

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: Jan 25, 2012

Option Name:

No New Large-Scale Diversions

Description of Option:

Within the Colorado River Basin and "adjacent areas," a combination of mostly non-structural options and strategies (e.g. temporary transfers of agriculturally-owned water to municipalities such as through water banking, reoperation of reservoirs, water reuse, and municipal demand management) eliminates the need for new large-scale withdrawals of Colorado River water (i.e. no Lake Powell Pipeline, no Flaming Gorge Pipeline, no CAP extension). The intent of this option is to limit major, future depletions in streamflow within the Colorado River Basin.

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

Diversions points at Flaming Gorge Reservoir, Lake Powell, and Lake Havasu are not used to supply additional water to municipalities in other parts of the Basin or in adjacent areas.

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.

There is no quantity of water associated with this option directly.

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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.

Not building large-scale infrastructure projects is completely feasible. The feasibility of replacement water supplies depends on the options selected, but municipal demand management and reservoir reoperations are both common in the US. Temporary transfers of agricultural water, such as the fallowing programs in Southern California, have become increasingly common in the US in the last decade. Since the 1990 EPA veto of a permit for Two Forks Dam in Colorado, there are examples in the Basin and elsewhere of proposed trans-basin projects being rejected in favor of less costly and controversial non-structural alternatives.

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.

Will vary depending on the alternate option for water supply. As an example, the Colorado Water Conservation Board estimates the average cost to implement conservation programs over the next 10 years to be \$6,327 per acre-foot, with the less expensive measures costing as little as \$1,000 to \$2,000 per acre-foot. The CWCB further estimates direct non-potable reuse to cost approximately \$7,000 per acre-foot (including infrastructure requirements), and the costs for indirect potable reuse to be \$13,500 per acre-foot. These are all substantially less than the \$30,000 to \$40,000 per acre-foot estimated for just the capital costs of new supply proposals from the Western Slope.¹

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

Most new large-scale water withdrawals from the Colorado River Basin would require an EIS, whereas most municipal demand management programs will not. Some water banking and reservoir re-operations will require EISes, but those are less likely to be as controversial as permitting large new out-of-basin diversion projects.

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.

The legal issues raised by diverting water in one state for use in another, or diverting water from the Upper Basin for use in the Lower Basin are substantial, but would not need to be addressed under this alternative. Legal issues raised by alternative supply options vary, although demand management programs and reservoir reoperations typically do not trigger significant legal issues.

¹ Colorado Department of Natural Resources, Colorado Water Conservation Board. 2011. *Colorado's water supply future, Statewide Water Supply Initiative 2010*. Denver, CO. February

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

The risks and uncertainty of relying on alternatives like demand management, reservoir re-operations, reuse, and temporary transfers of agricultural water will vary depending on the specific alternate, but these risks are substantially lower than the risk of relying on construction of costly and controversial new trans-basin diversions to supply municipal water.

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.

Vary depending on alternate option for water supply.

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

Likely improved by comparison to pipelines in place because of dilution associated with greater water quantity in the river.

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
Vary depending on alternate option for water supply, but all options likely to use <i>significantly</i> less than energy needed for pipelines to deliver comparable quantities of water.	

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
Pipeline alternatives are unlikely to have any or minimal impact on existing power generation by comparison to new pipelines, which, by taking water out of the river, result in a decrease of existing generation.	

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

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Location(s)	Anticipate Benefits or Impacts
Improved by comparison to putting new pipelines in place, because of greater flows in the river.	

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

Location(s)	Anticipated Benefits or Impacts
Improved by comparison to putting new pipelines in place, because of greater flows in the river.	

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

Unknown.

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

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