

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: February 1, 2012

Option Name:

Guided Water Markets

Description of Option:

Assuming that some water uses will have to be reduced in the Upper Basin during prolonged droughts to ensure compliance by Upper Basin States with the Colorado River Compact, this option would: (1) seek to maximize opportunities for using economically beneficial market transactions to secure necessary reductions; and (2) where possible, employ related federal programs to maximize environmental and agricultural benefits throughout the Upper Basin. Strict adherence to prior appropriation in implementation of any curtailment scenario could require some junior water right holders (including some farmers and ranchers) to forego use of Colorado River water. With a more strategic, guided approach, water market transactions could be proactively used to meet demand reduction goals. In essence, such guided markets would seek to allow irrigators who have low profit margins or who have less productive lands within their operation early opportunities to participate in the market, reducing pressure on more profitable irrigation operations that might otherwise be subject to cutbacks. Guided water markets might be coupled with other programs such as Farm Bill conservation programs, the Salinity Control Program, species Recovery Programs, as well as state-specific programs to help provide funding and expand the range of benefits created by guided markets. For example, in coordination with the Salinity Control Program, market-based, compensated transactions with willing sellers could be structured to prioritize reductions in irrigation on lands that contribute high levels of salinity to further reduce salinity loading in the 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.

Upper Basin.

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-

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average hydrologic years) considerations. If known, describe any key assumptions made in order to quantify the potential amount.

The amount of water conserved would vary depending on how much water can be made available by willing sellers/lessors and is likely to vary depending on what incentives they are offered through market incentives and possible use of related federal programs. This kind of approach will likely start off with small amounts of water enrolled but would increase as programs become more established and trusted. In addition, this approach could be piloted first in places where curtailments are more likely to occur or where salinity and selenium loading is high.

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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.

One technical challenge will be to credibly identify the locations throughout the Upper Basin where participation in guided markets would be most likely and where such participation could provide additional benefits with respect to reductions in salinity and selenium or recovery of endangered species.

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.

A guided water market would function much like other water banks and therefore administration costs and cost per acre foot would need to be determined, but would differ in that it could create additional benefits. Potentially, new funds could be used to develop accounts that would compensate irrigators willing to forbear water use in the anticipation of, or in the event of, a 'call' on the Colorado River Compact. Water users looking to firm their uses in the event of a 'call' may decide to pay into a fund to help identify water rights ahead of a call.

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

It is unlikely that permitting will be required unless federal reservoirs are used to store the "new" water that would be used at a later time by a buyer.

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.

This strategy will certainly have administration issues that need to be resolved. These include calculating saved water within the context of individual state water rights systems.

Another challenge will be matching buyers and sellers (developing the structure and institutional mechanisms) and finding ways to get the saved water supply to buyers in a way that benefits the environment or has no net impact.

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

LOW. This is a no-regrets activity, with virtually no risk of stranded capital or negative environmental impact.

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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.

No known risks and in fact should increase reliability.

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

Potential for water quality improvements.

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
None known.	

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
	None known.

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

Location(s)	Anticipate Benefits or Impacts
	Potential for recreation benefits resulting from increased flows downstream from conservation locations; potential to increase recreation benefits if reservoir operations can be altered in tandem with conservation activities. Both positive and negative impacts will be very site specific though and we would need to consider them as details and operations are developed.

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

Location(s)	Anticipated Benefits or Impacts
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	Potential for increased river health resulting from increasing flows downstream from conservation locations and improved water quality. Both positive and negative impacts will be very site specific though and we would need to consider them as details and operations are developed.

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

Economic impacts to rural/source communities would be mitigated through direct payments to irrigators under many of these programs. In some cases it may also be appropriate to ensure payments to local institutions (e.g. county governments) and dependent businesses (e.g. crop sprayers) to compensate for revenue losses. Mitigation is expected to be defined in terms of negotiated agreements.

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

This concept is based on the assumption that in the future Upper Basin states will have to curtail uses in order to comply with the Colorado River Compact and that some water transfers and market based solutions will occur. A guided water market focuses on HOW to structure those solutions. We would appreciate the opportunity to work with Reclamation's technical team on the implementation of this option in the Colorado River Simulation System model.