



Town of Castle Rock

Agenda Memorandum

Agenda Date: 9/15/2020

Item #: 28. **File #:** TMP 2020-623

To: Honorable Mayor and Members of Town Council

From: Mark Marlowe, P.E., Director of Castle Rock Water

Resolution Of The Town Council Of Castle Rock Stating Its Opposition To The Appeal Submitted By JRW Family Limited Partnership, LLP, To The Water Supply Standards Set Forth in Section 18A Of The Douglas County Zoning Resolution With Regard To The Proposed Pine Canyon Planned Development

Executive Summary

The purpose of this memorandum is to provide Town Council the results of a detailed review of the Pine Canyon Water Appeal and a Resolution recommending denial of the Water Appeal by the Douglas County Planning Commission and the Douglas County Board of County Commissioners (see **Attachment A**). JRW Family Limited Partnership (Applicant) has filed an application for zoning for 2,248 single family equivalents including residential home and commercial and institutional users. The Applicant plans to provide their own water and wastewater service to the planned development through a non-existent entity, the Pine Canyon Water and Sanitation District. Because the Applicant does not have enough non-tributary, non-renewable groundwater (710 acre feet versus the needed 1,530 acre feet) to meet County standards, the Applicant filed a Water Appeal in accordance with Douglas County Zoning Resolution Section 18A. The Douglas County Planning Commission and the Douglas County Board are required to consider the Water Appeal based upon evidence that 1) the request will not be detrimental to the health, safety, or welfare of the present or future inhabitants of the County; and 2) the application provides sufficient supporting data of alternate water demand criteria so the water supply is still considered sufficient in terms of quantity, quality and dependability.

Since the Applicant is proposing to develop strictly off of non-renewable groundwater, the request will be detrimental to the long term health, safety and welfare of present and future inhabitants of the County as this non-renewable water supply will not be able to support the development over the long term as clearly noted in Douglas County's Comprehensive Master Plan which states, "The Denver Basin alone (a non-renewable resource) cannot sustain the population's water needs long-term.". Further, additional new use of this non-renewable water supply will only speed up the depletion of the resource which is currently still relied upon by existing residents of Douglas County (including Castle Rock) and will be for many years to come as water providers continue their decade's long plan to transition to a renewable water supply. The application also does not provide adequate supporting data that the water supply will be sufficient in terms of quantity and quality, and long term dependability. The Applicant proposes a non-renewable groundwater supply of unknown real capacity

Item #: 28. File #: TMP 2020-623

based solely on paper water decrees and with no safety factor of excess non-renewable supply, a non-renewable groundwater supply with no sampling data or information showing quality, water demand criteria not proven in the Castle Rock area, and a reusable wastewater effluent which will likely not get permitted

Notification and Outreach Efforts

Castle Rock Water has discussed the proposed Pine Canyon development's plan to develop purely off of non-renewable groundwater with all of the major water providers in Douglas County and other South Metro water Providers including Denver Water and Aurora Water. Parker Water has already sent Douglas County a letter recommending that they not allow Pine Canyon to move forward with a separate water and sanitation district, (see **Attachment D**). Other water providers, as well as the South Metro Water Supply Authority are planning on sending letters recommending denial of the water appeal by Douglas County.

History of Past Town Council, Boards & Commissions, or Other Discussions

In December 2013, the landowner, JRW Family Limited Partnership, LLLP, submitted an annexation petition, proposed Planned Development (PD) zoning application and an Annexation and Development Agreement (DA) request to the Town of Castle Rock. Several reviews of the proposal were completed, and the ninth set of staff comments and redlines were sent to the applicant in February 2018.

On April 17, 2020, the applicant submitted a written request to the Town to withdraw the Pine Canyon annexation petition, zoning and DA applications. Subsequently, in May 2020 the landowner submitted an application to Douglas County requesting a rezoning of the property to a PD.

On May 19, 2020, Town staff presented an overview to Town Council of the project and the application to Douglas County for a PD.

On May 22, 2020, Douglas County staff sent the applicant Initial Review comments that identified several areas that needed to be addressed by the applicant, prior to the proposal being deemed complete enough to route for external referrals. Items noted included Douglas County staff concerns that the proposal did not demonstrate compliance with the Douglas County Master Plan, did not address Approval Criteria for Planned Development Districts in Douglas County Zoning Codes, and that the proposal will impact existing Town of Castle Rock infrastructure, services, and facilities requiring considerable effort and coordination to address these impacts, on the part of the applicant.

On May 27, 2020, Castle Rock Water staff presented an overview to the Castle Rock Water Commission on the project and the application to Douglas County for a PD.

