

EMMA MALCOMB#, and KIMBERLY A. BJORGO-THORNE, Department of Biology & Environmental Science, West Virginia Wesleyan College, Buckhannon, WV, 26201. **Completed gas wells may not impact localized stream water quality.**

Natural gas is a valuable resource for West Virginia's economy and people. The requirements to build wells, however, may have impacts on West Virginia's land and water resources, especially with over 1,900 completed wells and over 1,700 permitted wells in WV. The purpose of my study was to examine the water quality collected in the area of gas wells. I also determined the streams closest to each completed well. I wanted to focus on streams because the rivers and streams hold wildlife such as native trout that are required to have a healthy habitat to live. Environmental degradation to the soil can cause erosion, which can quickly ruin the stream's insect and fish populations. I examined the relationship of dissolved oxygen, total dissolved solids, total suspended solids, pH, alkalinity and conductivity in streams that were within 1 km of a well site. For each well site, we looked for effects on water quality within 100m, 250 m, 500m, and 1 km. None of the water quality parameters was correlated with the distance from the well site. Our results indicate that completed well sites do not appear to have an impact on local water quality. However, there could be localized effects on water quality during the placement of the wells that was not captured during water quality data collection. Hydraulic fracturing chemicals can also be leaked into the water source during drilling, which may create hazardous health issues for not only the wildlife, but for the humans who consume the water.