

DOCKETED

Docket Number:	15-WATER-02
Project Title:	WaterSaver Idea Exchange
TN #:	204534
Document Title:	Marc Warsowe Comments: 1 trillion gallons of water used at U.S. sinks each year - 80% WASTED!!
Description:	N/A
Filer:	System
Organization:	Marc Warsowe
Submitter Role:	Public
Submission Date:	5/7/2015 4:57:03 PM
Docketed Date:	5/7/2015

Comment Received From: Marc Warsowe

Submitted On: 5/7/2015

Docket Number: 15-WATER-02

1 trillion gallons of water used at U.S. sinks each year - 80% WASTED!!

“The AquaPedal” is a game-changer! That’s what Prof. Thomas Kosnik, Consulting Professor, Stanford Technologies Ventures Program, says about the AquaPedal – a hands-free, pedal operated device that can save up to 80% of the water and energy used at sinks.

When introduced commercially in 4-6 months, the patented AquaPedal will be inexpensive (target msrp: \$135 - \$150 -- before rebates!), easy to install, and intuitive to use. We’ve attached a deck that describes relevant aspects of the AquaPedal’s water-saving benefits in greater detail.

Using the AquaPedal also offers environmental and societal benefits not addressed in the attached deck, which is focused on water savings. For example, according to the Center for Climate and Energy Solutions, heating water generates 13% of all residential greenhouse gas emissions; thus, reducing faucet hot-water use by up to 80% would also reduce the amount of residential greenhouse gas emissions, possibly substantially. Our website, www.aquapedal.net, has additional information.

AquaPedal LLC is seeking public water agencies/utilities and non-profits as grant-partners to field-test our third-generation beta-production units before going into commercial production. We are also seeking public and private partners to implement field tests that could qualify for LEED credits.

Additional submitted attachment is included below.



aquapedalTM

Small device. Big catalyst.

**AquaPedal brings to market innovative water and energy conservation devices and services
in the rapidly emerging water/energy nexus.**

The Water / Energy Nexus

*“Transportation and treatment of water, treatment and disposal of wastewater, and the energy used to heat and consume water account for nearly **20 percent of the total electricity** and **30 percent of non-power plant related natural gas** consumed in California. ... Water-related electricity use is **48 terawatt-hours (TWh) per year** [Emphasis added.]”*

California Energy Commission, 2005

- Increasingly, utilities, such as PG&E and San Diego Gas & Electric, as well as leading energy professionals, are recognizing that conserving water equals conserving energy. Hence, the term “water/energy nexus” has recently entered the vocabulary of experts on both the energy and water sides of this equation. In fact, utilities such as San Diego Gas & Electric now have senior staff and whole departments dealing full-time with water/energy nexus conservation issues.
- AquaPedal LLC has been recognized by both water and energy professionals as a leading innovator in behavioral conservation in this emerging water/energy space. **Consequently, AquaPedal was honored to present at the American Council for an Energy-Efficient Economy’s 2015 Hot Water Forum in Nashville, in February, 2015.**

Faucet Water and Energy Waste: AquaPedal has the Best Solution!



Water scarcity and drought provide a stark background for the environmental and societal problems AquaPedal successfully addresses:

Reducing the obscene quantity of water, energy, and money wasted at sinks every day.