On July 7, 2020, Town staff presented an overview to Town Council of the project and shared Douglas County Department of Community Development, Planning Services and Department of Public Works first review comments.

On July 22, 2020, Town staff presented an overview to the Castle Rock Water Commission of the

project and shared Douglas County Department of Community Development, Planning Services and Department of Public Works first review comments.

On July 31, 2020, the applicant resubmitted their PD zoning and water appeal to Douglas County. Subsequently, Douglas County staff returned a second set of initial review comments to the applicant on August 24, 2020, letting them know that additional information was still needed before this proposal could be routed to external referral agencies for the 21-day referral.

On August 18, 2020 Town Council approved a resolution stating its opposition to the Site Location Application for a wastewater treatment plant submitted by JRW Family Limited Partnership, LLP.

On August 26, 2020 Castle Rock Water Commission unanimously supported Council's resolution stating its opposition to the Site Location Application for a wastewater treatment plant submitted by JRW Family Limited Partnership, LLP.

Discussion

The South Metro Denver area including Douglas County historically developed off of non-renewable groundwater resources. In 2000, region wide efforts were undertaken to reduce pressure on and preserve this limited and essential resource to avoid impacts that would be detrimental to the health, safety, and welfare of the present and future inhabitants of the region as well as significant economic disruptions to the region's prosperity. Water providers in the South Metro area developed long term renewable water supply plans and have invested hundreds of millions of dollars to transition from a non-renewable groundwater resource to a sustainable, fully renewable water supply that will allow for the continued prosperity of inhabitants and economic success.

Douglas County has partnered with many of the water providers in these critical initiatives for the better part of a decade. The Water Infrastructure and Supply Efficiency (WISE) project and partnership was born out of these efforts. Specifically, the WISE project is a partnership of ten South Metro water providers and Denver Water, Aurora Water, and East Cherry Creek Water and Sanitation District. Douglas County invested significant time and money into supporting and promoting the WISE project for the benefit of the County. These water providers together have invested over \$120M in this successful work. We have invested \$52M to date with more required in the near future.

Approval of this Water Appeal will set these efforts back by allowing additional new development off of this non-renewable resource. At some point in the future, one of the existing water providers in the area will be required to step in with renewable water resources to avoid a disaster for the potential future residents of this community.

In addition, the proposed non-renewable water supply does not meet the County's standards for non-tributary groundwater. Those standards have undoubtedly been established to provide for a safety factor given the long term unsustainable nature of non-renewable groundwater. The Applicant argues, that if the County loosens the standards for their case, they will have enough non-renewable groundwater to meet demand. While the Applicant's demand calculations are defensible, the point of the County's standards is to ensure an adequate supply well into the future and not just enough

supply to barely cover near term demand. Especially, demand that has been lowered using a variety of water efficiency requirements which could reverse in the future as the development ages and pipes and plumbing start to leak. In fact, the Applicant wants the County to approve a 78% reduction in their demand standard for a single family equivalent. The County requires and has required 0.75 acre feet per single family equivalent which is more than is typically required. Actual demand has dropped per single family equivalent in recent years but the standard for non-renewable groundwater has not been lowered. This is good engineering practice and similar to the town's requirement for 1.1 acre feet per single family equivalent. Not using a safety factor when non-renewable groundwater supply is the only supply would further put the future residents of this development at risk for not having an adequate future water supply.

The Applicant further proposes to meet a significant amount of their demand using reusable wastewater effluent. As such, the Applicant has submitted a Site Location Application for a new wastewater treatment plant to serve the development and also provide reuse water for outdoor irrigation and toilet flushing. There are many issues with the proposed wastewater treatment plant which are outlined in Castle Rock's letter to Colorado Department of Public Health and Environment (CDPHE) recommending denial of the Site Location Application, (see **Attachment B**). If the wastewater treatment plant is not approved, which is highly likely to be the case, the Applicant will be further hampered in their ability to meet the quantity requirements for a sustainable water supply under the Water Appeal.

As discussed previously, much like the County, Castle Rock requires more non-renewable groundwater for new development than the development may actually require to meet immediate demand good engineering practices. In fact, Castle Rock requires 2 acre feet of supply for every acre foot of demand. While the County standards are not quite as protective of the supply, they do require more than would typically be needed to meet immediate demand. This extends the time that the non-renewable groundwater supply will be available for the future residents of the development. In Castle Rock's case, this is done to allow for development of a renewable water supply to replace the non-renewable groundwater supply in the future. Pine Canyon is not proposing to seek a renewable water supply now or in the future so a large safety factor on non-renewable ground water is even more critical. It is clear that this Water Appeal cannot meet the spirit of the second criteria which is that *the application provides sufficient supporting data of alternate water demand criterion so the water supply is still considered sufficient in terms of **quantity, quality and dependability***. The water supply quantity being proposed is on the razor's edge and barely able to cover the actual real world demand in the near term. There is no safety factor to allow for the depletion of the non-renewable groundwater supply and no dependability built in by providing excess water supply.

