STATE OF COLORADO

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

M-2002-004 GCC Pueblo - Notification of GW Discharge Exceedance 2Q 2025

1 message

Meghan Way <meghanway@gcc.com> Mon, Jul 7, 2025 at 1:11 PM
To: Jocelyn Carter - DNR <jocelyn.carter@state.co.us>
Cc: Landon Beck <lbeck@slrconsulting.com>, Amy Rodrigues <aveek@gcc.com>

Hi Jocelyn,

Pursuant to Rule 3.1.7(9), this email provides the notification of concentrations above Colorado state ag standards in groundwater samples collected as part of the recent 2nd Quarter 2025 groundwater sampling event at GCC's Pueblo Facility. On July 3rd, GCC received the final laboratory reports from ACZ Laboratories indicating concentrations above the ag standards for the samples collected on June 10th from MW-13 and MW-14 and on June 11th MW-21, MW-22, MW-23, and MW-2B (duplicate of MW-22). GCC received the final laboratory reports from ACZ Laboratories indicating concentrations above the ag standards for the samples collected on June10th from MW-13 and MW-14 and no exceedance for samples from MW-21, MW22, MW-23 and MW-2B. The report provided the following results with exceedances noted in bold red text:

Parameter	*State Ag Standard (µg/L)*	Results MW-13 (µg/L)	Results MW-14 (µg/L)	Results MW-21 (µg/L)	Results MW-22 (µg/L)	Results MW-23 (µg/L)	Results MW-2B (Sample duplicate of MW-23) (µg/L)
Boron	*750*	**1080**	**1280**	604	748	384	374
Fluoride	*2000*	**5850**	**2910**	1410	1240	62	61

1. As noted in Water Quality Control Commission, Regulation 41 - The Basic Standards for Groundwater, the boron standard of 750 µg/L is set to protect the following plants in ascending order of sensitivity: Pecan, Black Walnut, Persian (English) Walnut, Jerusalem Artichoke, Navy Bean, American Elm, Plum, Pear, Apple, Grape (Sultanina and Malaga), Kadota Fig, Persimmon, Cherry, Peach, Apricot, Thornless Blackberry, Orange, Avocado, Grapefruit, Lemon. As there are no known growing operations with crop use of groundwater received from this facility, the applicable standard for boron is 5000 µg/l.

2. Fluoride is a naturally occurring constituent, usually present in ionic form in groundwater, and the solubility of fluoride-bearing minerals can be increased in waters that are generally low in calcium (Nordstrom and Smedley, 2022; Hem, 2005). It is likely that groundwater in the wells with elevated fluoride concentrations is saturated with respect to calcite (CaCO3) and dissolved concentrations of calcium remain low as calcite precipitates, increasing the solubility of the fluoride ion in solution (Nordstrom and Smedley, 2022).

1. Nordstrom, D.K., and P.L. Smedley, 2022. Fluoride in Groundwater. The Groundwater Project. Guelph, Ontario, Canada. Available at: https://books.gw-project.org/fluoride-in-groundwater/
2. Hem, J.D., 2005. Study and Interpretation of the Chemical Characteristics of Natural Waters. U.S. Geological Survey Water-Supply Paper 1473. Available at: https://pubs.er.usgs.gov/publication/wsp1473

Thank you,

Meghan Way

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