

FAQs

THE ASU STUDY ON THE ECONOMIC IMPORTANCE OF THE COLORADO RIVER TO THE BASIN REGION

WHY DID PROTECT THE FLOWS COMMISSION THIS STUDY?

As a business network of over 1,100 with members ranging from Fortune 500 companies to main-street retailers, we support common-sense solutions to water challenges facing the Southwest. We are looking for solutions to ensure there is enough water in the Colorado River Basin to support and sustain the environment, business, recreation and the overall quality of life in the region.

In our efforts to find solutions that can sustain balanced economies and businesses in the West, we sought to quantify the economic impact and importance of the Colorado River to the West and the U.S. as a whole. What we discovered was a lack of data to make educated decisions on water use and management and arguments for investments in conservation and water efficiency in the Colorado River Basin. To address these issues, and with the resources we had available, we looked to leading economists from the W.P. Carey School of Business at Arizona State University to help us conduct this study. The study is intended to start to document in dollars and cents the value of the river, and to help advance the conversation about its protection, and we encourage other entities to build on and enhance this work going forward.

WHAT METHODOLOGY WAS USED TO CONDUCT THE STUDY?

To conduct the study, economists from the W.P. Carey School of Business at Arizona State University:

- ▶ Gathered data on Colorado River water usage in the commercial, industrial and agriculture sectors in the 7 basin states. The U.S. Bureau of Reclamation's (USBR) 2015 water demand projections for the Basin region were used in conjunction with historical consumption data collated by USBR.
- ▶ Utilized the widely- used IMPLAN input-output model, which contains 2012 economic data from the U.S. Bureau of Economic Analysis and provides a snapshot of the economy in the basin region.
- ▶ Under the IMPLAN model, began with two basic assumptions:
 - The non-availability of Colorado River water for one full year
 - The non-substitutability of Colorado River water- that is, no other sources of water such as desalination or other imports are available to compensate for the loss of Colorado River water for the study year.

The economists and Protect the Flows recognize that the total absence of Colorado River water is an unlikely scenario, and that in the face of a decline in water availability from the river, most entities would adapt or somehow compensate. However, under the IMPLAN model, utilizing these assumptions is the most efficient means to arrive at a comprehensive estimate of the value of the Colorado River to the economy of the basin region.

With a comprehensive, baseline estimate of this total value in place, economists and policymakers are able to extrapolate the impacts of smaller, and more realistic, reductions in river flows and water availability due to drought, allocation changes, etc. Following this logic and within the constraints of the IMPLAN model, the study calculated estimated economic impacts based on a 10%, 15%, 20%, 25%, 30%, 40%, 50% and 75% decline in availability of Colorado River water. While the economists at ASU and PTF are aware that should water shortages occur in the basin, they would not affect all states and sectors equally, we believe it is beneficial to provide some estimate of economic impact of reductions of river flows.

- ▶ For more information on methodology please see pages 5-8 of the final report from the Seidman Institute.

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WHY ARE REAL ESTATE, HEALTH CARE AND FINANCE THE SECTORS MOST IMPACTED BY THE NON-AVAILABILITY OF COLORADO RIVER WATER, WHEN IT DOESN'T SEEM LIKE THOSE SECTORS WOULD USE MUCH WATER COMPARED TO OTHER SECTORS LIKE AGRICULTURE OR MANUFACTURING?

- ▶ Even though it may not be obvious, all sectors of the economy do indeed rely on a sustainable water supply to operate buildings, cooling and heating systems, landscaping, cleaning, etc.
- ▶ Many of the basin states are rapidly urbanizing and shifting away from a more rural, agricultural based economy. As a result, the majority of economic activity in the region is being generated by service industries such as finance and health care. Because they generate so much of the region's Gross State Product (GSP), any loss of water to those sectors could heavily impact the overall economic picture for the basin region.
- ▶ Lastly, the IMPLAN model highlights the linkages between various economic sectors. For example, many of the top sectors provide services to other sectors. So any loss of water to sectors that use more water (i.e. manufacturing, electricity production or agriculture) would result in a lower demand from those sectors for services such as insurance, finance, legal, technical, etc. In other words, there is a multiplier effect that causes the financial losses among service sectors to be greatest.

ARE THERE OTHER STUDIES OUT THERE LIKE THIS ONE?

As far as we know, this is the first study to look at the entire Colorado River basin and the economic impacts of the river system.

- ▶ The Seidman Institute at ASU in 2014 conducted a study to estimate the economic impact of the Central Arizona Project's delivery of Colorado River water to the state of Arizona. The economic figures from the CAP study align with the results of the study ASU conducted for Protect the Flows and used similar methodologies and the IMPLAN model.
- ▶ In 2012, Protect the Flows commissioned a similar study that looked specifically at the Colorado River's impact to the recreation-based economy in the West. That study was conducted by Southwick Associates, Fish and Wildlife Economics and Statistics. The study also used IMPLAN models and found that \$26 billion is generated every year in the Colorado River Basin states by river-based recreation.



“OUR ANALYSIS CLEARLY DEMONSTRATES THE IMPORTANCE OF THE COLORADO RIVER FOR THE ECONOMIES OF THE BASIN REGION.”

Dr. Tim James, Professor of Economics and Report Author, Arizona State University

Protect the Flows, a coalition of over 1,100 businesses that seeks to maintain a healthy and flowing Colorado River system, has engaged with senior business leaders ranging from Fortune 500 firms to main street enterprises throughout the seven Colorado River Basin states to proactively address water sustainability challenges.

For more information and for a list of companies that endorse smart water policies, please visit www.protectflows.com.