Contrary to the Applicant's arguments, the proposed water supply also does not meet the quality criteria in the County's Water Appeal requirements either. The Applicant argues that the only treatment necessary is chlorination. This ignores the fact that water from the Denver Basin aquifer can contain radium, iron and manganese at levels which can exceed maximum contaminant levels (MCLs) as set by the United States Environmental Protection Agency and CDPHE. It is for this reason that public water supply systems, including Castle Rock, typically provide treatment for Denver Basin groundwater unless the water has undergone extensive testing to verify its quality. Water quality can vary significantly from one well to another with some not meeting MCLs and others meeting MCLs. As such, Jehn Water Consultant's statement that "raw groundwater is expected to be

of high quality” is simply a hopeful statement and not based on any data or facts.

The Applicant’s consultant further argues that the system has demonstrated adequate dependability because it will be designed by a Colorado Professional Engineer and constructed in compliance with CDPHE criteria. Without details on how the system will be **designed** and **operated** to be dependable, it cannot be concluded that the system will be dependable. We have already shown that the water supply is not dependable over the long term. The information in the Water Appeal certainly does not provide evidence that the system will be designed and operated in a dependable fashion on a day to day basis. The Pine Canyon Water and Sanitation District has no history, no assets, and no customers to show that they can successfully, safely, and dependably design and operate a dependable water system. Their consultants have ignored the importance of a long term renewable water supply in their proposed water supply plan for the long term sustainability of the future residents which indicates that they may not be able to design a dependable water system.

The Applicant’s consultant also argues that the proposed new wells on the Pine Canyon property will not have a significant impact on Castle Rock’s wells. This is false. The Applicant’s Consultant used a specific yield value which represents unconfined aquifers in the well interference calculations. Experts from Leonard Rice Engineers and Colorado State University, have worked with Castle Rock and successfully modeled well draw downs and interference in Castle Rock’s 60 plus deep wells using a specific storage value that represents semi-confined aquifer conditions. A review by Leonard Rice Engineers of the work done by the Applicant’s consultant is provided as **Attachment C**.

Since Castle Rock Water utilizes aquifer storage and recovery and has plans to use this for long term sustainability of our water supply, the proposed wells at Pine Canyon have the potential to interfere with Castle Rock’s water rights. Water injected into the aquifer for storage by Castle Rock will help the productivity of the Pine Canyon wells. Operation of the Pine Canyon wells will negate the positive effect of storing water in Castle Rock’s deep wells. As such, Castle Rock will have to re-evaluate the efficacy of aquifer storage and recovery in some of our wells close to the Pine Canyon development.

Staff recommends that we encourage the County to deny the Water Appeal and instead have the Applicant work with one of the existing water providers in the area on obtaining access to a long term renewable water supply.

Budget Impact

While the Water Appeal does not have an immediate impact on Castle Rock’s budget, longer term it could have significant impacts both on Castle Rock’s operating and capital budgets once well to well interference takes hold. Well to well interference will cause water level drops in our wells resulting in increased energy costs to extract our water. These well level drops may also result in us having to replace or drill new wells sooner. Other long term impacts to budget will include additional treatment costs for water in East Plum Creek where Pine Canyon plans to discharge treated wastewater and stormwater. Finally, there may be future costs associated with rescuing the Pine Canyon development when their water supply becomes unsustainable. Castle Rock is already engaged in negotiations with a neighboring community to do this exact thing.

Item #: 28. File #: TMP 2020-623

Staff Recommendation

Staff recommends that we encourage the County to deny the Water Appeal and instead have the Applicant work with one of the existing water providers in the area on obtaining access to a long term renewable water supply.

Proposed Motion

"I move to approve the Resolution as introduced by title."

Attachments

- Attachment A: Resolution Recommending Denial of the Pine Canyon Water Appeal
- Attachment B: Castle Rock's Letter to CDPHE Recommending Denial of the Pine Canyon Site Location Application
- Attachment C: Report on Well to Well Interference by Leonard Rice Engineers
- Attachment D: Parker Water Letter to Douglas County Recommending Denial of the Pine Canyon Site Location Application