

MEMORANDUM

TO: Water Right File No(s). 35-2251, 35-2252B, 35-2614, 35-2651D, 35-7442, 35-7772, 35-7989, 35-13247, 35-13503, and 35-13505

FROM: Aaron Marshall 

DATE: June 19, 2009

SUBJECT: Deloy Ward et al. Water Supply Bank Rental Application

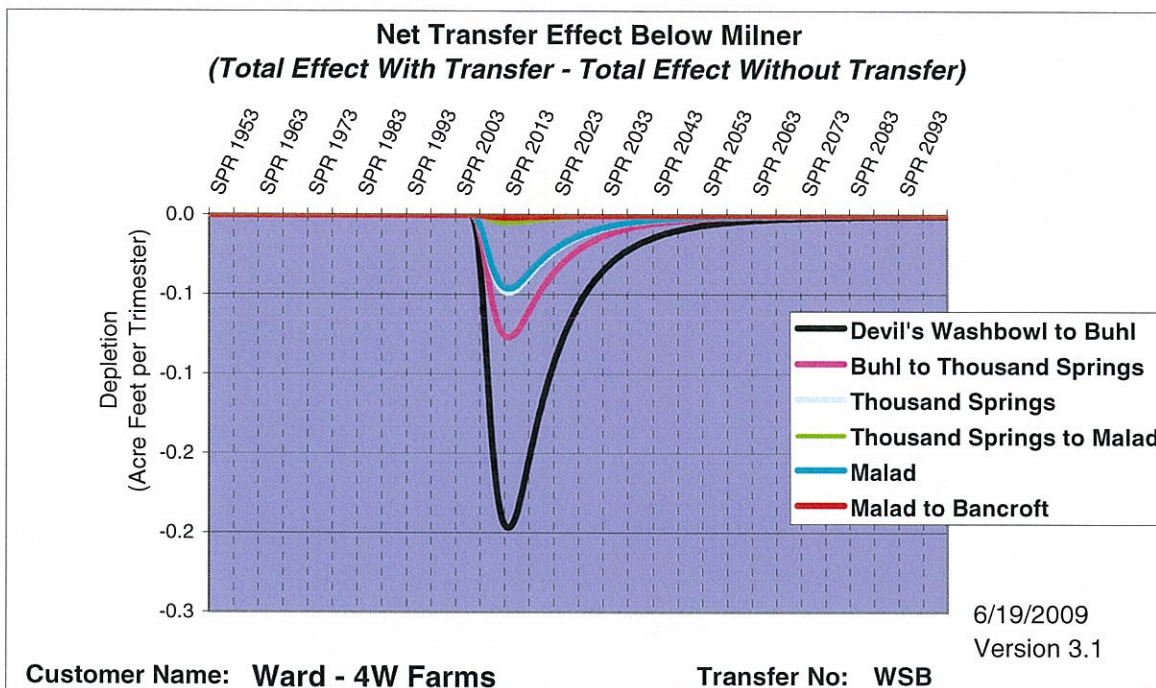
On April 23, 2009, IDWR received a Water Supply Bank (Bank) rental application from Deloy Ward, Viola Ward, Neal Ward, and Shelly Ward requesting the use of ground water for irrigation of 88.0 acres northwest of Blackfoot for a period of 5 years. Portions of water rights 35-2251, 35-2252B, 35-2614, 35-2651D, 35-7442, 35-7772, 35-7989, 35-13247, 35-13503, and 35-13505 are leased to the Bank for an indefinite period and can partially fulfill this request. The portions of these rights available for rent from the Bank totals 0.87 cfs and 213.2 acre-feet for irrigation of 53.3 acres.

Since the use of the leased rights and proposed rental is irrigation, data was modeled with $\frac{1}{3}$ of the annual volume in the spring trimester (March – June) and $\frac{2}{3}$ of the annual volume in the summer trimester (July – October). Below is the data input to the model for the proposed rental period.

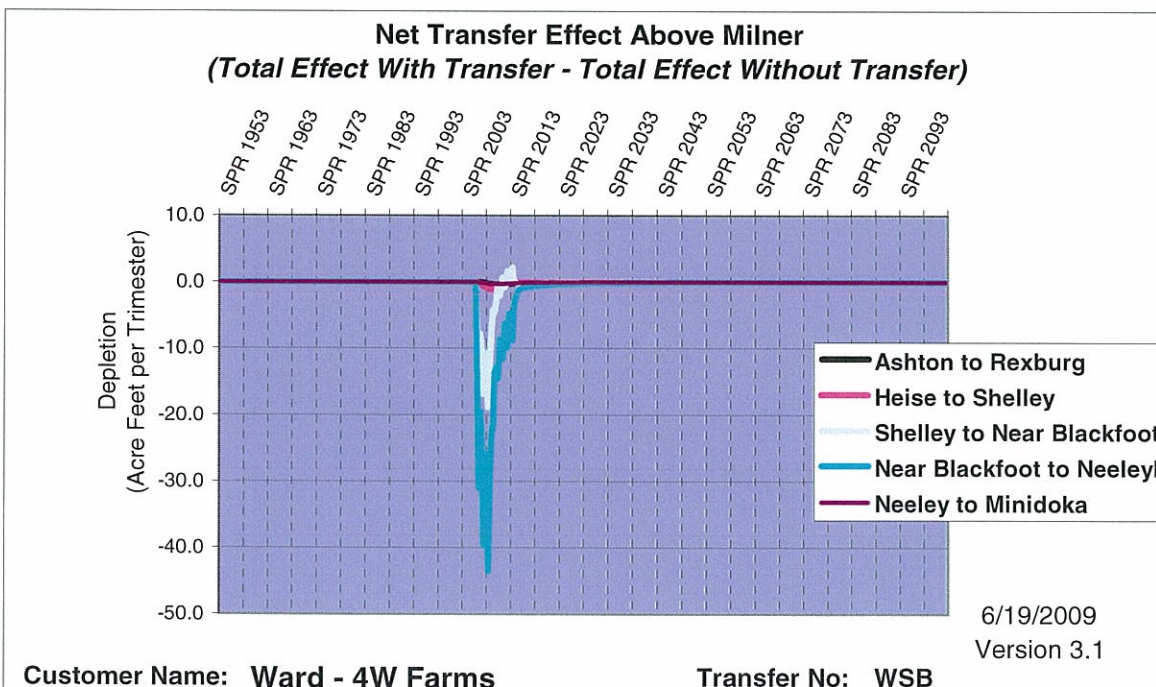
CELL LOCATIONS:		'TO' CELL	'FROM1' CELL	'FROM2' CELL	'FROM3' CELL
ROW		74	73	73	71
COLUMN		136	127	130	128

