

## Public Meeting on the WaterSense® Draft Specification for Showerheads October 21, 2009

### Meeting Summary

Stephanie Tanner of EPA welcomed everyone to the public meeting on WaterSense's draft specification for showerheads. Ms. Tanner then went over the administrative details and ground rules for the meeting and explained that the purpose of this meeting was to review the specification, answer any questions concerning EPA's intent, and clarify and take comments on any aspect of the specification.

She then provided a brief overview of the WaterSense Program's purpose and goals and a description of the draft showerhead specification development process. WaterSense collaborated with the American Society of Mechanical Engineers/Canadian Standards Association (ASME/CSA) task force on water-efficient showerheads (task force) to develop the specification criteria. As part of the specification development process, EPA conducted a user satisfaction study to determine if users uniformly liked or disliked certain showerheads, confirm which characteristics were important to users, and establish minimum acceptable performance levels. Several meeting participants had questions concerning the user satisfaction study that EPA conducted.

One participant asked if EPA was satisfied with the sample size of the study (i.e., 37 participants testing 16 different showerhead models). Ms. Tanner indicated that while it is admittedly a small sample, it is the best/only one EPA has. Even given the sample size, EPA believes that some clear preferences are discernable, which allowed it to develop measurable performance criteria.

Another participant asked who the test subjects of the study were. Ms. Tanner responded that the showerheads were tested by the staff and families of EPA's contractor.

Someone then asked where the study was conducted. EPA responded that the study was conducted in the Washington, DC metropolitan area.

Another participant asked whether water pressure was tested in each test subject's household. EPA responded that it was not.

Another participant then asked how long the test subjects' showers were. EPA responded that actual shower times were not recorded or tracked. The participants were instructed to install the test showerheads and to shower as they would with their normal showerhead.

One participant then stated that he felt it was unfortunate that temperature [drop] was not included as one of the performance criteria in the draft specification. He mentioned studies by his company that show that some aerating showerheads use significantly more energy than non-aerating models as users increase water temperatures to counteract cooling of the water caused by the aerating action. Ms. Tanner responded that temperature is one factor that EPA might include in future revisions of the specification. At this time EPA does not have the resources to study and define the temperature drop issue and develop performance criteria and

testing methods. She also pointed out that in the user satisfaction study temperature drop was not deemed a significant factor for most participants. Kim Wagoner of ERG also indicated that temperature drop was considered during the specification development process, but that it was not ultimately included because of the difficulty in accurately measuring it. The effect of temperature drop is included in the current version of the Australia/New Zealand standard for showerheads but they have had issues obtaining reliable data. The test is influenced by many factors in addition to the showerhead, including things like the shower stall size and room humidity. Later in the presentation, Ms. Wagoner also indicated that temperature seemed to be correlated with force and spray coverage, so it could be indirectly addressed through the specification's criteria.

Another participant asked how the EPA user satisfaction study compared to the Canadian university student study performed by Veritec Consulting, Inc. and Koeller and Company. John Koeller, of Koeller and Company, responded that the results were very similar and correlated very well with the findings of EPA's study. Another participant asked whether the Veritec study used the same showerheads and same set of questions as the EPA study. Mr. Koeller replied that the Veritec study did use the same showerheads and essentially the same questions as the EPA study.

Ms. Wagoner pointed out that there is an ongoing study being conducted by the California Energy Commission to further assess consumer satisfaction and that the results will likely be considered as EPA moves forward with this specification. The study is assessing user satisfaction with the same set of showerheads that were included in EPA's study and the survey questions are largely the same.

Ms. Wagoner then moved into the next section of the presentation, describing the draft showerheads specification scope and objective and the requirements for water efficiency, performance, and marking.

One participant asked for a clarification on how the specification addresses multi-mode showerheads. Ms. Wagoner explained that all modes of a multi-mode showerhead must meet the maximum flow rate requirement of the specification (i.e., less than or equal to 2.0 gpm), and that at least one of the modes must meet all of the water efficiency and performance requirements of the specification. The commenter asked whether the specification clearly indicates who determines which mode should be used for testing to all the performance standards. Ms. Wagoner responded that the specification does state that the manufacturer must specify which mode is used for compliance testing. The participant suggested possibly revising this language in the specification to clarify this fact and to avoid and/or close any possible loop holes that might invite or allow abuse. The suggestion was to explicitly state that the mode that is selected by the manufacturer has to pass all of the performance requirements.

