

**Brad Little** *Governor* 

#### **Jeff Raybould**

*Chairman* St. Anthony At Large

#### **Roger W. Chase**

*Vice-Chairman* Pocatello District 4

#### Jo Ann Cole-Hansen

Secretary Lewiston At Large

**Peter Van Der Meulen** Hailey At Large

#### **Albert Barker**

Boise District 2

#### Vacant District 3

**Dale Van Stone** Hope District 1

Vacant At Large

# Amended AGENDA

**IDAHO WATER RESOURCE BOARD** 

Board Meeting No. 5-21 WORK SESSION Thursday, March 18, 2021 11:00 a.m. (MST)

Water Center

Conference Rooms 602 B, C & D / Zoom Online

322 E. Front St.

BOISE

(This meeting will be conducted using guidance in response to the public health emergency caused by the COVID-19 pandemic. Masks are required & in person attendance is limited. Call or email if you have questions: jennifer.strange@idwr.idaho.gov)

Board Members & the Public may participate via Zoom

Click here to join our Zoom Meeting Dial in Option: 1(253) 215-8782

<u>Meeting ID</u>: 976 9435 9072 <u>Passcode</u>: 896633

#### 1. Roll Call

- 2. Salmon & Energy Concept Presentation by Congressman Mike Simpson
- 3. Lemhi Basin Settlement Working Group Update
- 4. Boise River Feasibility Study/Anderson Ranch Dam Raise
- 5. Upper Salmon Water Transactions
- 6. Water Supply Outlook Update
- 7. Picabo Livestock Company Loan
- 8. ESPA Recharge Update
- 9. Non-Action Items for Discussion

10. Executive Session: Board will meet pursuant to Idaho Code §74-206(1) subsection (f) to communicate with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. <u>Topics:</u> Idaho Code §42-1737 & Lemhi. There are no actions during executive session.

11. Adjourn

\* Action Item: A vote regarding this item may be made this meeting. Identifying an item as an action item on the agenda does not require a vote to be taken on the item. <u>Americans with Disabilities</u>: If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email: jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.

## Memorandum

To: Idaho Water Resource Board

From: Brian Patton

Date: March 9, 2021

Re: Salmon and Energy Concept Presentation by Congressman Mike Simpson

Congressman Mike Simpson will present the Salmon and Energy Concept.



## The Northwest in Transition Dams, Energy and Salmon

The Northwest has been caught in an unsustainable cycle of conflicts over salmon and energy. For over thirty years, lawsuits, appeals, salmon management directives and endless spending have prevailed, while salmon, energy, agriculture and transportation interests continue to suffer. This concept is a proposal to break that cycle and deliver certainty and security to the Northwest without picking winners and losers.

#### Dams

The 4 Lower Snake River dams (LSRD) provide significant benefits for clean energy, transportation, agriculture and to communities. If the dams were to be removed, the benefits must be replaced. Suggestions in the concept include:

- 35-50-year license extension for all public and private FERC licensed dams in the Columbia River Basin greater than 5 megawatts.
- 35 year dam litigation moratorium related to anadromous fish under the Endangered Species Act (ESA), National Environmental Policy Act (NEPA), and the Clean Water Act (CWA) for the fourteen federal Columbia River System dams, the 12 federal projects on the Upper Snake River, and all FERC-licensed dams within the Columbia Basin greater than 5 megawatts.
- Liability protection for irrigation districts, energy interests or any other entities that own a dam or other engineering structure that impedes the movement of fish.
- Allows for the voluntary removal of nonoperational, marginal or high expense dams or diversions with irrigation protection.

### **Agriculture and Transportation**

Barging provides our agricultural farmers (especially grain) with a low-cost option that prevents them from becoming captive shippers to rail and trucking. They are a critical component in getting our agricultural products overseas. It is essential that the needs of the agriculture community are heard and met if these dams are to be removed. Framework includes:

 A 25-year lawsuit exemption from Clean Water Act or Endangered Species Act lawsuits related to water quality issues for those participating in voluntary watershed partnerships.

- Incentivizes innovation and collaboration with waste management/digesters for dairy and confined animal operations.
- Provides funding and legal indemnification to ditch districts or small energy entities to remove abandoned or non-functioning irrigation structures or dams.
- Ensures irrigation mitigation in the Lower Snake River Corridor.
- Guarantees resources for Palouse/Idaho grain farmers that utilize the Snake River ports to reconfigure/adjust their transportation options or create new opportunities.
- Expands Tri-cities port as a regional hub with an emphasis on creating greater barging volume of agriculture commodities on the Columbia River than exists today.
- Ensures economic adjustment protections for Snake River bargers.

#### Energy

The 4 LSRD provide clean, low cost, renewable hydropower that is on-demand and helps to balance the transmission system. This energy can be replaced, and it can be done in a way that modernizes our energy landscape for generations to come. Suggestions include:

- Projects must provide firm clean power replacement for lost generation.
- Examples include: renewable to battery storage, pump storage, hydrogen storage, small modular reactors, etc.
- Replacement must be built and online prior to any breaching.
- Provide BPA with needed authorities and certainty to enhance their balance sheet.
- Northwest Power Council will have an expanded energy role and be removed from fish recovery.
- Establishes a new Center for Advanced Energy Storage co-located at the Pacific Northwest National Laboratory (PNNL) and a Lewiston-Clarkston Technology campus.

### Fish

All Idaho's salmon and steelhead are listed as threated or endangered. Poor ocean conditions, warming rivers and reservoirs and the 4 LSRD are contributing to their demise. Removing the 4 LSRD isn't a guarantee that Idaho's salmon will return, but if those dams remain, our salmon and steelhead are on a certain path to extinction. Recovery efforts include:

- Designates Columbia Basin States and Tribes as Co-Equal partners in fish management.
- Revitalizes salmon habitat through watershed partnerships.
- Restores Non-ESA protected salmon runs in the Upper Snake and Columbia River Basin.
- Address salmon fisheries infrastructure backlog.

### **Communities and Recreation**

- Provides waterfront restoration for Lewiston-Clarkson.
- Established economic development funds for Tri-Cities and Lewiston-Clarkston areas.
- Designated Lower Snake River National Recreation Area.
- Ensures tourism promotion for Lewiston-Clarkston and Tri-Cities/ Spokane Areas.
- Grants mitigation funds for marina relocation, recreational boating, and impacted sportfishing.

# The Northwest in Transition *Myths* and Facts

**Myth** - There will be increased flooding risks if the dams are removed.

**Fact** – The four Lower Snake River (LSR) dams are not flood control dams. If they were to be removed it <u>would not</u> affect flood control.

# *Myth* - If these dams are breached, all dams will be in danger of being breached.

**Fact** – This concept would protect hydropower in the Northwest by locking in all other major dams in the Columbia River basin for the next 35-50 years and end Endangered Species Act and Clean Water Act lawsuits.

# **Myth** - Congressman Simpson is writing legislation to remove dams.

**Fact** – Congressman Simpson has released a concept; he has not written legislation—he is continuing to hold meetings and take feedback because he wants this to be a process where all stakeholders are creating certainty and security on their own terms for their own futures.

# *Myth* – Congressman Simpson doesn't support hydropower.

**Fact** – Congressman Simpson has supported hydropower for his entire career. The four LSR dams produce incredibly valuable low cost, clean reliable energy. Congressman Simpson's plan would require that the power lost by dam removal be replaced with clean, affordable energy that would be online **before** any of the dams were removed. It would also lock in protections for all major dams in the Columbia Basin for 35-50 years.

# *Myth* - The four LSR dams don't affect salmon runs.

**Fact** – Idaho wild salmon that must transit the four LSR dams have unsustainable survival rates when compared to the salmon that only are required to go through the Columbia River Dams. Salmon on the John Day River in Oregon - which negotiate three dams-have a smolt to adult return (SAR) ratio of around 4%, which is what Snake River salmon need to achieve recovery goals. The mainstem Columbia River salmon go through four dams and their SAR is also roughly 3- 4%. Wild Idaho salmon that transit eight dams (four Columbia and four Snake River) have a SAR of roughly 1%, which biologists say is below replacement and on a trajectory towards extinction.

Congressman Simpson believes that if the dams are removed, we must have a plan to protect Idaho agriculture, Palouse farmers, and our communities. His number one goal is to protect Idaho.

# *Myth* - More reasonable steps at saving salmon need to be addressed first.

**Fact** – For over 30 years, working groups and collaboratives have been examining this issue and have attempted many solutions, and none have proven to save the dying salmon runs. This plan protects Idaho's right to control its water and economic future. It trades chaos for certainty.

## *Myth* - *This concept just throws money at a problem.*

**Fact** – Over 17 billion dollars has been spent on fish recovery already, and there are more endangered salmon species in Idaho than when we began. The status quo is not fiscally responsible. Congressman Simpson's shifts the investment from wasteful spending on failed fish experiments to Idaho's economy and puts the financial backing for important projects that protect Idaho.

# *Myth* - *The power from the four LSR dams cannot be replaced.*

**Fact** – Recent advancements in energy storage will be key to replacement power. This plan invests 10 billion dollars in firm clean power replacement such as; pump, battery storage, small modular reactor, or other technologies.

# *Myth* - Once the dams are breached, replacement power might not be online.

**Fact** – All replacement power must be online prior to any breaching. Also, the dam infrastructure will remain in place, only the earthen berms around the dams will be removed, so if salmon do go extinct, the dams could be restarted.

# **Myth** - Congressman Simpson is prioritizing salmon over people.

**Fact** – While these fish matter, the people are the priority here. Congressman Simpson is the only one to insist that people must be made whole if these dams are to be removed. These dams have incredible benefits that must be replaced. Congressman Simpson is trying to protect Idaho from liberal federal judges. If that happens, our communities and industry will have no voice or say in the matter, and there is no chance all parties would be made whole. In this plan, everyone is invited to collaborate and have a say in their own future.

# **Myth** – Congressman Simpson is moving forward on this concept without agriculture.

**Fact** – Congressman Simpson and his staff are in constant communication with a number of Idaho agriculture groups and water user groups. We have learned a great deal about how dam removal would impact their livelihoods. This plan was developed with their critical input and is an effort to find real solutions.

# **Myth** - This concept is only supported by environmentalists.

**Fact** – There is a broad coalition of groups and stakeholders who recognize that the endless cycle of lawsuits and uncertainly around the four LSR dams is not working. Congressman Simpson isn't asking people to support his plan, he's asking if the Northwest wants to fix a problem that is only getting more difficult and expensive with no resolution in sight.

## **Myth** – Lower Snake River Farmers who use this water will not be able to irrigate.

**Fact** – The concept provides resources for the water groups to reconfigure pipes and deepen wells to ensure irrigation continues without issue.

# *Myth* - Barging is the only way to transport goods from Lewiston.

**Fact** – Road and rail are a reasonable alternative to barging. Also, the concepts would expand and reconfigure the Tri-Cities area ports so that they can become an even larger regional hub/destination for increased barging (agriculture, commodities and containers) with the goal of putting more annual barging tonnage on the Columbia River than exists today.

## Memorandum

To:Idaho Water Resource BoardFrom:Brian Patton

Date: March 9, 2021

Re: Lemhi Basin Settlement Working Group Update



Clive Strong and Norm Semanko will provide the latest updates on the Lemhi Basin Settlement Working Group.

## Memorandum

To:Idaho Water Resource BoardFrom:Cynthia Bridge Clark and Emily Skoro

Date: March 5, 2021

Re: Boise River Feasibility Study & Anderson Ranch Dam Raise

The following is a status report on the Boise River Feasibility Study (study) and the Anderson Ranch Dam Raise alternative. Staff will provide a more detailed update at the March regular IWRB meeting.

#### **Project Concept**

To help address future water needs in the Treasure Valley and southwest Idaho, the Idaho Water Resource Board (IWRB) partnered with the Bureau of Reclamation (Reclamation) to complete a feasibility study of new surface water storage within the Boise River Drainage (study). The study initially included an evaluation of small raises of the three large dams on the Boise River system (Anderson Ranch, Arrowrock, and Lucky Peak Dams) and was later focused on a raise of Anderson Ranch Dam. The concept recommended in Reclamation's Final Feasibility Study is a 6-foot dam raise resulting in approximately 29,000 acre-feet of storage capacity.

The study was authorized under the Water Infrastructure Improvements for the Nation Act (WIIN Act, P.L. 114-322). General requirements under the WIIN Act include:

- Continuing authority only applies to projects determined to be feasible before January 1, 2021. Additionally, projects can only receive federal funds if the project is designated by name in Federal appropriations legislation.
- Reclamation must secure agreement(s) with project partner(s) providing for upfront funding of the non-Federal share of the capital costs, or post-authorization costs, of the project.
- The WIIN Act requires the project to be under construction by December 16, 2021. The term "construction", as defined by Reclamation, means the designing, materials engineering and testing, surveying, and building of water storage including additions to existing water storage and construction of new storage facilities, exclusive of any Federal statutory or regulatory obligations relating to any permit, review, approval, or other such requirement. Reclamation is currently clarifying the details of this requirement.

In 2019, the Idaho Legislature passed House Joint Memorial 4 (HJM004) and House Bill No. 285 (HB285). HJM004 was passed to support the raising of Anderson Ranch Dam as one of the priorities for the State of Idaho in the interest of promoting additional water security. HB285 provided a \$20,000,000 General Fund transfer to the IWRB's Water Management account to address the fiscal impact of HJM004.

#### **Project Status**

#### Final Environmental Impact Statement/Final Feasibility Study/Record of Decision

Reclamation issued a Draft Environmental Impact Statement (DEIS) and Draft Feasibility Report (DFR) on July 31, 2020. The DEIS and DFR identified a 6-foot raise of Anderson Ranch Dam as the preferred alternative. In



October 2020, Reclamation submitted the Final Feasibility Report (FFR) for feasibility determination. In December 2020, the Secretary of the Interior determined the study's recommended plan to be feasible in accordance with the WIIN Act. Reclamation plans to release the Final Environmental Impact Statement (FEIS) in the spring of 2021 and to issue its decision on the alternatives presented in the FEIS in a Record of Decision (ROD) in the summer of 2021.

