



AGENDA

IDAHO WATER RESOURCE BOARD MEETING NO. 2-15

February 13, 2015 at 8:00 am

Idaho Water Center
Conference Rooms 648A
322 East Front Street, Boise, Idaho 83720

C.L. "Butch" Otter
Governor

Roger W. Chase
Chairman
Pocatello
District 4

Jeff Raybould
Vice-Chairman
St. Anthony
At Large

Vince Alberdi
Secretary
Kimberly
At Large

Peter Van Der Meulen
Hailey
At Large

**Charles "Chuck"
Cuddy**
Orofino
At Large

Albert Barker
Boise
District 2

John "Bert" Stevenson
Rupert
District 3

Dale Van Stone
Hope
District 1

-
1. Roll Call
 2. Recharge
 3. Report from MTAC on interim rental policy in Wood River Valley
 4. Adjourn
-

Americans with Disabilities

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email Mandi.Pearson@idwr.idaho.gov or by phone at (208) 287-4800.

MEMO



To: Idaho Water Resource Board
From: Wesley Hipke, Brian Patton
Subject: ESPA Managed Recharge – Payment Structure for Deliveries Above American Falls Reservoir
Date: February 12, 2014

Managed recharge is a key part of stabilizing the Eastern Snake Plain Aquifer (ESPA). Stabilizing the ESPA is necessary for maintaining spring flows from the ESPA through the Thousand Springs at a level sufficient to maintain the minimum flows established under the Swan Falls Agreement. Stabilizing the ESPA is also necessary to prevent future ground water-surface water use conflicts.

The Idaho Water Resource Board's (IWRB) investigations into ESPA managed recharge have revealed the following:

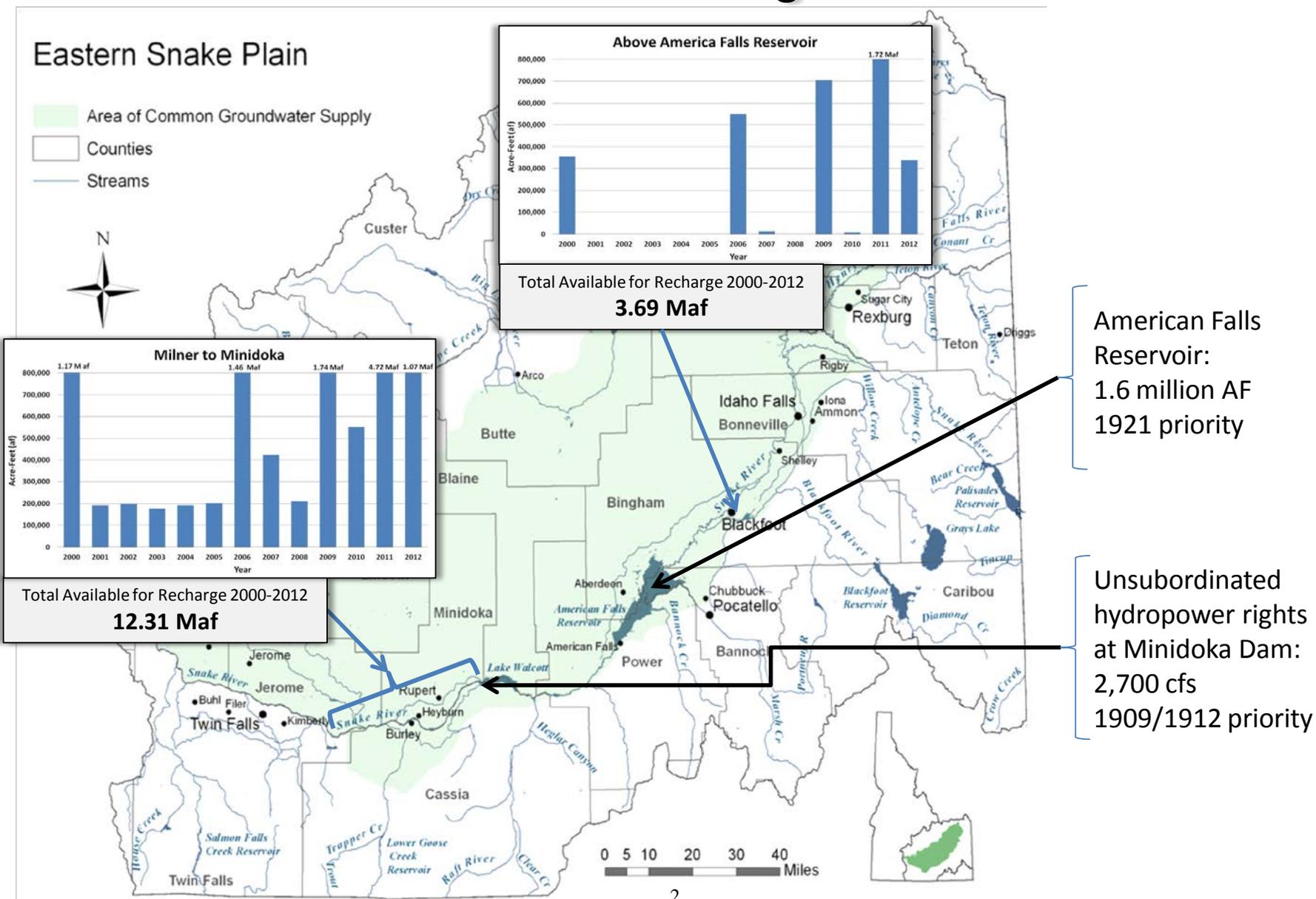
1. Water is available sporadically for managed recharge, under the IWRB's recharge water right, above American Falls Reservoir (see charts on Page 2).
2. The winter-time flow available for recharge at Milner is below the lowest storage reservoir in the Upper Snake Basin, and therefore is not storable in any reservoirs, and if not used for recharge is lost to the basin and ESPA.
3. The IWRB to date has only utilized a portion of the water to which it has access for recharge.

