

Morrison AMD Treatment System Overhaul  
Growing Greener – C990000634  
Clarion Conservation District

**Project Description:** In 1991 a treatment system was constructed at the Clarion County Park near Shippenville, PA. The system was neglected for 20 years and the performance declined substantially because of neglect. Iron oxide sludge was a problem from the beginning, and within two years of original construction the vertical flow pond (VFP) plugged with the heavy accumulation. Sometime in the early 2000s the accumulation of vegetation and sludge in the channel below the anoxic limestone drain (ALD) causing a breach and mine water to flow through the neighbor's trees, killing all through the drainage area.

**Project Goals:** a complete overhaul of a failing treatment system; to double the size of the existing system with a better layout to adequately treat and capture iron oxide.

**Project Results:** In 2019, CCD was awarded a Sole Source Award to replace and relocate the position of the failing 500-ton ALD with a 1,200-ton ALD. Due to landowner delays and COVID-19 related delays, the pond construction did not take place until 2022. The delays also cause financial burdens on the project because of inflation caused by the pandemic, and also the additional accumulation of sludge created by the expanded ALD was not accounted for in the original proposal. Despite all of the challenges with this project, the old system was cleaned out, the VFP was rehabilitated, and a 13,000 square foot settling pond was successfully constructed in the fall of 2022. A 2<sup>nd</sup> Growing Greener application is submitted to finish the project with a second settling pond and constructed wetland.

Killzone prior to construction



System cleanout



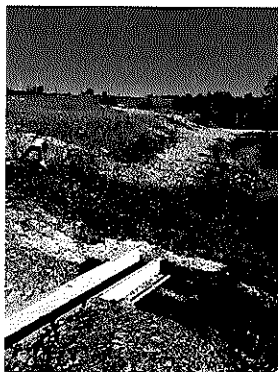
Drying Pad



Pond during construction



VFP outflow to pond



Completed settling pond



**Project Costs:** \$196,628 (to date)

**Lessons Learned:** Expect the unexpected and plan for the worse case scenario.

**Partners:** Clarion Conservation District, Hedin Environmental, County of Clarion

**Contact Information:** Tricia Mazik, Clarion Conservation District, mazikccd@gmail.com