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## **New Study Shows Populations Relying on Colorado River Water Growing Much Faster than Their Demand for Water**

*Water Agencies Demonstrate that More Efficient Use is Possible  
in Face of Supply-Demand Imbalance*

The Pacific Institute today released [\*Municipal Deliveries of Colorado River Basin Water\*](#), documenting population and water delivery information and trends for 100 cities and agencies that deliver water from the Colorado River basin. Since 1990, the number of people in the United States and Mexico who use Colorado River basin water has increased by more than 10 million – but their overall per capita water use declined by an average of at least one percent per year from 1990 to 2008.

The new report complements the Bureau of Reclamation's recently released interim [Basin Study](#), providing – for the first time – real numbers on the extraordinary population growth among cities that depend on water from the basin and on changing water delivery rates by these cities. The Pacific Institute [report](#) documents the substantial water-efficiency gains made over the past twenty years by agencies delivering water from the Colorado River basin – even by agencies and cities such as Flagstaff that already had relatively low per capita delivery rates in 1990.

Water taken from streams and rivers and pumped from the ground within the nearly quarter-million-square-mile Colorado River basin now meets some or all of the needs of almost 35 million people, including fast-growing cities within the basin such as Las Vegas and Phoenix and St. George, Utah. Some cities, especially in Arizona and Utah, have more than tripled in size since 1990. But more than 70% of the people receiving such water live outside the basin, in cities such as Cheyenne, Denver, and Albuquerque to the east and Salt Lake City, Los Angeles, San Diego, and Tijuana to the west of the basin.

From 1990 to 2008, total municipal water deliveries from the Colorado River basin increased by more than 600,000 acre-feet, at a rate much slower than population growth. In fact, the new study shows that if water deliveries had increased at the same rate as population growth, they would have grown by almost two million acre-feet – assuming that much additional water was even available for delivery.

“Demands for water from the Colorado River basin now exceed supply,” said Michael Cohen, senior research associate at the Pacific Institute and author of the report. “This supply/demand imbalance would be much worse if municipal water agencies across the seven basin states had not decoupled water deliveries from population growth.”

From 1990 to 2008, per capita water delivery rates declined dramatically in Albuquerque (38%); Southern Nevada (31%); Phoenix (30%); and San Diego County (29%). Southern California agencies delivered 4% less water in 2008 than they had in 1990, despite delivering water to almost 3.6 million more people. In fact, 28 water agencies in five different states delivered less water in 2008 than they had in 1990 despite population growth in their service areas, evidence that water deliveries do not simply track population. However, nine agencies’ per capita deliveries actually increased from 1990 to 2008. The report shows that such increases are an aberration, encouraging these agencies to move their water use trends in the right direction.

“If all the water agencies in this study had achieved per capita declines of at least one percent per year, the system could have saved 300,000 acre-feet of water, a very substantial volume,” said Cohen. “Many agencies have demonstrated that more efficient use is clearly possible, and water conservation and efficiency can help the Western U.S. cope with future droughts and climate change impacts.”

Municipal deliveries – which include deliveries to the residential, commercial, industrial, and institutional sectors, but do not include deliveries to agriculture, energy producers, or mining – comprise about 15% of total Colorado River use (agriculture uses more than 70%). But as the fastest-growing sector, municipal use drives demands for additional water supplies and places pressure on a river system that is over-allocated and facing a supply-demand imbalance, as well as the prospect of long-term declines in run-off due to climate change.

The *Municipal Deliveries of Colorado River Basin Water* study shows that projecting future water demands should take into account the successes achieved in cities where there are many examples of water conservation in practice that could be adopted or emulated by the less water efficient providers. The full report can be downloaded at [http://www.pacinst.org/reports/co\\_river\\_municipal\\_deliveries](http://www.pacinst.org/reports/co_river_municipal_deliveries)

Based in Oakland, California, with an office in Boulder, Colorado, 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](http://www.pacinst.org)

## **State Highlights:**

**ARIZONA** saw very fast population growth (Surprise, Arizona grew from 7,000 in 1990 to 93,000 in 2008). Total water deliveries by surveyed agencies in the state increased by 346,000 acre-feet from 1990-2008, a 44% increase, but every agency saw a decrease in per capita use. Phoenix, for example, declined by 30%, but several, such as Scottsdale, still have very high per capita delivery rates.

**CALIFORNIA's** Metropolitan Water District of Southern California service area grew by more than 3 million, but total water deliveries actually fell, reflecting an overall decline in per capita deliveries of 23%. However, one Metropolitan member agency, the City of San Marino, had the third-highest per capita delivery rate of any agency in the study; the two higher rates were both agencies serving the Coachella Valley.

Several **COLORADO** water agencies experienced substantial declines: Greeley (42%); Fort Collins (33%); Durango (24%); Denver (22%); and Boulder (20%). However, total basin water use increased by 100,000 acre-feet.

**SOUTHERN NEVADA WATER AUTHORITY'S** per capita delivery rate fell by 31%, but because its service area population almost tripled, total water deliveries actually increased by 226,000 acre-feet. Per capita water deliveries in nearby Mesquite increased by 38% because of a new casino and resort.

**Albuquerque, NEW MEXICO** experienced a 34% reduction in per capita water deliveries, delivering almost 19,000 less acre-feet in 2008 than 1990, despite 27% population growth.

**UTAH** saw extraordinary population growth – a 50% increase in water service area populations – but total water deliveries only increased 8.5%. Several cities, such as Salt Lake City (39%) and Provo (44%), showed dramatic reductions in per capita deliveries, but they started from very high initial rates. Many cities in Utah continue to have per capita water delivery rates at the high end of the spectrum, showing significant room for efficiency improvements.