The IWRB is initiating efforts to utilize the winter-time spill at Milner for recharge, with promising results to date. Even with the recharge that has occurred this past winter season over 130,000 acre-feet (af) has gone past Milner. This volume of water emphasizes the opportunities that exist to recharge water going past Milner that will assist in stabilizing the ESPA. This memo focuses on a payment structure to incentivize additional recharge deliveries in the basin above American Falls Reservoir.

In general, the Upper Valley canals that have diverted recharge in the past have exhibited lower aquifer retention rates than the areas used for recharge in the Lower Valley. Retention rate is an important factor to consider when attempting to stabilize the ESPA. However, there is a great potential for utilizing Upper Valley canals to recharge water that is available for recharge that would otherwise leave the basin.

Recall, however, that 2700 cfs must be passed through the Minidoka Dam to meet the Bureau of Reclamation's senior power rights before recharge diversions can occur upstream from Minidoka Dam. This ensures that. For the foreseeable future, we will maximize lower valley recharge capacity before recharge occurs in the upper valley.

Water Available for Recharge 2000 - 2012



Since 2009, the IWRB has offered delivery payment of \$3/AF of water delivered for recharge. A substantial volume of water has been diverted above American Falls since 2009 as shown in the table below. However, the graph in the previous figures demonstrates that a significantly higher volume of water was available for recharge.

	Below American Falls (at Milner)	Above American Falls	Total
2009	46,708	77,828	124,536
2010	5,595	55,913	61,508
2011	77,614	40,430	118,044
2012	54,671	70,147	124,818
2013	3,867	0	3,867
2014-2015*	43,617	0	43,617
Average	38,940	48,864	79,398

* As of February 10th, 2015

In considering how to get the available spring-time recharge water out of the river above American Falls and into the ground for recharge, while dealing with shorter retention times and the intermittent nature of the water supply, several IWRB members came up with the concept of an incentive-based payment plan. It is based on two components:

- 1) Base Rate – determined by 5-year aquifer retention zone in which the contracted canal companies or irrigation district is located using ESPAM2.1:
 - Greater than 40% retained in aquifer at 5 years \$5.00/AF delivered
 - 20 to 40% retained in aquifer at 5 years \$4.00/AF delivered
 - Less than 20% retained in aquifer at 5 years \$3.00/AF delivered

- 2) Add Incentive for Delivery to Base Rate - percentage of days a canal delivers for recharge during the period when recharge right is “on” and IWRB issues a Notice to Proceed:
 - Greater that 75% \$3.00/AF delivered
 - 50% to 75% \$2.00/AF delivered
 - 25% to 49% \$1.00/AF delivered

The “Base Rate” is intended to recognize the prioritization that the IWRB places on aquifer retention and its role in stabilizing the ESPA. The “Incentive for Delivery” is intended to encourage canals to match their delivery capacity to an uncertain and intermittent water supply.