#### **IWRB/Reclamation Contracting**

In accordance with resolution no. 19-2020, passed by the IWRB on November 19, 2020, IWRB will enter into an agreement or contract with Reclamation for construction of the raise, use of water, and operations and maintenance for the new storage. This includes providing for all of the upfront funds necessary to pay the non-federal share of the project costs. When allocating the non-federal portion of the space, the IWRB will enter into sub-contracts with interested water users.

Reclamation will not begin formal contract negotiations until after the ROD is issued and must receive authorization to negotiate with the IWRB through a Basis of Negotiation (BON). Reclamation staff is preparing the BON and coordinating with IDWR/IWRB staff as needed. IDWR staff is actively developing the contract framework in preparation for negotiations. In addition, terms of the agreement will influence the sub-contracts with water users; therefore, the IWRB will work closely with water users in preparation of the agreement.

#### Contracting New Storage Space - Water User/IWRB Contracting

The IWRB anticipates entering into sub-contracts with water users interested in the new storage space. Staff is developing a water user contract solicitation process to facilitate open and transparent coordination with potential spaceholders. This may be issued as a request for proposals (RFP) to the public that will provide details about project development, costs, and spaceholder contract terms. Staff is currently working to clarify project details and criteria for the solicitation process in coordination with the IWRB and the public. As an information gathering exercise, staff released a survey to water users to develop a better understanding of water user's expectations, interests, and financial capabilities. This information will help the IWRB develop a contracting process and inform discussions with Reclamation. The water user survey results will be discussed during the March IWRB meeting.

#### Project Financing and Financial Advisor

There are several options for financing the Anderson Ranch Dam raise, though the IWRB anticipates issuing bonds to help fund the non-Federal portion of the project costs. Given the aggressive timeline to develop a plan for financing the project, in coordination with interested water users, staff has contracted with Municipal Capital Markets Group, Inc. to analyze the financing alternatives available to the IWRB and to coordinate with all parties, including bond counsel.

#### Water Right

The IWRB filed a water right permit application on June 7, 2019 for the additional 29,000 AF of storage water that a 6-foot dam raise would generate (Water Right Number 63-34753). A number of protests to the application were filed and preliminary discussion meetings were held with the protestants to better understand the basis of each protest and to discuss the details of the project. Additional project information is now available with the publication of the Feasibility Study and DEIS. Staff will continue discussions with the protestants throughout the spring and summer.

<u>Tentative Schedule</u> -The following is an estimated timeline for milestones in the next 12-months:

12-Month Milestones	Date
Reclamation FEIS Release	Spring 2021
Reclamation Issue ROD	Summer 2021
Water User Contract Coordination	Summer/Fall 2021
Execute Reclamation/IWRB Water Use Contract	Fall 2021
Initiate Construction (Project Final Design)	Fall 2021
WIIN Act Expiration	December 16, 2021

#### ATTACHMENTS

1. Bureau of Reclamation – Project Update Memo



## United States Department of the Interior

BUREAU OF RECLAMATION Snake River Area Office 230 Collins Road Boise, ID 83702-4520



IN REPLY REFER TO: SRA-1308 2.2.4.21

#### VIA ELECTRONIC MAIL ONLY

Mr. Jeff Raybould Chairman Idaho Water Resource Board 322 East Front Street Boise, ID 83702

Ms. Melanie Paquin Area Manager Snake River Area Office 230 Collins Road Boise, ID 83702

Subject: Boise River Basin Feasibility Study / Anderson Ranch Dam Raise Status Update, Boise Project, Idaho

Dear Mr. Raybould and Ms. Paquin:

This status update is being sent in preparation for the Idaho Water Resource Board (IWRB) meeting on March 18, 2021.

The IWRB and Reclamation have partnered to complete a feasibility study of new surface water storage options on the Boise River (Study). Authorized under Water Infrastructure Improvements for the Nation (WIIN) Act of 2016, the Study focuses on a 6-foot raise of Anderson Ranch Dam in Idaho, resulting in approximately 29,000 acre-feet of new storage space.

#### Current Status

Recent project activities include:

- Developing and evaluating a plan to mitigate for a potential reservoir restriction during construction.
- Information-sharing about the Study's cost allocation methodology.

Ongoing project activities include:

• Reclamation and IWRB project sub-team are coordinating to plan water right and water contracting processes.

#### Completed Key Milestones

Nov. 2017 – Jan. 2019	Reclamation completed initial screening of the three potential dam raise alternatives and developed a project management plan.
July 27, 2018	IWRB passed a resolution supporting the narrowed focus of the Study to a raise at Anderson Ranch Dam.
August 28, 2018	Reclamation and IWRB hosted a Legislative Infrastructure Tour to discuss large water infrastructure projects in Idaho with representatives from Idaho's Congressional delegation.
November 8, 2018	Reclamation and IWRB hosted an informational public open house on the Study in Boise, Idaho.
December 3-7, 2018	Reclamation conducted a Value Planning Study with a final Accountability Report received in February 2019.
December 25, 2018	Reclamation awarded an Indefinite Delivery/Indefinite Quality contract for architect and engineering services to Sundance-EA Joint Venture (Consultant) to complete the Study and environmental compliance activities.
April 30, 2019	Consultant submitted land, structure, infrastructure, and real estate impact assessment (Rim Analysis) for Anderson Ranch Reservoir.
June 7, 2019	IWRB filed a water right permit application for the potential additional storage (Water Right No. 63-34753).
June 19, 2019	Reclamation's Technical Service Center completed feasibility-level design and cost estimates completed for Anderson Ranch Dam raise.
August 9, 2019	Reclamation published the Notice of Intent for an EIS in the Federal Register.
August 27-29, 2019	Reclamation conducted Public Scoping Open Houses in Pine, Boise, and Mountain Home, Idaho.
February 3-7, 2020	Reclamation completed the Design, Estimate, and Construction review of the feasibility-level designs.
April 6-10, 2020	Reclamation completed the Peer Review of the Water Operations Technical Memorandum.
July 31, 2020	Reclamation released the DEIS and Draft Feasibility Report.
October 30, 2020	Reclamation initiated formal Endangered Species Act consultation with NOAA Fisheries and submitted its biological assessment.
December 2020	The Secretary of the Interior determined the Study's recommended plan to be feasible in accordance with the WIIN Act.
December 2020	Reclamation transmitted the Final Feasibility Report to Congress.

December 2020 Fiscal Year 2021 Appropriations legislation secured \$12.88 million in WIIN Act funding for completing the Study, environmental compliance and construction.

#### Key Critical Path Milestones

Spring / Summer 2021	Reclamation Technical Service Center Design Service Agreement
Winter/Spring 2021	Receive USFWS and NOAA Fisheries Biological Opinions
Spring 2021	Publish Final EIS
Summer 2021	Issue Record of Decision
Fall 2021	Initiate construction activities

Thank you for this opportunity to provide an update on the Boise River Basin Feasibility Study Project. If you have any questions, please contact me at 208-378-5360 or via email at ckeith@usbr.gov

Sincerely,

CHRISTOPHER KEITH Digitally signed by CHRISTOPHER KEITH Date: 2021.03.04 13:43:51 -07'00'

Chris Keith Project Manager

## Memorandum

To: Idaho Water Resource Board

From: Amy Cassel Date: March 5, 2021

Re: Water Transaction Program – Panther Creek Acquisition



**REQUIRED ACTION:** Consideration of the attached funding resolution to authorize the acquisition of Panther Creek Water Right No. 75-14627.

#### Background:

Panther Creek is tributary to the Salmon River's Wild and Scenic River section near the historic town of Shoup, Idaho. The Panther Creek watershed encompasses 532 square miles and over 95% of the drainage is administered by the Salmon Challis National Forest (SCNF). Panther Creek and its tributaries historically provided an abundance of spawning and rearing habitats for ESA-listed steelhead, bull trout and non-listed Chinook salmon. Mining for heavy metals during the 1940–1960s had so degraded water quality in the lower 24 miles of Panther Creek that no aquatic animal life was present in the early 1990's. In 1995, concerted mine waste clean-up began and by 2002, copper levels had been reduced enough to allow for the initial recolonization of resident fish species. Since 2010, Panther Creek has seen consistent returns of Chinook salmon and steelhead, while bull trout and westslope cutthroat trout populations have expanded their habitat to previously inaccessible reaches.

WR No. 75-14927 out of Panther Creek is appurtenant to 52 acres of irrigated pasture, includes 0.75 miles of stream frontage, and the property is 110 acres in total. The points of diversion for WR No. 75-14927 are located approximately 33 river miles upstream of the confluence with the Salmon River (see Attachment 1). Western Rivers Conservancy purchased the property in October 2020 with the intent to convey the property to the SCNF, and convey the water right to the Idaho Water Resource Board (IWRB). Funding for the acquisition of the property will come from Land and Water Conservation Funds (LWCF).

The IWRB holds Minimum Stream Flow Water Right No. 75-14188 on Panther Creek (Attachment 2). The quantification point for MSF 75-14188 is located at river mile 29.5, and the USGS Panther Creek gage is located at river mile 20 (Attachment 3). USGS gage data indicates that MSF 75-14188 is not always met, and therefore Board staff proposes to rent the acquired water right to help meet the MSF on Panther Creek in perpetuity.

Although the water right is not a significant contributor to the overall target flows, the most beneficial outcome of this acquisition is the permanent protection of the 100 acres and the physical stream habitat improvements that would occur as a result of the SCNF ownership and ongoing management. Panther Creek and its tributaries are considered a high priority area for habitat restoration by the SCNF and Shoshone-Bannock Tribes, both of which have collaborated and developed a watershed/landscape scale restoration plan that identifies and prioritizes actions within the watershed to improve or enhance habitats, restore fish passage, and reconnect floodplains. Directly upstream of the 100 acre parcel

Panther Creek is home to significant natural beaver activity: ponds, dams, woody debris, and a connected floodplain strike a marked contrast to the heavily grazed and incised stream channel on the proposed acquisition.

The appraised value of WR. No. 75-14927 is \$75,000, or approximately \$1,442.00 per acre. The valuation analysis was based on the land value with and without water. The property has no encumbrances and can be subdivided. The one time permanent rental fee, to be paid to the water supply bank, is \$364.00. Total acquisition costs, including the rental fee, will come from the Columbia Basin Water Transaction Fund.

#### Attachments:

- 1. Attachment 1 Panther Creek Acquisition Location Map
- 2. Attachment 2 Minimum Stream Flow Water Right No. 75-14188
- 3. Attachment 3 Panther Creek Acquisition Monitoring Map
- 4. Draft Resolution

# Panther Creek Acquisition 2021





#### Water Right 75-14188

Owner Type	Name and Address
Current Owner	STATE OF IDAHO
	IDAHO WATER RESOURCE BOARD
	322 E FRONT ST
	PO BOX 83720
	BOISE, ID 83720-0098
	(208) 287-4800

#### Priority Date: 4/1/2005 Basis: Decreed Status: Active

#### <u>Source</u>

PANTHER CREEK

Tributary SALMON RIVER

Beneficial Use	<u>From</u>	<u>To</u>	<b>Diversion Rate</b>	Volume
MINIMUM STREAM FLOW	1/1	1/31	22.000 CFS	
MINIMUM STREAM FLOW	2/1	2/28	22.000 CFS	
MINIMUM STREAM FLOW	3/1	3/31	28.000 CFS	
MINIMUM STREAM FLOW	4/1	4/30	77.000 CFS	
MINIMUM STREAM FLOW	5/1	5/31	193.000 CFS	
MINIMUM STREAM FLOW	6/1	6/30	173.000 CFS	
MINIMUM STREAM FLOW	7/1	7/31	45.000 CFS	
MINIMUM STREAM FLOW	8/1	8/31	24.000 CFS	
MINIMUM STREAM FLOW	9/1	9/30	22.000 CFS	
MINIMUM STREAM FLOW	10/1	10/31	24.000 CFS	
MINIMUM STREAM FLOW	11/1	11/30	25.000 CFS	
MINIMUM STREAM FLOW	12/1	12/31	23.000 CFS	
	Total Div	version	193.000 CFS	

#### Source and Point(s) of Diversion

PANTHER CREEK

NENENW Sec. 3

Sec. 35, Twp 20N, Rge 18E, Lemhi County(E)

#### Place Of Use

MINIMUM STREAM FLOW

#### **Conditions of Approval:**

- 1. 153 This water right was established by Chapter 150, 2005 Idaho Session Laws (codified as Section 42-1507, Idaho Code). In accordance with such law, this water right will not become effective until the governor issues a proclamation certifying that all conditions for the effectiveness of the Snake River Water Rights Agreement of 2004 have been satisfied.
- 2. 144 This water right shall be subordinated to all future DCMI uses.
- 3. 027 Use of water under this right shall be non-consumptive.
- 4. 149 This water right is subordinated to future
  - non-Domestic-Commercial-Municipal-Industrial ("non-DCMI") development in an amount up to 2.1 cfs based on 10 percent of the lowest unimpaired median monthly flow or the amount available above a base flow which is equivalent to the unimpaired

monthly 80% exceedence flow whichever is less. The 80% monthly exceedence flows are as follows: Jan - 18 cfs, Feb - 18 cfs, Mar - 21 cfs, Apr - 42 cfs, May - 112 cfs, Jun -85 cfs, Jul - 23 cfs, Aug - 15 cfs, Sep - 16 cfs, Oct - 19 cfs, Nov - 20 cfs, and Dec - 17 cfs.

