

Raccoon Creek Watershed - Flint Run East

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Project Status: Complete: 8/1/2006 ODNR Project Number: Jk-MI-34

Pre-construction



Flint Run East site discharge, Photo by Ben McCament

Flint Run East is located in Section 28 of Milton Township in Jackson County and lies within the 12-digit HUC unit #050901010403. The project site is 56 acres and is located in Little Raccoon Creek next to Lake Milton. Flint Run East project is Phase I of the Flint Run Reclamation Project, Lake Milton is Phase II. The project discharge was measured at the tributary draining the Flint Run East treatment site. The Flint Run sub watershed is affected by abandoned strip mine drainage and associated unreclaimed coal refuse piles mostly from the Broken Aro mine which is in the headwaters of Flint Run. This area was the coal washing and loading facility for the Broken Aro mine. The site is very complex hydrologically, the site consists of large buried slurry impoundments and surface mining pits around the rim of the main valley (Figure 2). Mead-Westvaco reclaimed the main slurry pond area with paper mill sludge in the mid 1980's. AMD seeps originate in many locations associated with the slurry impoundments and the surface mine pits. The design was completed by RD Zande for a cost of \$241,702. The treatment approach for this site was to dewater the strip pits and install passive acid mine drainage treatment systems. The major consideration during the design process was to reduce groundwater infiltration into the valley coal refuse pile. Construction was completed Aug. 1, 2006, by Berridge Reclamation for a cost of \$1,456,106. The funding sources for this project were ODNR-DMRM for the design and ODNR-DMRM, EPA-319 and OSM ACSI for construction. Pre-treatment acid and metal loadings at site FR0126 are shown in figure 1.

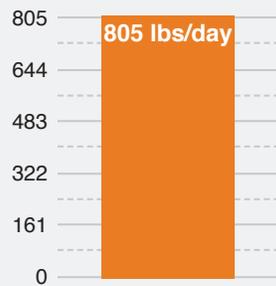
Post-construction



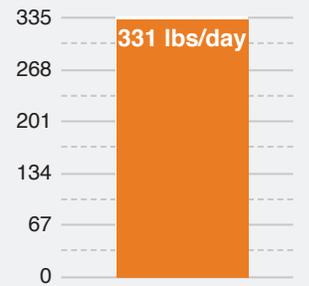
Air photo of Flint Run site near completion, Photo by Ben McCament

SITE: FR0126

Pre treatment acid load



Pre treatment metal load



Data derived using the Mean Annual Load Method (Stoertz, 2004).

Figure 1. Estimated acid and metal loadings prior to treatment

Treatment Installed	Quantity & Units
Earthwork	56 acres
Erosion Control	13,000 linear feet
Dewatering Existing Impoundments	12,827,200 gallons of water
Sediment Pond	87,400 square feet
Steel Slag Leach Bed	32,500 square feet
Fresh Water Storage Pond	84,800 square feet
Limestone Leach Bed	10,400 square feet
Wetland, passive	4,800 square feet
Successive Alkaline Producing Systems (SAPS)	32,500 square feet
Open Limestone Channel	13,650 linear feet

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Figure 2. Flint Run East and Lake Milton treatment system and site

