


Memorandum

To: Morgan Landers, Community Development Director

From: Michael J. Erion, P.E. 

CC: Brandy Reitter, Bryon McGinnis, Fred Tobias, Carrie McCool, Mary Elizabeth Geiger

File: 161-9.21

Date: March 8, 2019

Re: Reserve at Hockett Gulch – Technical Review of Water Related Submittals

At the request of the Town of Eagle, Resource Engineering, Inc. (RESOURCE) reviewed the water related documents in the Annexation and Planned Unit Development (PUD) submittal for the proposed Reserve at Hockett Gulch project. The water documents include an August 16, 2018 memorandum from Brownstein Hyatt Farber Schreck (BHFS), Water Management and Analysis Report prepared by Aquasan Network (Aquasan) dated August 20, 2018, and Raw Water Supply System Conceptual Design Review Technical Memo prepared by Alpine Engineering, Inc. (AEI) dated August 10, 2018. Additional water documents were submitted and include a December 14, 2018 report prepared by Aquacraft Water Engineering and Management (Aquacraft) and a February 26, 2019 memorandum jointly prepared by BHFS and the Applicant. Additional information was received at the end of the day on March 7, 2019 including a depletion analysis from Aquacraft dated March 6, 2019 and an updated memo from the Applicant and BHFS dated March 6, 2019. RESOURCE's technical review comments are presented below.

RAW WATER SUPPLY AND DELIVERY SYSTEM

The proposed concept plan prepared by AEI appears feasible and consistent with potential options discussed between Applicant and Town staff. The AEI memo does not indicate how many acres will be irrigated with the raw water system, however, it assumes there will be an adequate amount of Ditch No. 3 water rights assigned to the raw water system. The August 16, 2018 BHFS memo also indicates that the raw water irrigation system will utilize the Applicant's Ditch No. 3 water rights. The Aquasan and Aquacraft reports indicates that 8.2 acres of raw water irrigation are proposed for the project, but the PUD appears to indicate 7.5 acres of raw water irrigation. For purposes of RESOURCE's review, 8.2 acres are used in the analysis for comparison to Applicant's reports.

Ditch No. 3 historically irrigated 24 acres of land on Applicant's property as described in Water Court Case No. 80CW269. The dry up of 12.07 acres and 16 AF of consumptive use credit was conveyed to the Town pursuant to the 1981 JHY Agreement and 2.04 acres is associated with the 2.7 AF for the Middle Eby Creek Subdivision as decreed in 80CW269. It appears there are 9.89 acres of dry up with

13.1 AF of consumptive use credit and 0.209 cfs of water in Ditch No. 3 remaining and owned by the Applicant. This should be adequate for raw water irrigation of 8.2 acres for lawn and landscape. Once the balance of the Applicant's interest in Ditch No. 3 is conveyed to the Town pursuant to the water rights dedication requirement outlined below, the Town would need to change the point of diversion for these water rights for raw water irrigation to a pump station on Brush Creek and to municipal use at the Town's Lower Basin Water Treatment Plant to the extent not used for irrigation. The Town would lease back the water rights necessary for the raw water irrigation system.

The Applicant, in its February 26, 2019 memo, is now proposing to dedicate all of its remaining Ditch No. 3 water rights to partially satisfy the water rights dedication requirement for the potable water service. The February memo does not indicate what water rights would be used for the raw water system. It appears the Applicant is proposing that the Town change water rights from the Town's portfolio for diversion at the raw water diversion. As described above, the Ditch No. 3 water rights should be used for the raw water system and any excess applied to the potable water dedication requirement. Either way, Reserve at Hockett Gulch would be paying a cash-in-lieu of water rights fee for potable water and/or raw water rights supplied by the Town, plus the cost of a water court case to change the water rights for use at the raw water system (and for use at the treatment plant). A change in point of diversion for the Applicant's Ditch No. 3 right would be much easier and less costly than changing another water right owned by the Town.

EQR ANALYSIS

The Town's EQR schedule is set forth in Section 12.16.050 of the Town Municipal Code, as was amended by Ordinance No. 18, Series 2018. The recent update reduced the EQR rating for multi-family units and the overall update was consistent with Town goals and with surrounding communities. There is no provision for an applicant to modify the EQR schedule and the calculation of the number of EQRs for the Reserve at Hockett Gulch project must follow the Town's schedule.

An EQR value is used by water service providers for purposes of tap fees or plant investment fees (PIF) for water and sewer facilities. A PIF is a "buy in" to the existing infrastructure such as diversion and treatment facilities, water/sewer mains, storage tanks, lift stations, and pressure reducing valves. Some of these facilities have an inverse relationship to daily water use. For example, fire flows are a significant portion of storage tank and water main sizing (and looping of water mains). Multi-story multi-family buildings require more fire flow capacity than single family units. For sewer systems, there is both a hydraulic loading and an organic loading to the system that requires treatment and must meet discharge standards. The organic loading is the same whether the toilet uses 5 gallons or 1.5 gallons and the concentration is higher in lower flows requiring more treatment to meet standards. PIF fees provide revenue to the Town's capital improvement funds and are utilized so that development pays its own way rather than being subsidized by monthly service fees of existing residents. The EQR represents a widely accepted methodology for equitably determining the cost to buy into the existing systems. The EQR schedule is based on a relative scale of water use and is therefore also the basis for water rights dedication and/or cash-in-lieu of water rights fee.