The following are examples of potential payments to the canals in different retention zones based on this payment schedule:

Irrigation District A

5-year Retention Rate > 40%

Estimated recharge capacity = 300 cfs

Estimated average period of water being in priority (in those years when it is in priority) = 53 days

<u>Delivery Time</u>	<u>Acre-Feet</u>	<u>Base Pay</u>	<u>Time Incentive</u>	<u>Payment</u>
12 days (24%)	7,569	\$5	\$0	\$38,634
26 days (49%)	15,453	\$5	\$1	\$94,613
40 days (75%)	23,653	\$5	\$2	\$165,573
53 days (100%)	31,538	\$5	\$3	\$252,301

Irrigation District B

5-year Retention Rate > 20%

Estimated recharge capacity = 300 cfs

Estimated average period of water being in priority (in those years when it is in priority) = 53 days

<u>Delivery Time</u>	<u>Acre-Feet</u>	<u>Base Pay</u>	<u>Time Incentive</u>	<u>Payment</u>
12 days (24%)	7,569	\$4	\$0	\$30,907
26 days (49%)	15,453	\$4	\$1	\$78,844
40 days (75%)	23,653	\$4	\$2	\$141,919
53 days (100%)	31,538	\$4	\$3	\$220,764

Irrigation District C

5-year Retention Rate < 20%

Estimated recharge capacity = 300 cfs

Estimated average period of water being in priority (in those years when it is in priority) = 53 days

<u>Delivery Time</u>	<u>Acre-Feet</u>	<u>Base Pay</u>	<u>Time Incentive</u>	<u>Payment</u>
12 days (24%)	7,569	\$3	\$0	\$23,180
26 days (49%)	15,453	\$3	\$1	\$63,075
40 days (75%)	23,653	\$3	\$2	\$118,266
53 days (100%)	31,538	\$3	\$3	\$189,226

It should be noted these are examples only. Actual amounts and payments will be variable based on actual water supplies and canal conveyance capacity. Also, these delivery costs would be incurred about every other year.

To provide opportunity for the canal companies and irrigation districts in different retention zones Staff suggests that fifty percent of the volume of water available for recharge above American Falls be divided equally between the three aquifer retention zones (greater than 40%, 20%-to-40%, and less than 20%) depending on the capacity and availability to deliver within the three zones. If the volume of recharge water allocated to a retention zone is not utilized the volume will be redistributed at the Board's discretion. The remaining 50% volume of water available above American Falls for recharge would be utilized at the Board's discretion.

Staff recommends 1-year conveyance contracts to the canals and irrigation districts, with an assessment following the recharge season regarding the effectiveness of the payment structure. To date the following canal companies and irrigation districts have expressed interest in conveying recharge water:

- Aberdeen-Springfield Canal Co.
- Enterprize Canal Co.
- Farmers Friend Irrigation Co.
- Fremont Madison Irrigation District
- Great Feeder Canals
- New Sweden Irrigation District
- Peoples Canal & Irrigation Co.
- Progressive Irrigation District
- Riverside Canal Co.
- Snake River Valley Irrigation District

Also attached is a resolution that would approve this incentivized recharge payment plan for those canals that divert above American Falls Reservoir. Should the IWRB choose to adopt it, that will allow us to get conveyance contracts in place. The IWRB currently has about \$1.2 million in the Secondary Aquifer Fund committed for recharge delivery payments, less the amount that will be paid out to the lower valley canals under the existing delivery contracts. This amount should easily cover recharge delivery costs incurred during the winter and spring, and the first disbursement from the Cigarette Tax will be received in July of 2015.

2) Add Incentive for Delivery to Base Rate - percentage of days a canal delivers for recharge during the period when recharge right is "on" and IWRB issues a Notice to Proceed:

- Greater than 75% \$3.00/AF delivered
- 50% to less than 75% \$2.00/AF delivered
- 25% less than 50% \$1.00/AF delivered

BE IT FURTHER RESOLVED that fifty percent of the volume of water available for recharge above American Falls be divided equally between the three aquifer retention zones (greater than 40%, 20%-to-40%, and less than 20%) depending on the capacity and availability to deliver within the three zones. If the volume of recharge water allocated to a retention zone is not utilized the volume will be redistributed at the Board's discretion. The remaining 50% volume of water available above American Falls for recharge would be utilized at the Board's discretion.

BE IT FURTHER RESOLVED that the IWRB's ESPA managed recharge program will be limited to recharging natural flow to avoid placing additional pressure on storage supplies above Milner Dam.

BE IT FURTHER RESOLVED that the IWRB will offer conveyance contracts of up to 1-year terms, with an assessment following the recharge season to evaluate the effectiveness of the payment structure.

BE IT FURTHER RESOLVED that the IWRB will evaluate projects on an individual basis, taking into consideration hydrology, retention time, and financial constraints.

BE IT FURTHER RESOLVED that any infrastructure investments the IWRB may make to facilitate recharge deliveries will be considered under separate resolutions.

BE IT FURTHER RESOLVED that the IWRB's ESPA managed recharge program will be coupled with a monitoring program approved by IDWR staff to verify the effects of managed recharge, and if necessary, modify the recharge program based on evaluation of the effects.

