



International Association of Plumbing and Mechanical Officials

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FOR IMMEDIATE RELEASE

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IAPMO, ASPE, WQRF to Collaborate on Hunter's Curve Research Project

Ontario, Calif. (May 16, 2013) – The International Association of Plumbing and Mechanical Officials (IAPMO®), American Society of Plumbing Engineers (ASPE) and the Water Quality Research Foundation (WQRF) will jointly fund a research project using data provided by Aquacraft Inc. to update Hunter's Curve for estimating water supply for residential applications using water efficient fixtures.

The research project will provide statistical analysis of fixture use behavior in single-family residential homes, extended to include multi-family dwellings, using the latest data sets for 2010-11 as provided by Aquacraft Inc., a water management, research and use analysis firm.

Data sets representing a sampling of 1,300 homes will allow the mining of thousands of individual fixture samples to determine the probability of the fixtures' end usage. Probabilities derived from this research will be used as a foundation to develop a statistical probability model for an estimating design curve for residential application.

In July 2011, IAPMO and ASPE convened a special task force to revise the methodology for properly sizing plumbing systems in response to the increased use of high-efficiency plumbing fixtures, fixture fittings and appliances and the subsequent decreased demand for water in commercial buildings and residences. To assist with the mathematical and statistical aspect of the work, ASPE appointed three high-profile members — Jason Hewitt, PE, CPD, LEED AP, of CB Engineering; Tim Wolfe, PE, of KJWW; and Thomas Poerio, Ph.D., PE, LEED AP, of Univesco, LLC — to work with Dan Cole, IAPMO's technical services supervisor. In addition to the ASPE appointees, Steven Buchberger, PhD, PE, professor of Environmental Engineering at the University of Cincinnati, is assisting in statistical analysis.

"Such a large-scale statistical analysis of hourly use and flow patterns of plumbing fixtures common in residential occupancies has never been done," Cole said. "The original Hunter model for public use was based on assumptions only, not data. The Hunter model for private use was based on morning calls in two hotels and one apartment. The scope of this project greatly surpasses the original work piloted by Dr. Hunter. We are excited about the potential results this project may bring forth for more accurate water supply demand estimates, efficient pipe sizing, and precise metering."

"ASPE is committed to supporting this critical research that will provide our members with statistically sound information that will assist them in designing plumbing systems that are even more efficient and cost effective," stated Jim Kendzel, ASPE Executive Director/CEO. "The plumbing industry needs to continually



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invest in research to be able to provide the public with a safe and efficient water supply and ASPE is proud to be working with IAPMO and WQRF in supporting this project.”

The research project is expected to conclude by year's end and its findings applied to a code proposal for a future edition of the *Uniform Plumbing Code (UPC®)*.

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Sponsor of the Uniform Codes, IAPMO – The International Association of Plumbing and Mechanical Officials – works in concert with government and industry for safe, sanitary plumbing and mechanical systems.

Learn more about IAPMO at www.iapmo.org.

ASPE is the international organization for professionals skilled in the design, specification and inspection of plumbing systems. ASPE is dedicated to the advancement of the science of plumbing engineering, to the professional growth and advancement of its members, and the health, welfare and safety of the public.

Learn more about ASPE at www.aspe.org.

The Water Quality Research Foundation (WQRF) was formed in 1949 to serve as a universally recognized, independent research organization for the water treatment industry.

Learn more about WQRF at www.wqrf.org.