- 5. 151 There are no diversions associated with this minimum stream flow water right. The quantification point for this instream flow water right is at the above location.
- 6. 091 Use of water under this right shall recognize and allow the continued beneficial diversion of water under any prior existing water right established by diversion and application to beneficial use or by an application, permit, or license on file or issued by the director under the provisions of Chapter 2, Title 42, Idaho Code, with a priority of water right date earlier than the date of priority of this right.
- 7. 152 The Idaho Water Resource Board, upon receiving a request, or upon its own initiative, may petition the Director for an amendment to this water right after complying with the notice and consultation procedures of Section 42-1507(4), Idaho Code. The petition must set forth any significant change in circumstances and evidence of the public interest supporting the proposed amendment. The Director will notify the general public and specific persons or notify interested parties of the proposed change, and conduct a hearing for the purpose of determining whether the water right should be amended in the public interest.
- Future non-DCMI = 2.18.
- When this water right is not capable of being maintained using existing flows, Idaho 9. 154 Code Section 42-1507 authorizes the Idaho Water Resource Board to maintain the flow through operation of the water supply bank authorized by Section 42-1761 through 42-1765, Idaho Code, and by other available methods consistent with Idaho Law.
- 10. 146 The place of use for this water right is the reach above the quantification point.
- 11. 148 The purpose of this instream flow is to preserve fish and wildlife, scenic, and recreational values and to protect and enhance water quality, and is equivalent to the unimpaired monthly 40 percent exceedence flows.
- 12. While the instream flow and the future allocation for non-DCMI uses and base flows are 150 to be decreed in cubic feet per second (cfs), such quantities are intended to reflect the percentages of the unimpaired exceedence flows at the quantification point described in this water right. The unimpaired exceedence flows were estimated using regional regression equations developed by the United States Geological Service. Upon further finding and order of the director that gaging stations are required to maintain the approved minimum flows under this right, such measuring devices shall be permanently installed and maintained as specified by the director. If actual flow data become available, the quantities in this water right will be adjusted as necessary to give effect to the exceedence assumption stated above. Such adjustments do not result in a material change to the water right and are not subject to the notice and hearing requirements set forth in this partial decree, but shall comply with the notice and consultation requirements of Section 42-1507(4), Idaho Code.

**Combined Use Limits** N/A

#### SubCase: N/A

#### Water Supply Bank: N/A



## Panther Creek Acquisition 2021 Monitoring Map



POD 75-14927

Panther\_Creek\_MSF\_75-14188

Water Right POU - 52 acres *PantherPrimary\_UpperMSF* 

Panther Parcel - 110 acres

#### **BEFORE THE IDAHO WATER RESOURCE BOARD**

#### IN THE MATTER OF THE BOARD PURCHASE OF WATER RIGHT NO. 75-14927 FROM WESTERN RIVERS CONSERVANCY

Resolution No.

RESOLUTION TO MAKE A FUNDING COMMITMENT

1	WHEREAS, steelhead, bull trout, and Chinook salmon habitat in Panther Creek is limited
2 3	by low flow in the upper reaches of Panther Creek; and
4	WHEREAS, Panther Creek provides steelhead, bull trout, and Chinook salmon habitat and
5	the 2004 Snake River Water Rights ("Nez Perce") Agreement commits the state to providing
6	incentives for improving fish habitat which includes improving or protecting flow conditions to
7	augment stream flows; and
8	
9	WHEREAS, it is in the interest of the State of Idaho to increase flow in Panther Creek to
10	encourage recovery of ESA-listed steelhead, bull trout, and Chinook salmon; and
11	
12	WHEREAS, Water Right No. 75-14927 has been historically diverted from Panther Creek
13	for irrigation purposes; and
14	
15	WHEREAS, the Idaho Water Resource Board (IWRB), pursuant to Section 42-1734, Idaho
16	Code, has the authority to acquire, purchase, lease, or exchange land, rights, water rights,
17	easements, franchises, and other property deemed necessary or proper for the construction,
18	operation, and maintenance of water projects; and
19	
20	WHEREAS, the Water Right owner desires to sell to IWRB all their legal interests in Water
21	Right No. 75-14927 appurtenant to 52 acres, so that the water may remain in Pantner Creek to
22	ennance lish habitat; and
23	WHEREAS upon acquisition Water Pight No. 75 14027 may be repted out through the
24 25	Idaho Water Supply Bank for permanent delivery to Minimum Stream Elew Water Pight No. 75-
25 26	1/188 on Panther Creek.
20	
28	WHEREAS, funds are available from Columbia Basin Water Transaction Program Fund for
29	purchase of the water right: and
30	
31	WHEREAS, the Panther Creek transaction is in the public interest and is consistent with
32	the State Water Plan; and
33	

Page 1

NOW THEREFORE BE IT RESOLVED that the IWRB hereby agrees to purchase the assignment of Water Right 75-14927 for seventy-five thousand dollars (\$75,000) contingent upon the IWRB and the Water Right Owner executing a written agreement governing the rights and responsibilities of the parties resulting from the assignment of the water right; and

NOW THEREFORE BE IT FURTHER RESOLVED that the IWRB authorizes the Chairman, or
 his assigns, to pay a one-time permanent rental fee of three-hundred sixty four dollars (\$364.00)
 to the Idaho Water Supply Bank; and

42

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition
 that the IWRB receives the requested funding from the Bonneville Power Administration through
 the Columbia Basin Water Transaction Program in the amount of seventy five thousand, three
 hundred sixty-four dollars (\$75,364.00).

DATED this 19th day of March, 2021.

JEFF RAYBOULD, Chairman Idaho Water Resource Board

ATTEST \_\_\_

Jo Ann Cole-Hansen, Secretary

## Memorandum

To: Idaho Water Resource Board

From: Amy Cassel Date: March 5, 2021

Re: Water Transaction Program – Morgan Creek 2021-2024



**REQUIRED ACTION:** Consideration of the attached resolution to authorize two four-year Agreements Not to Divert on Morgan Creek.

#### Background:

The 2004 Snake River Water Rights ("Nez Perce") Agreement commits the state to providing incentives for improving fish habitat which includes improving or protecting flow conditions to augment stream flows. Morgan Creek, a tributary to the Salmon River near Challis, is important for the spawning, migration and rearing of ESA-listed steelhead and bull trout. It also supports the rearing of ESA-listed juvenile Chinook salmon. Morgan Creek typically becomes dewatered below the lowest two diversions (SMC 2-4 and SMC 1) during the irrigation season, blocking access to those fish species.

For the past 14 years, the IWRB has held agreements not to divert with the two water users on those diversions from Morgan Creek. Rather than divert from Morgan Creek they have spilled at least 2 cfs in the creek during the low flow periods (August-September) to maintain adequate flows in Morgan Creek to the confluence with the Salmon River. The water users then pump water out of a Salmon River ditch (S-22) that carries existing Salmon River water rights appurtenant to the same ground. In return, the irrigators were compensated based on the cost of pumping water from the Salmon River ditch.

Over the past few years, Board staff as well as other partners have worked to come up with a long-term solution on Morgan Creek. Specifically, Board staff is working with the Custer Soil and Water Conservation District (CSWCD), Natural Resources Conservation Service (NRCS), Idaho Department of Fish and Game (IDFG), and the Bureau of Reclamation (BOR) to propose long-term solutions that will work for both water users.

One of the main challenges on Morgan Creek is the Morgan Creek-Salmon River ditch intercept (see Attachment 1). The S -22 ditch that conveys water to the place of use co-mingles with Morgan Creek and can physically take additional Morgan Creek water down the ditch. To keep the water in Morgan Creek and to help ensure the creek does not become disconnected to the mouth, BOR is designing rock ramp control structures, steel head gates, and measuring devices for the intercept location. These structures will help control and convey the S-22 water through Morgan Creek. Project implementation is scheduled for July 2021.

One of the water users on Morgan Creek has listed their ranch on and off the sales market for the past several years. In May 2020, the ranch was approached by Midas Gold, now known as Perpetua Resources, with an offer that included a four-year contract and first right of refusal on the sale of the ranch. It is Board staff's understanding that the intent of this offer is to secure the water rights associated with the ranch (a total of 10.75 cfs of Morgan Creek and Salmon River water) for mitigation purposes. Staff further understands that the purpose of this water is to mitigate for a proposed application for storage water right needed for Midas Golds' operation at the Stibnite gold mine in the South Fork Salmon River drainage. Due to this first right of refusal contract, the water user cannot enter into a long-term agreement with their Morgan Creek water and

thus a long-term transaction is not possible at this time. These were unforeseen and unanticipated circumstances.

In lieu of a long-term agreement, Board staff is proposing to enter into four-year Agreements Not to Divert with the water users to maintain Morgan Creek connectivity and secure the gains that have been made since 2006. From a fisheries perspective, for the past 14 years, Morgan Creek has been functionally connected and juvenile Chinook salmon and steelhead have been able to avoid entrainment. If additional water transaction agreements are not secured, it is likely that Morgan Creek will dewater late season and the entrainment of ESA-listed fish is possible.

The proposed four-year Agreements Not to Divert will compensate the water users for the days when they spill Morgan Creek water and pump Salmon River water to maintain the 2 cfs flow. Total cost is based on a maximum of 60 days. Compensation is \$80.00 per cfs per day, with a maximum payment amount of \$13,404.00 per year. Total compensation for the four-year agreements will not exceed \$53,616.00. Funding for the transaction will come from the Columbia Basin Water Transaction Fund.

#### Attachments:

- 1. Attachment 1 Morgan Creek Map
- 2. Draft Resolution

## Morgan Creek 2021-2024

Points of Diversion

S\_22\_ditch





#### **BEFORE THE IDAHO WATER RESOURCE BOARD**

#### IN THE MATTER OF THE 2021-2024 MORGAN CREEK WATER TRANSACTION CONTRACTS

## RESOLUTION TO MAKE A FUNDING COMMITMENT

1	WHEREAS, steelhead, bull trout, and juvenile Chinook salmon habitat in Morgan Creek is
2	limited by low flow in the lower reaches of Morgan Creek; and
4	WHEREAS, Morgan Creek provides steelhead, bull trout, and juvenile Chinook salmon
5	habitat and the 2004 Snake River Water Rights ("Nez Perce") Agreement commits the state to
6	providing incentives for improving fish habitat which includes improving or protecting flow
7	conditions to augment stream flows; and
8 9	WHEREAS it is in the interest of the State of Idaho to reconnect Morgan Creek to
10	encourage recovery of ESA-listed steelhead, bull trout, and Chinook salmon; and
11	
12	WHEREAS, Idaho Department of Water Resources staff has developed a series of
13	agreements not to divert water from Morgan Creek at the SMC-2/4 and SMC-1 diversions to
14	improve stream flow for anadromous and resident fish; and
15 16	WHEREAS staff is negotiating four-year agreements with the Morgan Creek water users
17	not to divert water at the SMC2/4 and SMC 1 diversions; and
18	
19	WHEREAS, a proposal for \$53,616.00 will be submitted to the Columbia Basin Water
20	Transactions Program to be used to fund said agreements; and
21	WHEREAS instead of divorting from Morgan Crook, the water users have agreed to nump
22	from Salmon River sources that are not flow-limited and the funds paid under these agreements
24	will offset the power expenses incurred by pumping from exisiting points of diversion; and
25	
26	WHEREAS, the Morgan Creek transactions are in the public interest and in compliance
27	with the State Water Plan; and
28	NOW THEREFORE REATING that the WARR sutherizes the Chairman to enter into
29 30	contracts with Ronald lones and Donna Hughes, or their successors, for agreements not to divert
31	out of Morgan Creek in an amount not to exceed fifty-three thousand. six hundred sixteen dollars
32	(\$53,616.00); and
33	

Resolution No.

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition that the IWRB receives the requested funding from the Bonneville Power Administration through the Columbia Basin Water Transaction Program in the amount of fifty-three thousand, six hundred sixteen dollars (\$53,616.00).

DATED this 19th day of March, 2021.

JEFF RAYBOULD, Chairman Idaho Water Resource Board

ATTEST \_\_\_\_

JO ANN COLE-HANSEN, Secretary

Resolution No.

### Memorandum

To: Idaho Water Resource Board

From: Amy Cassel

Date: March 5, 2021



Re: Water Transaction Program – 2021 Lower Lemhi River Transaction

**REQUIRED ACTION:** Consideration of the attached resolution to authorize the 2021 Agreement Not to Divert on the Lemhi River at the L-6 diversion.

#### Background

The Lemhi River Basin is an important basin for the spawning, migration and rearing of Chinook salmon, summer steelhead, westslope cutthroat trout, and bull trout. During the irrigation season, low flows at the L-6 diversion can cause migration barriers for out-migrating juvenile Chinook salmon and inmigrating adult Chinook salmon and steelhead (see map below). The State of Idaho has committed to maintaining flows between 25 and 35 cfs at the L-6 diversion through the 2004 Snake River Water Rights Agreement The 35 cfs flows are needed for out-migration in the spring and 25 cfs is needed for in-migrating adults in the mid- to late-summer.

For the past 14 years, the IWRB has been working to meet the 35 cfs target through agreements between the IWRB and water users "not to divert" from the Lemhi River. As identified below, a total of 32.27 cfs is currently protected through permanent or short-term agreements:

Flow Target:	35 cfs
Currently Protected:	
Permanent Subordination Agreements	16.83 cfs
<ul> <li>2019-2022 Annual Subordination Agreements</li> </ul>	15.54 cfs
TOTAL Protected	32.37 cfs

Board staff proposes the development of an additional short-term agreement to reduce or eliminate the gap of the approximately 3 cfs needed to meet the 35 cfs flow target. As in previous years, payment will be based on the number of days the irrigator is turned off with compensation of \$90.00/24-hour cfs. The irrigator owns Water Right Nos. 74-318B and 74-318C which allow for the diversion of 6.45 cfs. He would like to enter into a one-year Agreement Not to Divert up to 3 cfs and determine if his operation will be continue to be productive with the restricted delivery of 3.45 cfs. He will only be curtailed when the flow targets are not being met and up to a maximum of 100 days, which is unlikely unless severe, unprecedented drought conditions persist throughout the entire irrigation

season. If the 2021 irrigation season goes well for him under this scenario, he would like to enter into a permanent subordination agreement in 2022.

The state of Idaho signed a 4-year extension of the 2008 Columbia Basin Fish Accords MOA in September 2018, and the Idaho Water Transaction Program has a total budget of \$1,218,406 for years 2019 through 2022. Therefore, Board staff recommends entering into the additional short-term agreement with the Lower Lemhi irrigator in 2021. The agreement not to divert will not exceed \$27,000, and funding for this agreement will come from the 2019-2022 Idaho Fish Accord Water Transaction Program Fund.