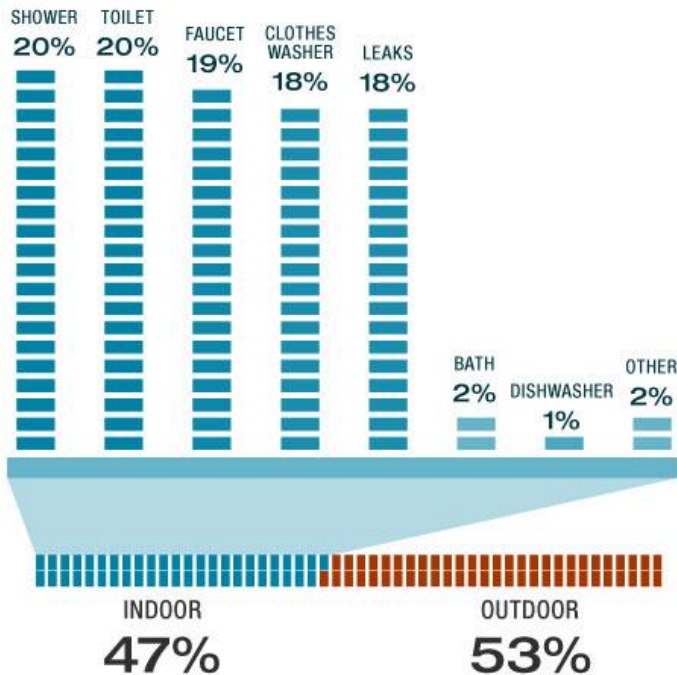
- Every year, over **1 trillion** gallons of cold and hot water flows down U.S. sink drains*.
- Of that, over **866 billion** is simply wasted – *because before the AquaPedal, there's been no easy and inexpensive way to stop faucet water flowing when it's not actually being used!*
- AquaPedal can **save** households and many businesses **up to 80%** of that wasted water and energy – saving AquaPedal users **a lot of \$\$\$!**



The AquaPedal can be quickly installed with just a screwdriver and a drill (1 hole)!

Small Device. Big Catalyst for Water and Energy Savings

Household Water Use In California



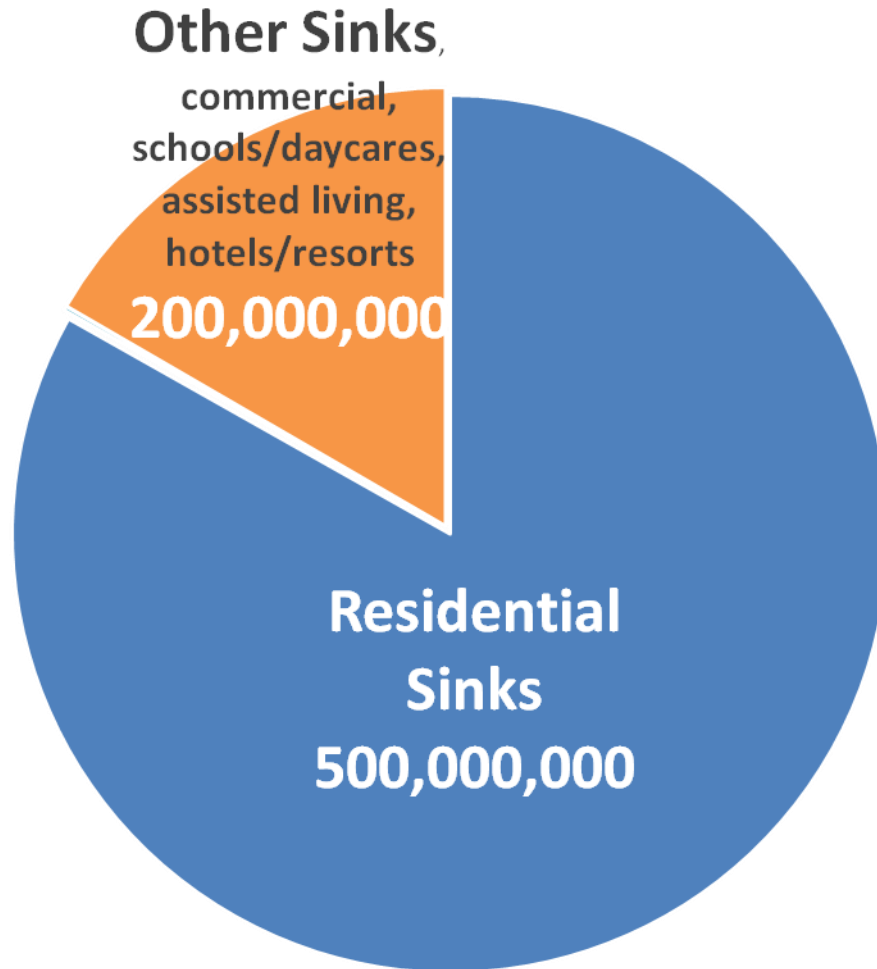
The AquaPedal:

