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April 5, 2013

Re: UC Irvine AASHE Stars 1.2 Letter of Affirmation Innovation 4 (2013):
Water for Peace Global Outreach Campaign

To Whom It May Concern:

I am writing to affirm the innovative nature of the global outreach program initiated by Jay Famiglietti, Professor of Earth System Science in the School of Physical Sciences, founding director of the University of California's Center for Hydrologic Modeling, and Professor of Civil and Environmental Engineering in The Henry Samueli School of Engineering here at UC Irvine.

Working with the State Department, Professor Famiglietti and members of his team traveled to Israel, Jordan, and Palestine earlier this year to conduct a "water diplomacy visit." Essentially, the team was there to share information resulting from its pioneering use of NASA's Gravity Recovery and Climate Experiment (GRACE) mission satellites. Data gleaned from years of research confirms that water-stressed areas identifiable only from space are due to the unsustainable use of groundwater, mostly for irrigation. With these findings in hand, Famiglietti felt an urgent need to share this information with scientists and policymakers in the Middle East to encourage peaceful cooperation on water management across geo-political boundaries. He wrote about the experience in a blog hosted by National Geographic (click here to access the article and blog).

Famiglietti's research findings and blog captured the attention of many news organizations including *CNN* and *NBC News*, *The Economist*, and *The Jerusalem Post*. Andrew Revkin of *The New York Times* wrote about Famiglietti's work in a February 23, 2013, Dot Earth blog:

> "Jay Famiglietti, one of the authors of an important new study on the rapid depletion of aquifers under the Tigris and Euphrates river basins, has posted an excellent overview of the work and its context for policy, and noted that he and other authors are preparing for a two-week 'water diplomacy' tour to discuss their findings in the affected region.
>
> The project shows how improving systems for observing and analyzing environmental trends are brightening prospects for better management of resources and risks in struggling regions – even when governments might not want the information revealed."

The trip to the Middle East was part of a larger outreach effort propelled by the urgent need to elevate water management nationally and globally. Famiglietti and his team, which includes graduate student researchers and postdoctoral scholars, made their first water diplomacy trip in 2011, to China. Since then, Famiglietti also has met with students and faculty at universities across America, as well as elected officials and policymakers in Washington, D.C.

In writing for National Geographic, Famiglietti noted:

> "We cannot reverse climate change and its impact on water availability, but we can and must do a far better job with water management, including the modernization of national and international water policy. Our research and its implications point to the following critical needs, not only for the Middle East, but in all regions of the world where groundwater resources are in decline."

Below are the "critical needs" to which he refers:

- First, it's high time for groundwater to be included under the water management umbrella. In most of the world, groundwater pumping is unmonitored and unregulated.
- Second, since nearly 80% of the world's water resources are used to support agriculture, continued improvements in agricultural and irrigation conservation and efficiency should be an important focus for research, development, investment and cooperation.
- Third, our report and others that have preceded it clearly demonstrate that satellite technology has advanced to the point where a reliable assessment of regional hydrology can be produced with little access to observations on the ground.
- Finally, the priority of international water policy discussions must be elevated. All around the world, we will increasingly be faced with the need to share water across political boundaries, either within nations or between them. More generally, our common water future must accommodate the ability to move water, either literally or virtually, from the regions that have it to the regions that do not.

I am honored to represent a School of globally renowned scientists. Professor Famiglietti is exceptional among his distinguished colleagues in his tireless efforts to inform the public and policymakers about scientific findings, particularly with respect to dwindling resources that have the highest potential for aggravating regional conflicts around the world.

Sincerely,

Professor Kenneth C. Janda
Dean, School of Physical Sciences