#### Attachment:

1. Draft Resolution



#### **BEFORE THE IDAHO WATER RESOURCE BOARD**

#### IN THE MATTER OF THE LOWER LEMHI 2021 WATER RIGHT SUBORDINATION AGREEMENT

RESOLUTION TO MAKE A FUNDING COMMITMENT

1	WHEREAS, Chinook salmon, steelhead, and bull trout habitat in the Lemhi River Basin is
2 3	limited by low flow in the Lower Lemni River; and
4	WHEREAS, it is in the interest of the State of Idaho to permanently reconnect the Lower
5 6	Lemhi River to encourage recovery of ESA-listed Chinook salmon, steelhead, and bull trout; and
7	WHEREAS, the State of Idaho committed to maintaining flows of 25 cfs to 35 cfs at the L-
8	6 Diversion on the Lower Lemhi River in the Lemhi Framework which was developed as part of
9	the 2004 Snake River Water Rights Agreement; and
10	WHEREAS, the Lembi Framework carries forward target goals which were included in
12	earlier conservation agreements developed and approved by local water users, and state and
13 14	federal agencies; and
15	WHEREAS, through enacting Idaho Code 42-1506 and 42-1765A, the Idaho Legislature
16	directed the Idaho Water Resource Board (Board) to establish a minimum streamflow water right
17	of 35 cfs in the Lower Lemhi River to be met through water right rentals or other appropriate
18	methods under state law; and WHEREAS, the Board has the authority to enter into agreements
19	to improve flow for anadromous and resident fish; and
20	
21 22	WHEREAS, the Board is authorized to expend Bonneville Power Administration funds for flow restoration through the Columbia Basin Water Transaction Program and the Bonneville Fish
23 24	Accord Water Transaction Fund; and
2 <del>4</del> 25	WHEREAS, the Board promotes water transactions that maintain the local agricultural
25 26	economy by retaining irrigated agriculture: and
20 27	conomy by retaining in gated agriculture, and
28	WHEREAS, Board staff has developed an additional one-year subordination agreement.
20 29	also known as the Lemhi Subordination Agreements, with a local water user to improve stream
30	flow for anadromous and resident fish: and
31	
32	WHEREAS, the water user has agreed to limit up to three (3) cfs of his diversion during
33	times of low flow; and
34	

Resolution No. \_\_\_\_\_

WHEREAS, the water user will continue to irrigate his full place of use when flows exceed 35 the flow targets; and 36 37 WHEREAS, the Lemhi Subordination Agreement is in the public interest and in compliance 38 with the State Water Plan; and 39 40 WHEREAS, funding is available through the Idaho MOA/Fish Accord Water Transaction 41 Program to fund the cost of said agreements in 2021; and 42 43 NOW THEREFORE BE IT RESOLVED that the Board authorizes the Chairman to enter into 44 an agreements for 2021 with a lower Lemhi River irrigator to not divert up to three (3) cfs out of 45 the Lemhi River, for an amount not to exceed twenty-seven thousand dollars (\$27,000); and 46 47 48 NOW THEREFORE BE IT FURTHER RESOLVED that this resolution is subject to the condition 49 that the Board receives the requested funding from the Bonneville Power Administration through the Idaho MOA/Fish Accord Water Transaction Program in an amount up to twenty-seven 50 thousand dollars (\$27,000). 51

DATED this 19th day of March, 2021.

JEFF RAYBOULD, Chairman Idaho Water Resource Board

ATTEST

JO ANN COLE-HANSEN, Secretary

Resolution No. \_\_\_\_\_

## Memorandum

To: Idaho Water Resource Board From: Neeley Miller

Date: March 9, 2021

Re: Water Supply Outlook Update



David Hoekema will provide the latest updates on the Idaho water supply outlook.

# March 2021: Idaho Water Supply

David Hoekema, Idaho Department of Water Resources, March 18, 2021



# Drought of 2021

U.S. Drought Monitor



### March 9, 2021

(Released Thursday, Mar. 11, 2021) Valid 7 a.m. EST

Drought Conditions (Percent Area)

	-			-	-	
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	38.46	61.54	24.56	<mark>4</mark> . 19	0.85	0.00
Last Week 03-02-2021	38.46	61.54	24.58	<mark>4</mark> . 19	0.85	0.00
3 Month s Ago 12-08-2020	35.29	64.71	22.59	<b>4</b> .23	0.77	0.00
Start of Calendar Year 12-29-2020	37.41	62.59	20.67	<mark>4</mark> .24	0.77	0.00
Start of Water Year 09-29-2020	29.22	70.78	17.04	4.43	0.96	0.00
One Year Ago 03-10-2020	65.78	34.22	8.88	1.62	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

#### Author:

Brian Fuchs National Drought Mitigation Center



#### droughtmonitor.unl.edu

# **July-September 2019**



# **October to December 2019**



# January to March 2020


# **April to June 2020**



# July to September 2020



## **October to December 2020**



# **January to February 2021**



# **March Precipitation to Date**



## Slide from Danny Tappa

 Record\* low soil moisture throughout southern half of Idaho & Upper Snake

> \*period of record is less than 20 years in most cases



## **January 2021 Forecasts**



# March 1, 2021 Forecasts: 50%

BASIN	primary period	[kaf]	Percentile	Hydrologic Drought
Kootenai River at Leonia	April-July	7,330	55	
Pend Oreille Lake Inflow	April-July	12,500	47	
Priest River nr Priest River	April-July	750	39	
Spokane River nr Post Falls	April-July	2,880	60	
North Idaho		22,710	51	
Clearwater River at Spalding	April-July	7,750	58	
Salmon River at White Bird	April-July	7,830	33	
Clearwater & Salmon Rivers		15,580	45	
Weiser River nr Weiser	April-July	355	42	
Payette River nr Horseshoe Bend	April-July	1,430	37	
Boise River nr Boise	April-July	1,200	40	
Big Wood River blw Magic Dam	April-July	104	25	Drier than Normal
Little Wood River abv High Five Crk	April-July	42	29	Drier than Normal
Big Lost River at Howell Ranch	April-July	109	26	Drier than Normal
Little Lost River blw Wet Ck				
Central Idaho		3,240	38	
Camas Creek at Camas	April-July	10	26	
Henrys Fork nr Ashton	April-July	445	42	
Falls River nr Ashton	April-July	360	59	
Teton River nr St Anthony	April-July	360	61	
Snake River nr Heise	April-July	2,960	42	
Willow Creek nr Ririe	March-July	47	39	
Blackfoot				
Portneuf	March-July	39	13	Moderate Drought
Eastern Idaho		4,221	45	
Bear River blw Stewart Dam	April-July	49	20	
Oakley Reservoir Inflow	March-July	22	39	
Salmon Falls nr San Jacinto	March-July	42	35	
Bruneau River nr Hot Springs	March-July	99	32	
Owyhee River at Rome	April-July	176	35	
Southern Idaho		388	33	
Idaho Totals and Averages		46,139	42	

# March 1, 2021 Forecasts: 70%

March 1 NRCS 70% Proba	bility of Exce	edance	• Forecas	t for Idaho Basins
BASIN	primary period	[kaf]	Percentile	Hydrologic Drought
Kootenai River at Leonia	April-July	6,740	44	
Pend Oreille Lake Inflow	April-July	11,400	36	
Priest River nr Priest River	April-July	665	29	Drier than Normal
Spokane River nr Post Falls	April-July	2,550	44	
North Idaho		20,690	40	
Clearwater River at Spalding	April-July	7,060	42	
Salmon River at White Bird	April-July	4,260	24	Drier than Normal
Clearwater & Salmon Rivers		11,320	35	
Weiser River nr Weiser	April-July	295	31	
Payette River nr Horseshoe Bend	April-July	1,240	26	Drier than Normal
Boise River nr Boise	April-July	1,050	27	Drier than Normal
Big Wood River blw Magic Dam	April-July	68	14	Moderate Drought
Little Wood River abv High Five Ck	April-July	32	18	Moderate Drought
Big Lost River at Howell Ranch	April-July	84	9	Severe Drought
Little Lost River blw Wet Ck				
Central Idaho		2,769	26	Drier than Normal
Camas Creek at Camas	April-July	6	12	
Henrys Fork at Ashton	April-July	400	25	Drier than Normal
Falls River nr Ashton	April-July	330	47	
Teton River nr St Anthony	April-July	315	45	
Snake River nr Heise	April-July	2,690	32	
Willow Creek nr Ririe	April-July	35	26	Drier than Normal
Blackfoot				
Portneuf	March-July	43	6	Severe Drought
Eastern Idaho		3,819	33	
Bear River blw Stewart Dam	April-July	9	5	Extreme Drought
Raft				
Oakley Reservoir Inflow	March-July	18	31	
Salmon Falls nr San Jacinto	March-July	49	29	Drier than Normal
Bruneau River nr Hot Springs	March-July	127	27	Drier than Normal
Owyhee River at Rome	March-July	112	24	Drier than Normal
Southern Idaho		315	26	Drier than Normal
Idaho Totals and Averages		38,913	31	

Boise River Basin SWSI

Adequate Water Supply Greater than -2.0 SWSI or 1,500 KAF

# Boise River SWSI

Station ID	Station Name	Period	Data Type	Years	# of Years
13202000	BOISE RIVER NEAR BOISE, ID	Apr-Sep s	strm	1991-2020	30 Units KAF
13201500	LUCKY PEAK	28-Feb 1	resv	1991-2020	30 Units KAF
13194000	ARROWROCK	28-Feb 1	resv	1991-2020	30 Units KAF
13190000	ANDERSON RANCH	28-Feb r	resv	1991-2020	30 Units KAF
	ENSO Classification				
	and a second sec				

#### SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

			Stream		Streamflow	Non-	
			Flow Apr-	Reservoir	+ Reservoir	Exceedance	
Rank Y	ear	Enso	Sep	28-Feb	Sum	Probability	SWSI
1 20	)17	LN	2463	619	3082	97%	3.9
2 19	997	Ν	2491	508	2998	94%	3.6
3 19	996	Ν	2066	701	2766	90%	3.4
4 20	)11	SL	1965	691	2657	87%	3.1
5 20	006	Ν	2162	433	2595	84%	2.8
6 19	999	SL	1838	717	2555	81%	2.6
7 19	998	SE	1701	794	2495	77%	2.3
8 20	)12	LN	1611	755	2366	74%	2.0
9 20	)19	Ν	1724	578	2302	71%	1.7
10 19	995	SE	1883	364	2248	68%	1.5
2021 10% Chance Exceedance Forcast		?	1650	589	2239	66%	1.3
11 20	018	LN	1221	829	2050	65%	1.2
2021 30% Chance Exceedance Forcast		?	1410	589	1999	63%	1.1
12 20	009	Ν	1323	615	1938	61%	0.9
13 20	000	Ν	1154	740	1894	58%	0.7
14 19	993	EN	1656	228	1884	55%	0.4
15 20	008	Ν	1382	491	1873	52%	0.1
16 20	010	EN	1224	623	1846	48%	-0.1
2021 50% Chance Exceedance Forcast		?	1250	589	1839	47%	-0.3
17 20	016	SE	1254	582	1837	45%	-0.4
18 20	014	Ν	1178	521	1700	42%	-0.7
2021 70% Chance Exceedance Forcast		?	1090	589	1679	40%	-0.8
19 20	003	EN	1219	431	1649	39%	-0.9
20 20	002	Ν	1178	413	1591	35%	-1.2
21 20	020	?	922	667	1589	32%	-1.5
22 20	)15	EN	750	782	1532	29%	-1.7
2021 90% Chance Exceedance Forcast		?	855	589	1444	27%	-1.9
23 20	007	EN	739	691	1429	26%	-2.0
24 20	004	Ν	974	455	1429	23%	-2.3
25 20	005	EN	931	452	1383	19%	-2.6
26 20	013	Ν	704	612	1316	16%	-2.8
27 19	994	SE	590	660	1250	13%	-3.1
28 19	991	Ν	734	469	1203	10%	-3.4
29 20	001	LN	546	537	1083	6%	-3.6
30 19	992	EN	471	320	791	3%	-3.9

Adequate Supply

Rig Wood		Big Wood River Basin SWSI
DIE WUUUU	Station ID	SI
0	13142500	Big Wood R blw Magic Reser
	13142000	Magic Reservoir
		ENSO Classification
RIVer		SE Strong El Nino - EN Mild E

**SWSI** 

#### Adequate Water Supply Greater than 0.4 SWSI or 275 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13142500	Big Wood R blw Magic Reservoir	Apr-Sep	strm	1991-2020	30 Uni	its KAF
13142000	Magic Reservoir	28-Feb	resv	1991-2020	30 Uni	its KAF

#### SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

			Stream		Streamflow	Non-		
			Flow Apr-	Reservoir	+ Reservoir	Exceedance		
Rank	Year	Enso	Sep	28-Feb	Sum	Probability	SWSI	
1	2017	LN	710	99	808	97%	3.9	-
2	2006	Ν	636	62	699	94%	3.6	
3	1997	Ν	605	78	683	90%	3.4	
4	1998	SE	427	163	590	87%	3.1	
5	1999	SL	420	120	540	84%	2.8	
6	1995	SE	518	16	534	81%	2.6	
7	2019	Ν	424	89	513	77%	2.3	
8	1996	Ν	351	127	478	74%	2.0	
9	2011	SL	322	91	412	71%	1.7	
10	2018	LN	204	171	375	68%	1.5	
11	1993	EN	355	14	369	65%	1.2	
12	2012	LN	238	128	365	61%	0.9	
13	2000	N	165	111	277	58%	0.7	— Adequate Supply
202	21 10% Chance Exceedance Forcast	?	240	27	267	56%	0.5	, acquate suppry
14	2010	EN	167	82	250	55%	0.4	
15	2009	N	219	30	249	52%	0.1	
16	2016	SE	18/	36	223	48%	-0.1	
1/	2005	EN	194	26	219	45%	-0.4	
18	2008	2	1/8	24	202	42%	-0.7	
19	2020 21 20% Chance Exceedance Exceed	2	159	135	190	39%	-0.9	
202	21 50% Chance Exceedance Forcast	EN	150	124	103	25%	-1.1	
20	2007	EN	140	224	163	27%	-1.2	
21	2003	EN	70	23 61	140	20%	-1.5	
22	2013	N	120	19	139	25%	-2.0	
202	21 50% Chance Exceedance Forcast	2	112	27	139	24%	-2.2	
24	2014	N	84	49	133	23%	-2.3	
25	1994	SE	31	86	117	19%	-2.6	
202	21 70% Chance Exceedance Forcast	?	74	27	101	18%	-2.7	
26	1991	N	76	22	98	16%	-2.8	
27	2013	Ν	66	28	93	13%	-3.1	
28	2004	Ν	66	23	89	10%	-3.4	
29	2001	LN	38	48	87	6%	-3.6	
202	21 90% Chance Exceedance Forcast	?	32	27	59	5%	-3.8	
30	1992	EN	24	27	51	3%	-3.9	

#### **Big Wood River Basin SWSI**

Adequate Water Supply Greater than 0.4 SWSI or 275 KAF

Rig Wood	Big Wood	River Basin SWSI Adequate W	/ater Supply Greater t	han 0.4 SWSI (	or 275 KAF	
DIE WUUU	Station ID	Station Name	Period	Data Type	Years	# of Years
0	13142500 Big Wood	R blw Magic Reservoir	Apr-Sep	strm 1	1991-2020	30 Units KAF
_	13142000 Magic Res	ervoir	28-Feb	resv	1991-2020	30 Units KAF
	ENSO Clar	rification				

## River SNOW WATER EQUIVALENT IN **BIG WOOD SWSI**



For more information visit: 30 year normals calculation description.

