

KAMDEN DULANEY and MARK FLOOD, Dept of Natural Sciences, Fairmont State University, Fairmont, WV, 26554, Examination and Assessment of the Environmental Health of a Non-Acid Mining Drainage Site

The overall aim of this undergraduate research was to quantify and identify trends within the bacterial environment at a *non-acid* mining drainage site in Lumberport, West Virginia, United States, due to iron and aluminum contamination. As the environmental impact of metal contaminants in acid mining drainage has been a concern for decades, this project is an excellent attempt to assess whether filtration methods are within local standards, to raise awareness of the potential bacterial hazards due to metal contaminants, and to discover the detrimental effects of mining drainage in general. Through community-level profiling and multi-parameter analysis, the percent functional diversity and percent variation of bacterial populations were quantified, as well as the pH and temperature throughout 8 collection points at different proximities from the direct mining drainage. It was determined that due to the mining drainage, the pH increases, the temperature increases, and the percent functional diversity increases.