Modeling the Distribution of Pollutants for a Mine (Poster)

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The institution of new mining facilities is a constant threat to environmental persistence and abundance. This issue can be minimalized with greater insight into how pollutants spread. Understanding the dispersal of pollutants allows cleanup efforts to be directed in an extremely efficient manner. To determine the spread of pollutants, the Belt Creek Drainage which has several mining facilities was chosen to be tested for specifically Arsenic, Selenium, and Lead. Using ICP (Inductively Coupled Plasma) the concentrations of each pollutant was determined at various points along the drainage system. The data retrieved was then synthesized in GIS (Geographic Information Systems) to create a gradient showing the concentration changes across distance within the river system. This type of analysis is extremely applicable to understanding how and where pollutants can be predicted to accumulate and can enhance the effectiveness of pollutant cleanup efforts.