

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: _____

Option Name:

Colorado River Augmentation - Bear River to Ham's Fork Creek Import

Description of Option:

This import alternative involves diverting water from the Bear River and delivering it to the Green River Basin. Under this alternative, water would be diverted and pumped from Bear River over the basin divide to Ham's Fork Creek, upstream of Lake Viva Naughton.
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Location: Describe location(s) where option could be implemented and other areas that the option would affect, if applicable. Attach a map, if applicable.

Various locations were considered for diversion from the Bear River. Based on review of stream gage data, there is sufficient yield in the Bear River directly downstream of Smith's Fork to consider it as a diversion location.

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.

50,000 AFY - Annual distribution of Bear River flows below Smith's Fork and presents one possible river diversion operational scheme. As shown, peak flows generally occur between the months of May and July. Based on the average hydrologic year, a river diversion structure with a capacity of 750 cubic feet per second (cfs) could capture and divert 50,000 AF over those months, while leaving a minimum of 750 cfs in the river.
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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.

The components associated with the alignment include two pumping stations, one hydropower station, 11.5 miles of 132-inch diameter pipe, and approximately 2.5 miles of tunnel. All of these are highly feasible from a technical standpoint.

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.

Estimated Capital Costs: \$314M

Estimated Annual O&M Costs: \$12M/Yr

\$600/AF

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

Extensive permitting would be required. Key permit issue may include construction within National Forest and obtaining a favorable record of decision on the Environmental Impact Statement

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.

Legal Considerations: Agreements with all stakeholders would be required, including Utah and Wyoming.

Public Policy Considerations:.

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

Because of this relatively short distance and because the feasibility of a new storage facility is unknown, it was assumed that regulatory storage would not be provided and that the conveyance facilities would be sized to match the full 750 cfs capacity of the diversion facilities. If warranted, future studies could evaluate the feasibility and cost benefit of providing storage near Smith's Fork.

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.

Reliability of the supply depends primarily on the water rights and interstate compact agreements made.

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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.

Bear River at the proposed diversion point is considered to be good as a M&I source water.

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
The two pumping stations would have combined power requirement of approximately 25,000 hp.	unknown

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
	One hydropower facility is needed that will generate 0.5 Mwatts of power

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

Location(s)	Anticipate Benefits or Impacts
	none

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

Location(s)	Anticipated Benefits or Impacts
	Air Quality: n/a
	Ecosystems: Detailed biology studies would be required to determine the actual instream flow requirements and diversion limitations. Environmental issues include the effect of reduced river discharge on biological communities, especially anadromous fish species, and impacts due to construction of facilities

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

none

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

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