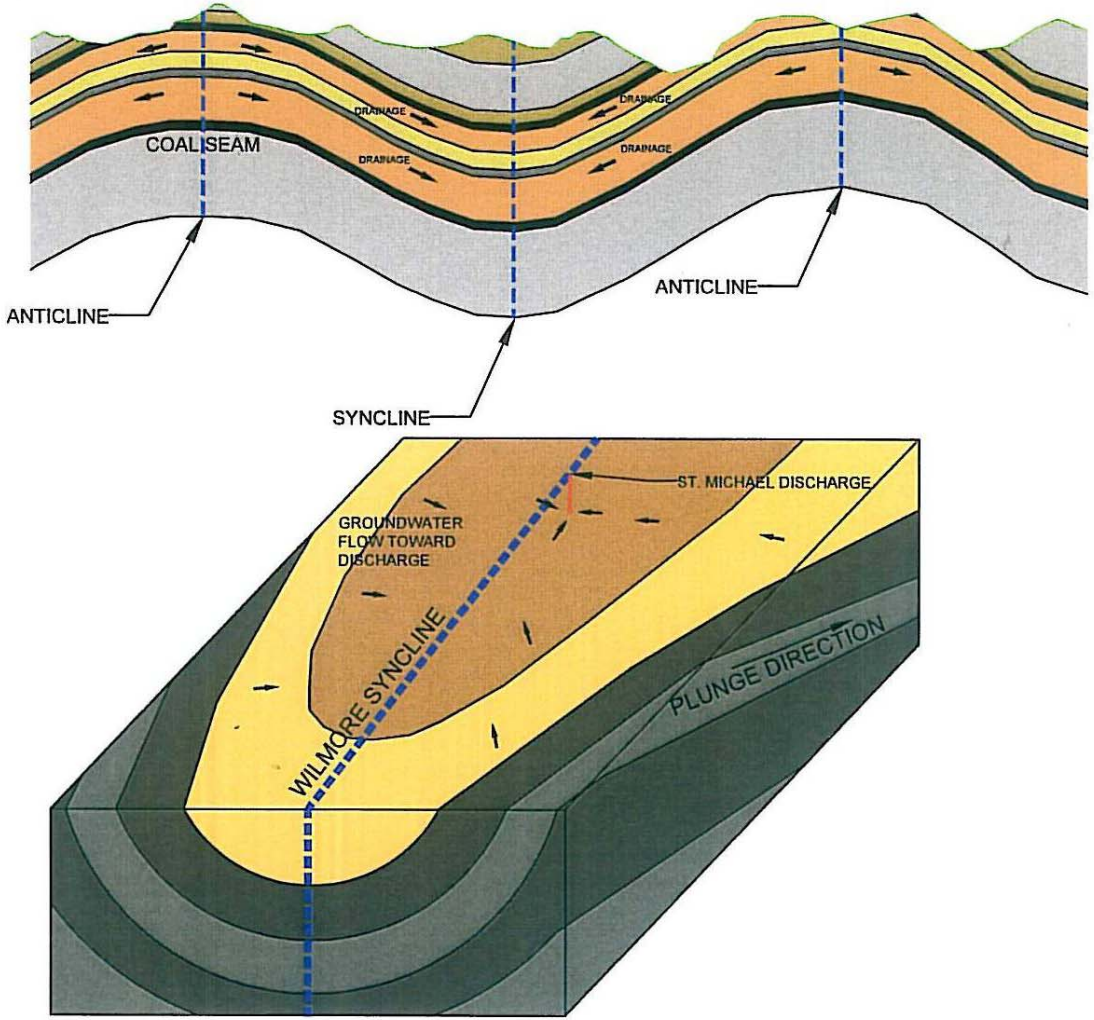
Topper Run

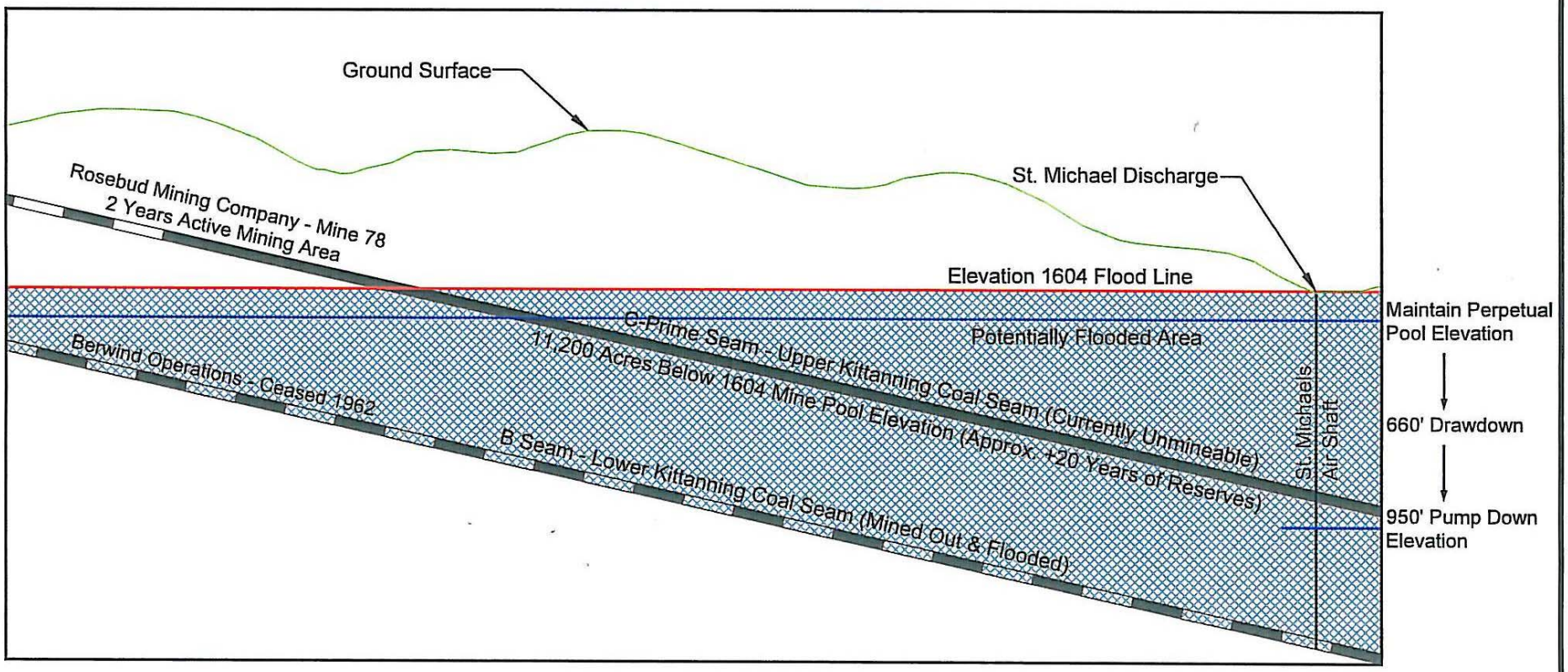
Residual discharges in addition to the main flow at areas along the
stream banks of Topper Run will be eliminated. Thus, improving the water quality significantly.

