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Review of Big Sky Partnership permits by Kay Walker of IDWR 11/02/2005

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This report is a review of permits in the names of Robert (Bob) Rhead and Big Sky Partnership for water diverted from 8 wells and Little Camas Creek. The water is diverted from the wells and injected into Rhead Reservoir (that is an on-stream storage facility on Little Camas Creek) or into the mainline for direct irrigation from the wells.

Below is a summary of the permits that are involved in this review in priority date order:

Permit No.	Source	Uses	Proposed Quantity	Proposed Volume	V =	Permitted Acres
63-8067	GW (4 wells)	Irrigation	5.49 cfs	1280.	(320 x 4.0)	320
63-10272	Little Camas Ck.	Irr. Stor. Irr. From Stor.		380	380.	570
63-9672	GW (4 wells)	Irr. Stor. Irr. From Stor. Div. To Stor.	5.49	380 2280.	380. (570 x 4.0)	570
63-11514	GW (8 wells)	Irrigation	9.68	4110*	(9.68x1.9835x214)	1111
63-11513	GW (8 wells)	Irrigation Div. To Stor. Irr. Stor. Irr. From Stor.	9.68 9.68	4490* 380	(9.68x1.9835x214)	1178
Totals:			15.71			2816.6

*Rounded to 3 significant figures per Admin. Memo #6

History:

Steve Lester examined permit Nos. 63-8067 and 63-10272 in August of 1991. Permit No. 63-9672 was not included in this examination because the permit had lapsed for failure to the permit holder to submit an examination fee and examiner was unaware it had been reinstated when he prepared for his exam. In June of 2005 Chuck Brockway was hired by the water user to complete a system analysis on all the permits. Mr. Brockway conducted his analysis and submitted examinations on all the pending permits (5 in total) to our office in September. Due to a lapse of 14 years between the original field examination and the examinations Mr. Brockway submitted, it was decided that we should utilize the exams completed in 1991 for development that had occurred on the earlier permits. We have used the well capacities found in 1991 for permit 63-8067 and Permit 63-9672. Steve found the use of 4 wells when he conducted his exam and recommended a capacity of 5.49 cfs. Mr. Brockway also considered Steve's examinations in his recommendations of the permit developments and recommended the use of 4 wells for Permit 63-8067 but recommended a greater capacity based on his findings.

Analysis:

In review of Mr. Brockway's calculations of the system capacity, I found he had listed Well #8 as part of the system even though it was not being included on any of the proposed licenses. He had included 150 gpm from this well on his review sheet, therefore including 0.33 cfs on the system

capacity that should not be included. Mr. Brockway found a system capacity of 15.51 cfs from all the wells. When capacity was entered into workflow for each well as found by Mr. Brockway, workflow determined a system capacity of 15.17 cfs. I am recommending this amount as system capacity for these proposed licenses.

Use of water under these permits will be combined onto a permissible place of use of 2816.6 acres if licensing amendments are submitted as requested. Each proposed license will be limited to the number of permitted acres during any irrigation season.

Permit Nos. 63-8067 and 63-9672 will be limited to 5.49 cfs when combined as determined by 1991 exam. Permits Nos. 63-11514 and 63-11513 will be limited to 9.68 cfs when combined. All the groundwater permits will be limited to 15.17 cfs when combined.

The storage rights are all being diverted into an on-stream reservoir known as "Rhead Ranch" reservoir in our dam safety records. The storage capacity for this reservoir is 380 acre-feet. The proposed licenses will cover storage of water from Little Camas Creek and groundwater. The reservoir can be continuously filled using the above storage rights as needed throughout the irrigation season. Review of ASCS aerial photo attached to 1991 exam shows how the well water can be injected into 12" mainline and then discharged into Rhead Reservoir, therefore the point of injection of the well water would be the same as the point of rediversion from the reservoir. This is also shown on 2005 exam but not as clearly defined.