EPA Grants $4 Million to University Water Quality Research

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The US Environmental Protection Agency (EPA) announced approximately $4 million in funding for two universities to research water quality issues related to low-flow conditions of drinking water in premise plumbing systems.Â "Providing clean drinking water is an essential part of EPA's mission to protect public health, and these efforts should focus from the source to the faucet,"Â said Thomas Burke, agency science advisor and deputy assistant administrator of EPA's Office of Research and Development.Â "The research will guide decision makers as they design, renovate, or manage plumbing systems to provide safe and clean drinking water."

Premise plumbing is the portion of the drinking water distribution system located within a building, including pipes, valves and faucets, that carries water from its entry into a building all the way to the consumer's tap. As water conservation efforts become more common and water shortages occur in some parts of the country, the use of low-flow plumbing fixtures, such as faucets, toilets and showerheads, has increased. The use of these fixtures combined with population decreases in some locations has led to lower water demands. Decreases in water consumption result in lower flows of water through water system pipes that were designed to manage higher flows, which may negatively impact water quality. Waterborne disease outbreaks can occur due to issues within premise plumbing systems, emphasizing the importance of this research. As instances of lower flows in drinking water distribution systems increase, so does the need for better designed, renovated and managed distribution systems so that water can be delivered efficiently while protecting public health. The research announced will provide a greater understanding of health risks associated with low flows.

The awardees will create methods, tools, and models to help design plumbing systems that will ensure appropriate flows and water pressures while delivering clean drinking water at actual consumption levels. Grants are being awarded to the following universities: Drexel University of Philadelphia is developing a database of premise water conditions and associated health parameters. Predictive models will use the information from the database to identify the risks involved with failing to meet water quality goals for premise plumbing. The models will be part of a tool that will identify high-risk conditions for water quality and potential remedial actions. Purdue University of West Lafayette, Ind., is conducting research on home and LEED office buildings to develop integrated water quality models and identify piping network design and operational conditions that can decrease health risks. The models will be part of a tool that will help identify premise plumbing characteristics, operations and maintenance practices that minimize health risks to those who live or work in the building.

Water Research Grants - US Environmental Protection Agency