- Addresses one of the five heaviest indoor uses of household water.
- Reduces faucet water and energy use at residential, commercial, and institutional sinks by up to 80%.
- Pays for itself in as little as 12-18 months.
- Reduces exposure to illness-causing pathogens by virtually eliminating faucet cross-contamination.
- Is a conservation “gateway” product that enables users to easily and “painlessly” gain awareness of, and modify, their often wasteful water-use habits – motivating and empowering almost every user to conserve water and energy – *and to personally experience that one person can make a difference!*

The AquaPedal is:

Hands-Free • Pedal-Operated • Robust & Reliable • 100% Mechanical • Inexpensive to Purchase
Easy to Install • Inexpensive to Professionally Install • Field-Tested • Patented

Huge Potential for Water- and Energy-Savings in Retrofits and New Construction



- 500MM installed residential sinks in the U.S.
- 200MM installed non-residential sinks in the U.S.
- Millions of new residential and non-residential sinks installed each year in the U.S.
- International water- and energy-saving potential exceeds U.S.

Why should the AquaPedal receive a Technology Grant?

Why should Consumers and Business receive Rebates?

BAWSCA (Bay Area Water Supply & Conservation Agency) and Other Public Agencies have expressed interest in being AquaPedal's public partner. We are looking for additional public and non-profit partners!

Grants (*or conditional purchase contracts!*) will enable AquaPedal LLC to demonstrate to grantor-agencies and commercial and residential water-users that the AquaPedal:

- Will save significant amounts of water and energy in California. ***(Reason to Rebate!)***
- Will provide a global solution for saving water and energy in urban areas.
- Is a “gateway” product sensitizing, motivating, & empowering individuals to conserve – *and to experience personally that one person can make a difference!* ***(Reason to Rebate!)***
- Can help reduce faucet-borne illnesses in homes, and in commercial & institutional venues – especially for critical population groups, including immune-compromised individuals, seniors, and children in daycare and K – 6 classrooms. ***(Reason to Rebate!)***
- Can enable small, medium, and large commercial water-users to substantially reduce their own total community water and energy footprints, while providing valuable public education and community benefits. See next slide. ***(Reason to Rebate!)***
- ***AND will help water agencies and local and state governments*** to practically *and psychologically* mitigate customer/voter distrust and fears of incurring enormous fines and penalties for wasting water. ***(Reason to Rebate!)***

Saving 80% at Your Faucet Quickly Adds Up!

Enormous environmental & societal benefits from seemingly insignificant per-faucet use reductions!



➔ Doing a rough calculation[†], if **all 6,200+ Oracle employees[‡]** at the Redwood Shores campus were to **install AquaPedals** in their kitchen and bathroom sinks, **the water saved – approximately 41,400,000 gallons annually – would be enough to fill a column of water about 209' x 209' (a square acre) 127 feet tall (i.e., 127.052 a-f).**

- To put that in perspective, **Oracle 100** is about **98 feet tall**, and **Oracle 500** is about **134 feet tall**.
- ***In addition***, the energy otherwise needed to heat that saved water will also be saved, as will the energy otherwise needed to dispose of that water as wastewater!

AquaPedal and Possible LEED Credits

- Possible Pilot Credit for Field-Testing AquaPedals to Save Faucet Water in Restrooms
 - According to the LEED Reference Guide for Building Design and Construction, updated July 1, 2014, LEED credits are no longer available for sensor faucets, because sensor faucets do not save water or energy:

Duration-based savings from autocontrol faucets with automatic fixture sensors or metering controls are no longer allowed in the design case. Studies have shown that autocontrol faucets do not save water because users frequently reactivate the faucet after initial use or stop washing before the cycle ends. To earn points, project teams must include fixtures necessary to meet the occupants' needs. (p.40)

- In contrast, with the AquaPedal occupants/users feel – and are – totally and effortlessly in control of the duration of water flow. They use only what they need, not what the autocontrol faucets dictate, thus meeting the occupants' needs, noticeably improving user satisfaction, and – based on initial field-test observations – substantially reducing water and energy use.
- Possible Public Education/Community Action Innovation Credit for Saving Water and Energy Off-Campus in Employee Households
 - See the prior slide: A corporate sustainability program that provides employee households with AquaPedals for their kitchens and bathrooms could reduce that company's total community (i.e., on-campus and off-campus) water and energy footprints by millions of gallons/kilowatts/therms annually.

➔ **AquaPedal is seeking strategic partners to implement these two pilot projects.**