

# DRAFT

Jackson Lake Operating Agreement  
Between the  
Bureau of Reclamation and the State of Wyoming

Purpose

The purpose of this agreement is to provide information regarding the Bureau of Reclamation's (Reclamation) current operating criteria for Jackson Lake by describing both physical and institutional constraints, the flexibility within these constraints, and what operational alternatives exist within this area of flexibility. In addition, this agreement will address the water accounting procedures used to track storage rights and water exchanges between reservoirs in general and specifically as it relates to the Palisades space contracted for by the State of Wyoming (Wyoming). This operating agreement will also attempt to define the relationship between Reclamation and Wyoming in the operations of Jackson Lake.

It is important to understand that in a complex system of interdependent reservoirs, having a variety of multipurpose demands to balance, it is imperative that the highest level of operational flexibility possible is afforded to water managers. With the ever changing water supply conditions, changes in irrigation demand patterns, and expanding needs for recreation and fish and wildlife uses, creative planning, sound management, and coordination is required to meet the increasing demands on the finite water resource. This agreement is intended to enhance these coordinated efforts between Reclamation and Wyoming.

#### Background

The State of Wyoming has entered into a contract with the Bureau of Reclamation which allows the purchase of 33,000 acre feet (af) of space in Palisades Reservoir. This space was reserved in Palisades to enable Wyoming to meet its Snake River Compact (Compact) obligations. This space will be utilized by Wyoming to provide, through exchange, water in Jackson Lake for use by Wyoming. This storage would be used at the discretion of Wyoming either as a volume retained in Jackson Lake to maintain higher lake levels or released to supplement low fall-winter streamflows or some combination as deemed necessary by Wyoming. All decisions or calls on the use of this space will be made by Wyoming through their appropriate authorities. The purchase of

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such storage space does not relieve Wyoming of its obligation under the Compact. Wyoming also has the option of marketing their Palisades storage through the Rental Pool.

Jackson Lake Operating Criteria

Flood Control:

Jackson Lake Dam and Palisades Dam are utilized as flood control structures to provide flood protection on the Snake River as required by Section 8 of the 1949 Flood Control Act. This provision is administered by the Corps of Engineers, Walla Walla District. The criteria calls for the use of these reservoirs to aid in controlling flows on the Snake River at Heise to a maximum of 20,000 cubic feet per second (cfs). Storage space allocations are determined daily, March through July, by using a set of rule curves that determine how much space shall be reserved based on the predicted spring snow melt runoff. The required space is allocated 25% to Jackson Lake and 75% to Palisades Reservoir.

A winter flood space reservation of 200,000 acre-feet is required for Jackson Lake from October 1 through April 30 of each year to provide protection from rain-on-snow events. This level is at elevation 6761 or a content of 647,000 acre-feet. Additionally,

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Jackson Lake Dam is operated to provide flood control in the Wilson, Wyoming area. That area has experienced encroachment on the flood plain which has restricted the effective channel capacity. Dikes are utilized to pass flood flow levels up to 20,000 cfs, however, relief from flows in excess of 10,000 cfs is provided if flood space in Jackson Lake is available and no other authorized project purposes are compromised. Jackson Lake can be and is operated below elevation 6761 as needed to supply downstream demands or for required maintenance or structural repairs as determined by Reclamation.

Fall/winter operation for lake trout:

Beginning on October 1, the Jackson Lake is operated to protect the lake trout redds by not drawing the lake down any further. In most years lake inflow is passed. Required flood reservation releases generally are performed during the summer and fall months. In years when substantial releases from storage are required to meet irrigation demands, the fall and winter releases are reduced to allow for the storage of inflow above those levels until the winter level of 647,000 acre-feet is reached.

Winter release operations:

Winter time releases at Jackson Lake Dam have typically ranged

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from 100 cfs up to inflow which ranges from 350 to 600 cfs depending upon the fall and winter stream flow and watershed conditions. In most years, the water supply conditions are such that winter releases meet or exceed the recommended minimums for fishery protection and enhancement. However, there are rare occasions when the storage rights held in Jackson Lake require releases perhaps as low as 100 cfs for extended periods. By utilizing Palisades Reservoir as a location for the storage of Jackson Lake rights, some additional flows can be bypassed in certain circumstances. The State of Wyoming may choose to utilize some or all of the accrual to their Palisades Reservoir storage to supplement these releases with exchange water held in Jackson Lake. (( Comment - Prior to the purchase of 33,000 acre-feet of Palisades space by Wyoming, the 100 cfs was made up by 50 cfs from storable flows that belonged to spaceholders and 50 cfs from that 33,000 acre-feet of space. This was done through exchange.))

