

CONTACT: Nancy Ross, nross@pacinst.org or 510.251.1600 x106

PER CAPITA WATER USE IN THE U.S. DROPS

Analysis of New National Water-Use Data Shows that Improving Efficiency is Critical for Sustaining Water Resources, but Energy Demands on Water are Growing

October 28, 2009 – Oakland, Calif.: New data just released by the US Geological Survey (USGS) shows that total water use in the United States dropped slightly in the five-year period ending in 2005 even while the nation's population and economy grew. This improvement in the efficiency of water use continues a trend that began in the late 1970s, and total freshwater use in the U.S. is now lower than it was in 1975. Translated to water use per person, per-capita water use in the U.S. is down to 1383 gallons per-person per-day – a level not seen since the 1950s!

According to an assessment by the Pacific Institute, these dramatic changes in national water use are largely the result of improvements in efficiency, with biggest savings in industrial and irrigation water use. But the Pacific Institute analysis also shows that water use for producing energy – already the largest component of U.S. water use – is growing. And while water use per person is dropping, population growth in hotter and drier regions of the country is putting more pressure on regional water resources.

“The USGS data indicate that improvements in water-use efficiency are the most significant factor in sustaining our nation's limited water resources. The population of the U.S. has grown by more than 81 million people since 1975, but total water use has declined. As a result, our per-person water use is almost 30% lower than it was 30 years ago,” said Dr. Peter Gleick, president of the Pacific Institute and one of the world's foremost experts on freshwater. “If each American still used 1,940 gallons per day, population growth would have caused the U.S. to use an additional 165 billion gallons per day. That's equal to more than 12 new Colorado Rivers – or enough water for everyone in California, New York, Florida, Texas, Illinois, and Michigan. With the critical water situation in the western U.S. and growing conflicts over water in the southeast, these numbers show that we can do more with less water, and we need to make that effort a national priority in every sector, from our own homes to agriculture to industry.”

According to the latest figures, released every five years by the USGS, water for cooling power plants accounted for 49% of all water withdrawals and 41% of all freshwater withdrawals in 2005, making it the single largest water use. The second largest water use is irrigation, which in 2005 accounted for 31% of all water withdrawals, 37% of all freshwater withdrawals. But the total amount of water used for irrigation is nearly the same as in 1970, while irrigated acreage has continued to expand by millions of acres. More efficient irrigation water use has been the key factor here, a big part of which is conversion to more efficient sprinkler and drip irrigation systems.

“These numbers show how integral freshwater is to our food and energy supply. Continued improvements in how we use water are going to be critical for avoiding the kinds of political conflicts we see growing in the Alabama/Georgia/Florida region, between Nevada and Utah, in California, and elsewhere” said Gleick. “In terms of energy, far more water is required for nuclear and fossil-fuel

energy systems than for most renewable energy systems. Water availability will increasingly limit our energy choices as climate change accelerates and population continues to grow.”

The USGS figures show the potential already being realized for addressing water scarcity and quality problems by increasing the efficiency of water use and reducing waste. But according to the Pacific Institute, there is still tremendous untapped potential for improving efficiency in homes and businesses.

There is huge variation in residential water use among the states. Residential per-capita water use ranges from 54 gallons per day in Maine to 190 gallons in Nevada, with a national average of 98 gallons, a figure mostly unchanged from a dozen years ago, according to the USGS.

“The numbers are not showing the significant improvements in domestic use at a national level,” said Heather Cooley, senior research associate at the Pacific Institute, “partly because the real improvements in efficiency are being masked by a shift in population to hotter, drier climates where water use goes up. People from wetter regions are not taking their water with them when they head to drier areas.”

Progress has been made in managing the nation’s water – but the current pace will not counter the demands of a growing population, climate change, and increasing tensions over scarce water resources.

“Even with the improvements we’ve seen, our rate of population growth and regional water usage is not sustainable. In many regions we are past the point of peak ecological water use, where current levels are damaging the health of our rivers, lakes, and groundwater aquifers. We have the tools to further reduce our water footprints dramatically. We need the will to make the changes and rethink how we manage our freshwater resources at every level,” said Gleick.

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. www.pacinst.org.

Selected Facts on U.S. Water Use in 2005

- Total water use in the U.S. in 2005 is lower than it was in 1975.
- Per-capita water use in the U.S. in 2005 is lower than it has been since the mid-1950s.
- U.S. water use, per person, peaked in 1975 at 1944 gallons per person per day and has now dropped to 1383 gallons per person per day.
- Household water use is growing at the same rate as national population. Improvements in water-use efficiency in homes are being balanced by a shift in population to hotter, drier regions.
- The economic productivity of water (dollars of Gross Domestic Product per unit of water used) is higher than it has ever been: it has nearly tripled since the 1970s, to \$8.45 of GDP produced per hundred gallons used from only \$3.18 in 1975 (in 2005 dollars).

###