Big Lost River Basin SWSI

13127000 Big Lost R blw Mackay Reservoir

Station Name

Station ID

Adequate Water Supply Greater than 0.7 SWSI or 180 KAF

Apr-Sep

Period Data Type

strm

# of Years

30 Units KAF

Years

1991-2020

# Big Lost River SWSI

13126000 Mackay Reservoir				28-Feb	resv	1991-2020	30 Units KAF	
ENSO Classification								
SE Strong El Nino - EN	Mild El Nino - N Ne	utral -	LN Mild La Nin	a - SL Stron	g La Nina			
			Stream		Streamflow	Non-		
			Flow Apr-	Reservoir	+ Reservoir	Exceedance		
Rank	Year	Enso	Sep	28-Feb	Sum	Probability	SWSI	_
1	2017	LN	310	36	345	97%	3.9	
2	1995	SE	272	22	294	94%	3.6	
3	1997	N	244	16	261	90%	3.4	
4	2006	N	216	32	248	87%	3.1	
5	2018	LN	204	37	242	84%	2.8	
6	1998	SE	198	34	232	81%	2.6	
7	1999	SL	196	36	231	77%	2.3	
8	1996	N	171	42	213	74%	2.0	
9	2019	Ν	170	35	206	71%	1.7	
10	2011	SL	160	38	198	68%	1.5	
2021 10% Chance Exc	eedance Forcast	?	167	29	196	66%	1.3	
11	1993	EN	169	24	192	65%	1.2	
12	2009	N	166	26	192	61%	0.9	Adaguata Supply
13	2010	EN	135	39	174	58%	0.7	Adequate Suppr
14	2012	LN	134	40	174	55%	0.4	
15	2005	EN	142	23	165	52%	0.1	
2021 30% Chance Exc	eedance Forcast	?	124	29	153	50%	0.0	
16	2016	SE	119	31	151	48%	-0.1	
17	2008	N	105	25	130	45%	-0.4	
18	1991	Ν	106	23	129	42%	-0.7	
2021 50% Chance Exc	eedance Forcast	?	95	29	124	40%	-0.8	
19	2013	N	88	35	123	39%	-0.9	
20	2000	N	89	32	121	35%	-1.2	
21	2015	EN	89	32	120	32%	-1.5	
22	2020	?	79	39	118	29%	-1.7	
23	2007	EN	83	31	114	26%	-2.0	
24	2003	EN	87	18	105	23%	-2.3	
25	1994	SE	69	33	102	19%	-2.6	
26	2014	Ν	67	29	96	16%	-2.8	
2021 70% Chance Exc	eedance Forcast	?	66	29	95	15%	-3.0	
27	2001	LN	68	24	92	13%	-3.1	
28	2002	Ν	69	23	91	10%	-3.4	
29	1992	EN	64	26	89	6%	-3.6	
30	2004	Ν	66	21	87	3%	-3.9	
2021 90% Chance Exc	eedance Forcast	?	24	29	53	2%	-4.0	

**Big Lost River Basin SWSI** 

Adequate Water Supply Greater than 0.7 SWSI or 180 KAF

Dig Loct	ı.	Big Lost River Basin SWSI	Adequate Water Supp
DIS TOPI	Station ID	Station Name	2
	13127000	Big Lost R blw Mackay Reservoir	A
	13126000	Mackay Reservoir	
		ENSO Classification	
RIVer		SE Strong El Nino - EN Mild El Nino - N M	leutral - LN Mild La Nin
	CNOW W		TNI

# of Years Period Data Type Years strm 1991-2020 30 Units KAF pr-Sep 28-Feb resv 1991-2020 30 Units KAF a - SL Strong La Nina

### SNOW WATER EQUIVALENT IN

**BIG LOST** 

**SWSI** 



Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th Percentiles. For more information visit: 30 year normals calculation description.

Snake River Near Heise SWSI

13037500 Snake River near Heise

**ENSO Classification** 

13032450 Palisades Reservoir

13010500 Jackson Lake

Station Name

Station ID

Adequate Water Supply Greater than -1.7 SWSI or 4,400 KAF

28-Feb resv

28-Feb resv

Apr-Sep

Period Data Type

strm

# of Years

30 Units KAF

30 Units KAF

30 Units KAF

Years

1991-2020

1991-2020

1991-2020

# Upper Snake River SWSI

SE Strong El Nino -	EN Mild El Nino - N Ne	utral -	LN Mild La Nir	na - SL Strong	g La Nina					
			Stream		Streamflow	Non-				
			Flow Apr-	Reservoir	+ Reservoir	Exceedance				
Rank	Year	Enso	Sep	28-Feb	Sum	Probability	SWSI			
1	1997	Ν	7008	1507	8515	97%	3.9		•	
2	2011	SL	6343	1532	7876	94%	3.6			
3	2017	LN	6140	1312	7453	90%	3.4			
4	1996	Ν	5584	1862	7446	87%	3.1			
5	2018	LN	4795	1991	6786	84%	2.8			
6	1999	SL	4949	1663	6611	81%	2.6			
7	1998	SE	4495	1854	6349	77%	2.3			
8	2009	Ν	4610	1649	6259	74%	2.0			
2021 10% Chance I	Exceedance Forcast	?	4250	1765	6015	73%	1.9			
9	2020	?	3959	1964	5923	71%	1.7			
10	2019	Ν	3929	1886	5815	68%	1.5			
2021 30% Chance I	Exceedance Forcast	?	3780	1765	5545	66%	1.3			
11	1995	SE	4443	918	5360	65%	1.2			
12	2014	N	4594	760	5354	61%	0.9			
13	2006	Ν	4076	1267	5343	58%	0.7			
14	2012	LN	3384	1863	5248	55%	0.4			
2021 50% Chance I	Exceedance Forcast	?	3460	1765	5225	53%	0.3			
15	2008	N	4286	903	5188	52%	0.1			
16	2015	EN	3204	1830	5034	48%	-0.1			
17	2000	Ν	3057	1901	4958	45%	-0.4			
18	2010	EN	3106	1803	4909	42%	-0.7			
2021 70% Chance I	Exceedance Forcast	?	3140	1765	4905	40%	-0.8			
19	1993	EN	4113	664	4777	39%	-0.9			
20	2016	SE	3010	1439	4449	35%	-1.2			
2021 90% Chance I	Exceedance Forcast	?	2670	1765	4435	34%	-1.3	•	— Adequate Sup	vla
21	1991	Ν	3354	1053	4407	32%	-1.5			· · /
22	1994	SE	2317	1964	4281	29%	-1.7			
23	2007	EN	2316	1689	4005	26%	-2.0			
24	2005	EN	3193	774	3967	23%	-2.3			
25	2013	N	2719	1242	3960	19%	-2.6			
26	2003	EN	2924	829	3753	16%	-2.8			
27	1992	EN	1998	1588	3585	13%	-3.1			
28	2004	N	2833	686	3519	10%	-3.4			
29	2002	Ν	2774	681	3456	6%	-3.6			
30	2001	LN	1964	1334	3298	3%	-3.9			

Oakley SWSI

Oa	kley	/ Basin	SWSI
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Adequate Water Supply Greater than -0.4 SWSI or 50 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years
13083500 Oakley Reserv	oir Inflow	Mar-Sep	strm	1991-2020	30 Units KAF
13083500 Oakley Reserve	oir	28-Feb	resv	1991-2020	30 Units KAF
ENSO Classific	ation				

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

				Stream		Streamflow	Non-		
				Flow Mar-	Reservoir	+ Reservoir	Exceedance		
Ra	nk	Year	Enso	Sep	28-Feb	Sum	Probability	SWSI	
	1	1998	SE	46	44	90	97%	3.9	
	2	2006	N	54	34	88	94%	3.6	
	3	2017	LN	49	38	87	90%	3.4	
	4	1999	SL	39	45	84	87%	3.1	
	5	1997	N	46	33	79	84%	2.8	
	6	2011	SL	52	22	74	81%	2.6	
	7	2019	N	44	24	69	77%	2.3	
	8	1996	N	37	27	64	74%	2.0	
	9	2007	EN	18	43	61	71%	1.7	
	2021 10% Chance Exceedance Force	əst	?	37	24	61	69%	1.6	
	10	2020	?	24	35	58	68%	1.5	
:	11	2000	N	18	40	57	65%	1.2	
:	12	2005	EN	40	15	55	61%	0.9	
	13	2012	LN	17	37	54	58%	0.7	
	2021 30% Chance Exceedance Force	ast	?	29	24	53	56%	0.5	
:	14	1995	SE	38	15	52	55%	0.4	
	15	2009	N	31	21	52	52%	0.1	
	16	2018	LN	14	37	50	48%	-0.1	
	17	2008	N	22	27	49	45%	-0.4	
	2021 50% Chance Exceedance Force	ast	?	24	24	48	44%	-0.5	
	18	2010	EN	21	26	47	42%	-0.7	
	19	2016	SE	27	19	46	39%	-0.9	
	20	1993	EN	35	10	45	35%	-1.2	
	2021 70% Chance Exceedance Force	ast	?	20	24	44	34%	-1.3	
1	21	2013	N	19	22	42	32%	-1.5	
	22	2001	LN	13	26	38	29%	-1.7	
	2021 90% Chance Exceedance Force	ast	?	14	24	38	27%	-1.9	
1	23	2002	N	24	14	38	26%	-2.0	
1	24	2014	N	19	18	37	23%	-2.3	
1	25	2015	EN	16	20	36	19%	-2.6	
:	26	2004	N	24	11	35	16%	-2.8	
1	27	1994	SE	13	15	28	13%	-3.1	
1	28	1991	N	15	11	26	10%	-3.4	
:	29	2003	EN	10	15	25	6%	-3.6	
	30	1992	FN	7	11	19	3%	-3.9	

— Adequate Supply

Calmaan	Salmon Falls	Creek Basin SWSI
Saimon	Station ID	Statio
	13105000 Salmon Falls	Creek or San Jacinto

ENSO Classification

Adequate Water Supply Greater than -0.9 SWSI or 110 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years
13105000 Salmon Falls (	reek nr San Jacinto	Mar-Sep	strm	1991-2020	30 Units K
13106500 Salmon Falls F	teservoir	28-Feb	resv	1991-2020	30 Units K

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

# Tract **SWSI**

						Streamflow	Non-	
			Allotment St	tream Flow Re	servoir 28	+ Reservoir	Exceedance	
Rank	Year	ENSO	(per share)	Mar-Sep	Feb	Sum	Probability	SWSI
1	2017	LN		157	81	238	97%	3.9
2	2011	SL	1.167	164	49	214	94%	3.6
3	1997	N	1.167	132	60	192	90%	3.4
4	2006	N	1.167	143	46	190	87%	3.1
5	1998	SE	1.167	113	76	189	84%	2.8
6	2019	N		143	41	185	81%	2.6
7	1999	SL	1.167	92	81	172	77%	2.3
8	1996	N	1.167	107	59	165	74%	2.0
9	2020	?		71	83	155	71%	1.7
20	21 10% Chance Exceedance Forcast	?	1.167	97	47	144	69%	1.6
10	1995	SE	1.000	115	25	140	68%	1.5
11	2016	SE		109	26	135	65%	1.2
12	1993	EN	1.050	118	16	134	61%	0.9
13	2018	LN		38	94	132	58%	0.7
14	2009	N	1.000	106	24	130	55%	0.4
15	2012	LN	0.685	36	89	125	52%	0.1
16	2007	EN	0.655	46	78	124	48%	-0.1
20	21 30% Chance Exceedance Forcast	?	1.167	76	47	123	47%	-0.3
17	2010	EN	0.680	73	46	120	45%	-0.4
18	2005	EN	0.840	97	21	118	42%	-0.7
20	21 50% Chance Exceedance Forcast	?	1.167	63	47	110	40%	-0.8
19	2000	N	0.481	48	59	107	39%	-0.9
20	21 70% Chance Exceedance Forcast	- ?	1.000	51	47	98	37%	-1.1
20	2008	N	0.579	61	32	92	35%	-1.2
20	21 90% Chance Exceedance Forcast	3	0.800	36	47	83	34%	-1.3
21	1994	SE	0.330	33	46	79	32%	-1.5
22	2004	N .	0.425	61	1/		29%	-1.7
23	2002	N	0.436	62	15	76	20%	-2.0
24	2013			42	33	75	23%	-2.5
25	2015	CIN N	0.260	42	28	/0	19%	-2.0
20	1991	N	0.360	40	18	64	10%	-2.8
27	2014	EN	0.214	41	20	61	13%	-3.1
20	2003	LN	0.214	30	20	50	694	-3.4
29	2001	EN	0.227	10	20	20	20/5	-3.0
30	1992	EN	0.150	19	18	37	5%	-3.9

Adequate Supply

Owyhee SWSI

Owy	hee Bas	in SWSI
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Adequate Water Supply Greater than -2.6 SWSI or 575 KAF

Station ID	Station Name	Period	Data Type	Years	# of Years	
13183000 Owyhee R bl	w Owyhee Dam	Mar-Sep	strm	1991-2020	30	Units K
13182500 Lake Owyhee	nr Nyssa	28-Feb	resv	1991-2020	30	Units I
ENSO Classif	cation					

