

EMILY DETEMPLE#, and DOUGLAS SWARTZ, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. **Water analysis of rivers and streams in the northern panhandle of West Virginia.**

The purpose of this study was to analyze specific water systems in the Northern Panhandle of West Virginia for analytes that are commonly found in coal mining, the steel industry, and hydraulic fracturing processes. Since these industries are prevalent in the region, many are concerned that the chemicals used in the processes are contaminating the water and harming the environment. Each site chosen was in close proximity to a preexisting or current industry that produces the analytes. Using spectroscopy, water samples were tested for specific concentrations of sulfates, manganese, and chlorides. Other general chemistry tests conducted on each sample were pH, conductivity, turbidity, and alkalinity. Compared to the baseline developed in the summer of 2014, this past summer (2015) results indicated that the Ohio River and streams did not undergo significant changes in the one year of study. This is the first study to show correlation between chemicals used in these manufacturing industries and water quality in the Ohio Valley.