

Developing a Water Management Plan for Underground Coal Mines in the Monongahela River Basin

Paul Ziemkiewicz, Director, WVU Water Research Institute

Abstract

Flooding of the underground coal mines across the Monongahela River Basin was last reported in 2003. Major changes have occurred in mine configuration, ownership, coal production and markets over the intervening 15 years. Bankruptcies across the coal industry raise the prospect of either uncontrolled discharges to the Monongahela River or a massive infusion of public funds to maintain the existing and expensive AMD treatment facilities. That mine pool management infrastructure was installed for individual mines and companies to meet the requirement of their mining, safety and environmental operations. That system was rational in the context of active mining and cash flow. But it includes as many as 20 large pump and treat plants. In fact, less than half that number might be needed if a strategy were in place that rationalized water treatment needs across the basin. That would require current knowledge of mine flooding levels, interconnections and potential discharge points. We cannot afford a blowout of acid mine drainage like the one that affected the Animas River in 2015.

We propose a comprehensive, multi-agency program to develop a mine flooding and management plan for the basin that will reduce treatment costs, rationalize capital and operating investment and financing until the pollutants in the mines flush out and they can be allowed to drain freely. The assembled group has more expertise and commitment than any similar group of mine pool experts in the United States. The resulting strategy will allow a common basis for engaging participation and investment from the state agencies and industry. For example, active mining companies might implement part of the plan by building or modifying treatment plants that will complement the desired strategy rather than building facilities that will be mothballed or abandoned in ten years. States could use their bond forfeiture funds to implement components of the strategy rather than wasting money on treatment schemes that will be irrelevant in the future.