

MEMORANDUM

May 21, 2007

TO: Transfer file 72469

FROM: Cindy Yenter, Watermaster WD130

RE: Jim Peterson supplemental well use and enlargement analysis

Watermaster recommendation for this transfer application required an analysis of some type to estimate the use of the well prior to the pivot installation in 1987. Since there are no IDWR measurement records for ground water which date back that far, I asked Bob Simpson, WD37N Watermaster and manager of Little Wood Irrigation District, for information regarding delivery of appurtenant Little Wood River rights. Bob related the following:

The transfer application indicates that after Peterson installed the half-pivot in Section 16, west of Reservoir Road, stored water was used exclusively for the pivot and ground water was plumbed only into the handlines to the north of the pivot. Simpson indicates this is accurate to the best of his knowledge.

Jim Peterson owns storage shares in Little Wood Reservoir for 133.59 acres for use within Section 16. The shares may be used on both sides of Reservoir Road. The water right overlap comparison in S16 also indicates appurtenancy, but not necessarily use of, Little Wood Irrigation natural flow rights 37-421 and 422. Peterson also holds title to his own natural flow rights from the Little Wood River, but historically these were not used in Section 16. There is a pending transfer (71902) to move some these rights into Section 16 to supplement stored water.

After the last Wood River Reservoir storage right was developed, the irrigation district could provide nearly 30,000 AF to 11,085 acres, or about 2.7 acre foot per acre. Natural flow rights held by the irrigation district are not place of use specific, and are limited to 7766 acres. The Watermaster reports for 2005 and 2006 indicate total combined deliveries for Water District 37N and the Little Wood Irrigation District, of 35,600 and 37,500 acre-feet, respectively, and indicate these values represent slightly below and very near normal water uses for the area.

Mr. Simpson indicated that Peterson would very likely have used his well for supplemental water in most years prior to his pivot installation, even when the reservoir was full, because it would have been difficult to gravity irrigate otherwise. Simpson was not elected to this district until about 1997, but was certain that Peterson's land subject to this transfer was historically irrigated with only storage water and supplemental ground water. Assuming deliveries of 2.7 af/ac from stored water in a good water year, Peterson would have needed to make up an estimated 0.8 af/ac with ground water, or 48 acre-feet for 60 acres, to irrigate with a full water duty. In poor water years, the ground water fraction would have been proportionately greater. Because the supplemental ground water right did not fully overlap on the entire parcel, there is also a reasonable possibility that the well was effectively used as primary supply for 60 or more acres in many years, in order for the storage shares to be doubled up to supply the balance for other acres. I don't think it is too great a stretch to imagine that ground water diversions exceeded 100 acre feet per year on a regular basis.

Maximum volume for 23 acres at 3.5 af/ac is 80.5 acre-feet. If applicant is willing to forfeit the balance of the right in order to assume a primary use on 23 acres, my position is that no enlargement of historical use is indicated. Presently, applicant does not have a measuring device, and estimated use has been in excess of 100 acre-feet annually. I strongly suspect that these are high estimates, but WD130 can regulate accordingly after a device has been installed.

Idaho Department of Water Resources

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			2006	358.60	0.80		
			Flow Verification Date	Start Time	End Time	Operating Hours	
			08/15/06				
			Validated	Preferred	Comments		
					THIS SYSTEM HAS A TIMECLOCK ON IT BUT IDAHO POWER HAS SEALED IT AND MARKED IT INACTIVE. SYSTEM WAS UP AND RUNNING WITH HANDLINES.8/06 JJ		

Copy	Edit	Delete	Report Year*	Average GPM	Average CFS	Acre Feet Volume	Acre Feet Qualifier
			2005	358.60	0.80	110.93	Full Year Estimate
			Flow Verification Date	Start Time	End Time	Operating Hours	
			08/15/06			1680.00	
			Validated	Preferred	Comments		
			Validated by Water Master		Owner has no hours on reporting form, says, system runs 2 weeks in May; all of June; 3 weeks in July and 6 days in Sept. hours estimated equiv to 10 weeks. (cy)		

Copy	Edit	Delete	Report Year*	Average GPM	Average CFS	Acre Feet Volume	Acre Feet Qualifier
			2004	358.60	0.31	134.70	Full Year Estimate
			Flow Verification Date	Start Time	End Time	Operating Hours	
			08/15/06			2040.00	

			Validated Validated by Water Master	Preferred	Comments 85 days, 24-hr sets. Flow extrapolated using crop demand and run time; not measured.		
<u>Copy</u>	<u>Edit</u>	<u>Delete</u>	Report Year* 2003	Average GPM	Average CFS	Acre Feet Volume	Acre Feet Qualifier No Flow Measuring Device
			Flow Verification Date	Start Time	End Time	Operating Hours	
			Validated Validated by IDWR	Preferred	Comments owner did not report - has not installed device		
<u>Copy</u>	<u>Edit</u>	<u>Delete</u>	Report Year* 2001	Average GPM 674.00	Average CFS 1.50	Acre Feet Volume 223.50	Acre Feet Qualifier No Flow Measuring Device
			Flow Verification Date	Start Time	End Time	Operating Hours 1800.00	
			Validated Validated by IDWR	Preferred	Comments No measuring device at present. Full year estimate with just 5/32 lines estimated pressure on three lines. CRK 3/27/02		
<u>Copy</u>	<u>Edit</u>	<u>Delete</u>	Report Year* 1998	Average GPM 0.00	Average CFS 0.00	Acre Feet Volume	Acre Feet Qualifier
			Flow Verification Date	Start Time	End Time	Operating Hours	
			Validated Validated by IDWR	Preferred	Comments 1998 Rpt - This pump has 3 pumps on 1 meter, so the meter reading is not accurate. (WJ Peterson, owner). No measurement received.		