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NEW REPORT EXPLORES POTENTIAL OF GREYWATER REUSE TO AID SUSTAINABLE WATER USE

Pacific Institute Details Strategies for Communities to Expand Greywater Reuse

November 18, 2010 – Oakland, CA: In an increasingly water-stressed world, greywater systems, which reuse high quality water normally disposed of after a single use, can help to reduce the demand for new water supply and reduce the energy and carbon footprint of water services according to a new report from the Pacific Institute. [*Overview of Greywater Reuse: the Potential of Greywater Systems to Aid Sustainable Water Management*](#) details the opportunities and challenges of reusing greywater and discusses what is needed to scale up emerging international efforts to reuse greywater.

Greywater is the relatively high-quality wastewater generated from household uses like bathing and washing clothes. As pressures on freshwater resources grow and new supply sources are increasingly scarce, expensive, or controversial, reducing demand by increasing water-use efficiency is key. Greywater reuse is one such strategy.

“Greywater reuse is part of an important paradigm shift in how we manage water, toward a more rational approach where we match the quality of water to the need” said Meena Palaniappan, director of the Pacific Institute International Water and Communities Initiative and coauthor of the report. “By reusing greywater in the home for watering landscapes or flushing toilets, we can reduce the use of high quality, expensive, and energy-intensive drinking water for those purposes.”

The new report examines the state of greywater implementation and policy, along with challenges that must be addressed for greywater reuse to be accepted and implemented effectively at larger scales. It is being released on November 18 in Oakland, Calif., at the Greywater Alliance 2010 Roundtable, with the theme of “What We Have Learned and Where We are Going.” For more information, visit www.greywateralliance.org.

In the United States, Arizona has one of the most supportive greywater policies, and in a survey of the city of Tucson, 13% of respondents indicated that they reused greywater in 1999, leading to new permitting policy in 2001. Greywater use is growing even in regions with laws restricting its use and those with no explicit policies regarding greywater; therefore it makes sense to consider how to create policies that encourage responsible greywater reuse.

“The percentage of household water that is greywater varies regionally and between households, but it is generally between 50% and 80%,” said Juliet Christian-Smith, senior research associate at the Pacific Institute and coauthor of the report, who will be presenting the research at the Greywater Alliance Roundtable. “That adds up to a significant amount of water. Greywater systems have tremendous potential to reduce water demand by replacing the use of potable water in non-potable applications.”

Greywater systems range from simple low-cost devices that divert greywater to direct reuse, such as in toilets or outdoor landscaping, to complex treatment processes incorporating sedimentation tanks, bioreactors, filters, pumps, and disinfection. The research shows that when the systems are designed and implemented properly, possible public health concerns with using different water qualities can be addressed. As greywater reuse becomes more widely adopted, regulations can be put in place to ensure that water quality is appropriately matched to water need.

Current water reuse policies in many countries are very restrictive of responsible on-site greywater reuse, and public perception of greywater as unsafe for reuse, or uncertainty around how to safely reuse greywater, is a major challenge for its increased use. The *Greywater Reuse* report outlines the steps needed for implementation of wider use of greywater internationally:

- Supportive policy environment that protects public health, yet is not unduly burdensome.
- Clear and consistent categorization of different technologies, matched to appropriate end-uses.
- Development of industry standards to compare greywater treatment technologies and provide useful information to consumers.
- Financing efforts that consider co-benefits that could be provided to (and also paid for by) water suppliers, energy suppliers, wastewater utilities, and additional water users.
- Expanded greywater education and outreach, creation of learning exchanges, and establishing an international greywater organization.

[*Overview of Greywater Reuse: the Potential of Greywater Systems to Aid Sustainable Water Management*](#) analyzes how, as a key strategy that reduces demand, greywater reuse can improve the resilience of water systems to the impacts of climate change. It also serves as a relatively secure or drought-resistant source of water supply because presumably greywater generated from showers and washing machines will continue, if at a reduced rate. And in helping displace demand for water, greywater reuse can help reduce conflicts over water and reduce the demand for new water supply projects as a result of climate change.

Based in Oakland, California, the Pacific Institute is a nonpartisan research institute that works to create a healthier planet and sustainable communities. Through interdisciplinary research and partnering with stakeholders, the Institute produces solutions that advance environmental protection, economic development, and social equity – in California, nationally, and internationally.

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