

MEMORANDUM

To: City of American Falls Files
Fr: Bryce Cantor
Date: 8/17/01

Re: Combined Q Limitation,
POD

The following relies on the East Water Measurement District files. Except for measurement of discharge at the 85 location, copies are not included in the AF files.

1) Transfer-imposed limitation = 13.03 gfs from all POD combined.

2) WMD shows the following:

- 8531E 13 SW 3 wells @ Spring 307.1 GPM = 0.68 gfs
- 7531E 29 SE #5 1526.7 GPM = 3.40 gfs
- 7531E 29 SE #1 239.1 GPM = 0.53 gfs
- 7531E 29 NWSWE #4 not meas. - see theoretical below

Assume PCC $\approx$ PCC from well #1.

Well # PCC = 508.3 Kw# / acre foot

$$PCC = \frac{KW \times 5431}{GPM} \rightarrow GPM = \frac{KW \times 5431}{PCC}$$

Combined Q p 2

8/17/01

Observed Kw on WMD records for #4 = not reported.

Assume NP ratio is $\approx$ Q ratio.

Well #1 = 40 hp well #4 = 125 hp

$$0.53 \text{ gfs} \times \frac{125}{40} \approx 1.66 \text{ gfs}$$

- 75 31E 21 NWSESW Well #6

no meas performed by WMD

assume proportional to well #1

$$0.53 \text{ gfs} \times \frac{150}{40} \approx 1.99 \text{ gfs}$$

Note that Well #5 has 3.4 gfs discharge
@ 125 hp, so #4 & #6 may be 3.4
and 4.1 gfs respectively.

~~Note also that City of American Forks letter
indicates six sources of water; WMD records
only show 5. Wells #2 & #3 seen to be
missing from the series.~~

- 75 31E 29 NWNWSE pump #3

Combined Q p 3

8/17/01

Pump 3 not measured. 125 hp.

by methods above Q ranges fr.

1.66 - 3.4 cfs.

Summary.

Springs

5

1

4

5

3

Total

0.68 - 0.68

3.40 - 3.40

0.53 - 0.53

1.66 - 3.40

1.99 - 4.10

1.66 - 3.40

9.92 - 15.51

3) Summation of Transfer-approved rates:

29-2460

4.68

29-2510

2.42

29-4421

2.00*

29-7821

3.12

29-7822

0.81

13.03

* evidence does not support this rate.

4) Additional Permits per AT Enterprise Query:

29-8171

3.21 cfs.

5) Conclusions

- a) 29-4421 should be recommended @ the measured 0.68 gfs.
- b) At this recommendation, the AF recommendations will sum to $(13.03 - 2.00) + 0.68 = 11.71$ gfs
- c) Adding permit 29-8171 gfs brings total to $11.71 + 3.21 = 14.92$ gfs. This is very close to the optimistic high-end of actual Q.
- d) Because current recommendations will be less than 13.03 gfs there is no need for the combined Q limitation. Any need for combined limits associated w/ 29-8171 can be imposed by Allocations Bureau at time of licensing.

Deyle G. Cutor 8/17/01

Combined Q p 5 8/17/01

6) POD

There are 3 wells in the old spring at the 8 S. location. WMD records indicate 5 wells in the city. The transfer seems to indicate 6 wells plus the spring POW.

Likely the difference is "well #2" which is missing from the WMD list and attached map (from WMD files, apparently, supplied by City of American Falls. Note numbering discrepancy; two #5 and no #4. This map seems to correspond to what I remember from field work w/ Lewis Rouns of EWMD in 1998).

Conclusion: Recommend 3 POD @ spring, locate visually by GIS. Recommend 5 POD shown on attached map per visual GIS. Recommend "left over" POD from xfer by GIS "Make Shape from PLS" routine.

Deyce A. Contor 8/17/01

From East Water Measurement
District Records

