

Fish Creek Aquifer Recharge Plan
Issues for Discussion
April 2, 2008

Objective

To resolve concerns to the satisfaction of IDWR and Fish Creek personnel to allow the recharge plan to be finalized and submitted for approval for the 2008 recharge season.

Potential Issues

Historical information and analysis. What level of accounting of historical storage fill, deliveries, evaporation & seepage, etc. is needed?

Annual recharge accounting
 Measurement plan
 Evaporation calculation
 Seepage calculation

Mitigation credit. Will there be a limitation according to historical consumptive use?

Potential benefit of recharge to Snake River reaches.

Administrative options for water right changes that would allow the recharge:

 Transfer
 Water bank lease-back
 Water bank direct lease
 Permit with mitigation
 Others?

Objectives in SRBA

42-108

> 50 cfs or

> 5000 af

any permanent - requires legislative approval
or temp. change
period or nature of use unless < 3 yrs

recharge period -

after SSIS is full
ends when fill is over

some yrs with carryover
~~some yrs with spill~~

cannot assume
max stor
avail each yr

injuring

4/2/08 mds

Historic carryover generally < 1000 af

as long as < SSIS - no concern about carryover

Dave - must consider cu to give
credit for recharge. Want be able to
estimate based on acres - so just consider
seepage that wash has occurred both in stream & on-field
one might cancel the other to estimate consumption

Gay - would advertise Bank App < 5 yrs

February 12, 2008 - DRAFT

CHARLES G BROCKWAY
BROCKWAY ENGINEERING PLLC
2016 NORTH WASHINGTON ST, SUITE 4
TWIN FALLS, ID 83301

RE: Fish Creek Reservoir Company – Aquifer Recharge Plan

Dear Chuck:

I have received your letter of January 7, 2008 with your comments responding to the Department's initial review of the proposed Fish Creek Aquifer Recharge Plan. In your letter, you indicated that you would like to meet with the Director to discuss the issues to work towards consensus and finalization of the plan. This letter will provide clarification for some of the Department's initial questions and comments prior to further discussion.

Analysis of Change from Irrigation Storage to Ground Water Recharge

In your letter you questioned the need to limit the mitigation credit of recharged water. You pointed out that for the recent ESPA water calls, IDWR has allowed 1-for-1 (storage-for-mitigation) credit without an analysis of the historical consumptive use of the water. Mitigation quantities associated with the water delivery calls were based on shortages of water delivery for irrigation uses or other uses that are less consumptive than irrigation, so direct replacement from irrigation storage water was appropriate. Nevertheless, the Department could consider water stored to be "consumed" under a right due to the ability of the owner to hold or release the water as needed. Storage carryover raises a separate issue as described below.

Storage carryover should be considered when analyzing a change from irrigation storage to recharge for mitigation use. If water in storage was historically carried over to the next year, the average quantity "diverted" to storage in a given year could be much less than the maximum held in the reservoir. Actual delivery of the irrigation storage water may be a better measure of the beneficial use available as mitigation from recharge use. A change from irrigation storage to recharge use should be limited to the average volume actually delivered from storage to avoid potential enlargement of the right and injury to other rights.

Your letter also discussed seepage losses for deliveries to recharge use. You indicated that "...seepage occurring in the late winter or spring prior to the commencement of irrigation deliveries (either natural flow or storage) should be credited toward recharge,

because no water would otherwise have been in the creek." Although the timing of delivery through the creek may change between the irrigation use and the proposed recharge, conveyance losses would occur in both instances regardless of the timing for a given volume of water delivered. Conveyance losses in the stream are incidental to the beneficial use of the water and should not be counted as recharged water.

Mechanism for Water Right Change

Your letter provides responses to three options to change the water right from irrigation to recharge use. Option 1 is a transfer from irrigation storage to recharge use. The change would be permanent unless transferred back to irrigation use in the future. Your alternate suggestion to list recharge use without reducing the quantity listed for irrigation use could be considered but would require appropriate conditions to limit the irrigation volume prior to any dam reconstruction and to reduce the recharge use to the extent that the dam is reconstructed.

Option 2 is a water supply bank lease/rental by Fish Creek Reservoir Co. to change the use from irrigation to recharge. There is no limit on term; however, a rental term of more than 5 years (includes renewals) requires advertisement of the application and approval by the Water Resource Board. The administrative fee for rental would apply each year.

Option 3 is a water supply bank lease by Fish Creek Reservoir Co. and subsequent rentals from the bank by individuals requiring a source of mitigation water. Since rental of the water is accomplished through the bank, "side contracts" would not be appropriate.