Ms. Tanner then provided an overview of the certification and labeling requirements for WaterSense labeled showerheads. One participant asked whether all manufacturer claims as to potential water savings should be the same, as they are being based on WaterSense's water savings estimates. Ms. Tanner explained that WaterSense does not police manufacturer claims beyond claims of compliance to a WaterSense specification. It is the Federal Trade Commission's responsibility to police most manufacturer claims. Ms. Tanner also pointed out that actual water savings will vary greatly from product to product depending on its maximum flow rate (i.e., some WaterSense labeled products have a maximum flow rate of less than 2.0

gpm) and the environment in which it is installed and the product that it is replacing. In addition, cost saving claims can vary greatly as the cost of water varies between localities.

As there were no more questions or comments concerning product certification and labeling, Ms. Tanner opened the discussion to any aspect of the draft specification or supporting materials.

One participant asked whether the task force discussed or considered including a soap-up-valve, or trickle-valve, requirement as part of the specification. Ms. Wagoner responded that soap-up valves were discussed and are allowed, as the specification includes multimode showerheads (a soap up or trickle valve could be considered a mode). These valves, however, are not a requirement. One member of the task force also responded that the group's focus was on performance and that it intentionally did not attempt to address specific showerhead designs. The goal was to allow manufacturers flexibility and freedom in designing high-performance showerheads, and not to be design restrictive in anyway.

One participant commented that he appreciated the requirement that manufacturers may not provide instructions on product packaging or installation/maintenance literature that could lead to an overriding of the intended maximum flow rate. He questioned whether the ASME/CSA standard had any requirements for the removal of restrictor devices in showerheads. Another participant responded that the ASME/CSA standard does have a requirement that restrictors must require 8 pounds of pressure to be removed.

One participant asked whether there were any plans on EPA's part to convert the savings calculations presented in the draft specification supporting statement to an online calculator tool for consumers. Ms. Tanner replied that this is something that could easily be done on the WaterSense Web site, which is currently under revision.

The same participant asked whether EPA performed any survey studies in settling upon its \$30 estimated average cost for a replacement showerhead. He also questioned why EPA did not use the incremental cost between standard and high-efficiency showerheads in its cost savings estimates. Ms. Tanner replied that a formal survey was not performed. Rather, the average cost was derived based upon product research via the Internet. This research indicated that there is little to no incremental cost difference between standard and high-efficiency showerheads, therefore an average value was used. The participant suggested that based upon these findings, EPA might consider using an incremental cost of \$0 in its cost savings estimates instead of a \$30 average cost.

The participant also praised WaterSense for working with ENERGY STAR to jointly label pre-rinse spray valves and encouraged EPA to consider co-labeling showerheads, due to the water/energy relationship. Ms. Tanner indicated that at this time WaterSense has had no discussions with ENERGY STAR about co-labeling showerheads.

Another participant raised the issue that, in designing a showerhead to meet the minimum flow rate requirements of the specification, the result might be a product that is uncomfortable at higher pressures (e.g., 80 psi). He asked whether EPA and task force considered this in developing the draft specification. One participant (a manufacturer representative) suggested that the likelihood of creating a showerhead that is uncomfortable or painful at high pressures is low because the minimum flow requirements of the draft specification will lead to showerheads

with very limited change in flow rate over the range of possible pressures (i.e., the minimum flow cannot be less than 60 percent of the maximum flow rate at 20 psi and 75 percent of the maximum flow rate at 45 and 80 psi). Because of this limited variability, uncomfortable or painful showerheads should not be a problem. Ms. Wagoner also pointed out that in the user satisfaction study, none of the participants indicated that the showerheads were too forceful, although water pressure was not measured as part of the study.

Another participant asked whether EPA planned to reach out to planners and retailers to promote WaterSense labeled showerheads. Ms. Tanner responded that EPA does do a lot of outreach to these groups through attending meetings, publishing articles in trade press, and developing educational documents geared to these audiences. Also, many utilities, manufacturers, and retailers are already WaterSense partners and receive regular newsletters, announcements, and reminders from the EPA.

With no further questions or comments from the participants, Ms. Tanner wrapped up the meeting by providing an overview of the next steps and how formal written comments on the draft specification can be submitted. Ms. Tanner encouraged all participants to provide written comments by November 9, 2009. She explained that all comments become a part of the public record and will be posted on the Web site at the conclusion of the comment period. Responses to these comments will be provided with the release of the final specification.