Figure: ANTICLINE AND SYNCLINE FOLDS

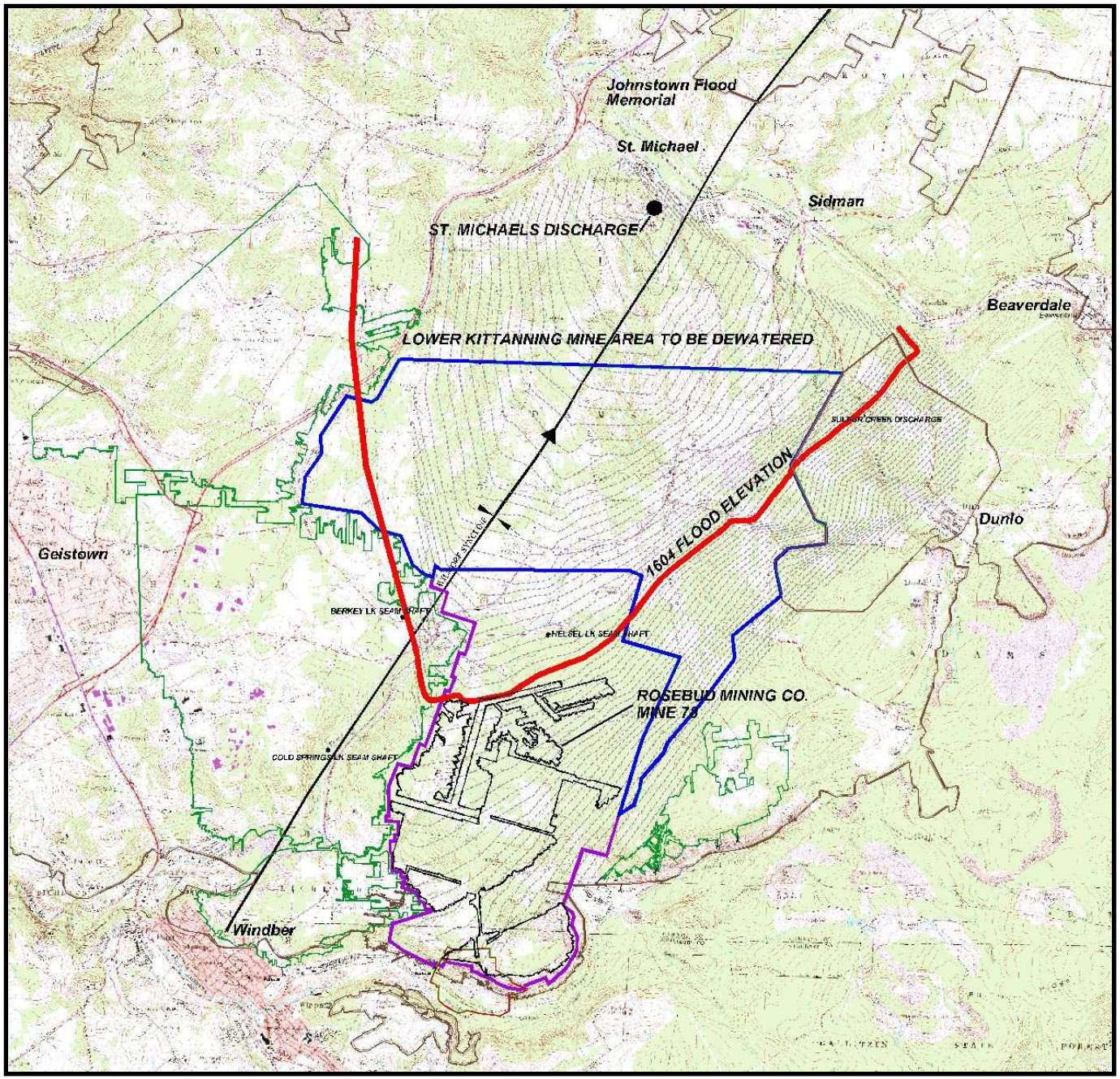


- Water enters the subsurface near stratigraphic high areas known as anticlines. Groundwater then travels down gradient toward the axis of stratigraphic lows known as synclines. The Wilmore Syncline plunges toward the St. Michael Shaft were the groundwater fills a bowl like structure to form the Berwind Mine Pool. St. Michael Shaft is the discharge point of the mine pool.

