

Dreher, Karl

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Sent: Monday, January 17, 2005 6:43 PM
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Subject: Water budget including Snake River seepage above Shelley

Here are water budget data that include the contribution of Snake River seepage above Shelley. The spreadsheet uses the model-predicted net river seepage to the aquifer above Shelley. Below Shelley we believe the river is a net gainer from the aquifer.

The "offsite" and "fixed pumping" classes both include well water pumped for irrigation of lands at distant locations, but they are treated separately to avoid double-counting of water. In the recharge calculations the "fixed point" wells have already been included in water master delivery records, and the "offsite" wells have not been. Class "SWV" includes both types of well volume along with surface-water diversions, so it represents net water available for field delivery. We've scrubbed the logic and the summation of the water budget in the spreadsheet *is* what it needs to be.

The recharge from the river is significantly less than the back-of-the-envelope estimate for historical seepage that I did for Clive. The difference is in the expected direction for a hypothesis that today's aquifer levels are much higher than the pre-development condition.

Please call if you have questions about this.

Bryce.

22-year average water budget. Signs are in reference to the aquifer. (Negatives are withdrawals, discharges or deductions from the wa

Component	Avg Acr Ft KAF(rounded)	
EIR	-5454804	-5,500
RNI	526615.11	530
PRJ	1715522.4	1,700
SWV	6925006.1	6,900
off	-66445.7	-70
fpt	-139417.5	-140
pch	273638.35	270
trb	1005120	1,000
cnl	462645.31	460
AbvShelle	206340	210
Net Rech	5454219.7	5,500

ET on irrigated lands

Recharge on non-irrigated lands. Primarily precipitation on range land, also includes wi

Precipitation on irrigated lands

Net surface water field headgate deliveries. (water-master reported gross deliveries + o)

Offsite pumping

Fixed-point pumping. Includes exchange wells and some adjustment values to correct v

Perched-river seepage (non-Snake)

Tributary underflow

Directly applied canal leakage.

Seepage from Snake River above Shelley, Model Output (from "No Changes in Surface

ter budget. Positives are recharge or additions to the water budget.)

etlands and cities extraction

ffsite pumping - directly applied canal leakage - returns to river). Note that water-master reported deliveries include volume from w

wetlands and Richfield Tract recharge.

-Water" scenario, Table 2).

ells reported as extraction in "fixed point pumping."