

Nelson, Dan

From: Nelson, Dan
Sent: Monday, July 24, 2017 2:01 PM
To: 'hroyal@blaineschools.org'
Subject: Irrigation Well Diversion Rate.
Attachments: Adjusted Diversion Rate Calculation.docx

Hello Howie,

The permit for the irrigation use for the Carey School was permitted for 20 acres at 0.04 cfs or 18 gpm per acre for a total of 0.80 cfs or 359 gpm. While we were there, you turned up the system to maximum capacity, and we measured a total of 397.5 gpm or 0.89 cfs. In a later telephone conversation, you told me that you run the system for 6 hours.

Typically in these types of situations, we limit the diversion rate to 0.04 cfs per acre, since it is already above our standard of the 0.02 cfs per acre. However, the system was obviously designed for a higher diversion rate. The attached memo shows the calculations I used to match the system design. According to my calculations using Department limits, I can recommend 0.70 cfs or 314 gpm. This is very close to the flow rate you had before you maximized the system. Cindy Yenter measured 201 gpm or 0.45 cfs when she calibrated your flow meter in 2012.

I think the 0.70 cfs is generous and should more than cover your needs. However, we do want to give you the opportunity to make a case to get the full diversion rate of 0.80 cfs or 359 gpm. To do this you will need to provide analysis showing why you need such a high diversion rate. This analysis would need to include system designs, soil analysis, and industry standard requirements for this type of irrigation use.

Providing an analysis of this kind can be time consuming, so I can hold off licensing until you can supply this documentation. I will need a time frame in which you think you can provide your analysis. Please let me know within 14 days if you want me to hold the licensing of the permit or if you want to move forward with the licensing the permit at 0.70 cfs and 314 gpm.

If you have any questions, please don't hesitate to contact me.

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