SE Strong El Nino - EN Mild El Nino - N Neutral - LN Mild La Nina - SL Strong La Nina

			Stream		Streamflow	Non-			
			Flow Mar-	Reservoir 28-	+ Reservoir	Exceedance			
Rank Ye	ear E	nso	Sep	Feb	Sum	Probability	SWSI		
1 20	)11	SL	1297	404	1700	97%	3.9		
2 20	006	N	1105	550	1655	94%	3.6		
3 19	998	SE	868	497	1365	90%	3.4		
4 19	996	Ν	675	594	1270	87%	3.1		
5 20	)17	LN	763	504	1268	84%	2.8		
6 19	97	Ν	680	548	1228	81%	2.6		
7 19	999	SL	616	554	1170	77%	2.3		
8 19	93	EN	1071	86	1157	74%	2.0		
9 20	19	N	713	305	1018	71%	1.7		
10 19	995	SE	628	343	972	68%	1.5		
2021 10% Chance Exceedance Forcast		?	590	366	956	66%	1.3		
11 20	05	EN	631	202	832	65%	1.2		
12 20	020	?	287	539	826	61%	0.9		
13 20	000	N	307	490	797	58%	0.7		
2021 30% Chance Exceedance Forcast		?	430	366	796	56%	0.5		
14 20	)12	LN	221	550	770	55%	0.4		
15 20	18	LN	201	514	714	52%	0.1		
16 20	07	EN	175	532	706	48%	-0.1		
2021 50% Chance Exceedance Forcast		?	335	366	701	47%	-0.3		
17 20	008	N	479	216	694	45%	-0.4		
18 20	009	N	415	233	648	42%	-0.7		
19 20	16	SE	424	218	642	39%	-0.9		
2021 70% Chance Exceedance Forcast		?	250	366	616	37%	-1.1		
20 20	010	EN	396	213	609	35%	-1.2		
21 20	004	Ν	481	120	601	32%	-1.5		
22 20	002	N	428	166	594	29%	-1.7		
23 19	94	SE	134	458	593	26%	-2.0		
24 20	001	LN	293	293	586	23%	-2.3	<b></b>	Δ
2021 90% Chance Exceedance Forcast		?	151	366	517	21%	-2.4	-	~
25 19	91	N	260	251	511	19%	-2.6		
26 20	13	N	173	304	477	16%	-2.8		
27 20	003	EN	181	176	357	13%	-3.1		
28 20	15	EN	129	169	298	10%	-3.4		
29 20	14	N	135	127	262	6%	-3.6		
30 19	92	EN	96	146	241	3%	-3.9		

Adequate Supply



## MEMO

To: Idaho Water Resource Board

From: Kala Golden

**Date:** March 4, 2021



Subject: Picabo Livestock Company – New Water Supply Project Loan Application

### Action Item: \$95,000 loan

### **1.0 INTRODUCTION**

Picabo Livestock Company (Company) is requesting a loan in the amount of \$95,000 from the Idaho Water Resource Board (Board) to drill a new backup well for its community water system, and install a new pump and accompanying electrical system (Project).

### 2.0 BACKGROUND

The Company currently holds ownership of Picabo Water System (System), a public utility supplying water to the unincorporated community of Picabo, with a population of approximately 200. Under regulation by the Idaho Public Utilities Commission (PUC), the water system provides service to approximately 80 residential, and 4 commercial connections which includes the Company's feedlots. The system was originally constructed in 1917 and has been upgraded over time. Its current operator also serves as the Director of Public Works for the City of Carey. Infrastructure, including the primary ground water well, storage tank, chlorinator, and pump system, is housed on property owned by the Company.

The Company also maintains a back-up well to satisfy Idaho Department of Environmental Quality (IDEQ) rules for public drinking water systems. The rules require an alternative water source, and require the water system capacity provide for both maximum day demand and adequate fire flow capacity as determined by the local fire authority. The existing back-up well is designed to serve the community water supply system and to meet local fire flow capacity requirements. Currently, the alternate well is located on a separate private lot that is being sold, and the lot owners have chosen to abandon the well. A moratorium is in place on any new services, until a new alternate well is drilled. This project will provide funding for the installation of a new well, and the required upgrades to the pump and electrical systems.

### **3.0 PRIOR LOANS**

The current Project will be the second the Company has funded through a Board loan. In 2001, the Board approved a loan to the Company in the amount of \$38,000 at 5.5% interest and a 10-year term. Funds from that loan were also used to make upgrades on the Picabo Water System, and consisted of drilling the primary well and construction of the water

treatment system. At that time, the community of Picabo was approximately one-quarter its current size. The previous loan was repaid timely and in full.

#### 4.0 PROPOSED ALTERNATE WELL PROJECT

The Project includes the drilling of a new alternate ground water well, to be installed adjacent to the existing storage tank. Water from this well will flow through the storage tank and into the existing chlorinating system, utilizing a designated 10hp booster pump to move water into the System's distribution line. The two wells will be cycled independently, except in the event of a fire; at which time both the new and existing booster pumps would operate simultaneously to provide sufficient pressure and supply for fire flows.

Construction of the new well will also require upgrades to the existing electrical system. The Company will work with Idaho Power Company to upgrade the System's electrical supply, and install 1000 feet of underground power line to the new well. The total cost for well drilling, electrical installation and upgrade, and installation of a turbine set and booster pump for the new well, is estimated to be approximately \$95,000. The Company recently submitted an application for transfer of water rights to accommodate the new well, and intends to start the Project upon approval of this transfer by the Department of Water Resources.

#### 5.0 BENEFITS

The new ground water well and water system improvements for the Picabo Water System will provide a reliable, long-term water supply for residents of the community of Picabo, and ensure the System remains in compliance with the state standards. Additionally, the Project is intended to ensure the safety of the community by providing adequate fire flows if needed.

#### 6.0 FINANCIAL ANALYSIS

The Company is requesting a loan of \$95,000 at 2.5% interest for a 20-year term. The following analysis reflects the Board's current interest rate of 3.5%, as well as the applicant's request for a 2.5% interest rate.

Currently, water users are assessed an annual water user rate of \$378 for residential hookup, and \$642 for commercial hookup. Users are assessed on a monthly basis, with an increased assessment during the irrigation season. The average monthly rate per user is approximately \$32, with the last rate adjustment being approved by the PUC in 2004. Since that time, annual operations and maintenance costs have increased, and the number of hookups on the system has more than doubled.

The Company published the first public notice of intent to increase rates in early March and will apply to the PUC for a rate increase in May. The proposed rate adjustment will increase assessments by approximately \$18 per month on average; this is about a 56% increase from the current rate and is equivalent to the percentage increase of the 2004 rate adjustment.

#### **Payment Analysis**

ete / o Inte	the for interest Current rute estusisfied sy the reader							
Term	<b>Estimated Annual</b>	Current Assessment	After Assessment					
(Years)	Payment-Revolving	Cost/Residence/Year	Cost/Residence/Year					
	Account Loan							
20	\$6,684.30	\$384.00	\$600					

#### 3.5% Interest- Current rate established by the IWRB

#### 2.5% Interest- Applicant's requested rate

Term (Years)	Estimated Annual Payment-Revolving Account Loan	Current Assessment Cost/Residence/Year	After Assessment Cost/Residence/Year
20	\$6,093.98	\$384.00	\$600

#### 6.0 WATER RIGHTS

Picabo Livestock Company for Picabo Water System holds the following water rights:

WATER RIGHT	SOURCE	Diversion Rate (CFS)	PRIORITY DATE	
37-7455	Ground Water	0.06	9/2/1975	
37-21400	Ground Water	0.7	3/6/2003	
37-11628	Ground Water	0.06	9/1/1930	

#### 7.0 SECURITY

As collateral for the loan, the IWRB is authorized to hold the Company's water rights associated with the System, in addition to its facilities, equipment, and all materials associated with this project.

#### 8.0 CONCLUSION AND RECOMMENDATION

This loan will be used to drill a new backup well and install the necessary operational components to meet IDEQ and local fire flow capacity requirements. Staff recommends approval of the \$95,000 loan request by the Company.



### **IDAHO WATER RESOURCE BOARD**

322 East Front Street, Statehouse Mail Boise, Idaho 83720 Tel: (208) 287-4800 FAX: (208) 287-6700



#### APPLICATION FOR FINANCIAL ASSISTANCE FOR <u>POTABLE</u> WATER SYSTEM CONSTRUCTION PROJECT

Answer the following questions and provide the requested material as directed. All pertinent information provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested. For larger funding amounts an L.I.D. may be required.

## Incomplete documents will be returned and no further action taken will be taken by IWRB staff. All paperwork must be in twenty eight (28) working days prior to the next bi-monthly Board meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/waterboard/

I. Prepare and attach a "Loan Application Docum The Loan Application Document requirements an Guidelines. The guidelines can be found at: <u>http://www.idwr.idaho.gov/waterboard/Financial%</u> You can also obtain a copy by contacting IWRB st	ent". re outlined in the Water Project Loan Program <u>620program/financial.htm</u> . raff.
II. General Information:         A. Type of organization: (Check box)         Municipality         Water and/or Sewer District         Non-Profit Water Company         For-Profit Water Company	<ul> <li>Homeowner's Association</li> <li>Water Association</li> <li>Other</li> <li>Explain:</li> </ul>
Picabo Water/Picabo Livestock Co.	Nick Purdy/President
Organization name	Name and title of Contact Person
Box 688/Ranch Lane	208-720-5150
PO Box/Street Address	Contact telephone number
Picabo, Blaine, Id, 83348	nick@purdyent.com
City, County, State, Zip Code Project location legal description NE,SW,SW,	e-mail address Sec 27,1N,20E

B. Is your organization registered with the Idaho Secretary of State's office? Yes 🔳 No 🗌

IWRB Drinking loan form 4/10

- C. Purpose and name of project for this loan application.
  - New Project
  - Rehabilitation or replacement of existing facility
  - DEQ requirement
  - Other: drill back up well for city water system
- **D**. Briefly describe the existing water supply facilities and describe any existing operational or maintenance problems. Attach map of the service area and a separate sheet if necessary to complete the explanation.

See Attaced PICABO WELL OPERATION MANUAL, PRELIMINARY ENGINEERING REPORT FOR NEW WELLWITH MAPS

#### **III. WATER SYSTEM:**

A. Source of water:



Groundwater Other

B. Water Right Numbers:

Water Right	Stage	Priority Date	Source	Amount	
37-7455		1975	GROUND WATER	.06	-
37-21400		2006	GROUND WATER	.7 .94CFS	/
37-11628		1930	GROUND WATER	.06 ,02CFS	570

Note: Stage refers to how the water right was issued. (License, Decree, or Permit)

C. Hook-ups on the system:

Approximate number of residential hook-ups:  $\frac{86}{4}$ Approximate number of commercial hook-ups:  $\frac{4}{4}$ 

80 SERVING 200

D. On average, how much water is provided per day? 40,000 GAL

#### **IV. USER RATES:**

A. How does you organization charge user rates

Other Explain: IRRIGATON IS EXTRA

B. Current user rate? <u>\$ 32</u>

Per Hook up Per Volume Used

(gallons used, monthly, yearly, etc.)

If a graduated or progressive rate structure or different rates for different classes of users are used, attach a separate sheet with explanation.

C. When was the last rate change? \_\_\_\_\_\_(month/year)

per month

IWRB Non-drinking loan form 4/10

<b>D</b> . Does your organizat If yes, how?	ion measure water use? Yes	
M	eters at User Hook-ups	
🛛 М	aster Meter	
Ot	her (explain)	
E. Does you organization If yes, explain how it	ı have a regular assessment f is assessed:	or a reserve fund? Yes 🗌 No 🔳
F. Does your organizatio If yes, explain for what	n have an assessment for som at purpose and how it is asses	ne future special need? Yes 🗌 No 🔳
V. PROPOSED METH How will you pay the a	OD FOR PAYING LOAN nnual loan payments? Che	PAYMENTS eck revenue sources below:
Tax Levies Capital Improv User Fees and Other (explain	rement Reserve Account or S Tap/Hookup Fees ) Ioan from Picabo Livestock Company	Sinking Fund y
Will an increase i When will new as WE WILL APPLY T	n assessment be required? Y sessments start and how lon O START IN APRIL	(es No g will they last?
VI. SECUREMENT O List all land, buildings, v will be used as collateral	<u>F LOAN</u> aterworks, reserve funds, an for the loan:	d equipment with estimated value that
Property		Estimated Value
PICABO LIVESTOCK RANCH	1	30 MIL
<u>Please attach a legal de property.</u>	scription of the property be	eing offered along with a map referencing the
VII. PROOF OF OWN Please provide proof of construction and apartic	ERSHIP ownership, easements or agree	ements that are held or can be acquired for the

### VIII. FINANCIAL INFORMATION:

IWRB Non-drinking loan form 4/10

A. Attach a copy of each of the last 3 year's financial statement. (Copies must be attached)
B. Reserve fund (current) <u>PANCH LINE OF CREDIT</u>
C. Current cash on hand <u>EANCH LINE OF CREDIT</u>
D. Outstanding indebtedness:

To whom	<b>Annual Payment</b>	Amt. Outstanding	Years Left	
NO DEBT CURPEN	TLY			
RELATED TO WATER	SYSTEM			
Use you dong husinggo with the I	daha Watar Pasauraa Pa	and hafara? Vac 🔳 No		
Have you done business with the I If yes what was the loan for?	daho Water Resource Boa PRIMARY WELL IN 2001	ard before? Yes 🔳 No		
Have you done business with the I If yes what was the loan for? How much was the loan for?	daho Water Resource Boa PRIMARY WELL IN 2001 \$38,000	ard before? Yes 🔳 No		
Have you done business with the I If yes what was the loan for? How much was the loan for? Is the loan paid off? Yes IN	daho Water Resource Boa PRIMARY WELL IN 2001 \$38,000	ard before? Yes 🔳 No		

Rural Development, Banks, Local Government, etc.) USDA, PICABO LIVESTOCK (owner of water system), NORTHWEST FARM CREDIT

### VIII. ORGANIZATION APPROVAL:

Is a vote of the shareholders, members, etc. required for loan acquisition? Yes No If yes, a record of the vote must be attached.

