

Draft Terms for Agreement for Extraterritorial Water Service Between the BMR Metropolitan District (BMRMD) and the Town of Castle Rock

Date: October 19, 2020

Background

Since about 2008 the various BMRMD Boards have been studying options to improve the quality of water generated at the BMR Water Treatment Plant (WTP) and to provide a long-term sustainable water supply for BMR. We have had several engineering firms examine our water system infrastructure and suggest improvements for future operations. To complicate the task, the State of Colorado Department of Public Health and Environment (CDPHE) rules have been evolving. Because the State rules and regulations have been changing, several of the options that we have considered for modifying our water plant have been eliminated because they would not comply with the changing State requirements. Other options were eliminated due to excessive cost.

While the treated drinking water from the BMR WTP meets all State statutory standards, the wastewater (effluent) from the WTP does not meet all State requirements. Currently, the effluent from our WTP is discharged into Glade Gulch. In past years the CDPHE issued Discharge Permits for the BMR WTP effluent without much question; however, in 2016 that changed. Our current Discharge Permit expires on April 30, 2021. At that time the effluent from our water treatment plant must essentially meet "drinking water" standards. The ion exchange system used in our WTP produces an effluent that fails CDPHE standards in several areas:

1. The technologically enhanced naturally occurring radioactive material (TENORM) in the effluent exceeds State limits. The amount of naturally occurring Radium 226+228 in our raw (untreated) well water meets standards; however, once the water is treated to remove iron and manganese, the resulting discharge effluent is not in compliance with State statutory limits.
2. Whole Effluent Toxicity (WET). In order for the WTP effluent to pass a WET test, minnows and water fleas must survive for 7 days in the effluent; however, 100% do not survive in our WTP effluent due to high dissolved solids, especially salt, which is purged in the water softening process.
3. Discharge of phosphorous. An allocation permit for the discharge of phosphorous must be obtained from the Chatfield Water Authority, which governs tributaries to Chatfield reservoir (e.g. Glade Gulch which is a tributary of East Plum Creek). We currently do not have a permit, but have been given until April 30, 2021 to obtain one.
4. Excessive iron and manganese content in the treated water. While the State does not have statutory limit for drinking water regarding these minerals, BMR treated water exceeds the suggested limits.

Current Status

After years of analysis and discussion of various options of how to best proceed in improving water quality and with meeting our deadline for compliance with State requirements, the BMRMD selected the option of acquiring water from Castle Rock as the best option to pursue. Key rationale included:

- a. The BMRMD would come into compliance with State water regulations and standards by not having any wastewater discharge from the WTP.
- b. The quality of drinking water for BMR residents would be improved by lowering the levels of iron, manganese and salt from the softening process in the water. In addition, the amount of

- particulate matter would be reduced.
- c. The production and delivery of drinking water would be managed by career professionals in lieu of volunteer residents who may have little or no expertise in water systems.
 - d. A long-term sustainable water supply for BMR would be secured.
 - e. The cost of Castle Rock water for residents would be comparable to the current BMR water costs.

Hence, the BMRMD has been in discussions with Castle Rock Water (CRW) over the past year to explore the best way to connect the BMR water system to the Castle Rock water system. After several iterations of draft agreements, the BMRMD and Castle Rock Water (CRW) developed a draft Agreement for Extraterritorial Water Service from Castle Rock Water, which was presented to the Castle Rock Town Council at the 20 October Town Council meeting to obtain approval for CRW to move forward with developing a final legal agreement with the BMRMD. The Town Council unanimously approved CRW to move forward in formulating a final agreement with the BMRMD. There is still substantial detail that needs to be addressed in formulating a final agreement. We will schedule a virtual meeting for all BMR residents to address any concerns that residents may have regarding the draft agreement terms and to answer all questions.

For your information, the key provisions of the draft terms agreement presented to the Castle Rock Town Council are included below under the heading, Attachment 1. Also, there is a Commentary at the end of the draft agreement that contains further rationale for pursuing the agreement with CRW to provide water service to BMR.

We hope to have a formal agreement executed sometime in 2021, at which time CRW would assume operation and maintenance of the BMR water system, including responsibility for all compliance issues with CDPHE relative to the operation of the BMR Water Treatment Plant.