Finally, you asked what additional information would be required by IDWR to finalize a measuring plan for the recharge use. I think the requirements for a measuring plan will become clearer once the other details of the recharge plan are finalized.

I'd be happy to discuss any of these items further with you as you continue to develop the recharge plan.

Sincerely,

Jeff Peppersack
Chief, Water Allocation Bureau



Idaho Statutes

TITLE 42
IRRIGATION AND DRAINAGE -- WATER
RIGHTS AND RECLAMATION
CHAPTER 1
APPROPRIATION OF WATER -- GENERAL
PROVISIONS

42-108. CHANGE IN POINT OF DIVERSION, PLACE OF USE, PERIOD OF USE, OR NATURE OF USE -- APPLICATION OF ACT. The person entitled to the use of water or owning any land to which water has been made appurtenant either by a decree of the court or under the provisions of the constitution and statutes of this state, may change the point of diversion, period of use, or nature of use, and/or may voluntarily abandon the use of such water in whole or in part on the land which is receiving the benefit of the same and transfer the same to other lands, if the water rights of others are not injured by such change in point of diversion, place of use, period of use, or nature of use, provided; if the right to the use of such water, or the use of the diversion works or irrigation system is represented by shares of stock in a corporation or if such works or system is owned and/or managed by an irrigation district, no change in the point of diversion, place of use, period of use, or nature of use of such water shall be made or allowed without the consent of such corporation or irrigation district. Any permanent or temporary change in period or nature of use in or out-of-state for a quantity greater than fifty (50) cfs or for a storage volume greater than five thousand (5,000) acre-feet shall require the approval of the legislature, except that any temporary change within the state of Idaho for a period of less than three (3) years may be approved by the director without legislative approval.

Any person desiring to make such change of point of diversion, place of use, period of use, or nature of use of water shall make application for change with the department of water resources under the provisions of section 42-222, Idaho Code. After the effective date of this act, no person shall be authorized to change the period of use or nature of use, point of diversion or place of use of water unless he has first applied for and received approval of the department of water resources under the provisions of section 42-222, Idaho Code.

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January 31, 2008 - DRAFT

CHARLES G BROCKWAY
BROCKWAY ENGINEERING PLLC
2016 NORTH WASHINGTON ST, SUITE 4
TWIN FALLS, ID 83301

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In your letter you questioned the need to limit the mitigation credit of recharged water. You pointed out that for the recent ESPA water calls, IDWR has allowed 1-for-1 (storage-for-mitigation) credit without an analysis of the historical consumptive use of the water. Mitigation quantities associated with the water delivery calls were based on shortages of water delivery, so direct replacement from storage water was appropriate. Since the use for mitigation water under the proposed Fish Creek recharge plan is unknown, it is important to understand the historic consumptive value of the water to determine the extent of mitigation that could be accomplished for a future consumptive use.

Storage carryover is another item that should be considered when analyzing a change from irrigation storage to recharge for mitigation use. If water in storage was historically carried over to the next year, the average quantity delivered and used under the right could be much less than the maximum stored. Actual delivery and use (including consumptive use) of the irrigation storage water is a better measure of the beneficial use available as mitigation from recharge use. It may be necessary to limit recharge volume to the average quantity actually delivered and used from storage to avoid potential enlargement of the right and injury to other rights.

If Fish Creek Reservoir Co. intends to use their right for recharge purposes, a transfer or water bank application to change the nature of use will be required and should include historic use (including consumptive use) information to ensure that potential enlargement and

maybe
storage
is
consumptive
so can
be used
1:1 for
other
cons.
uses

(dry year
would
still
limit
availability
for
other

injury concerns are properly considered. The historic consumptive value would be used in a future analysis to determine if a proposed mitigation plan is adequate.

Your letter also discussed seepage losses for deliveries to recharge use. You indicated that "...seepage occurring in the late winter or spring prior to the commencement of irrigation deliveries (either natural flow or storage) should be credited toward recharge, because no water would otherwise have been in the creek." The change to recharge use may alter the timing of the delivery through the creek and other channels, but conveyance losses would occur in both instances regardless of the timing for a given volume of water delivered. I realize the rate of loss could vary during different periods of delivery. Analysis should also consider historic losses from irrigation canals and ditches and seepage from irrigation storage. Consideration of those losses may result in losses that are higher for the irrigation use than losses associated with delivery of the recharge water. I suggest that the seepage losses are incidental to both uses and should be ignored unless further justification is provided.

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