### Amount of funds requested:

\$95,000

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date:





#### CONSTRUCTION NOTES

#### GENERAL

- THIS PROJECT INCLUDES INSTALLATION OF A NEW WATER SUPPLY WELL, PUMP, AND TIE-IN TO AN EXISTING PUBLIC DRINNKING WATER SYSTEM. THE PROJECT ALSO INCLUDE ABANDONMENT OF AN EXISTING BACKUP WELL. CONTRACTOR SHALL OBTAIN DRILLING PERMIT(S) FROM IDAHO DEPARTMENT OF WATER RESOURCES.
- ALL TECHNICAL QUESTIONS REGARDING ANY ASPECT OF THE PROJECT SHALL BE DIRECTED TO BROCKWAY ENGINEERING C/O CHARLES G. BROCKWAY, P.E., 2016 WASHINGTON ST. NORTH #4, TWIN FALLS, ID 83301, (208) 736-8543
- CONTRACTOR SHALL VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS SHOWN OR IMPLIED ON THE DRAWINGS AND SPECIFICATIONS, AS WELL AS THE EXISTING WORK AND PHYSICAL DESCRIPTIONS AND CONDITIONS OF THE SITE, AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF THE WORK.
- ALL EQUIPMENT PROPOSED TO BE SUPPLIED BY THE CONTRACTOR MUST BE SUBMITTED FOR APPROVAL TO THE ENGINEER ANY ITEM WHICH THE CONTRACTOR PROPOSES TO FURNISH AS 'EQUIAL' OR 'EQUIVALENT' TO ITEM SPECIFIED SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER WITH SUFFICIENT MANUFACTURER'S LITERATURE TO DETERMINE EQUIVALENCY.
- CODES AND STANDARDS: INTERNATIONAL PLUMBING CODE (IPC); NFPA 70 (NATIONAL ELECTRIC CODE); AND NFPA 101 (LIFE SAFETY CODE); AMERICAN CONCRETE INSTITUTE (ACI) 301, 318, & 530.
- WELL WORK SHALL CONFORM TO ALL APPLICABLE PORTIONS OF THE MINIMUM WELL CONSTRUCTION STANDARDS ESTABLISHED BY THE IDAHO DEPARTMENT OF WATER RESOURCES (IDWR), THE REQUIREMENTS OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY'S (IDEQ) ADMINISTRATIVE RULES FOR PUBLIC DRINKING WATER SYSTEM WELLS, ANY CONDITIONS SET FORTH IN THE DRILLING PERMIT ISSUED BY IDWR, AND THE PROVISIONS OF THIS SPECIFICATION.
- ALL EQUIPMENT AND MATERIALS CONTACTING POTABLE WATER SHALL BEAR THE NSF-61 AND NSF-372 CERTIFICATIONS.
- ALL CHEMICALS OR LIQUIDS CONTACTING POTABLE WATER SHALL BEAR THE NSF-60 CERTIFICATION
- UNDERGROUND UTILITIES MAY BE PRESENT. LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVES TO DETERMINE HOW NEW WATER PIPELINE WILL AVOID ALL UTILITIES.

#### PIPE MATERIALS

- 10. PVC PIPE: PVC PIPE: AWWA C900 GASKETED PIPE, ASTM F-477 AND D-3139, SIZE AND CLASS AS SHOWN
- 11. PVC FITTINGS: AWWA C900, GASKETED, ASTM D3139. PLACE CONCRETE THRUST BLOCKS AT ALL ELBOWS, TEES, AND WYES.

#### WELL CONSTRUCTION

- 12. DRILLING METHOD SHALL BE AIR ROTARY
- 13. CASING SHAL BE NEW STEEL PIPE MEETING AWWA A-100, 10", WALL THICKNESS 0.365".
- 14. ALL WELL CASING THAT IS DRIVEN SHALL HAVE DRIVE SHOES, AND SHOES MAY BE OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS. IF REQUIRED BY IDEQ, THE SHOE SEAL SHALL BE TESTED BY AN APPROVED METHOD.
- 15. ANNULAR SURFACE SEAL: GRANULAR BENTONITE WITH A MEDIAN SIZE OF #8 MESH (ALLOWABLE SIZE RANGE #4 TO #20 MESH) CONTRACTOR SHALL HAVE ON SITE A MINIMUM OF 50% EXCESS SEAL MATERIAL AS A PRECAUTION DURING SEAL PLACEMENT. ALL DRY POUR GRANULAR BENTONITE SHALL BE TAGGED AT APPROPRIATE INTERVALS TO VERIFY PLACEMENT. IF A BRIDGE OCCURS, A TREMMIE PIPE SHALL BE WASHED OR JETTED THROUGH THE BRIDGE TO ALLOW FOR PUMPING OF GROUT
- 16. ALL TOOLS, EQUIPMENT, AND MATERIALS SHALL BE STEAM CLEANED AND SWABBED WITH A 500 PPM DISINFECTION SOLUTION PRIOR TO ENTERING THE WELL, BOTH BEFORE AND DURING DRILLING, AND BEFORE AND DURING PUMP TESTING. AFTER COMPLETION OF THE WELL, THE WELL SHALL BE SWABBED WITH A 50 PPM FREE CHLORINE SOLUTION AND FLUSHED. FLUSHED WATER CONTAINING CHLORINE SHALL NOT BE ALLOWED TO EXIT THE BOUNDARIES OF THE PROPERTY AND FLOW ONTO ADJACENT PROPERTY.
- 17. DRILLING FLUIDS AND WATER WITHDRAWN FROM THE WELL SHALL BE CONTAINED AND SHALL NOT BE ALLOWED TO ENTER ANY STREAM, RIVER, CANAL, DITCH, OR OTHER WATERWAY
- 18. NO SPILLAGE OF HAZARDOUS MATERIALS, INCLUDING BUT NOT LIMITED TO GASOLINE, SOIL, GREASE, HYDRAULIC FLUIDS, OF INDUSTRIAL CHEMICALS SHALL BE ALLOWED. STORAGE OF SUCH MATERIALS SHALL NOT OCCUR ON OR NEAR THE PROJECT SITE.
- JMBNESS: BOTH OPEN HOLE AND CASED PORTIONS SHALL BE STRAIGHT AND PLUMB THROUGHOUT THEIR LENGTH, WITH THE MAXIMUM DEVIATION FROM VERTICAL BEING FOUR (4) INCHES PER 100 FEET OF DEPTH. THE WELL SHALL BE SUFFICIENTLY STRAIGHT TO PERMIT THE INSTALLATION AND REMOVAL, WITHOUT BINDING, AND THE SATISFACTORY OPERATION OF A SUBMERSIBLE PUMP OF ONE (1) NOMINAL SIZE SMALLER THAN THE NOMINAL DIAMETER OF THE BORE.
- 20. PUMPING TEST: AFTER DRILLING, A PUMPING TEST SHALL BE CONDUCTED TO DETERMINE THE MAXIMUM YIELD OF THE WELL AND THE PUMPING LEVEL. THE TEST MUST CONTINUE FOR A MINIMUM OF 24 HOURS AT A RATE OF AT LEAST 250 GPM. THE PUMP TEST EQUIPMENT SHALL BE CAPABLE OF DELIVERING NOT LESS THAN 300 GPM TO A FREE DISCHARGE WITH A PUMPING WATER LEVEL OF 180 FEET BGS. THE PUMP SHALL BE LUBRICATED WITH WATER OR A FOOD-GRADE LUBRICANT. CONTRACTOR SHALL ARRANGE OWNER THE SATISFACTORY DISPOSAL OF THE PUMPED WATER.
- 21. PUMPING TEST MEASUREMENTS: PROVIDE EQUIPMENT TO MEASURE DISCHARGE RATE TO ACCURACY OF 5% OR BETTER. WATER LEVEL IN WELL DURING PUMPING, AND SAND CONTENT IN PPM. ENGINEER OR HIS REPRESENTATIVE WILL COLLECT SAMPLES FOR WATER QUALITY TESTING PURPOSES.

### PIPE INSTALLATION

- TO ALL DRAIN POINTS.
- IMPORTED. SELECT BACKFILL SHALL BE 3/8" GRAVEL, COMMONLY KNOWN AS "PEA GRAVEL", MEETING ASTM C-33 SIZE #8 GRADATION.
- INCHES OF PIPE. APPLY MODERATE FORCE WITH RUBBER-TIRED EQUIPMENT AND REGULATE WATER CONTENT TO ACHIEVE COMPACTION TO 90% OF MAXIMUM DENSITY PER ASTM D-1557.
- ADJACENT TO THE WELL SITE SHALL BE OPERATED FOR 10 MINUTES.
- VALVES AND APPURTENANCES
- AMERICAN FLOW CONTROL 2500 OR EQUAL
- 27. CHECK VALVES: FLOMATIC 80DI OR EQUAL.
- 28. ADJUSTABLE VALVE BOX: 5-1/4" CAST IRON SCREW OR SLIDE TYPE, MUELLER OR EQUAL

#### PUMPS AND RELATED EQUIPMENT

- 30. PITLESS ADAPTER: WELD-ON STYLE, BAKER MONITOR 8123BEZ OR EQUAL, NSF-61 AND NSF-372 APPROVED.
- FLECTRICAL CONNECTION
- GREATER, WITH A LOW-PRESSURE CUTOFF FUNCTION
- BELOW THE SET POINT, CONTROLLER SHALL ACTIVATE BOTH WELL PUMPS.

#### MISCELLANEOUS

- 34. ELECTRICAL SUPPLY: COORDINATE WITH OWNER FOR SUPPLY TO NEW PUMP LOCATION FROM ADJACENT POWER POLE.
- 35. CHAIN LINK FENCING: 9-GAUGE GALVANIZED, POSTS SET 24\* BELOW GROUND IN CONCRETE, DOUBLE GATE WITH LOCKING LATCH.
- 3.6. PERFORM IN THE PRESENCE OF THE ENGINEER AND PROVIDE A REPORT
- 37
- LEAST 24 HOURS APART ARE NOT ATTAINED, FLUSH THE LINE AGAIN AND RETEST.
- ABANDON EXISTING BACKUP WELL AS FOLLOWS:
   39.1. REMOVE SUBMERSIBLE PUMPAND EITHER STORE OR DISCARD PER OWNER
- DISCONNECT POWER AND REMOVE EXISTING ELECTRICAL PANEL AND POST. 39.2
- FILL THE WELL WITH APPROVED SEAL MATERIAL AND SIMULTANEOUSLY PULL THE CASING
- 39.6. ABANDONMENT PERMIT





THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, FLLC. FOR A SPECIFIC PROJECT KAING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIRE HER SO ET THE PROJECT, RELISE OF THIS DRAWING FOR ANY WHITTEN FRANSION FROM LECTH BROCKWAY ENGINEERING & THE QUERT IS REMATED						DESIGNED BY CGB	DRAFTED BY	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES	P PROP
	A	ISSUED FOR DEQ REVIEW DESCRIPTION	12/28/2020 DATE	APPD.	REFERENCE DRAWINGS	(18.7.24)	Danie One y	2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS ID, 83301 (208) 736-8543	COV

SECTION LETTER SHEET WHERE SHEET WHERE DETAIL IS SHOWN SECTION IS SHOWN SHEET WHERE SHEET WHERE SECTION IS TAKEN DETAIL IS TAKEN

22. BURIED PIPE INSTALLATION: INSTALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. LAY PIPE ON FIRM, UNIFORM BURGED FIFE INSTALLATION, INSTALLACED AMINIMUM SLOPE OF 1% OR 1/8" PER FOOT WITH NO HIGH OR LOW SPOTS, FREELY DRAINING

23. PIPE BEDDING AND INITIAL BACKFILL: GRAVEL, SAND, SAND/SILT MIXTURES, OR SILT LOAM. MATERIAL SHALL CONTAIN NO STONE OR TO BE SUITABLE, CONTRACTOR TO VERIFY. IN ANY REACH WHERE NATIVE MATERIAL IS UNSUITABLE, SELECT BACKFILL SHALL BE

24. PIPE TRENCH FINAL BACKFILL: NATIVE MATERIAL, BUT NO STONE OR ROCK FRAGMENT LARGER THAN 2" SHALL BE ALLOWED WITHIN 6

25. EXISTING PIPE TIE-INS: CONTRACTOR TO LOCATE THE PIPE, EXCAVATE AT THE TIE-IN LOCATION, AND VERIFY TYPE AND DIAMETER AND PROPER FITTINGS REQUIRED. TAP SHALL BE MADE TO THE EXISTING MAINLINE USING A HOT TAP SYSTEM INCLUDING SLEEVE, FITTING, AND VALVE. THE SYSTEM SHALL NOT BE DEPRESSURIZED IN ORDER TO MAKE THE CONNECTION. AFTER CONNECTION, THE HYDRANT

26. GATE VALVES, BURIED: RESILIENT-WEDGE, CAST-IRON, EPOXY-COATED, SIZE AND CONNECTION TYPE AS INDICATED ON DRAWINGS.

29. PUBLIC WATER SYSTEM WELL PUMP: SUBMERSIBLE PUMP, STAINLESS-STEEL, 250 GPM AT MINIMUM 237 FEET TDH, 480V, 3PHASE, 20HP,

31. SANITARY CAP: BAKER MONITOR 10W WITH VENT, OR EQUAL, NSF-61 AND NSF-372 APPROVED, CONTAMINANT-PROOF ENTRANCE FOR

32. PWS WELL PUMP ELECTRICAL EQUIPMENT: CONTROLLER SHALL BE A FIXED-SPEED, SOFT-START, 3-PHASE UNIT, RATED FOR 20HP OR

33. PUMP LOGIC: CONTROLLERS SHALL ACTIVATE THE EXISTING WELL PUMP OR THE NEW WELL PUMP WHEN SYSTEM PRESSURE DROPS BELOW CURRENT SET POINT. PUMPS SHALL BE OPERATED IN AN ALTERNATING, DUPLEX FASHION. IF SYSTEM PRESSUREDROPS 10 PSI

36. HYDROSTATIC TESTING: PERFORM HYDROSTATIC PRESSURE TESTING OF PIPING IN ACCORDANCE WITH ISPWC DIVISION 400, SECTION

FLUSHING AND DISINFECTION: FLUSH AND DISINFECT ALL NEW PIPING RELATED TO PUBLIC WATER SYSTEM IN ACCORDANCE WITH SPWC DIVISION 400, SECTIONS 3.9.A AND 3.9.B. USE ADJACENT HYDRANT TO ACHIEVE THE FLUSHING VELOCITY. DO NOT ALLOW CHLORINATED WATER TO ENTER ANY SURFACE WATERWAY. PERFORM IN THE PRESENCE OF THE ENGINEER AND PROVIDE A REPORT.

