APPENDIX B. Annual Groundwater Budget

SUMMARY OF LOWER PAYETTE VALLEY WATER BUDGET			1	2	3	4	5	6	7	8	9	10	11	12	w/o EAST ADA & BOISE FOOTHILLS
Aquifer Recharge	Canal Seepage		-	-	221	15,976	36,516	35,659	38,598	38,178	31,294	13,649	-	-	210,091
	On-farm Infiltration		9,295	3,279	(3,476)	3,480	15,517	17,955	24,922	38,425	33,908	6,564	12,623	10,586	173,077
	Dry Lands Infiltration		9,836	7,613	7,987	(1,543)	(1,636)	(2,954)	(6,843)	(6,089)	(4,331)	(3,207)	9,571	9,213	17,616
	Infiltration on residential, commercial, and public recreation lands		108	90	126	197	269	179	179	215	143	90	90	108	1,793
	Tributary Underflow	Haw, Bissel, Big & Little Willow Creek basins, this is overestimated due to very limited streamflow data	4,949	4,949	4,949	4,949	4,949	4,949	4,949	4,949	4,949	4,949	4,949	4,949	59,389
	Ground Water Underflow from Boise Valley?	Ground Water Underflow from Boise Valley?													
	Total Water In		24,188	15,930	9,807	23,059	55,615	55,788	61,805	75,679	65,963	22,044	27,233	24,856	461,966
Aquifer Discharge	Municipal pumping	Emmett, New Plymouth, Fruitland	(108)	(93)	(108)	(158)	(290)	(348)	(389)	(384)	(310)	(218)	(113)	(104)	(2,624)
	Net groundwater pumping for agricultural irrigation	Consumptive use	-	-	-	(641)	(1,166)	(1,480)	(1,696)	(1,278)	(682)	(243)	-	-	(7,185)
	Net discharge from wetlands and water bodies		1,136	831	858	(3,113)	(3,111)	(3,198)	(3,633)	(3,551)	(3,402)	(3,271)	1,107	1,159	(18,189)
	Net discharge on residential, commercial, and public recreation lands		31	26	36	(303)	(385)	(536)	(647)	(570)	(488)	(326)	26	31	(3,105)
	Groundwater drain returns	Includes drains to Payette River and Snake River	(14,429)	(12,714)	(13,143)	(12,982)	(13,641)	(13,922)	(14,086)	(12,293)	(14,629)	(14,936)	(15,191)	(15,554)	(167,522)
	Groundwater discharge to Payette River	Reach gain between Emmett and Payette gages, this is overestimated due to very limited data for tributary streamflows	(11,994)	(14,327)	(13,524)	(16,297)	(27,859)	(34,552)	(29,323)	(30,601)	(29,525)	(14,924)	(5,990)	(6,189)	(235,104)
	Groundwater Discharge to Snake River	Estimated by using ratio of groundwater drain returns to Snake R. base flow in Schmidt (2008) study	(1,697)	(2,027)	(1,913)	(2,306)	(3,942)	(4,889)	(4,149)	(4,330)	(4,177)	(2,112)	(848)	(876)	(33,264)
	Total Water Out		(27,061)	(28,306)	(27,794)	(35,801)	(50,395)	(58,925)	(53,922)	(53,007)	(53,213)	(36,030)	(21,009)	(21,533)	(466,993)
Difference (In-Out)/Out			-10.6%	-43.7%	-64.7%	-35.6%	10.4%	-5.3%	14.6%	42.8%	24.0%	-38.8%	29.6%	15.4%	-1.1%
Difference (In-Out)			-2,873	-12,375	-17,987	-12,742	5,220	-3,137	7,883	22,672	12,750	-13,985	6,223	3,323	-5,027