

## **Pilot Tap Water Sampling Project to Study Urban Drinking Water Quality in Indianapolis for Community Exposure Assessment**

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**Background:** Most epidemiological health studies on drinking water rely on water utilities to supply exposure data. This data is collected at treatment sites (water stations) and is not representative of true exposure concentrations to humans because of several known and unknown factors. These include temporal-spatial changes, source water type characteristics, retention time in the distribution systems, byproducts formation, poor condition of pipes, and water contamination. By the time water reaches its destination i.e., residential areas, its quality can deteriorate. Also, the water utilities do not test for un-regulated water contaminants which can be more potent. Due to the urban location of White River, Indianapolis drinking water supply has a higher risk of contamination with emerging contaminants such as pesticides, personal care-products, and pharmaceuticals. Hence, a direct method of water sampling is needed for true exposure assessment.

**Study Plan:** We are designing a pilot tap water sampling project to study drinking water quality for pesticides and other urban contaminants in the Indianapolis Community Water System (IndyCWS). Seven residential sites are identified to capture sufficient parts of IndyCWS. The samples will be collected weekly, biweekly, and monthly during the April-June period. The samples will be analyzed in a certified laboratory using EPA recommended methods. The data from this study will be compared with utilities data, used to identify the presence of new contaminants, evaluate cumulative mixture exposure, and assess potential health risks. This work is currently in progress and the results from the study will be discussed in future meetings.