MOUNTAIN REGIONAL WATER

To: Mountain Regional Water Administrative Control Board Members

From: Jess DiCaprio, Staff Engineer
Date: January 16, 2025

Re: PFAS Update on three wells within the District

The following memorandum discusses the results of sampling for per- and polyfluoroalkyl substances (PFAS) in three wells owned by the District. **No action is needed from Board members, this memorandum is for informational purposes only.** PFAS in the environment continues to be a high-profile issue so the District wants to keep Board members updated.

From December 2023 through December 2024, District staff collected samples on a quarterly basis from eight wells for lab analysis. Three of the sources consistently contained detectable amounts of PFAS. The highest levels were found in Tank Well 16 which was shut off in December 2023 and has remained offline, but it was still sampled throughout the year. Samples from the other two wells (Silver Creek Well 10 and Gorgoza Well 6) contained smaller amounts of PFAS, all of which meet standards set by the United States Environmental Protection Agency (US EPA).

Background

PFAS are manufactured chemicals that are incredibly versatile and have both industrial and consumer applications. There are thousands of chemicals belonging to the PFAS group, but two of the most widely used and studied are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Due to impacts on human health and the environment, the US EPA set standards for six PFAS compounds which are summarized in **Table 1**.

Table 1: Maximum Contaminant Level (MCL) for PFAS Compounds

Compound	MCL (enforceable)
PFOA PFOS	4.0 parts per trillion (ppt) or nanogram per liter (ng/L)
PFHxS PFNA HFPO-DA (also known as GenX Chemicals)	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1.0 (unitless) Hazard Index

PFAS Sampling within the District

Prior to 2023, investigative PFAS sampling was conducted throughout the District spurred by results from Park City Municipal sampling efforts. No PFAS were detected in District sources at this time. In 2023, the District started participating in the fifth Unregulated Contaminant Monitoring Rule (UCMR5), an EPA-driven monitoring effort that involves sample collection and analytics for 30 chemical contaminants (lithium and 29 PFAS) between 2023 and 2025.

In March and September of 2023, samples were collected throughout the District, either directly from sources or from tanks (as a composite) to achieve representative sampling. In both rounds, the sample from Silver Creek Tank had detectable levels of three PFAS compounds. Given the results, a new sampling effort took place from December 2023 to December 2024 which focused on the eight wells contributing to Silver Creek Tank, listed below:

- Atkinson Well 2
- Jailhouse Well 3
- Silver Creek Well 10
- Gorgoza Well 6
- Nuggett Well
- Tank Well 16
- Star Pointe Well 15B
- Bison Bluffs Well 15C

During this time, three sources consistently contained detectable amounts of PFAS and the highest levels were found in Tank Well 16. Results are shown in **Figure 1** where Silver Creek Well 10 results are in shades of blue, Gorgoza Well 6 results are in shades of green, and Tank Well 16 results are in shades of orange. *Please note that the y-axis on the graph was adjusted to compare results with the EPA MCL of 4 ppt for PFOA and PFOS.*

