

**SUBMIT OPTION SUBMITTAL FORM BY:**

1. EMAIL TO: [COLORADORIVERBASINSTUDY@USBR.GOV](mailto: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

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## Option Submittal Form

**Contact Information (optional):**

**Keep my contact information private.**

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

Date Option Submitted: 1/27/2012

**Option Name:**

***Mutual Forbearance by Upper and Lower Basins***

**Description of Option:**

This option proposes a negotiated agreement between the Upper and Lower Basin states. The Upper Basin States would agree to forbear annual consumption of water beyond some specified amount, and in exchange the Lower Basin states would agree to forbear making an inter-basin shortage call under the 1922 Compact. The precise level of the cap on Upper Basin consumptive use would be agreed to via interstate negotiations, as would the apportionment of the development cap among the four Upper Basin states – with appropriate input on both issues from the stakeholder governance process described in Proposal #1, above. This agreement could be negotiated on a permanent basis or (more likely) with a fixed sunset date on which it would expire if not renewed.

The primary purpose of the mutual forbearance arrangement would be to provide certainty to both the Upper and Lower Basin states and users therein. The Lower Basin would receive a much more certain level of flows from Lake Mead under the drier conditions expected in coming decades due to climate change, and the Upper Basin would be free from the fear of a compact call. Neither side would need to proceed with litigation to resolve the major disputed issues under the 1922 Compact, e.g. the Upper Basin delivery obligation/ obligation not to deplete, the status of the Lower Basin tributaries, and the apportionment of the delivery obligation to Mexico. This would allow all parties to concentrate on resolving any remaining supply/demand imbalances through conservation, reallocation, temporary storage/ banking, and other appropriate measures.

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

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**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.

This option would provide for more stable and predictable releases from Mead and Powell, and would make it more likely that releases could be maintained at or above 8.23 maf/ year. The degree of increase would depend on the numeric level of the cap that was negotiated, and on future climate conditions.

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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.

This option is technically feasible, but would require the development of an agreed-upon methodology to measure consumptive use at multiple sites in the Upper Basin.

**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.

This option would have administrative and monitoring costs that would likely be borne by the basin states, the Bureau, and (in the case of monitoring) other federal agencies who participated in monitoring work

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

N/A

**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 option would provide greater water security for both the Upper and Lower Basins, but would require trade-offs: the Upper Basin states would have to give up (at least on a temporary basis) their right to develop the full extent of their apportionments under the Compact, and the Lower Basin states would have to forego their right to make an Upper Basin shortage call.

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

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

N/A
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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
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
Glen Canyon Dam	Larger, more-stable flows/ generation than existing baseline scenario
Hoover Dam	Larger, more-stable flows/ generation than existing baseline scenario

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

Location(s)	Anticipate Benefits or Impacts
Grand Canyon, Mead, Powell	More stable water supply available to sustain recreational flows and lake levels
Upper Basin mainstem and tributaries	Cap on new water development would limit future decreases in in-stream flows available for recreation

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

Location(s)	Anticipated Benefits or Impacts
Upper Basin mainstem and tributaries	Cap on new water development would limit future decreases in in-stream flows available for ecosystems

**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.