

Little Raccoon Creek Watershed - Daniels Reclamation Project

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Project Status: Completed 07/30/2018 ODNR Project Number: JK-MI-74

Pre-construction



Exposed 10 acre gob pile prior to reclamation
Photo by Amy Mackey

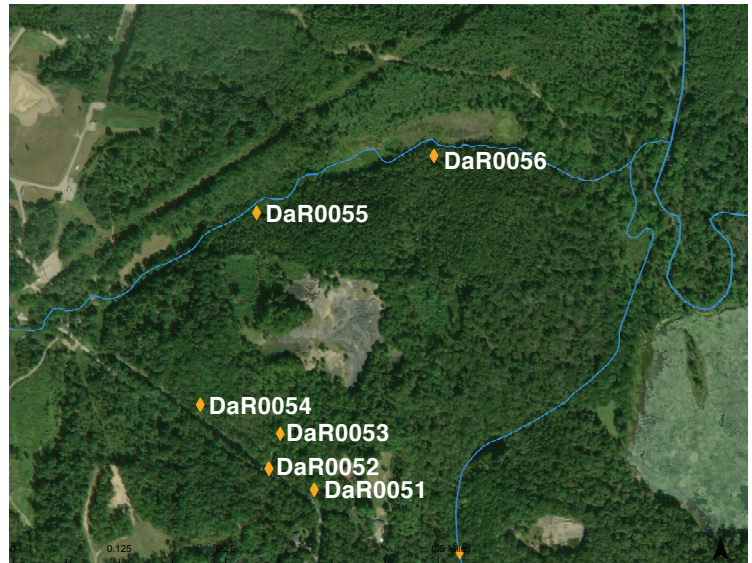
Post-construction



Surface reclamation complete with regrading, seeding, and limestone channel
Photo by Amy Mackey

Daniels Reclamation Project is located in Milton Township in Jackson County and lies within the 12 digit HUC unit #050901010403. The Daniels Reclamation Project is located within the Little Raccoon Creek Watershed which has been adversely affected by historic abandoned coal mines. This historic mining has resulted in the formation of Acid Mine Drainage (AMD) and sediment deposition to four unnamed tributaries to Little Raccoon Creek. Typical water quality in the pits and subsequent tributary drainage is pH between 3.1-3.5, acidity from 136-287 mg/l, iron from 2.0-18.4 mg/l, and aluminum from 16.0-31.3 mg/l. The goal of this project is to reclaim the 10 acre site composed of coal mine spoil and strip pits, eliminating these direct inputs of AMD and sediment into Little Raccoon Creek. In addition to the environmental benefits of this project, a Priority 2 Dangerous Spoil Pile will be eliminated. The treatment strategy consists of draining and filling two strip pits, grading 10 acres of spoil to obtain positive drainage, incorporating lime into the toxic spoil (20 tons/acre), covering the spoil with approximately 2' of suitable resoil material (limed at 5 tons/acre), and revegetation of the entire area. The adjacent borrow area was planted with tree seedlings to match its preconstruction land use. Three rock channels were installed to connect side drainages to their main channels (620 linear feet). The design was completed in-house at DMRM. Construction was completed by Dirt Works Express for \$222,078. The funding sources for this project were DMRM AML, DMRM Health and Safety, and OSM WCAP. Pre-treatment acid and metal loadings were not calculated for this project due to the extreme low flow conditions of headwater, small drainage areas, and the disperse nature of the drainage off the site into five tributaries.

Figure 1. Tributaries draining the Daniels Site: DaR0051, DaR0052, DaR0053, DaR0054, DaR0055, DaR0056



pH and Acidity Ranges

Pre treatment pH range
2.83 – 4.48

Pre treatment acidity range
28.1 – 287.0 mg/l