

Carriage Estates Well Survey
Summer/Fall 2010
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A well survey was performed during the summer and fall of 2010 as a follow up to high arsenic concentrations found on Lindenwood Drive on the south side of Marion County in 2009. The main purpose of the survey was to gauge the arsenic contamination in the Carriage Estates Neighborhood. There were a total of fifty-six (56) properties in the study area, and each was initially sent a letter explaining the purpose of the sampling project. Each resident was encouraged to call the Marion County Health Department to set up a sample. Residents who did not initially call and set up an appointment were hand delivered a door hangar and either had their wells sampled on the spot or were encouraged to call the Marion County Health Department to gain information and to schedule an appointment to have their well sampled. Out of the possible fifty-six (56) properties, twenty-nine (29) partook in the survey resulting in 51.7 % participation. Both bacteriological and chemical parameters were tested.

Out of twenty- nine (29) properties sampled, twenty-two (22) or almost 76% have shown arsenic concentrations that are above the MCL. Due to the propensity to cause skin and circulatory issues as well as cancer, EPA has set a limit for arsenic in public water drinking supplies at 10 ug/l. The data shows that there is a range of arsenic concentration in the wells from 1.1 ug/l to 79.6 ug/l. The median concentration is 28.3 ug/l. Bacterial contamination was also an issue in this neighborhood with seventeen (17) out of the twenty-nine (29) wells showing a presence of either total coliform or E. coli bacteria. The depths of the wells were either given by the owners at the time of the inspection or retrieved using data from the DNR well log database. The static water level in the area was determined to be between 30 and 46 feet. No real correlations can be made regarding depth of the well or side of the street and arsenic concentrations. Arsenic is naturally occurring in the bedrock in Marion County and erodes into the ground water from the New Albany shale in the bedrock.

Cynthia Dr. Well Survey 2010