TRIMESTER OF ACTIVITY	TO WELL	FROM1 WELL		FROM2 WELL		FROM3 WELL	
	Projected Use	With Transfer	Without Transfer	With Transfer	Without Transfer	With Transfer	Without Transfer
	AF/TRIMESTER	AF/TRIMESTER	AF/TRIMESTER	AF/TRIMESTER	AF/TRIMESTER	AF/TRIMESTER	AF/TRIMESTER
SPR 2009	71	0	9	0	35	0	27
SUM 2009	142	0	19	0	70	0	53
WIN 2009	0	0	0	0	0	0	0
SPR 2010	71	0	9	0	35	0	27
SUM 2010	142	0	19	0	70	0	53
WIN 2010	0	0	0	0	0	0	0
SPR 2011	71	0	9	0	35	0	27
SUM 2011	142	0	19	0	70	0	53
WIN 2011	0	0	0	0	0	0	0
SPR 2012	71	0	9	0	35	0	27
SUM 2012	142	0	19	0	70	0	53
WIN 2012	0	0	0	0	0	0	0
SPR 2013	71	0	9	0	35	0	27
SUM 2013	142	0	19	0	70	0	53
WIN 2013	0	0	0	0	0	0	0

The results of the model run indicate slight decreases in depletions to reaches of the Snake River below Milner Dam caused by the proposed rental.



The model predicts that only the “Shelley to near Blackfoot” reach of the Snake River will experience an increase in depletion greater than 2.0 acre-feet per trimester at any point during the proposed rental period. Every other reach of the river above and below Milner Dam during the proposed rental period is predicted to have a net accretion caused by the rental.



Net Transfer Effect (AF/trimester), Shelley to near Blackfoot reach, Spring 2009 to Winter 2013

Spring 2009	-7.8 AF
Summer 2009	-4.2 AF
Winter 2009	-4.6 AF
Spring 2010	-3.0 AF
Summer 2010	-0.9 AF
Winter 2010	-2.1 AF
Spring 2011	-1.1 AF
Summer 2011	0.7 AF
Winter 2011	-0.8 AF
Spring 2012	0.0 AF
Summer 2012	1.6 AF
Winter 2012	0.0 AF
Spring 2013	0.7 AF
Summer 2013	2.2 AF
Winter 2013	0.5 AF

Potential impact to the Snake River by the proposed rental was evaluated with regard to the criteria outlined in Administrator's Memorandum, Transfer Processing No. 24. The transfer memo states, "applications that propose to move the point of diversion for a water right to divert and use ground water from the ESPA, including any modeled tributary aquifers, if **(a)** the depletion to a hydraulically connected reach is greater than 10% of the total depletion resulting from diversion at the proposed point of diversion; **(b)** increases to depletions in a reach is greater than 2 acre-feet per trimester; and **(c)** the transfer would result in increased depletions greater than 10%, to any reach of the Snake River; the transfer is not approvable without mitigation."

Applying the test described in part (a) above, the total depletion resulting from diversion at the proposed points of diversion in summer 2013 will be 77.2 acre-feet. In the "near Blackfoot to Neeley" reach during summer 2013, the depletion is expected to be 44.5 acre-feet. Since this depletion volume represents 58% of the total depletion resulting from the proposed change, the test is positive and mitigation may be required.

Applying the test described in part (b) above, the increase in depletion to the "Shelley to near Blackfoot" reach is 2.2 acre-feet in summer 2013. Since this increase in depletion volume is greater than 2.0 acre-feet, the test is positive and mitigation may be required.

Applying the test described in part (c) above, the depletion resulting from diversion at the proposed point of diversion in summer 2013 will be 25.9 acre-feet in the "Shelley to near Blackfoot" reach. This is 2.2 acre-feet greater than if the change did not occur. This trimester is predicted to have the greatest increase in depletion during the rental period. Since the increase in depletion is less than 10% ($(2.2 / 23.7) * 100 = 9.3\%$) the test fails and **mitigation is not required**. Rental and diversion of 213.2 acre-feet of water per year under rights 35-2251, 35-2252B, 35-2614, 35-2651D, 35-7442, 35-7772, 35-7989, 35-13247, 35-13503, and 35-13505 is acceptable for irrigation of 53.3 acres at the proposed place of use. Rental of additional water rights is necessary to satisfy the request for irrigation of the remaining 34.7 acres proposed by the application.