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To: Tim Luke, IDWR, Boise
cc: Harold Jones, IDWR, Eastern Region ✓
Ernie Carlsen, IDWR, Eastern Region Adjudication
Tom Maeder, Idaho Dept. Fish and Game, Terreton ID. 83450
Fr: Bryce Contor, NWMD Assistant Hydrographer *Bryce*
Date: 4/29/1999
Re: Idaho Fish and Game, A31-02448A, A31-02448B, A31-02316.

Recently I did a flow test and PCC calibration on the Fish and Game "Jernberg" well at 7N 34E 23 NENW, and did theoretical calculations for the other two Fish and Game wells. Mr. Tom Maeder, Wildlife Management Area Manager, is concerned that the refuge's water use be within authorized limits, and that its licenses and claims correctly reflect its right to use water.

It appears that the total of the water rights is adequate to cover the total water usage. However, since the smallest water right is linked to the most productive well, considering that right alone may give the appearance of unauthorized usage. I reviewed this briefly with Scott King of your section, and he suggested a letter to IDWR from the Water Measurement District might be in order. Here is a summary of what I've found:

Authorized Rates:

A31-02448A	4.0 cfs	7N 34E 23 NENW	"Jernberg" well
A31-02448B	6.0 cfs	7N 35E 20 NESESE	"Lower" well
A31-02316	7.5 cfs	7N 35E 20 SESE	"B" well
Total	17.5 cfs		

Observed Rates:

"Jernberg" well	16.4 cfs	measured
"Lower" well	5.4 cfs	theoretical
"B" well	4.3 cfs	theoretical
Total	26.1 cfs	

While the total capacity is greater than the total authorized rates, the refuge manager Tom Maeder indicated that the wells are not generally operated simultaneously. The Jernberg well is operated early in the season and the other two are operated later. Operating hours calculated from monthly power records indicate that authorized diversion rates were probably not exceeded in 1997 or 1998.

Authorized Volumes:

None of the water rights list authorized volumes. A31-02448A lists only wildlife as an authorized use. The 6.0 cfs authorized by A31-02448B includes 6.0 cfs for irrigation of 10 acres and 0.20 cfs for wildlife. I assume this is a clerical error; it seems likely the intent was 0.20 cfs for 10 acres of irrigation and 6.0 cfs for wildlife. A31-092316 authorizes the full 7.5 cfs for either irrigation or wildlife.

I simply calculated authorized rates for the full authorized periods of use (April – October for A31-02448A and A31-02448B, January – December for A31-02316). The results are:

A31-02448A	1697 acre feet
A31-02448B	2546 acre feet
A31-02316	5428 acre feet
Total	9671 acre feet

Observed Volumes:

The measured volumes are calculated from Power Consumption Coefficients and utility-supplied power records. The "Jernberg" PCC is measured, the other two are calculated theoretically.

The power records for the "Jernberg" and "B" wells were included on the UPL database supplied to the North Water Measurement District; and data for the "lower" well were obtained by telephone from UPL. The PCC's are based on spring time pumping water levels, so it is likely that actual volumes are a little less than indicated here.

"Jernberg" well	2036 acre feet 1997	811 acre feet 1998
"Lower" well	no usage 1997	14 acre feet 1998
"B" well	625 acre feet 1997	529 acre feet 1998
Total	2661 acre feet 1997	1354 acre feet 1998

Please consider this information and advise Mr. Maeder of any action that needs to be taken. Feel free to contact me about any of this information.