2024 Orange - Minnesota St. Groundwater Assessment Summary

Background

The Marion County Public Health Department conducts groundwater/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 Orange-Minnesota St. neighborhood is in the southwest side of Marion County. This region includes Orange St. between S Hawthorne Lane and S Ritter Ave., extending south to Terrace Ave. Due to city water lines in the area, the survey was further expanded to Minnesota St., between S. Hawthorne Lane and S. Ritter Ave.

This area was selected following detection of VOCs in Bean Creek at a routine sample site. These results are monitored separately and can be seen on Pleasant Run's Watershed data for 2024. Historic presence of VOCs at a residence to the north was also a factor in this decision.

Survey Results

A total of 121 properties were surveyed. 7 responses were collected for a response rate of 5.79%. Samples taken were analyzed at the MCPHD Laboratory and the results were compared to EPA Drinking Water Standards.

Sampling Results

Bacteria

E. Coli bacteria were not found in any samples; however *Coliform* bacteria were present in four samples. *Coliform* bacteria is an indicator bacteria and does not cause illness, but may indicate organisms of concern in the well. Laboratory results and chlorination instructions were sent to affected residents. Follow-up samples were then collected after treatment occurred.

VOCs

No volatile organic compounds, total trihalomethanes, etc. were detected in the samples collected.

Anions

Well samples were conducted for the following: Chloride, Fluoride, Nitrates, Nitrites, Phosphates, and Sulfates. No samples were seen above EPA 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 MCLs was shown, at 14.6 ppb. Fact sheets on arsenic and treatment methods were distributed to the affected resident.

Conclusions

The primary groundwater contaminant was *Coliform* bacteria, at 57.14% of samples collected. The rate of *Coliform* bacteria is similar to the rates from other surveys. One sample contained arsenic above the EPA MCLs, for 14.29% of samples collected. The high arsenic level is attributed to naturally occurring arsenic in the geology of the county and the watershed.

The initial region sampled can be viewed below in **Figure 1**, while **Figure 2** shows the addresses that were added due to the discovery of city lines in the initial area. A well sample can be requested by contacting the Marion County Public Health Department at 317-221-2266.

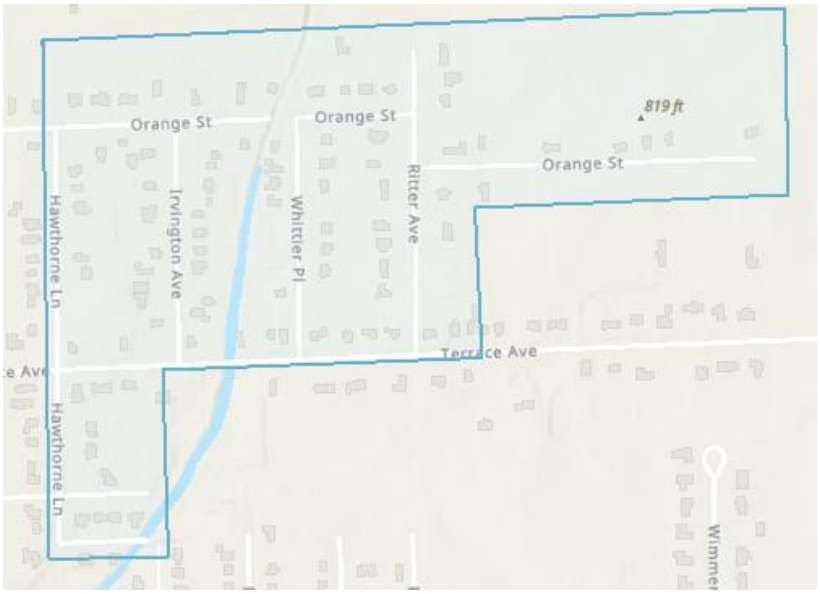

Figure 1: Survey area on Orange St., between Hawthorne Ln. and Ritter Ave.

Figure 2: Survey area on Minnesota St., between Hawthorne Ln. and Ritter Ave.