

MEMORANDUM

Draft

FROM: Gabe Racz
DATE: August 14, 2020
RE: Pine Canyon Site Location and Trade Proposal Comments of the Town of
Castle Rock

The Town of Castle Rock recommends that the Water Quality Control Division deny the site location application for the Pine Canyon Water Reclamation Facility. The application is inadequate, and the proposed project is inconsistent with the site location policies of the Colorado Water Quality Control Act, Water Quality Control Commission Regulation 22, and the implementing guidance developed by the Water Quality Control Division.

In order to approve the site location and design for a domestic wastewater treatment works, the Colorado Water Quality Control Act, C.R.S. § 25-8-702, requires the Division to:

- (a) Consider the local long-range comprehensive plan for the area as it affects water quality and any approved regional wastewater management plan for the area;
- (b) Determine that the plant on the proposed site will be managed to minimize the potential adverse impacts on water quality; and
- (c) Encourage the consolidation of wastewater treatment facilities whenever feasible.

The site application for the Pine Canyon Water Reclamation Facility should be denied because it does not show that the proposed plant will be managed to minimize the potential adverse impacts on water quality. The plant has serious potential adverse impacts on Castle Rock public water supply wells located immediately downstream of the proposed discharge. Furthermore, the applicant has not yet been formed as a District and has not demonstrated any ability to manage a wastewater treatment plant or to finance its construction, operation, and maintenance. The application lacks the minimum financial information necessary to demonstrate the ability to operate a wastewater plant.

The site location should also be denied because it would be feasible to provide wastewater service through consolidation with the Plum Creek Wastewater Reclamation Authority facility. The proposed wastewater treatment plant would serve a new development located in the heart of Castle Rock. The existing PCWRA facility would efficiently serve the development. The application seriously underestimates the cost of the proposed treatment facility, and includes development costs that are irrelevant to the feasibility of consolidation of wastewater service. When the true, relevant costs are compared, consolidation with PCWRA is less expensive and therefore more feasible than the proposed wastewater treatment facility.

1. The applicant has not shown that the proposed wastewater treatment plant can be managed to minimize potential adverse impacts on water quality.

a. The designation of the legally responsible person and the legal description of the site location required by Reg. 22.5(1)(a) shows that the proposed facility cannot be properly constructed or managed.

Pine Canyon Water & Sanitation District does not exist. The site application notes that the District has not been formed (Site app. Pg. 1). Therefore, the applicant is JRW Family Limited Partnership LLLP. The application does not identify the partners, does not provide other information about the legal structure of the partnership, and provides no information about the financial or management capability of the partnership to actually design, construct, operate, and maintain a domestic wastewater treatment works in a manner that does not place public health and the environment at risk.

The applicant must provide information that the applicant can generate funds, set rates, and earmark funds for acceptable waste treatment. (WQCD Reg. 22 Guidance, pg. 21). This information was not provided. It appears that the Family Partnership has no ability to generate funds, set rates, or earmark funds. It is relying entirely upon a water & sanitation district that does not exist and has not been formed.

The Division's Regulation 22 Guidance (pp. 22-23) also requires the applicant to provide information about the financial system associated with constructing, operating, and maintaining the proposed facilities. This requires evidence of enough resources available to meet these requirements. If the project will be financed independently, the applicant needs to provide written evidence from a financial institution that it has adequate capital to undertake the project. (Reg. 22 Guidance, pg. 22). If the entity will need a loan, it must submit a letter indicating the intent of a financial institution to make a loan for construction purposes. (*Id.*). None of this information was provided with the application. Lack of sufficient financial resources places public health and the

environment at risk if there is not enough capital or revenue to properly construct, operate, and maintain the facilities.

The application form indicates that the applicant will not apply for a state or federal grant or loan to finance the project. Instead, the report notes (pg. 38) that the as-yet-unformed PCWSD will pursue bonds to pay for the facility, and also claims that the District may apply for grants or loans (pg. 5). There is no letter indicating that any financial institution will issue bonds, and the claimed sources of funding in the engineering report contradict the site location application.

The applicant must demonstrate the ability to finance the construction of the facility and must have sufficient reserve funds for operation and maintenance, and for anticipated expansions and improvements in treatment over at least a 20-year period. The applicant is required to provide a long-range financial plan and a projected 5-year budget and financial analysis. (Reg. 22 Guidance, pg. 23). None of this information was provided to demonstrate that there will be enough funding available to actually construct the project. The following factors required by the Regulation 22 Guidance were not adequately addressed in the application:

- Itemization of projected expenses and revenues. Costs are not itemized, and revenues are not projected. Because the area to be served does not have any development entitlements at this time, the applicant must provide a projection of the schedule for receiving wastewater impact fees and rates. This schedule must be compared to the capital and operating costs for the proposed facility to ensure that the facility can be completed and properly operated.
- Comparison of all anticipated wastewater revenues and planned expenditures for a 20-year period. The applicant provided no information to satisfy this requirement.
- Identification of reserve accounts for emergencies/replacement funding and operations and maintenance funds. The applicant did not identify any reserve accounts.
- Access to public and private financial capital. The applicant provided no information that it currently has access to capital. The applicant merely assumes that loans or bonds will be available upon formation of a special district without any existing residents or ratepayers.

