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DEPARTMENT OF
WATER RESOURCES

May 3, 2005

Mr. Jeff Peppersack
Idaho Department of Water Resources
322 East Front Street
P.O. Box 83720
Boise, ID 83720-0098

Re: Additional Information Request
Transfer Nos. 70994, 70679, and 71587

Dear Mr. Peppersack:

I am providing additional information regarding the Petition for Reconsideration request for the above-referenced preliminary transfer orders. On February 4, 2005, I submitted a Petition for Reconsideration to the Department. On February 11, 2005, the Department requested additional information regarding the preliminary orders.

T#70679

In this split, it appears that the subordinated/unsubordinated proportions were calculated incorrectly. On the original right, 0.5 cfs of the irrigation was unsubordinated and 1.5 cfs was subordinated. 33% of this right was moved to other lands, which means that the unsubordinated portion on the other land should be $0.33 \times 0.5 \text{ cfs} = 0.17 \text{ cfs}$, but the new right (37-16180)* indicates only 0.09 cfs unsubordinated. This calculation would also affect the 36-16180 unsubordinated amount on the remaining right.

CHARLES E.
BROCKWAY,
PH.D., P.E.

CHARLES G.
BROCKWAY,
PH.D., P.E.

T#70994

The new right created by this transfer (36-16193) was assigned a flow rate for irrigation of 0.41 cfs. This appears to have been calculated using 0.02 cfs per acre and accounting for seepage loss in the Barlogi Ditch. This represents a substantial cut in the per-acre flow rate compared to the original right and is insufficient to operate of the irrigation system on the 6.7 acres authorized under the transfer. Please see item #3 in my letter of January 6, 2004 to Jim Stanton (attached). Jim had indicated that $2.0 \text{ cfs} - 0.58 \text{ cfs}$ (moved to other land) $- 0.24 \text{ cfs}$ (conveyance loss) $= 1.18 \text{ cfs}$ would be available at the pump

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

station from the Barlogi Ditch, and that the applicant could specify what portion of this amount would be irrigation and what portion would be aesthetic. My letter indicates that 0.80 cfs is needed at the pump station for irrigation. Thus, the irrigation diversion rate at the ditch headgate should be $0.80 + 0.24 = 1.04$ cfs, with the remaining aesthetic flow rate (0.38 cfs) being transferred to the other land. Structured this way, no enlargement of the diversion rate or increase in per-acre duty of water will occur and I believe the water right holder has the discretion to structure the water right in this manner.

T#70679

36-37A Condition #4

36-37B Condition #4

36-16180 Condition #7

T#71587

36-16171 Condition #3

The above conditions place limits on both the seasonal volume and the per-acre diversion rate diverted at the field headgate. The condition states that no more than 4.0 ac-ft/acre shall be diverted, without regard to the type of irrigation. It also states that no more than 0.02 cfs/acre shall be diverted if water is applied via sprinklers; presumably this portion of the condition would not apply if gravity irrigation was used.

The decreed duty of water is 0.0763 cfs/acre (3.8 inches/acre) for 36-37A, 0.0863 cfs/acre (4.3 inches/acre) for 36-37B, and 0.0533 cfs/acre (2.7 inches/acre) for 36-16171. These rates were determined from excess flow analyses and irrigation efficiency calculations performed in the course of the adjudication several year ago. A low irrigation efficiency that necessitates a diversion rate greater than 1.0 inch/acre also necessitates a seasonal diversion volume greater than 4.0 ac-ft/acre. For example, an irrigation system with an efficiency of 40% will require both a diversion rate greater than 1 inch/acre and a seasonal volume greater than 4.0 ac-ft/acre. In the Hagerman valley, alfalfa seasonal IR is 38.1 inches (Allen & Brockway). To gravity irrigate with only 4.0 ac-ft/acre, the seasonal irrigation efficiency would have to be 79%. This is unattainable in this area with even the best-managed gravity irrigation system. As written, the conditions placed on these transfers would prohibit gravity irrigation on these lands, which I understand to be against the intent of IDWR in a transfer proceeding.

Please review this information. I am formally petitioning the Department to modify the above-referenced transfers as follows:

1. Correct the subordinated and unsubordinated portions wherever applicable.
2. Modify the irrigation / aesthetic diversion rate split under T#70994 as described above.
3. Remove the 4.0 ac-ft/acre diversion volume limitation from the above-noted water rights.

Cordially,


Charles G. Brockway, P.E.

cc: Peter Sturdivant
Patrick Brown
Allen Merritt, IDWR