Figure - GENERALIZED PROFILE OF PROJECT AREA

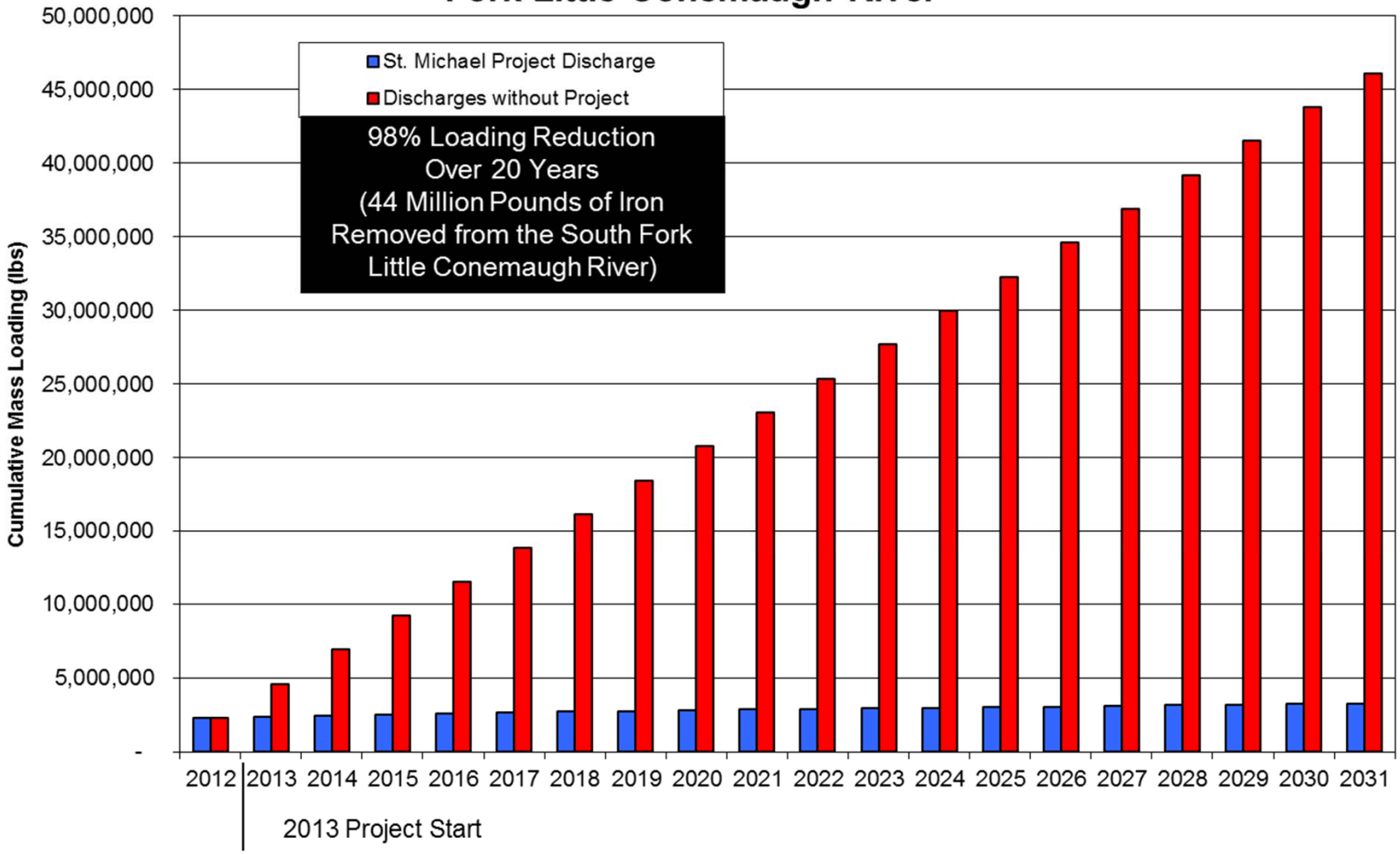


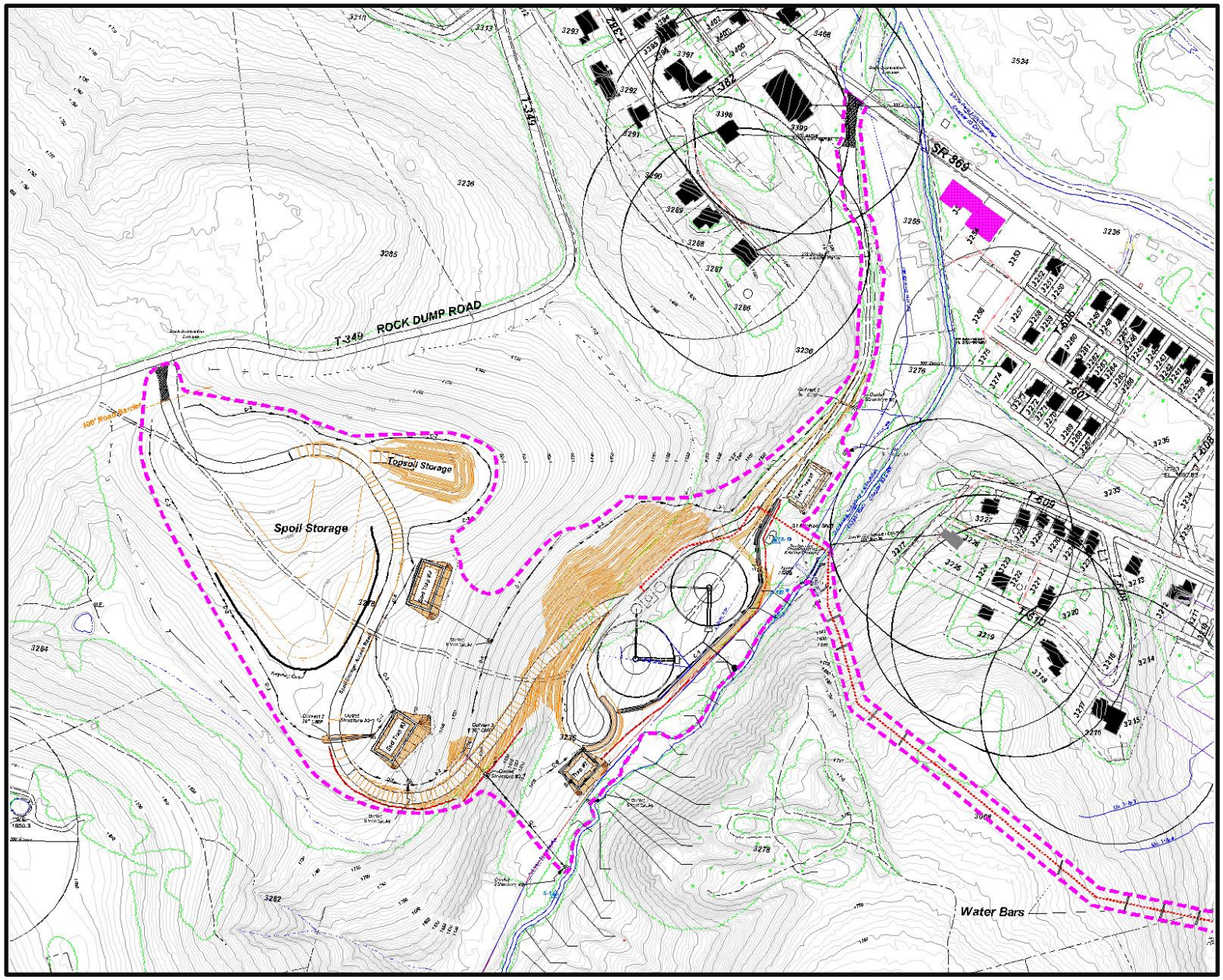
- The Upper Kittanning coal seam (seam being extracted by Mine 78) is approximately 100 feet above the Lower Kittanning coal seam (seam extracted in the early 20th century) and they are hydraulically connected. No mining can be conducted at Mine 78 below an elevation of 1604' msl until the area is dewatered by pumping the Berwind mine pool at the St. Michael Shaft. The pumping and treatment facilities will allow 20 plus years of additional mining and eliminate 30% of the AMD loading on the Little Conemaugh Watershed. Upon completion of the mining activities at Mine 78, the mine pool will be allowed to rise but be maintained below and current discharge elevation.



1604’ Flood Elevation is the current surface elevation at the St. Michael Shaft discharge

St. Michael Treatment Plant Project
20-Year Comparison of Cumulative Iron Mass Loadings to the South Fork Little Conemaugh River




T-349 ROCK DUMP ROAD
100' Road Barrier
Topsoil Storage
Spoil Storage
SR 369
T-382
T-606
T-607
T-608
T-609
T-610
Water Bars

Construction of the St. Michael AMD Treatment Plant