

February 3, 2016

M E M O R A N D U M

TO: Colorado Ground Water Commission

FROM: Jennifer Mele and Keith Vander Horst

RE: Cherokee efforts to relax TDS standards for WWTP effluent in Upper Black Squirrel Creek Designated Ground Water Basin

Introduction

At the November 20, 2015 meeting of the Colorado Ground Water Commission (GWC) Commissioner Dan Farmer requested that the GWC participate in proceedings initiated by Cherokee Metropolitan District (Cherokee) in front of the Water Quality Control Commission (WQCC) to relax the standards for total dissolved solids (TDS) that can be discharged through waste water treatment plan (WWTP) effluent into the Upper Black Squirrel Creek Designated Ground Water Basin under a discharge permit issued by the WQCC. The GWC directed Staff to attend the stakeholder meeting set for January 12, 2016. Keith Vander Horst and Jen Mele attended the hearing in Monument. The purpose of this memorandum is to describe the issue, set forth the timeline of the WQCC process and provide Staff's recommendation.

Description of the Issue

Cherokee is seeking a change to the WQCC's Regulation 42 to allow for a site specific exception to the TDS standard for discharge permits within the Upper Black Squirrel Creek Designated Ground Water Basin. WQCC Regulation 41, adopted in 1987, sets the standard for ground water at 400 mg/l. Such standard is a secondary standard, related to nuisance effects and not health effects, and was intended to be an interim standard. The intent was that specific standards for each aquifer would be adopted, however due to a shortage in resources this has never happened. Some site specific exceptions are contained in Regulation 42, and Cherokee seeks to revise Regulation 42 to provide for a relaxed TDS standard within the UBS Basin which would allow for greater than 400 mg/l of TDS in the water discharged from Cherokee's WWTP. Cherokee has not yet stated its specific proposal for TDS limits.

The Federal Clean Water Act standard for surface water is 500 mg/l, however with Regulation 41 the WQCC decided to have stricter standard. Cherokee's consultant stated that once TDS is within the range of 500 mg/l – 600 mg/l, water may begin to taste and smell different.

Why Cherokee is seeking the relaxed standard

Cherokee has spent \$30 million on its WWTP which began operation in July of 2010. The rapid infiltration basins (RIBs) were inadequate and had to be reconstructed, and the plant was designed and constructed without regard for TDS. Cherokee sued the design and construction firms and settled with both at the insurance limits. Now that work on the RIBs is complete, Cherokee is focusing on the TDS standard.

In 2013 Cherokee signed a compliance order with the WQCC in which, according to WQCC Staff, Cherokee agreed they would comply with the 400 mg/l requirement. It was not discussed at the stakeholder meeting why they signed the compliance order if they intended to try to change the standard.

Water in the UBS Basin in its natural state typically has a TDS level of 400 mg/l. Cherokee's water users input around 200-350 mg/l, which when added to the TDS of the raw water entering their system means that Cherokee is currently discharging about 600 mg/l or higher through its WWTP into the aquifer via the RIBs. Regardless of whether the default standard of 400 mg/l is imposed on Cherokee's discharge, Cherokee will have to address TDS levels since if not dealt with properly, TDS levels will continue to rise due to user input. Cherokee indicated it will build a reverse osmosis (R/O) system to deal with TDS levels. An R/O system is not without its drawbacks, as a 20% water loss is typically involved due to the cleansing process. Cherokee reported that if the WWTP R/O system is built to a standard of 400 mg/l, the total cost will be over \$30 million, and will cost users about \$28/month. If the R/O system is built to a standard of 500 mg/l, the total cost would be less than \$20 million, reducing the cost passed on to users to \$19/month.

At the suggestion of WQCC Staff, Cherokee is looking into what level of TDS is protective of agricultural use.

The UBS Ground Water Management District and the Booker Family Trust appear to be the main parties opposing Cherokee's effort. Woodman Hills, Meridian, and Comanche Crossing Metropolitan Districts, as well as Easter Seals Colorado have indicated in letters to the WQCC that they support the relaxed standard.

Reporters from the Ranchland News and the Gazette were present at the stakeholder meeting. The Ranchland News reporter took photos, was involved in the discussion and seemed interested in the GWC's position on the matter.

Rough Timeline of Proceedings (many dates are not yet set)

February 11, 2016: Second Stakeholder meeting

March 10, 2016: Third Stakeholder meeting

Mid-March: Cherokee must submit a draft mark up of existing Regulation 42 and proposed basis of statement and purpose.

April 11, 2016: WQCC will review Cherokee's proposal at regularly scheduled meeting and decide if it will move forward with rulemaking in August. If there are concerns with ripeness of the proposed change the matter may be delayed until a subsequent meeting.

Late April: party status requests due

May: Cherokee Prehearing Statement due

June: Responsive Prehearing Statements due

July: Prehearing Conf. Discuss logistics of hearing and order of oral testimony

August 8, 2016: Hearing date. WQCC relies heavily on written prehearing statements. Hearing is opportunity for WQCC to ask questions of the parties and will only last about two hours. No new evidence can be presented. There will be opportunity for limited public comment for those who are not parties.

Staff Recommendation

Staff recommends that the GWC have no involvement in the process before the WQCC. Historically the GWC has not gotten involved in water quality issues. GWC Staff does not have the expertise to opine whether or not TDS maximum for Cherokee's WWTP effluent should remain at 400 mg/l or if it is acceptable to allow 500 mg/l or something more than that. The GWC may want to request Staff attend but not participate the August 2016 hearing however in order to understand the WQCC's position on the matter.