Attachment 1- Key Provisions of Draft Terms for Agreement for Extraterritorial Water Service Between the BMR Metropolitan District (BMRMD) and the Town of Castle Rock

1. Agreement will be exclusive to BMR (321 homes and 2 irrigation taps) and will be perpetual.
2. BMR residents will become CRW customers subject to the same rates and fees plus a 10% extraterritorial surcharge.
3. BMR will be assessed standard CRW system development fees at the 2020 rate (approx. \$6.8M) that will be recovered by CRW over a 30-year period at an interest rate of 2.54% (CRW's current average carrying cost of debt).
4. System development fees will be partially offset by the depreciated value of BMR contributed assets plus the value of excess groundwater rights at \$2,500/acre foot (AF) (approx. \$3.4M total).
5. Castle Rock will acquire additional property in BMR (approx. 3 acres) at fair market value for future expansion of the existing Bell Mountain Ranch Water Treatment Plant (BMRWTP) and for installation of raw water pipelines to the BMRWTP from existing wells on BMR currently owned by CRW.
6. BMR will pay for the infrastructure required to connect the BMR water system to the Castle Rock water system (approx. \$2.3 M) and the cost will be rolled into the BMR debt to be repaid to Castle Rock over a period of 30 yrs. CRW will front the funds required to

construct the connection between the BMR and Castle Rock water systems and will manage the design and construction of the connection. BMRMD will have representation on the design and construction management team.

7. Based on upon the CRW approved 2021 rates and fees, estimated total monthly bills for BMR customers will range from \$142 to \$277 and average \$185. This includes an estimated fixed monthly charge of \$129 for system development fees, debt service, fixed monthly charges common to all CRW customers and a 10% extraterritorial surcharge. Individual bills will depend on actual usage and final agreement terms and will be adjusted annually based on CRW rates and fees as approved by the Castle Rock Town Council.
8. All groundwater rights and fixed assets comprising the BMR water system will be deeded to the Town of Castle Rock. BMRMD will relinquish all control over the BMR water system. CRW will own, operate, maintain and replace (as necessary) the water distribution system in BMR as part of CRW's service area. Customers in BMR will become customers of CRW and will be subject to the same rules and requirements for water service as other CRW customers, including all water conservation requirements.
9. CRW will administer customer accounts, read meters on a monthly basis, and send bills directly to customers on a monthly basis.
10. BMRMD will adopt CRW's rules and regulations, rates and fees on an annual basis to ensure that enforcement of the rules and regulations, rates and fees can be implemented by CRW.
11. Water supplied to BMR will not be returned via sanitary sewer; hence, there is a loss of use of the majority of supplied water; however, the water rights to all irrigation and septic return flows will be retained by CRW.
12. Once a final agreement is fully executed, CRW will own and operate the BMR water system. CRW will have the option to improve and/ or expand the existing BMR water plant as deemed necessary to serve the needs of BMR and Castle Rock. The existing BMR Water Plant may be taken offline indefinitely once the connection between the BMR and Castle Rock water systems is completed and fully operational.

Commentary on Draft Terms Agreement

There is additional detail in the form of attachments that explains how the numbers in the basic draft terms were determined. For the sake of simplicity and because many of the numbers used are estimates, the supplemental attachments have not been included here.

The Town of Castle Rock currently owns three operational wells near the BMR Community Park that were formerly owned by Silver Peaks. Currently, these wells are used intermittently to pump water into East Plumb Creek. The water is then taken out downstream and used for various purposes, including processing for drinking water. Assuming that CRW assumes operation of the BMR water system, there is a plan to connect these wells via Glade Gulch to the BMRWTP. The BMRWTP would be converted to a Green Sand filtration process and the capacity increased to about 1,300,000 gal/day, versus the current capacity of approximately 500,000 gal/day. The current maximum usage by BMR is about 350,000 gal/day. This would give BMR residents access to five wells for water supply, instead of just two.

The planned Green Sand filtration system would also have equipment to concentrate wastewater into a sludge, which would then be trucked offsite for processing at a sewage plant or disposal at a special landfill. Hence, there would no longer be any effluent discharge into Glade Gulch. This type of a filtration system is also more effective for removing iron and

manganese from well water. In addition, since no salt is needed for regenerating the filter material, the salt content of the treated water is drastically reduced.

The planned connection between the BMR water system and the Castle Rock water system would have the ability to operate in both directions. In other words, it could be used to bring water from the Castle Rock water system to BMR or, if reversed, send water from the BMRWTP to the Castle Rock water distribution system.

The planned agreement is a win-win deal for both parties. CRW gets to efficiently use the wells that they currently own on BMR for water supply to BMR and potentially in surrounding communities. BMR gets:

- a. out of the regulation compliance business with the State CDPHE
- b. improved water quality (i.e. reduced iron, manganese, salt content and particulates)
- c. a long-term sustainable water supply
- d. a water system operated and maintained by career water professionals
- e. comparable water cost to current BMR costs