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

Form to Submit Options to Resolve Future Supply and Demand Imbalances

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:

Facilitating Voluntary Transfers of Federal Project Water

Description of Option:

This option calls for the U.S. Bureau of Reclamation to ensure that its policies and procedures provide appropriate flexibility to facilitate voluntary transfers of water that stored in federal reservoirs and delivered pursuant to federal contracts with water users. Additionally, this would include ensuring that Reclamation has the ability to facilitate water banking. Currently, it is not clear whether water banking is allowed throughout the federal facilities. Reclamation should assess this and determine if it can be explicit that water banking is permissible without having to change project authorization. Several of the relevant policies are currently undergoing public comment and revision. (http://www.usbr.gov/recman/)

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 option would apply to federal water projects throughout the basin, but particularly to areas where demand patterns are shifting from purely agricultural irrigation demand to a mix of agricultural, municipal/industrial and environmental needs. It would apply to those instances in which water users receiving federal project water desire to enter into voluntary, compensated leases or permanent sales and where those transfers meet state and federal legal requirements.

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.

Quantity is unknown, but a very large percentage of water used in the basin derives from federal reclamation projects. The timing and scale of such voluntary transfers would depend on the development of demand patterns, crop prices, development patterns and river system health trends. Additionally, water banking allows for flexibility to adapt to a changing climate without necessarily transferring water out of agriculture permanently. These kinds of mechanisms will be critical to fostering flexibility in the future.

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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.

Successful voluntary transfers have been demonstrated throughout the western U.S., including in the Colorado River Basin. Technological issues can occur in specific transfers, however, including: how to accurately quantify reduced consumptive use and how to accomplish transfers in a way that maintains the viability of the remaining irrigated agriculture in the project area.

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.

Not available but in many cases voluntary transfers (temporary or permanent) a cost-effective way of meeting shifting demand patterns and impose less external costs on the environment than new reservoirs.

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

Virtually all transfers of federal project water will require federal and state law approvals, and most will require action by irrigation district boards. This option encourages USBR to ensure that its transfer policies and procedures do not pose undue roadblocks to cost-effective, volutaary and environmentally sound transfers. USBR could further advance this policy by providing business plan assistance to irrigation districts receiving federal project water, allowing the districts to better assess their options over the coming decades. (See Ron Griffin and Mary Kelly, *Colorado River Basin Irrigation,* in The Water Report, January 2012, Issue # 95).

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.

See discussion above under permitting. Voluntary transfers may also implicate third-party socio-economic interests. In most cases, those interests must be considered under state approval procedures for transfers.

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

Temporary transfers or mechanisms like dry-year options and water banking may be useful to reduce risk to irrigators.

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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Transfers are generally as reliable as the underlying water source.

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

Transfers may have either negative or positive effects on water quality, depending on location and type and amount of the transfer. These potential implications would have to be evaluated on a case-by-case basis.

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
N/A	

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
	N/A

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

Location(s)	Anticipate Benefits or Impacts
	Voluntary transfers may explicitly have positive effects on recreation when they are made for purposes of enhancing instream flow, depending on how the transactions are structured. The effect of other types of voluntary transfers (e.g. from irrigation to municipal use) on recreation will need to be evaluated on a case-by-case basis.

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

Location(s)	Anticipated Benefits or Impacts
	Voluntary transfers may explicitly have positive effects on ecosystems when they are made for purposes of enhancing instream flow. The effect of other types of voluntary transfers (e.g. from irrigation to municipal use) on ecosystems will need to be evaluated on a case-by-case basis.

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

Properly structured, voluntary transfers, especially temporary or rotational type transfers, can have positive socioeconomic effects, while serving as a cost effective way for cities and environmental needs to be met.

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

While voluntary transfers have been occurring in the Colorado River Basin, transfers involving federal project water are often more complex and difficult. Yet, many irrigation districts dependent on federal project water will need to better understand if, how and when transfers can be beneficial for district operations as demand and water availability patterns shift rapidly over the next few decades.