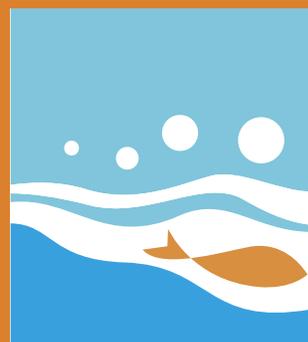




# Water Efficiency for Instream Flow:

## Making the Link in Practice



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A joint project of the Alliance for Water Efficiency, American Rivers, and the Environmental Law Institute



# Summary

**T**hroughout the Colorado River basin, with ever-expanding demands for multiple water uses and increasingly uncertain supply, any promising opportunity to do more with less is welcome. The importance of healthy instream flows, as one of these uses, is more pressing than ever. Improved water efficiency can in concept help stretch water supplies and contribute to protection of aquatic environments and the resources and services that they provide.

This report summarizes efforts to explore whether water efficiency efforts can be linked in practice to improved instream flows in areas of the Colorado River basin. In brief, we found that practical possibilities to do this do exist within the current context of the river basin. Given a stream stretch with a clearly identified need for improved instream flows and a realistic opportunity for improving water efficiency, willing partners generally can build the bridges needed to overcome other challenges.

Project partners Alliance for Water Efficiency, Environmental Law Institute and American Rivers, each with a different perspective on the issue, posed several key questions which are addressed in this report:

1. What is the **practical experience in the western U.S.** in achieving greater water efficiencies and applying them to instream flows, and what lessons can we apply to the unique characteristics of the Colorado River basin?
2. What is the **legal setting in each basin state** for applying conserved water to instream purposes?
3. What are the **practical challenges** to using water efficiency programs to improve instream flows in the Colorado River basin?
4. What are the **most promising on-the-ground opportunities**—incentives and strategies, characteristics of success, and approaches to partnership—in the basin?

**The Colorado River basin is perhaps the most challenging river basin in the nation:** water demand now exceeding supply, valued but fragile ecosystems, and support for nearly every type of water-relevant interest. Building on this urgency led to this one-year survey project to explore the link between water efficiency programs and improved instream flows in the Colorado River basin. Much is already known about how to achieve greater water efficiencies in urban and agricultural water use in a given situation. Documented instream flow needs of priority aquatic environments are available in much of the basin.

## Experience Across the West

Across the West, water from both agricultural and municipal water efficiency efforts has been used to improve instream flows, often in combination with other water management efforts. Cases from around the West show that while an external legal or regulatory driver, or anticipation of one, can prompt action, cooperation can multiply benefits and aid success. Water efficiency is often just one part of the water management package. Funding often requires creativity and multiple sources. Location and scale of projects vary; successful projects come in all sizes from rural headwaters involving just two partners to major stream stretches involving many parties.

## The Legal Setting

It is possible to apply water from efficiency efforts to enhance instream flows in each Colorado River basin state, but opportunities and legal protections are greater in some states than in others. A wide array of federal and state programs can also affect water management decisions in a single stream as well as across the Colorado River basin, forming a difficult web to navigate.

## The Challenges

A wide range and diversity of challenges arise when people from the Colorado River basin contemplate using water from water efficiency efforts to help improve instream flows. And the obstacles are many: legal, institutional and motivational, economic, and physical.

The traditional characteristics of the prior appropriation system of water allocation can appear to be a formidable barrier, particularly procedures associated with protection of other water right holders and the concept of “use it or lose it.” For some, the biggest concern is potential impairment of existing water rights because of the complex interactions between water uses. Polarized water interests exist in many areas. Fear, uncertainty, and a lack of trust can dominate conversations about improved water efficiency and the use of any resulting water.



For others, the biggest question concerns who will pay for these efforts. A disconnect in costs, benefits, and impacts inhibits action. The timing and location of instream flow needs may not match the water that can be made available. Similarly, following the physical drop of water may show that greater water efficiency does not result in additional water in a particular situation. And since all individual efforts take place in a basin context, unintended consequences may result.

## Incentives and Strategies

Yet many of these apparently pervasive challenges can be cooperatively addressed on a local or watershed basis, particularly in cooperation with others. The context is different in each case: the parties, the needs, the concerns, and more. As a result, the approach will vary for each situation. As different incentives motivate different types of willing partners, it is important to identify the challenges in a particular situation and consciously find ways to address and even leverage them.

Attitude, trust, and willingness are the most important keys to success. These can counteract polarization, attitudes, and lack of motivation. Partnerships are key for action—one water right holder can't do this alone—and leadership is key to partnerships.

Initial motivation often comes from outside events, such as anticipated Endangered Species Act actions. While money can really motivate, it is not the only, or often the primary, factor. Motivations to take action can transcend money—“green” values, water-based recreation interests, vista preservation, a sense of legacy for the future.

While it is more difficult in some Colorado River basin states than in others, it is possible to link water resulting from efficiency measures to streamflow improvement in each state. Where conserved water can be protected from forfeiture or transferred to an instream flow use and protected from other water users, there is greater incentive to link efficiency and flow. It is important to distinguish between what the law allows and the perception of what is legally possible. Clarifying this can be an important strategy in fostering this link.



## Promising Opportunities

Practical possibilities for linking water efficiency efforts and instream flows exist within the current institutional context of the Colorado River basin. Given a stream stretch with a clearly identified need for improved instream flows and a realistic opportunity for improving water efficiency, willing partners generally can build the bridges needed to overcome other challenges. Creative funding, a defined legal path, and short-term or pilot efforts are other indicators of likely success.

With a champion or catalyst, willing partners, and a locally tailored approach, more efficient water use can be linked to improved instream flows in areas of the Colorado River basin. To forge this link on the practical level, incentives and approach are best designed separately for each specific situation. Different incentives tailored to motivate various types of willing partners are required: for communities, water suppliers, agricultural water districts, farmers and ranchers, nonprofit organizations, government partners, and others.

Nonprofits and government agencies can choose to begin short term efforts that set the stage for local action, and strengthen the link between local instream flow needs and water efficiency efforts. These efforts can work squarely within existing institutions.

Opportunities can take the form of:

- An upstream farmer or rancher working with a nonprofit with an interest in streamflow protection;
- A community with a direct connection to a stream stretch;
- An agricultural district seeking to modernize its water management systems in a way that can also reduce or relocate diversions from a river;
- Three-way arrangements for water use, such as trades among agriculture, streamflow, and a state fish and wildlife agency;
- A nonprofit with strong local relationships willing to take the lead; and
- Multiple partners collaborating in a stream stretch to anticipate an upcoming environmental need, whether physical or regulatory.

### About This Report

This report, funded by the Walton Family Foundation, is based on synthesis of information from case studies around the West, an analysis of the law relevant to using conserved water for instream purposes in the basin, over 60 interviews with knowledgeable individuals throughout the basin and the West, a one-day working session of selected basin experts, and experience with successful water efficiency efforts.

The full report is online:

[www.allianceforwaterefficiency.org](http://www.allianceforwaterefficiency.org)