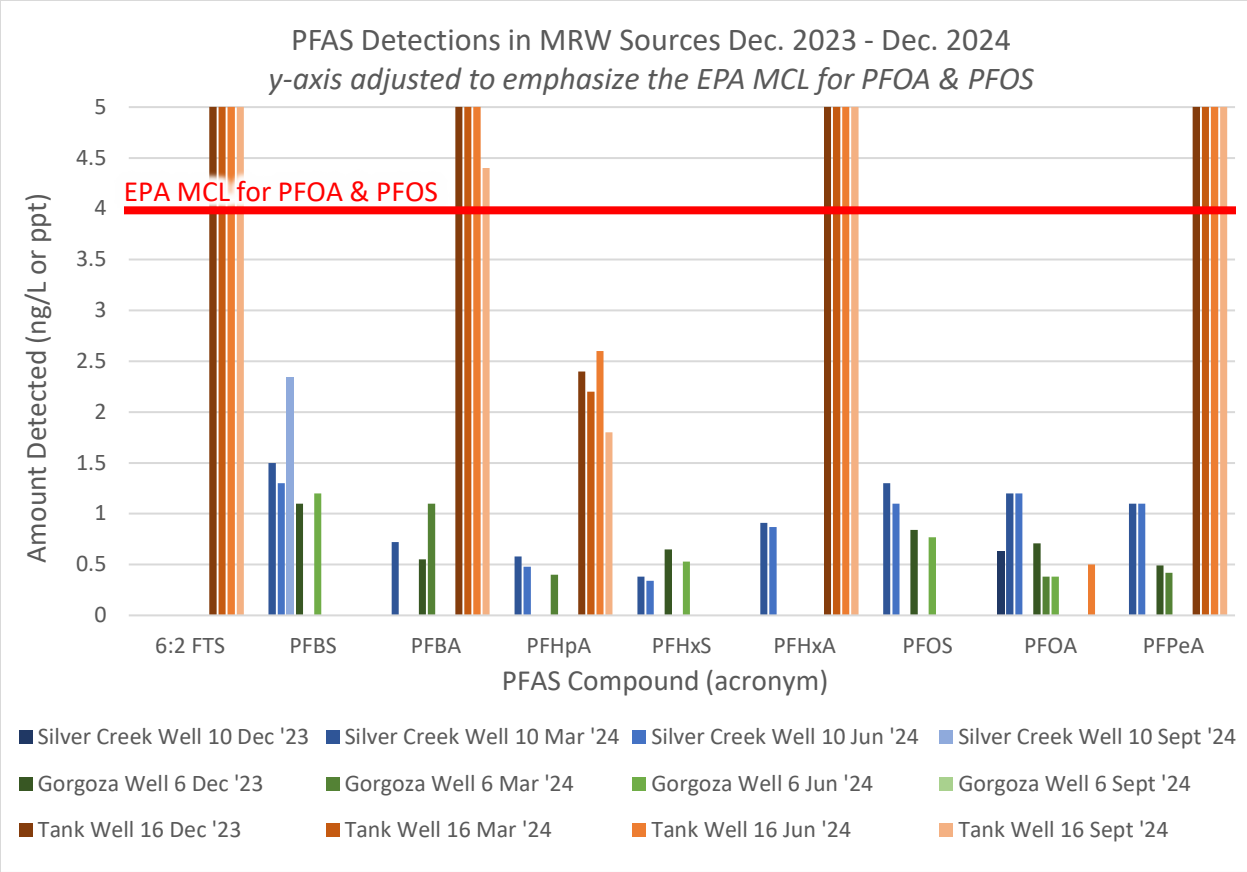

Figure 1: Quarterly PFAS Detections, December 2023 – December 2024

Tank Well 16 (shades of orange)

None of the PFAS detected at Tank Well 16 are regulated compounds, but most of them exceeded 5 ppt (the maximum value on the y-axis in the above graph). Of the detections greater than 5 ppt, values ranged from 11 ppt to 33 ppt. Type and quantity of PFAS at Tank Well 16 remained relatively consistent throughout the four rounds of sampling. Five compounds were detected during every round (6:2 FTS, PFBA, PFHpA, PFHxA, PFPeA) and each compound was detected at similar levels (PFBA: 4–7 ppt, PFHpA: 1.8–2.4 ppt, PFHxA: 12–17 ppt, PFPeA 24–33 ppt). An exception was 6:2 FTS which ranged from 11 ppt to 29 ppt.

Silver Creek Well 10 (shades of blue)

Detections at Silver Creek Well 10 were all below 2.5 ppt, but they were more sporadic in terms of type. None of the detected compounds appeared in all four rounds, most appeared in only March and June. Of the eight compounds detected, four are regulated compounds: PFOA, PFOS, PFHxS, and PFBS.

Gorgoza Well 6 (shades of green)

Gorgoza Well 6 detections were all below 1.5 ppt, but they were not consistently detected throughout the year. Some compounds appeared in back-to-back rounds whereas others appeared every other round. Of the seven compounds detected, four are regulated compounds: PFOA, PFOS, PFHxS, and PFBS.

Conclusions and Future Actions

Over the past year, PFAS has been consistently detected in three wells (Tank Well 16, Gorgoza Well 6, and Silver Creek Well 10) within the District. Gorgoza Well 6 contained three compounds included in the EPA's proposed regulation of PFAS and Silver Creek Well 10 contained one of the listed compounds. The levels of each compound in both wells were below MCLs. Tank Well 16 had much higher levels of PFAS (none of which are included in the regulations) and was shut off due to concern in December 2023. It will remain offline for the foreseeable future. The remaining wells had much smaller pops of PFAS, all below 2.50 ppt.

Sampling will continue in 2025, expanding to the remaining sources in the District. This is in part due to new EPA requirements and also helps to better understand if any additional sources have been impacted by PFAS since the last comprehensive sampling period.