

December 1, 2020

**El Paso County
Planning & Community Development**

2880 International Circle, Suite 110
Colorado Springs, CO 80910-3127

RE: Saddlehorn Ranch Metropolitan District (PWSID CO0101755)

To whom it may concern,

This letter summarizes water quality sampling and testing results for two wells that will serve the Saddlehorn Ranch Metropolitan District (SRMD) - An Arapahoe Aquifer Well and a Laramie-Fox Hills Aquifer Well. These wells were both drilled, cased, screened, and test-pumped in early 2008. The Arapahoe well has a total depth of 1,390 feet and the Laramie-Fox Hills well has a total depth of 2,035 feet. Water quality samples were collected in early 2019, and a summary of those results is enclosed with this letter.

All planned source water collected and treated by SRMD will be from these two wells. Seasonal variability is not expected. Initial water quality testing results were consistent with results from Arapahoe and Laramie-Fox Hills aquifer wells in nearby communities and do not indicate parameters of concern. A few parameters of interest include:

- **pH:** measured at 9.05 mg/L in the Arapahoe well and 8.87 mg/L in the LFH well. These values are above the secondary limit (SMCL), which is a range from 6.5-8.5 mg/L. A value closer to 8.0-8.5 was expected based on other wells in the area. If subsequent testing sustains a pH above 8.5, then consideration for dosing liquid acid will be given. A liquid acid feed is not proposed at this time.
- **Iron:** measured at an average of 0.552 mg/L and 0.734 mg/L in the Arapahoe and Laramie-Fox Hills wells, respectively, above the SMCL of 0.3 mg/L.
- **Manganese:** measured at an average of 0.026 mg/L and 0.042 mg/L in the Arapahoe and Laramie-Fox Hills wells, respectively. Manganese content in the Arapahoe is below the SMCL of 0.035 mg/L, while that of Laramie-Fox Hills is above the SMCL.
- **Total Dissolved Solids (TDS):** TDS in the Laramie-Fox Hills aquifer measured slightly above the SMCL (500 mg/L) at 547 mg/L. The Arapahoe aquifer well measured at 186 mg/L.
- **Toluene:** results were significantly below the maximum contaminant level and near the lab's minimum reporting level (MRL).

Based on the water quality data presented, Colorado Department of Public Health and Environment Water Quality Control Division (CDPHE WQCD) Design Criteria would likely require only chemical disinfection for treatment. pH may also need to be adjusted depending on further sampling results. However, in effort to provide enhanced water quality to its customers, SRMD has elected to employ treatment to remove iron and manganese to levels consistently below their respective SMCL.



Well sites are/will be protected by concrete sanitary seals with pitless adaptors. Spills occurring from any tenant will be required to be immediately reported to SRMD for proper remediation.

These water quality results have been included in a Basis of Design Report submittal to the CDPHE WQCD which is currently under review. Any questions or requests for information can be directed to the applicant as well as JDS-Hydro Consultants, Inc.

Sincerely,
JDS-Hydro Consultants, Inc.

A handwritten signature in blue ink, appearing to read "R. Mangino". The signature is fluid and cursive, written over a white background.

Ryan Mangino, P.E.
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Enclosures