

By creating ease-of-use evaluation materials, we hope to find the most accessible water contaminant test kits on the market for common well-water contaminants like arsenic, manganese, E. coli and more. We believe finding accessible options for untrained individuals is important because millions of North Carolinians rely upon well water, yet private wells face no contaminant regulations, and testing is entirely up to well owners. Predominantly black communities in North Carolina are also more likely to rely on well water due to the under bounding of municipal water systems, making the effects of well-water contamination disproportionately impact black North Carolinians. A lack of testing is especially problematic as various areas of North Carolina, including the Inner and Outer Coastal Plains, have been found to be particularly prone to bacterial contamination. By identifying accessible testing materials, we hope to increase the accessibility of well-water testing, leading to more testing, more informed local communities, and more equitable health outcomes. Furthermore, our work ties into other projects of the ECUIPP lab focused on finding accurate contaminant tests for E. coli and manganese. Finding a balance between ease-of-use and accuracy will be critical for helping local communities, as tests should be able to be properly and confidently completed by untrained individuals in order to have a meaningful impact.