Flow release demand criteria:

In near to above normal water years, summer and fall operations, May 1 through October 1, requires bypassing inflow within local flood control criteria and making releases from storage to meet the flood reservation requirements by October 1. These releases are timed in a manner that attempts to balance boating and

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fishing opportunities below Jackson Lake Dam during the peak recreation periods. Scenic viewing boaters in the upper reaches prefer relatively tranquil flows (500 to 2000 cfs) adequate for the scenic float boating experience. However, the whitewater boaters want moderate to high releases from Jackson Lake Dam (2000 to 6000 cfs) depending upon the skill level or requirements of the targeted clientele. On the other hand, fishermen prefer lower flows when possible and detest rapid or frequent changes. (( Comment - The minimum flow for floating below the confluence with the Buffalo Fork is 2,000 cfs. The local gain is approximately 600 cfs. Similar description can be made for other stream reaches. ))

During water shortage years, it is necessary to make storage releases from Jackson Lake Dam to meet irrigation demand. The timing of these releases is highly dependant upon the demand patterns but generally, releases are made to meet later season demands. Early demands are met with storage held in American Falls and Palisades reservoirs. Jackson Lake releases are also factored into Palisades Dam power generation and in years where there is limited carryover storage in Palisades, the timing of Jackson Lake releases becomes much more of a factor in providing sufficient head for power generation. More water must be released downstream earlier.

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Typical Operation:

Usually, Jackson Lake is filled during the recession portion of the runoff, sometime near the end of June. Inflows are bypassed until they no longer meet the desired or required release rate. Release requirements are then met by drafting storage. If demands hold up through the summer season, the active storage portion of the lake (approximately 800,000 acre-feet) may be depleted by mid to late September. As the season progresses, demands are carefully monitored to avoid excessive releases from upstream reservoirs, in this case Jackson Lake. Releases from the active storage space in Jackson Lake, that below the 200,000 acre-feet winter flood control requirement, is normally the last storage to be delivered from the system.

Water Accounting

Dividing water between various water rights in the Snake River basin above Milner, Idaho is the responsibility of the Water District 01 Watermaster as appointed by the Idaho Department of Water Resources. Wyoming and Idaho water rights operate almost identically and are coordinated under the authority of the Snake River Compact. For reservoirs, the watermaster's office accounts for water storable in each reservoir depending upon it's priority

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date relative to other rights and amount of water originating in the watershed above the reservoir. For diversions, water that is in excess of the flows necessary to meet the total diversion rights or which is not diverted by right is charged to storage.

In order for Wyoming to utilize water stored in Palisades Reservoir to supplement releases from Jackson Lake, an exchange will be required. Placeholder contracts within the upper Snake River basin allow for the temporary holding of water belonging to one reservoir in another reservoir so long as the storage right of that reservoir is not injured in any manner. If water is requested to be released from Jackson Lake by Wyoming for the purpose of supplementing minimum releases, it will be charged to the Wyoming accrual in Palisades Reservoir. Once this water is released from Jackson Lake, it loses its identity and becomes available to fill downstream natural or storage rights. That operation in turn will make space available in Palisades Reservoir for the temporary holding of water that belongs to the Jackson Lake storage right.

If American Falls Reservoir was not filled by right, the water released from Jackson Lake physically could be moving from Palisades Reservoir to American Falls Reservoir in the water rights accounting process. Once American Falls Reservoir is filled and Palisades Reservoir is near full, the physical release



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of storage from Jackson Lake could, in the accounting process, be flowing from Wyoming's Palisades Reservoir space and also accruing to Palisades Reservoir space of which Wyoming would share on a pro rata basis. The occurrence of a situation to curtail releases is triggered by downstream reservoirs filling and the possibility of stored water passing Milner impends. The majority of requests from Wyoming would probably occur in the fall and winter months.

Operational Relationship

The complexities of the reservoir system operation make it difficult to define conditions that warrant a specific action. It will be in the best interest of the State of Wyoming to take an active role in making the decisions that best serve it's desires in the management of the Palisades Reservoir accrual each year.

Reclamation can best accommodate this process by providing a high level of information exchange through establishing and maintaining open channels of communication and by providing a forum for Wyoming to actively participate in the planning process. Both parties interests can also best be served by maintaining the level of operational flexibility that is

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currently utilized to meet the varied needs of the Upper Snake basin.

Communications and Planning:

Currently, the daily operating information can be obtained through the recorded message at Jackson Lake Dam, telephone number 307-733-5452, or by contacting the Water Operations Branch, Minidoka Project Office, Burley, Idaho at 208-678-0461, or in an emergency situation, the Jackson Lake Dam Facility Manager can be reached at 307-543-2519.

The Minidoka Project Office also issues periodic news releases and operational plans as the situation warrants. In addition to this, a public meeting is held in late May to discuss the upcoming operational plan for the irrigation season.

Reclamation proposes that a more formalized process be developed between the interested State agencies and the Minidoka Project Office. A spring meeting after the April 1 forecast would be beneficial as proposed operating scenarios could be discussed thus providing for input into the planning process by the various concerns. An annual operating plan can then be prepared factoring in the many interests, however, it is Reclamation's duty to operate the facilities within the confines of the

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authorizing legislation, to protect the facilities and downstream concerns from flood damages, and to protect the water rights holders interests. Reclamation also proposes a fall meeting or telephone conference to discuss the probable fall/winter operations. Within the operational and institutional constraints as discussed, Reclamation does have flexibility to manage the Upper Snake Reservoir system for multiple concerns. Additional contact and coordination will be required on a continuing basis as the water supply and runoff conditions change throughout the season.

Authority

(add a section describing the names and/or positions and/or agencies from Wyoming authorized to make decisions regarding Wyoming's contracted space in Palisades re: Jackson Lake. Also add a similar description for those in Reclamation)

(( Comment - We have developed descriptions of the gaging station and hydromet network, snow measurement network, and forecasting equation and process, and some other similar material that can be included as appendices if needed. ))