

Groundwater Contamination at Coal Ash Disposal Sites in Kentucky

This project uses GIS-based methods to analyze and assess the effects of coal ash disposal and its relationship to the contamination of groundwater at 14 coal ash disposal sites throughout the state of Kentucky. Recently published data from groundwater monitoring wells located near ash disposal sites discovered that the majority showed signs of leaking contaminants and pollutants into groundwater. Several of these sites contained levels of hazardous compounds which exceeded the federal government's drinking water standards. This is a particularly dangerous and problematic environmental issue, as over a dozen waste sites are scattered throughout Kentucky and the ash they contain includes concentrated remains of toxic compounds associated with the combustion of coal, such as arsenic, lead and radium, which are consequently leached into groundwater. The objective of this project involved the creation of a detailed map which provides the reader with the ability to quantitatively assess the level of environmental pollution which occurred at each of these coal ash disposal sites located within Kentucky.