

SUBMIT OPTION SUBMITTAL FORM BY:

1. EMAIL TO: COLORADORIVERBASINSTUDY@USBR.GOV

2. U.S. MAIL TO: BUREAU OF RECLAMATION, ATTENTION MS. PAM ADAMS, LC-2721, P.O. BOX 61470, BOULDER CITY, NV 89006-1470

3. FACSIMILE TO: 702-293-8418

Option Submittal Form

Contact Information (optional):

Keep my contact information private.

Contact Name: _____	Title: _____
Affiliation: _____	
Address: _____	
Telephone: _____	E-mail Address: _____

Date Option Submitted: 2-1-12

Option Name:

Colorado River Basin-Wide Per Capita Water Use Goal

Description of Option:

<p>NRDC recommends the creation of a Colorado River basin-wide performance based goal for improved water use efficiency. The Pacific Institute's recent report on municipal deliveries in basin states (http://www.pacinst.org/reports/co_river_municipal_deliveries/) identified a long-term, basin-wide trend toward improved efficiency. Across the basin, many water agencies have achieved average improvements in per capita water use of at least 1% per year from 1990 to 2008. Similar results have been documented nationally (See Rockaway et al, "Residential Water Use Trends in North America," <i>AWWA Journal</i>, February 2011). This ongoing trend should be considered the baseline for water use efficiency improvements in the basin. We recommend that a basin-wide goal should be at least as ambitious as doubling this baseline, resulting in at least a 20 percent reduction in per capita water use within a decade. As discussed below, California has established a similar goal of increasing per-capita water use 20 percent by 2020.</p>

Location: Describe location(s) where option could be implemented and other areas that the option would affect, if applicable. Attach a map, if applicable.

This effort should include the entire basin, as well as water users outside of the basin that rely on Colorado River water.

Quantity and Timing: Roughly quantify the range of the potential amount of water that the option could provide over the next 50 years and in what timeframe that amount could be available. If option could be implemented in phases, include quantity estimates associated with each phase. If known, specify any important seasonal (e.g., more water could be available in winter) and/or frequency (e.g., more water could likely be available during above-average hydrologic years) considerations. If known, describe any key assumptions made in order to quantify the potential amount.

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Additional Information

Technical Feasibility: Describe the maturity and feasibility of the concept/technology being proposed, and what research and/or technological development might first be needed.

California has demonstrated the technical feasibility of an ambitious performance-based water use efficiency goal. The California Department of Water Resources has prepared the following plan to implement California's 20x2020 goal - <http://www.water.ca.gov/wateruseefficiency/sb7/docs/20x2020plan.pdf>

Costs: Provide cost and funding information, if available, including capital, operations, maintenance, repair, replacement, and any other costs and sources of funds (e.g., public, private, or both public and private). Identify what is and is not included in the provided cost numbers and provide references used for cost justification. Methodologies for calculating unit costs (e.g., \$/acre-foot or \$/million gallons) vary widely; therefore, do not provide unit costs without also providing the assumed capital and annual costs for the option, and the methodology used to calculate unit costs.

Improvements in water use efficiency are widely recognized as the most cost-effective source of new water supply, particularly in the West.

Permitting: List the permits and/or approvals required and status of any permits and/or approvals received.

Legal / Public Policy Considerations: Describe legal/public policy considerations associated with the option. Describe any agreements necessary for implementation and any potential water rights issues, if known.

Establishing a basin-wide efficiency goal could be accomplished through the adoption of legislation by all basin states. However, such legislation is not necessary. A similar goal could be established through an agreement among governors, among water agencies, or among stakeholders. California has demonstrated one approach to establishing such a goal, through the passage in 2009 of SB 7X7, which created a state-wide goal of increasing per-capita water use 20% by 2020.

Implementation Risk / Uncertainty: Describe any aspects of the option that involves risk or uncertainty related to implementing the option.

Water agencies across the basin have demonstrated that efficiency investments are among the least uncertain and low-risk water supply investments available.

Reliability: Describe the anticipated reliability of the option and any known risks to supply or demand, such as: drought risk, water contamination risk, risk of infrastructure failure, etc.

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Investments in water use efficiency are among the most reliable sources of water. Efficiency investments can yield reliable benefits in all year types. They are also resistant to the likely impacts of climate change. In fact, some efficiency investments, such as landscape conservation programs, could yield greater water savings in a warmer future. These benefits are discussed further in NRDC's report *In Hot Water* (<http://www.nrdc.org/globalWarming/hotwater/contents.asp>).

Water Quality: Identify key water quality implications (salinity and other constituents) associated with the option in all of the locations the option may affect.

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Energy Needs: Describe, and quantify if known, the energy needs associated with the option. Include any energy required to obtain, treat, and deliver the water to the defined location at the defined quality.

Energy Required	Source(s) of Energy
In most cases, water use efficiency investments result in reduced energy use.	

Hydroelectric Energy Generation: Describe, and quantify if known, any anticipated increases or decreases in hydroelectric energy generation as a result of the option.

Location of Generation	Impact to Generation

Recreation: Describe any anticipated positive or negative effects on recreation.

Location(s)	Anticipate Benefits or Impacts

Environment: Describe any anticipated positive or negative effects on ecosystems within or outside of the Colorado River Basin.

Location(s)	Anticipated Benefits or Impacts
Basin-wide	Improvements in efficiency can reduce pressure on surface and groundwater sources of water.

Socioeconomics: Describe anticipated positive or negative socioeconomic (social and economic factors) effects.

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Other Information: Provide other information as appropriate, including potential secondary benefits or considerations. Attach supporting documentation or references, if applicable.