DATED this 13th day of February, 2015.

ROGER CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

Memorandum



To: IWRB Water Supply Bank and Mitigation Bank Subcommittee
From: Water Supply Bank Coordinator
Date: February 6, 2015
Re: Consultation with stakeholders of the Wood River Valley Model Technical Advisory Committee (MTAC) regarding the Water Supply Bank's 2015 interim ground water rental policy for the Wood River Valley

On February 5, 2015, Water Supply Bank Coordinator Remington Buyer presented to members of the Wood River Valley Model Technical Advisory Committee (MTAC) the Water Supply Bank's conditionally approved interim ground water rental policy for the Wood River Valley. Idaho Water Resource Board member Pete Van Der Meulen was present at the meeting. A January 23, 2015 Board resolution approved implementation of the interim policy, conditioned upon the Bank consulting with members of the MTAC to obtain from them consensus insights and recommendations on how the interim policy might be improved. This memo summarizes comments of MTAC members.

The Water Supply Bank presentation began with quick summary of the history and purpose of the Water Supply Bank and then focused on the Bank's concerns about the impact that increasing demand for ground water rentals may have on surface and ground water resources in the Valley. The Bank explained that the intent and success of the interim policy will be measured upon whether it improves administrative processing of an increasing number of rental requests and more proactively protects against injury to prior appropriators of surface and ground water.

The MTAC members were appreciative of the Bank consulting with the MTAC to present the policy and to seek their input. MTAC member Eric Powell of Brockway Engineering affirmed that the interim ground water rental policy would be beneficial if it resulted in faster, more reliable decision making on rental applications by Water Supply Bank staff. Mr. Powell confided that a key concern of Brockway Engineering is that Water Supply Bank staff are often required to make "on the fly" decisions regarding rental requests and that, if this interim policy can improve decision making by clarifying rental processes for both water users and Bank staff, it is a good thing. Mr. Powell inquired about the interim nature of the policy and whether the Bank would cancel or adjust the policy if the MTAC can complete its work on the model in advance of 2016. Mr. Buyer replied that any ground water transfer policy issued by IDWR based on the model would be sufficient reason for the Bank to cancel or adjust the policy in advance of the 2016 sunset.

Christian Petrich of SPF Engineering inquired as to whether the most northern (Ketchum) zone might be extended all the way south to Hailey, instead of ending at the point of diversion for the Hiawatha Canal. Mr. Petrich felt that, because the USGS stream gage in Hailey will be key to measuring whether injury to surface water appropriators may occur, it could be sensible for the Bank to consider all impacts occurring above the Hailey gage as occurring within one zone. Mr. Powell seconded Mr. Petrich's comment about a larger zone. Mr. Buyer replied that, though the minimum stream flow is measured at the Hailey gage, the minimum stream flow is in effect on the entire reach of the Big Wood River from Ketchum to Bellevue and that, though one zone north of the Hailey gage might make sense from a measurement perspective, it would not necessarily be more effective at guarding against injury to Big Wood River surface water appropriators along the full reach of the river.

Ernie Carlsen of Idaho Water Engineering inquired about whether digital data products such as shapefiles and transmissivity rating maps would be made available for access by the public. Mr. Buyer confirmed that such data would soon be uploaded to IDWR's website for download and use by the public.

Patti Lousen, project coordinator for the Wood River Land Trust, expressed appreciation that the Bank's policy was trying to simplify renting ground water within six zones while being conscientious of the minimum stream flow measurements at the Hailey gage. Her comments were followed up by a question from Sunny Healey, Silver Creek preserve manager for The Nature Conservancy, who inquired about whether a Theis analysis to take account of ground water impacts in the Bellevue Triangle would be sufficient to protect the Board's minimum stream flow water right on Silver Creek. Mr. Buyer replied that it is not clear to the Bank what the actual impacts to ground and surface water resources in the triangle will be if the number of ground water rentals occurring in the Triangle continues to increase. Mrs. Healey's comments gave cause for the Bank to affirm that future ground water rental evaluations in the Triangle, and any subsequent revisions of the interim policy, should take into account the impact that rentals may have not only ground water, but also the Board's minimum stream flow water right on Silver Creek.

In summary, the Bank's presentation on the interim ground water rental policy for the Wood River Valley was well received by MTAC members and no immediate recommendations to repeal or revise the interim policy were received. The Bank will now move forward with implementing the interim ground water rental policy for 2015. The effectiveness of the policy will be tracked throughout 2015 and performance measurements will be reported as required to the Water Supply Bank Subcommittee and IWRB.