

MEMORANDUM

Date: January 14, 2009
To: Water Right File 22-7790
From: medl
Re: measurement

Without a flow measurement for the high school well, the diversion rate I was able to recommend for licensing initially was considerably less than the City of Driggs had expected. Their water rights consultant, Kristin Moore from Rocky Mountain Environmental Associates (RME) requested additional time to either locate the pump curves or arrange for a measurement of the high school well-pump capacity. According to Kristin the pump on the high school well had been replaced since the field exam with 'an identical model'. I agreed to wait until January 12, 2009 to allow time for gathering and submitting additional information.

Jared Gunderson, City of Driggs Public Works Director, completed repairs on the flowmeter and so was confident that the rate displayed would be representative of actual operational flows. RME did not have a certified examiner on staff but Jared Gunderson arranged with me to take photos of the flow totalizer on the High School well while the pump was in operation. He had access to a digital camera that was capable of date and time stamping photos and scheduled an attempt at a measurement on Monday, Jan 12, 2009.

I was in the office on Jan 12, 2009 and exchanged several phone calls with Jared during the afternoon. He was having problems with the equipment overheating and tripping 'off'. However, the flow measurement was successful. He took snapshots documenting a short period which simulated peak flow operation and others which documented a 40-minute sustained period of operation and emailed copies of the snapshots to me. I confirmed that I had received them within the time extension that RME had arranged.

On Jan 13, 2009, I reviewed the snapshots and phoned Jared to clarify the time stamp on the pair of snapshots taken at 13:27 and 13:28. (See S6300160.jpg and S6300164.jpg). He stated that he had had his stopwatch on and had taken those photos by the stopwatch time. He stated that those photos were taken of readings that were exactly one minute apart. Based on those photos, the volume change in one minute was 1120 gallons. The snapshots which bookmark the flow in the 40-minute time frame show a slower rate than was observed in the one minute documented from 13:27 to 13:28.

1120 gpm exceeds the diversion rate I had set in my first -round attempt at licensing this water right. 1120 gpm also exceeds the permit rate of 2.25 cfs (which is ~1010 gpm). Supported by a combination of archive and contemporary documentation, I am comfortable licensing this right with a diversion rate equal to the permitted rate.

The final link in the chain of documentation for this remotely controlled measurement was to show that the meter is in the high school well house and that well house is located in the same place as the field examiner found the high school well in 2001. On Jan 14, 2009, I received an email with attached snapshots of the interior and exterior of the high school well house. I also confirmed the locations of the high school and Daly wells in a brief phone conversation with Jared Gunderson. None of the existing data points on the high school property correctly mark the location of the City of Driggs High School well house. I created a new POD shape in the correct location. Data point correlation is needed.