- Revenues must be greater than costs. There is no demonstration that revenues will be greater than costs, particularly in the period immediately after construction of the facility leading up to build-out of the proposed development.
- Current outstanding debt and ability to borrow funds. No information about this was provided. However, because the proposed special district does not exist, it has no ability to borrow funds.
- Periodic financial audits. There is no information about a plan to provide for financial audits.
- Annual development and utilization of budget. The applicant provided no budget information at all.
- Rate structure based on customer, flow, and/or waste type. The applicant appears to assume a single rate structure, but fails to address the multiple proposed land uses shown in the application (Application Figure 2).
- Capital improvements plan. No plan was provided.

b. The application fails to account for the proximity of the proposed facility to public water supply intake structures as required by Section 22.5(1)(d). Relationship to and potential impact of proposed facility on any water supply intake. (22.5(1)(d)).

The proposed discharge point for the Pine Canyon facility would be located immediately upstream of public water supply wells for the Town of Castle Rock. Despite this fact, the application does not identify Castle Rock wells and drinking water intakes located downstream of proposed discharge point. There is no analysis of the potential impact of the proposed facility on these wells. The application does not provide adequate information to review this factor.

Furthermore, the proposed location is within the Town of Castle Rock's Watershed Protection District. Castle Rock Code Chapter 4.02 requires the applicant to apply for a watershed district permit from the Town before it can construct and operate a wastewater treatment facility. This application must address how the Pine Canyon WSD can operate and maintain a domestic wastewater treatment facility immediately upstream of the Town's water supply wells without endangering public health.

The placement of a new wastewater treatment facility poses multiple risks to the drinking water supply of the town, including:

- Discharges of nitrate, arsenic, and other parameters of concern for human health that are commonly found in domestic wastewater effluent.
- Discharges containing TENORM. The applicant's proposed water supply is from Denver Basin wells. Filtrate from Denver Basin Groundwater is a source of TENORM. The applicant must indicate whether it will discharge residuals to its wastewater plant, and if not how it will handle the residuals.
- Other parameters of concern. The land use plan for Pine Canyon (Fig. 2) indicates multiple land uses including "mixed use" and "resort." Pine Canyon has not shown any institutional controls to prevent other pollutants from these sources from affecting the Town's water supply.
- Emergency plans, spill responses, SCADA, and staffing must all be adequate to prevent accidental contamination of the Town's water supply given the proximity to the Town's intake wells.

c. The applicant has not demonstrated the ability of the proposed treatment processes to meet applicable water quality planning targets. (22.5(1)(h))

As noted in the application, the applicant has requested preliminary effluent limitations (PELs) but has not yet received them for purposes of planning and design. Instead, the application provided preliminary Draft PELs based on the general permit for domestic wastewater facilities under 1 mgd. However, the preliminary draft PELs are inadequate because they do not account for the site-specific factors affecting a proposed new discharge to Plum Creek, the proposed location immediately upstream of Town of Castle Rock public water supply wells, or antidegradation requirements. At a minimum, the PELs for the facility should:

- Consider all limitations included in the PELs issued in 2018 for the PCWRA expansion.
- All of the available assimilative capacity in the stream for multiple parameters has already been allocated to PCWRA. Given the proximity of the proposed discharge to PCWRA, the proposed facility should not receive any allowance for dilution for parameters that were included in the PCWRA PELs without prior agreement from PCWRA.
- Include water quality-based effluent limitations for ammonia, chlorine, and any other limits included in the general permit for facilities <1.0 mgd

- Include additional human-health based parameters because of the proximity to Castle Rock wells.
- Consider the need to meet limitations for winter temperature for discharge to Plum Creek.
- Include antidegradation-based effluent limitations for all parameters of concern for the new facility. It is unclear whether the applicant has sufficient data to calculate the Baseline Water Quality at the proposed discharge location to determine the significant concentration threshold and Antidegradation-Based Average Concentration Limitations for the facility. However, at the very least the applicant should have included the antidegradation-based limitations in the general permit for domestic wastewater facilities in the preliminary PELs.

