

MEMORANDUM

TO: File 36-8094

FROM: Daniel Nelson – Staff Hydrologist

DATE: March 24, 2014

SUBJECT: Licensing Review for water right 36-8094

Cindy Yenter performed the field inspection for this permit, and with the assistance of Michele Eld, calculated the flow rate for this permit. The Power uses have been accounted for in the field exam, however, it has been determined that the domestic use should be changed to heating, since it only provides hot water to the home. The field examiner agreed with the changes.

I have received a memo from Michele on the heating requirement of 2.8 af for a 3,000 sq ft, and I can add on the in-house use requirement for the hot water use for showers and what not. Each of the homes are approximately 1680 sq. ft, and the water temperature is 109 degrees. Michele's calculations, are little lower than the actual use, but the applicant could provide information to show the amount of water being diverted through the system. Without the diversion rate, it is difficult to determine an accurate heating volume. Therefore, the heating use for each home would be approximately 1.4 af per home.

The homes also use the hot water for culinary purposes, and I have calculated the culinary uses. I am expecting that the culinary uses would be approximately 0.3 acre feet for each home $[(500 \text{ gpd/home in-house use} / 2) \times 365 \text{ days}] / 325850 = 0.3 \text{ af}]$ and 0.2 af for the office $[(\text{store} = 400 \text{ gpd/ toilet} / 2 \times 365 \text{ days}) / 325850 = 0.2 \text{ af}]$. When these are added it the total would be 3.6 af total for the heating use $[\text{home 1} = (1.4 + 0.3 = 1.7 \text{ af}) + \text{home 2} = (1.4 + 0.3 = 1.7 \text{ af}) + \text{office} = 0.2 \text{ af} = 3.6 \text{ afa total}]$. The total heating use will be licensed for 3.6 af.

All of the conditions were changed or removed except for condition 1 and portions of condition 5. We added condition R23, condition X35, condition 027, condition X06 for the heating use, condition F06, Condition 915, and we altered Condition X10 to include a portion of one of the permit conditions.