

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 - Snake River Import
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Description of Option:

This import alternative involves diverting water from the Snake River and delivering it to the Green River Basin. Under this alternative, water would be pumped from Palisades Reservoir over the basin divide to Horse Creek, which is tributary to the Green River.

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

Palisades Reservoir, near Alpine, Wyoming

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.

33,000 AFY - This is based on the amount of storage allocated to Wyoming in Palisades Reservoir that could capture spring runoff and is also allocated to Wyoming under the Snake River Compact. Up to 155,000 AFY could be realized (on average) if new storage was constructed upstream of Palisades Reservoir.

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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 facility components associated with this option include three pumping stations, 26 miles of 36-inch diameter pipe, and approximately 6 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: \$250M

Estimated Annual O&M Costs: \$13M/Yr

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

The 33,000 AF of storage space in Palisades Reservoir assumed to be available is currently tied up in a long-term agreement with the Wyoming Game and Fish Department and the operational approach to Palisades Reservoir would require revisions and approvals from all stakeholders for the storage space to be used as operational storage for an out-of-basin diversion.

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.

Requires approval from the State of Idaho, according to the Snake River Compact. Article IV of the Snake River Interstate Compact states the following, "No water of the Snake River shall be diverted in Wyoming for use outside the drainage area of the Snake River except with the approval of Idaho; and no water of any tributary of the Salt River heading in Idaho shall be diverted in Idaho for use outside the drainage area of said tributary except with the approval of Wyoming."

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

Two remote pumping stations located in the mountains would be required. Bringing power to the pumping stations may be challenging

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.

The proposed water quantity is fairly reliable, considering that the average flow available to Wyoming is about 155,000 AFY and has been allocated 33,000 AFY of storage in Palisades Reservoir and this storage is not currently being used to meet compact requirements.

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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.

Water quality in the Snake River at the proposed diversion point is considered to be good as a municipal and industrial (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 three pumping stations would have combined power requirement of approximately 28,500 hp (21 MW). This concept is estimated to use 15.7 kWh per 1000 gallons	The energy source for the conveyance system is unknown. The first pumping station would be located near Palisades Reservoir, while the subsequent two power stations would be remote and in the mountains. Bringing power to the PSs may be challenging.

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

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
	The 33,000 AF of storage space in Palisades Reservoir assumed to be available is currently tied up in a long-term agreement with the Wyoming Game and Fish Department and the operational approach to Palisades Reservoir would require revisions and approvals from all stakeholders for the storage space to be used for an out-of-basin diversion.

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

none

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

Palisades Reservoir was selected as the diversion location because utilizing this facility would eliminate the need for new diversion facilities and the potentially available storage would reduce the size of the required transbasin facilities. The new conveyance facilities would deliver the stored water to the Green River Basin over an 11-month period. This would leave one month per year that the system could be shut down for annual maintenance.