

2023 Rawles-Franklin Groundwater Assessment Summary

Background

The Marion County Public Health Department conducts well surveys to inform private well owners of groundwater quality and potential health risks. This was done by sending letters and conducting door-to-door outreach with residents when possible.

The Rawles-Franklin region consisted of Rawles Ave., Fenton Ave., Beechwood Ave., and Franklin Ave. The community is located just south of Interstate 40 within the Raymond Park neighborhood. This area was chosen following a high arsenic reading during a routine sample. Samples were collected throughout the summer of 2023.

Survey Results

A total of 80 properties were surveyed. 10 addresses (12.5%) showed interest, but samples were only collected at 8 residences (10%) due to city water lines. Samples were analyzed at the MCPHD Laboratory and results were compared to EPA Drinking Water Standards.

Sampling Results

Bacteria

E. Coli bacteria were found in two samples, while *Coliform* bacteria were present in three samples. Chlorination instructions were sent with laboratory reports to residents. Follow-up samples were taken after treatment occurred.

VOCs

One instance of volatile organic compounds, total trihalomethanes, was shown, but this value fell below EPA's Maximum Contaminant Levels (MCLs). Total trihalomethanes are disinfection byproducts which can be detected if a well was recently chlorinated.

Anions

Well samples were conducted for the following anions: Chloride, Fluoride, Nitrates, Nitrites, Phosphates, and Sulfates. All anions below the EPA's Maximum Contaminant Levels (MCLs).

Metals

Well samples were analyzed for Arsenic, Barium, Boron, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Thallium, and Zinc. One instance of arsenic above EPA MCL's was shown, at 16.7 ppb. Fact sheets on arsenic in drinking water and treatment methods were distributed to the affected resident. Elevated iron was also observed at three residences.

Conclusions

The primary groundwater contaminants found during this survey were *Coliform* bacteria, followed by *E. Coli* bacteria. This corresponded to 30% and 20% of samples, respectively. The rate of *Coliform* bacteria is consistent with rates from other surveys. Through conversations with residents, the *E. Coli* results shown were connected to structural issues, which have since been corrected.

One elevated result for arsenic was shown, corresponding to 10% of samples collected. The high arsenic level is attributed to naturally occurring arsenic in the geology of the county and the watershed. Three elevated results for iron, for 30% of samples taken, were also seen. This is common in regions with hard water. Iron is considered by EPA to be a secondary health contaminant with technical, cosmetic, or aesthetic concerns.

Finally, both private wells and public water lines were shown in this neighborhood. This created a notable limitation for the study that prevented addresses from being sampled unless an exterior well pump was present at addresses with city water.