38. COLIFORM TESTING: DRAW TWO (2) SAMPLES AT LEAST 24 HOURS APART AND TEST FOR TOTAL COLIFORM. SAMPLES SHALL BE DRAWN FROM THE ROUTINE SAMPLING LOCATION IN THE WELLHOUSE WITH ONLY THE NEW WELL ACTIVE. IF TWO (2) "ABSENT" RESULTS AT

EXPOSE PIPE RUNNING FROM WELLHEAD TO MAINLINE IN STREET. DISCONNECT AND CAP THIS LINE NEAR THE WELL. USE APPROPRIATE CAP OR PLUG, CONTRACTOR TO VERIFY PIPE MATERIAL AND SIZE.

BACKFILL EXCAVATIONS, COMPACT, AND RESTORE WELLHEAD AREA TO PREVIOUS CONDITION INCLUDING TURFGRASS SOD. IDWR MAY APPROVE VARIATIONS TO THE ABANDONMENT PROCEDURE. CONTRACTOR TO WORK WITH IDWR TO OBTAIN

	DRAWING	INDEX
	TITLE	DWG No.
	COVER SHEET AND VICINITY MAP SITE PLAN AND WELL DETAIL	0
A	BO WATER SYSTEM ED REPLACEMENT WELL	PROJECT # 160-16-2020
2	SHEET & VICINITY MAP	DWG# REV





FOR A SPECIFIC PROJECT TAKING INTO		· · · · · · · · · · · · · · · · · · ·				DESIGNED BY	DRAFTED BY	BROCKWAY ENGINEERING, PLLC
REQUIREMENTS OF THE PROJECT.		and the second second				CGB	m	HYDRAULICS - HYDROLOGY - WATER RESOURCES
PURPOSE IS PROHIBITED UNLESS						-		2016 NORTH WASHINGTON, SUITE 4
ROCKWAY ENGINEERING & THE	A	ISSUED FOR DEQ REVIEW	12/28/2020			(18Y24 DPA)	1"= 120"	TWIN FALLS ID, 83301
CLIENT IS GRANTED.	REV	DESCRIPTION	DATE	APPD.	REFERENCE DRAWINGS	(IDALA DIGA	WING ONE I)	(208) 736-8543

#### **BEFORE THE IDAHO WATER RESOURCE BOARD**

#### IN THE MATTER OF PICABO LIVESTOCK COMPANY FUNDING REQUEST

## RESOLUTION TO AUTHORIZE FUNDING FOR NEW WELL AND ELECTRICAL UPGRADE

2 3 4	Water Resource Board (IWRB) in the amount of \$95,000.00 for the drilling of an alternate, back-up well and accompanying electrical upgrades, for the system currently supplying water to the residents of the unincorporated community of Picabo (Project); and WHEREAS, the Company owns, operates, and maintains the Picabo Water System (System)
3 4	and accompanying electrical upgrades, for the system currently supplying water to the residents of the unincorporated community of Picabo (Project); and WHEREAS, the Company owns, operates, and maintains the Picabo Water System (System)
4	unincorporated community of Picabo (Project); and WHEREAS, the Company owns, operates, and maintains the Picabo Water System (System)
_	WHEREAS, the Company owns, operates, and maintains the Picabo Water System (System)
5	WHEREAS, the Company owns, operates, and maintains the Picabo Water System (System)
6	
7	which conveys potable water to the residents in Picabo, Blaine County, for domestic and commercial use
8	to the 200 residences in the community; and
9	
10	WHEREAS, the system operates under regulation by the Idaho Public Utilities Commission (PUC),
11	and Idaho Department of Environmental Quality (DEQ); and
12	
13	WHEREAS, the System is required by DEQ to maintain an alternate well to supply the System.
14	The current alternate well is located on a private lot, the owners of which intend to sell and abandon the
15	existing well; and
10	WILEDEAS, the alternate well, as hy requirement of the local fire authority, also serves to most
1/ 10	whereas, the alternate well, as by requirement of the local fire authority, also serves to meet
10	adequate file nows in time of need, and
19 20	WHEREAS, the proposed drilling of a new well will benefit the residents of the community of
20 21	Picabo by providing a long-term, reliable domestic water supply system that will comply with state and
21	local rules: and
23	
24	WHEREAS, the total estimated cost for the Project is \$95,000; and
25	
26	WHEREAS, the Company is a qualified applicant and the proposed Project qualifies for a loan
27	from the IWRB'S Revolving Development Account; and
28	
29	WHEREAS, the proposed Project is in the public interest and is in compliance with the State
30	Water Plan; and
31	
32	NOW THEREFORE BE IT RESOLVED that the IWRB approves a loan not to exceed \$95,000 from
33	the Revolving Development Account at% interest with a 20-year repayment term and provides
34	authority to the Chairman of the Idaho Water Resource Board, or his designee, to enter into contracts
35	with the Company on behalf of the IWRB.
36	

Resolution No. \_\_\_\_\_

37	NO	W THEREFORE BE IT FURTHER RESOLVED that this resolution and the approval of the loan are
38	subject to t	he following conditions:
39		
40	1)	The Company shall comply with all applicable rules and regulations that apply to the
41		proposed Project.
42	2)	The Company will provide acceptable security for the loan to the IWRB including, but not
43		limited to, the Company's water rights associated with the System and, all facilities and
44		equipment associated with the Project.
45	3)	The Company shall obtain approval from the PUC for an increase in the monthly user rates
46		prior to the disbursement of funds.
47		

DATED this 19<sup>th</sup> day of March, 2021.

JEFF RAYBOULD, Chairman Idaho Water Resource Board

ATTEST \_\_\_\_\_\_ JO ANN COLE-HANSEN, Secretary

Resolution No. \_\_\_\_\_

## Memorandum

To: Idaho Water Resource Board

From: Wesley Hipke

Date: March 8, 2021

Re: ESPA Managed Recharge Program Status Report



**REQUIRED ACTION:** No action is required at the March 19, 2021 IWRB meeting.

### I. IWRB Managed Recharge Summary

#### **IWRB Natural Flow Managed Recharge**

The IWRB's natural flow recharge water rights came into priority on October 28, 2020 and a current summary of recharge activities is provided in Table 1. The US Bureau of Reclamation (USBR) has followed normal winter-time release practices at Minidoka Dam to date, averaging 555 cfs. The volume of water available for recharge is a product of outflow from Minidoka Dam plus reach gains between the dam and the Milner Pool. Currently the only way to estimate the reach gains is by factoring in the releases from Minidoka and Milner Dams, any diversion from the Milner Pool and the level of the Milner Pool. The releases and diversion are relatively straight forward. The level of the Milner Pool, however, is impacted by numerous factors including a lag time between releases from the Minidoka Dam to Milner Dam and wind conditions significant impact he pool level measurements. As a result the rate of the reach gains can vary significantly on a daily basis but can show trends over time. Overall reach gains generally declined through the recharge season. Early in the season, from October through November, the reach gains ranged between 80 to 100 cfs by January the reach gains had declined to between 40 and 80 cfs. If the USBR maintains current winter-time release rates for the remainder of the recharge season, the volume of water available for recharge will be around 550 cfs.

Availability of additional water for recharge is dependent on factors such as changes in the snowpack, timing and volume of water required to meet irrigation demands, and the rate of snowpack runoff. The USBR will present its current outlook/plan for spring reservoir releases at the next Upper Snake Advisory Committee meeting on March 10.

Program operations have been relatively smooth with no significant changes in water availability or reservoir operations. Over the next several months, conditions can change quickly. Program staff will continue to work closely with partners and other stakeholders to respond to changing conditions to optimize recharge potential.

Mater Course	A #0.0	Ctout	#	Current Rate	Median Rate	Total Recharged
water source	Area	Start	Days	(cfs)	(cfs)	(Acre-feet)*
Snake River	Lower Valley	Oct. 29	130	561	417	118,134

 Table 1. IWRB Managed Recharge 2020/2021 Summary

\* As of March 7, 2021 – Reported recharge volumes are preliminary and subject to change.

### II. ESPA Recharge Program Projects and Buildout Activities

The IWRB has expanded the managed recharge capabilities since the start of the full-scale Program in 2014. Over the past seven years the IWRB added approximately 2,400 cfs of managed recharge capacity, the majority being in the Lower Valley (2,100 cfs). Moving forward, there will be an increased focus on establishing standard protocol related to operations, maintenance, monitoring, and evaluating the effectiveness of Program activities. Investigation of cost effective recharge capacity projects, especially in the Upper Valley, will continue to improve the IWRB's ability to capture the large volumes of water that may be available during the spring. The following tables provide a summary and status of current ESPA recharge capacity projects (Table 2) and Program operations (Table 3).

Table 2. IWRB ESPA Managed Recharge Capacity/Site Projects									
IWRB Partner	Project Name	Project Type	Status	IWRB Funds	Scheduled Completion	Description / Key Items			
TFCC	TFCC Injection Wells	Construction	Active	\$178,000	Fall 2021	<ul> <li>Construction of recharge wells</li> <li>Easements – Fall 2020</li> <li>USBR EIS – Spring/Summer 2021</li> <li>UIC permitting – Summer/Fall 2021</li> <li>TFCC had decided to cancel the project but has since reversed their decision, moving forward with the project</li> </ul>			
AFRD2	MP 31 BLM Embankment	Construction / Maintenance	Active	\$320,000	Apr 2021	Construction of Embankment to protect BLM road Meeting with BLM concerning issues – May 2020 Design Study Complete – Oct 2020 Develop Invitation to Bid – Oct-Jan 2020 Hire contractor – Mar 2021 Construction – Mar-Apr 2021			
Fremont- Madison ID	Egin Lakes Phase II	Construction	Active	\$580,000	Spring 2021	<ul> <li>Construction of recharge capacity expansion</li> <li>BLM approval – Oct 2018</li> <li>Finish berms expanding Egin Lakes site – July 2020</li> <li>Construct Tibbets berms in new area – Apr/May 2021</li> </ul>			
Butte Market Lake Co.	Injection Well Test	Testing / Construction	Active	\$110,000	Spring 2021	Construction of recharge site • Evaluation of area complete – Jan 2018 • Drilling & equipping monitor well – Dec 2020 • Background WQ sampling – Fall 2020-Spring 2021 • Construction of infrastructure – Winter-Spring 2021 • Test well – Spring 2021			

IWRB Partner	Project Name	Project Type	Status	IWRB Funds	Scheduled Completion	Description / Key Items
IWRB	Upper Valley – Large Scale Recharge Project	Study	Planning	\$99,500	Nov 2021	<ul> <li>Potential large scale managed recharge projects</li> <li>Initiate detailed feasibility investigation of three potential areas – Nov 2020</li> <li>High level review of 3 sites w/ delivery corridors, data needs, and potential constraints – Winter-Summer 2021</li> <li>Collect &amp; analyze data – Summer-Fall 2021</li> <li>Conceptual designs, cost &amp; permitting requirements – Fall-Winter 2021</li> </ul>
Enterprize Canal Co.	Willow Creek/Swan Hwy Recharge Site	Evaluation / Study	Planning	\$100,000	Summer 2021	<ul> <li>Evaluation, design, &amp; cost -potential recharge project</li> <li>Start of study – June 2020</li> <li>Design criteria, site investigation – Fall 2020-Winter 2021</li> <li>Analysis of site investigation – Winter 2021</li> <li>Preliminary design &amp; cost estimate – Spring-Summer 2021</li> </ul>

Table 3. IWRB ESPA Managed Recharge Program Projects						
Project	Purpose	Stage(s)	Status(s)	IWRB Funds	Scheduled Completion	Description / Key Items
Recharge Program Website	Public Outreach & Data Accessibility	Development	Active		Phase 1-Fall 2021	<ul> <li>Development of IWRB Recharge Program Website</li> <li>Rough Draft/Design – Spring 2020</li> <li>Development of basic content – Spring/Winter 2020</li> <li>Complete initial draft of priority topics – Spring 2021</li> <li>Deployment of high priority topics to public – Fall 2021</li> </ul>
Recharge Program Database	Data Storage, Analysis, & Accessibility (website)	Data Preparation & Design	Active		Fall 2021	<ul> <li>Development of Program Database for Recharge water level, flow, water quality, &amp; dye-testing data</li> <li>Basic training – Kisters-WISKI – Summer2020</li> <li>Coordination w/ Hydrology &amp; data prep – Spring 2021</li> <li>Upload of historic data – Summer 2021</li> <li>Develop report templates – Summer/Fall 2021</li> <li>Integration with Recharge website – Fall 2021</li> </ul>
Program Standards & Procedures	Standardizing Processes and IWRB recharge requirements	Development	Active		Fall 2021	<ul> <li>Development of Program Standards &amp; Procedures</li> <li>Outline of key topics presented to the Aq. Stabilization committee – Spring 2019</li> <li>Develop of updated topics, considerations/options – Spring 2021</li> <li>Development of supporting material – Spring/Fall 2021</li> </ul>
Program Analysis	Assist in policy development & demonstration of Program effectiveness	Development & Presentation of Results	Active		Ongoing	<ul> <li>Development &amp; Update of Analysis for Planning</li> <li>ESPA potential IWRB recharge capacity analysis – Complete/Update as required</li> <li>Recharge site particle travel time – Winter/Spring 2021</li> <li>ESPA animated water level change map – Update Summer 2021</li> <li>ESPA Recharge WQ summary/analysis – Spring/Summer 2021</li> <li>ESPA Recharge benefit analysis – Spring/Summer 2021</li> <li>Incorporate RiverWare Model for ESPA Recharge forecasting and planning – Summer 2021</li> </ul>