South Rybolt Area Survey

Background

In 2014 a ground water sample was taken at 524 Rybolt in which Tetrachloroethene was found at concentrations above the MCL. The Indiana Department of Environmental Management (IDEM) was contacted and they took confirmatory samples of the property. IDEM worked with the homeowner and an adjacent industrial operations facility and was able to connect the home to the public water supply at no cost to the homeowner. A neighborhood study was then created in order to determine if the contamination was throughout the area. Free well water sampling was offered to the neighborhood along with information regarding the contamination.

The area surveyed was located west of Holt Road and south of Washington Street. The area has water mains sporadically located in various locations. There were approximately 128 homes that were identified as potentially having private wells located on Collier, Foltz, Rybolt, Roena, Ray, and McCarty. The attached maps show the area on city water and the locations of the wells that were sampled.

Sampling Results

VOCs

Volatile organic compounds were found at five properties which were below the MCL. Three properties had Tetrachloroethene at concentrations of 1.9ppb, 0.69ppb, and 1.6ppb. The MCL for this compound is 5.0pbb. One property had 1,1,1-Trichloroethane with a concentration of 0.51ppb with an MCL of 200pbb. Finally, one property had Chloroform with a concentration of 5.3ppb. This compound is currently unregulated and there is no MCL from EPA. Follow up samples will be requested for these properties.

Metals

Samples were analyzed for the following metals: Arsenic, Barium, Cadmium, Chromium, Mercury, and Lead. All metals were below the Maximum Contaminant Levels (MCLs).

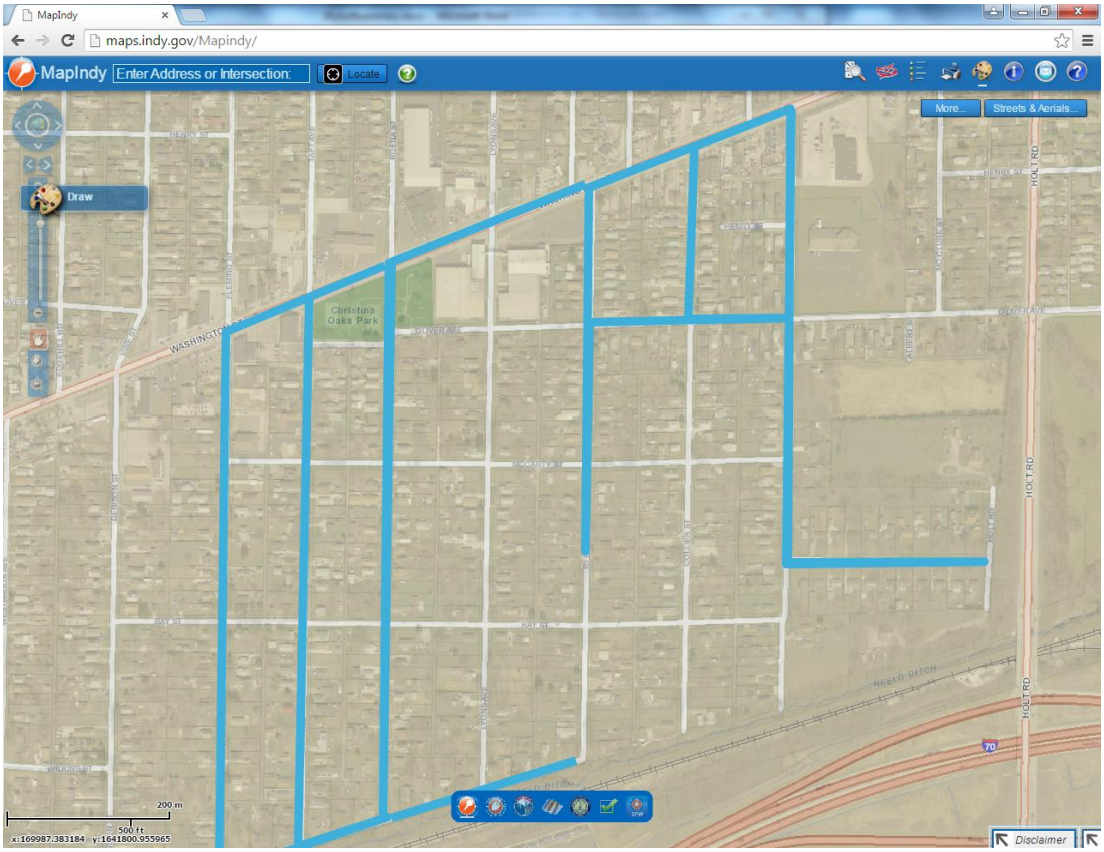
Anions

Well samples were tested for the following anions: Chloride, Fluoride, Nitrates, Nitrites, Phosphates, and Sulfates. All anions were below the MCLs.