EQR Calculation

The Reserve at Hockett Gulch project proposes a mix of one and two bedroom multi-family units, single family, and commercial uses. The actual EQR rating will depend on the final mix of units, however, for purposes of review of the application, RESOURCE is using the most recent project configuration. The EQR calculation for the Reserve at Hockett Gulch, according to the Town Code, is approximately 396.2 EQR (depending on actual commercial development), less 35.7 EQR credit for raw water irrigation, for a total of **360.5 EQR**. The calculation includes 198 one bed/one bath units @ 0.6 EQR (**118.8 EQR**), 198 two bed/two bath units @ 0.8 EQR (**158.4 EQR**), 104 single family @ 1.0 EQR (**104 EQR**), and 30,000 SF of commercial @ 0.5 EQR/1000 SF (**15.0 EQR**) totaling **396.2 EQR**. It is noted that the commercial use EQR rating depends on the actual use and the Town Code is not 0.5 EQR/1000 SF. The value of 0.5 EQR/1000 SF is a reasonable estimate for planning purposes.

The Town Code allows for a reduction of 0.25 EQR per 2500 square feet of irrigation if raw water irrigation is provided. The project proposes 8.2 acres of raw water irrigation which would result in a reduction of 35.72 EQR ($8.2 \text{ ac} \times 43,560 \text{ SF/ac} \times 0.25 \text{ EQR} / 2500 \text{ SF}$) that could be allowed for the project. The 396 multi family units are allowed up to 500 SF of irrigation per unit for a total of up to 198,000 SF and the 104 single family units are allowed up to 2500 SF of irrigation for a total of up to 260,000 SF with a combined total of 458,000 SF (10.51 acres). This equates to 45.8 EQR ($458,000 \text{ SF} \times 0.25 \text{ EQR} / 2500 \text{ SF}$) and therefore a **credit of 35.7 EQR** would be allowed.

The net EQR total for the project is estimated at **360.5 EQR** ($396.2 - 35.7$) including 345.5 EQR for residential development and an estimated 15 EQR for 30,000 SF of commercial development. However, as noted above, the actual residential mix commercial EQR will be calculated based on actual type of use.

The Applicant's February memo presents a comparison of EQR ratings and system improvement fees from surrounding communities for the residential component of the project. It is important to note that the EQR ratings are very similar among the communities, and the Town of Eagle is less than every community except Glenwood Springs. The difference in the "cost to the developer" is in the water and sewer fees, not in the EQR schedule. The difference is primarily in the sewer fee where the Town's \$10,000 fee is more than the surrounding communities. Each community as a rational nexus basis for their PIF fees that relate to the individual communities, which have different water portfolios and water and sewer infrastructure. The "cost to developer" for water and wastewater PIF fees is only one of many components of the cost to develop in a community.

Plant Investment Fees

Currently, the Plant Investment Fee and pre-payment amounts should be calculated based on **360.5 EQR**. The final payment of fees would be based on actual development approved by the Town Board for residential uses plus the actual commercial uses approved and developed within the project. The water PIF fee would be \$3,337,509 ($360.5 \times \$9,258$) and the sewer PIF fee would be \$3,605,000 ($360.5 \times \$10,000$) for a total of \$6,942,509. The applicant is proposing to deed restrict 15 for sale units and 120 rental units, which may qualify for a 50% PIF fee discount for affordable housing. If such units qualify, and assuming an equal mix of one and two bedroom rental units, a PIF fee discount of approximately

\$820,000 would apply. The 50% discount is an incentive to develop affordable housing and is not in the code for other communities.

The Aquacraft report and the prior Aquasan report are water demand analyses from around the country that are used to estimate the population and water demand for the proposed project. The reports then develop a project specific EQR schedule. Aquacraft calculates the project at approximately 123 EQR including 105 EQR for 500 units (an average of 0.2 EQR per unit) and 18 EQR for commercial use. This is inconsistent with the Town Code and with every surrounding community.

The Applicant proposes a water PIF fee of approximately \$1,138,734 and a sewer PIF fee of approximately \$1,230,000 for a total of approximately \$2,368,734. The Applicant is requesting that the Town waive approximately \$3,750,000 to \$4,575,000 in PIF fees. This equates to a 60% to 70% reduction in PIF fees.

The Applicant argues that the project will have low flow fixtures and will conserve water. The Town already encourages water conservation through the increasing block water rate structure that reduces water demand and irrigation restrictions that reduce peak demands on the water system.

Water Rights Dedication

According to the Town Code, the Reserve at Hockett Gulch project water rights dedication requirement is based on the EQR calculation of **360.5 EQR** outlined above, plus the water rights necessary for the raw water irrigation system. The 1981 JHY Agreement provides for 88 EQR of water service and dedication of 16 AF of historic consumptive use credit associated with 0.255 cfs of the Ditch No. 3 water right. This water right was conveyed to the Town. Therefore, the Applicant must provide a water rights dedication for **272.5 EQR**, plus raw water irrigation rights. In accordance with Section 12.26.030(c), the basic water rights dedication is 0.95 AF per EQR during the irrigation season (April – October). In addition, a cash fee (determined by the Town Board) is also assessed for the non-irrigation season demand. The Town Code requirement would include water rights with 258.9 AF of historic consumptive use and cash payment for 13.6 AF (0.05 X 272.5) of contract storage water. The additional water rights dedication has not been adequately addressed by the Applicant.

The March 7, 2019 submittal includes a diversion and depletion analysis and a water rights dedication proposal. RESOURCE's initial review is that the Applicant's remaining water rights in Ditch No. 3 are not adequate to meet the dedication requirements and additional water rights and/or a cash-in-lieu of water rights dedication will need to be provided by the Applicant. It is RESOURCE's understanding that the Town and Applicant will be working on this issue in the coming weeks.