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Sunshine Gardens Well Survey  
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A well survey was performed by the Marion County Public Health Department (MCPHD) in the Sunshine Gardens neighborhood during fall of 2013. Sunshine Gardens is located in southwestern Marion County. Its boundaries include I-465 to the north, Epler Avenue to the south, Warman Avenue to the east, and Sandhurst Drive to the west (Figure 1). This survey focused on properties located near the gravel pits in this geographic area and how these gravel pits may be affecting the quality of the groundwater. Additionally, there is concern that the fly ash lagoons located at the Indianapolis Power and Light Plant (IPL) at 3700 S. Harding Street pose a potential threat to the groundwater in this area. The main objective of this survey was to assess the chemical and bacterial contamination of the well water in the households in this area. The assessments were then utilized to inform and educate the residents of the risks associated with these contaminants and how to mitigate the risks.

A total of 193 properties were identified within the study area, and each resident was initially sent a letter explaining the objective of the sampling project. Each resident was encouraged to call the MCPHD to schedule a sample. Out of the possible 193 properties, 13

partook in the survey resulting in a 6% participation rate. The well water was sampled and analyzed for coliform and *E. coli* bacteria, anions, metals and volatile organic chemicals.

Out of the thirteen properties that were sampled, zero (0) contained results with arsenic concentrations that were above the Maximum Contamination Level (MCL). Due to the propensity to cause skin and circulatory issues as well as cancer, EPA has set the MCL for arsenic in public water drinking supplies at 10 ug/l. The only other chemical result of concern was found at 5420 Concord Street. This property was found to have a Nitrate concentration of 29.9 mg/l, which is approximately three (3) times the MCL (10 mg/l). Attempts at a follow up investigation and sampling have not been granted by these homeowners.

Bacterial contamination has been determined to be an issue in this area with five (5) out of the thirteen (13), or 38% of the wells showing a presence of total coliform bacteria. *E. coli* bacteria were not found in any of the samples. Residents were informed of the risks of ingesting bacterially contaminated water and chlorination was recommended as a treatment option for the bacterial contamination. Follow up sampling was completed for the properties where chlorination was completed. Out of the five (5) properties with unsatisfactory bacteria results; one (1) was chlorinated and resampled showing satisfactory results. At the time of this report, three (3) properties are still pursuing mitigation and treatment options and one (1) property has chosen to forego treatment.

In addition to the sampling survey, a comparison of historical well sample results for the Sunshine Gardens neighborhood was also completed. A review of the historical sample results revealed that 44 (23%) wells have been sampled previously within the Sunshine

Gardens neighborhood. A review of the historical results shows that there are no major water quality concerns:

- 41 (93%) of the historical chemical results were <MCL for the chemical parameters tested.
- Of the 3 (7%) wells with chemical results above the MCL, all three samples were elevated for Nitrates and the samples were all taken in 1984: 3301 Byrkit Street (54.4 ppm), 5236 Concord Street (15.1 ppm) and 5610 Concord Street (20 ppm).
- Turbidity analysis was not completed for the historic groundwater samples. \*

Overall the current and historic chemical sample results do not indicate contamination of the aquifer serving Sunshine Gardens.

\*Turbidity analysis was completed for the 2013 samples; however all of the results were less than 1 NTU (Nephelometric Turbidity Units).

Figure 1