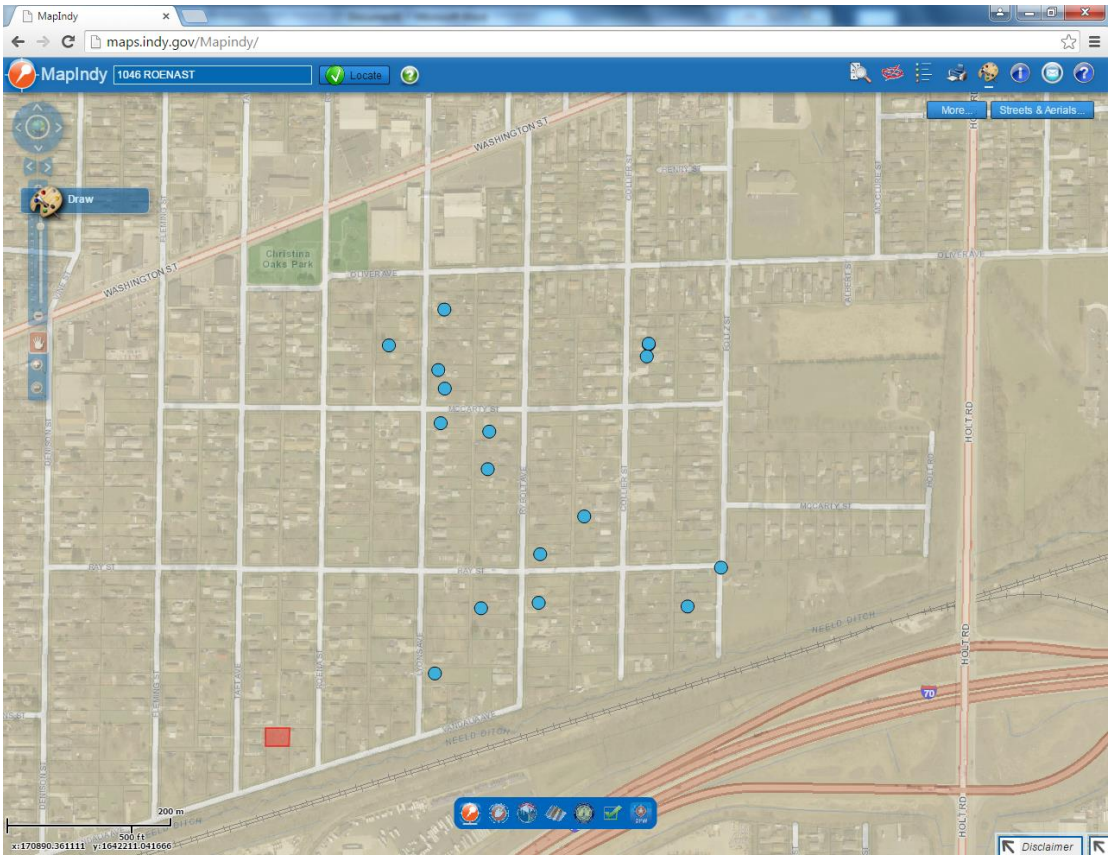
Bacteria

There were sixteen wells that were sampled during the study. Fourteen of the wells had bacteriological contamination, one of which contained *E.coli.* The property with *E.coli* contamination was chlorinated and the follow up sample was satisfactory. Chlorination instructions were sent out with the lab reports and follow-up inspections were scheduled.

Map 1. Area on City Water



Map 2. Locations of wells sampled



Conclusions

Based on the sample results the main concern for this area would be coliform bacteria contamination. There are many factors that may have been a contributing to the high number of unsatisfactory results. Based on my observations the homes were older and may have never been chlorinated. In addition, after speaking to homeowners, most were unaware of well ownership and lacked the knowledge of proper routine maintenance.