Finally, the proposed treatment plant would cause an unauthorized increase in phosphorus loads to Chatfield Reservoir. The applicant relies on a flawed proposal for a non-point to point source phosphorus trade to generate a phosphorus waste load allocation. The applicant claims that, by removing cattle from the property, phosphorus contributions to the reservoir will be decreased. However, the applicant has provided no evidence of the number of cattle that have been present on the property, how long ago they were present, or what seasons they were present. The applicant also fails to consider the phosphorus that will be added by the proposed development, particularly since the development will occur outside the Town of Castle Rock permitted MS4. Additional detail about the flaws in the proposed trade is provided in the attached Technical Memorandum from Vista Engineering.

2. The application should be denied because consolidation with PCWRA is feasible (Section 22.5(1)(c)).

The application should be denied because it is feasible for the wastewater from the proposed development to be treated by PCWRA. The applicant's consolidation analysis is flawed because it is based on a significant underestimate of the costs to build and operate a new wastewater treatment plant, and because the analysis considers irrelevant costs not related to wastewater treatment. Furthermore, the applicant's claims that consolidation would injure their water rights and eliminate the opportunity for reclaimed water use are false.

The proposed Pine Canyon development is located in the middle of Castle Rock. PCWRA has included the Pine Canyon area in its facility plan and will soon complete an expansion of its capacity that will allow it to treat growth in and around Castle Rock,

including the area where the Pine Canyon development is proposed. The map attached as Exhibit A shows the current service area in the PCWRA utility plan.

The applicant claims (engineering report pg. 23) that consolidation with PCWRA would impair PCWSD water rights because annexation to Castle Rock would require dedication of its water rights to Town. This is not impairment, it is use of the water rights to support urban-density development. The Regulation 22 Guidance, pg. 14, says that the Division may consider whether water rights issues prevent moving the effluent to another location for discharge. However, the applicant proposes to supply its development using non-tributary Denver Basin groundwater. Non-tributary groundwater does not have a required location for making return flows after use. Therefore, there would be no injury to the applicant's water rights from treatment at PCWRA.

The applicant also claims that it will lose an opportunity to conserve water through reclaimed water use. PCWRA is authorized to deliver Category 2 reclaimed water from its facility under NOA number COE004000. This category allows for unrestricted access landscape irrigation (Reg. 84.9). The applicant claims that it would use reclaimed water for residential area irrigation and indoor toilet flushing. However, the applicant provides no information about its plan to actually deliver reclaimed water for these uses, or for any other uses for which Category 2 reclaimed water could not be used under Regulation 84. Furthermore, the applicant has not investigated the ability of PCWRA to improve its reclaimed water system to allow it to obtain authorization to deliver Category 3 or Category 3 plus reclaimed water.

The applicant's economic analysis of the feasibility of consolidation is also flawed. First, the economic analysis improperly considers drinking water costs associated with annexation and development in the Town. However, the consolidation economic analysis considers the cost of consolidation with the regional WWTP against the cost of constructing and operating a separate facility. (Reg. 22 Guidance, pg. 15). Therefore, the applicant's economic analysis considers irrelevant cost factors and cannot be used as the basis for site location approval. Even if the cost of drinking water service from the Town were relevant, the applicant's analysis ignores the fact that the applicant proposes to supply a large development using non-renewable Denver Basing groundwater that will eventually be exhausted as a supply, while the Town provides a renewable and sustainable drinking water supply.

The applicant significantly underestimates the capital and operational costs of its proposed facility, as explained in the Technical Memorandum of Vista Engineering, attached. But even if the applicant's cost analysis were accurate, it shows that the cost of the proposed facility is significantly higher than the cost of treatment by PCWRA. The

estimated wastewater capital costs for PCWSD are \$12 million, compared to a \$9 million wastewater impact fee for connection to PCWRA. (engineering report, pg. 38, App. F).

Finally, the applicant failed to analyze several economic factors necessary to determine the feasibility of consolidation. The Regulation 22 Guidance, pg. 15, requires consideration of the costs of land acquisition, debt retirement expenses, and operation and maintenance costs for a minimum period of twenty years. The applicant failed to include these costs or to estimate the costs of operation and maintenance for the required twenty-year duration. Furthermore, the guidance requires cost comparisons on the basis of cost per 1,000 gallons of wastewater treated, as well as the present net worth. Neither cost comparison was provided by the applicant.

3. Conclusion.

Castle Rock recommends denial of the site location application for the Pine Canyon Water Reclamation Facility. The application does not show that the proposed facility can be operated in a way that minimizes adverse impacts to water quality. Furthermore, treatment by the nearby Plum Creek Wastewater Reclamation Authority facility would be feasible. The state's policy of encouraging consolidation wherever feasible, and the need to ensure that all domestic wastewater treatment facilities protect the environment, require the denial of the site location application.