

MEMORANDUM

Date: December 11, 2012
To: Water Right File 65-23048
From: csaxton
Re: System Capacity

Proof of Application of Water to beneficial use statement submitted for 65-7794 states that the well was pumped at 22.2 gpm (0.05 cfs) for over 24 hours resulting in a 75.4 foot drawdown below the initial water level of 35.6 feet. However, the statement goes on to say that the diversion works includes a 3 hp motor. Theoretical analysis using 3 HP pump with 75 feet of lift with a 60 psi assumed discharge pressure results in a theoretical diversion rate of 0.09 cfs. It is not clear if the system used for the pump test is the same as the installed system. Recommend 0.05 cfs for 65-23048 without combined use limit for diversion rate with 65-7794.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-23048
 Examiner: Craig Saxton
 Date of Field Exam: 12/10/2012

	Option 1	OPTION 2	OPTION 3	
P/D No.:				
PUMP HORSEPOWER	3	0	0	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	75.4	0	0	
DISCHARGE PRESSURE	60	0	0	
FRICTION	0	0.001	0.001	
RATE OF FLOW (cfs)	0.09	0.00	0.00	AVE
(gpm)	38.8	0.0	0.0	0.03

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.

Examiners Notes: