Treatment Success in a Heavily Mined Watershed in Ohio[1]

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Abstract: Little Raccoon Creek is the largest tributary to Raccoon Creek in southern Ohio and, historically, it was the most severely impacted part of the watershed. After pre-regulation mining of over 20,000 acres, Little Raccoon Creek supported little aquatic life and was previously designated as Limited Resource Water by the Ohio Environmental Protection Agency. Since 2000, treatment and reclamation projects have been installed on four of the key acid producing tributaries. Treatment projects have included successive alkalinity producing beds, steel slag leach beds, limestone leach beds, and land reclamation. Over $14 million has been spend in Raccoon Creek Watershed on treatment and reclamation projects, much of that in Little Raccoon Creek. Several treatment projects have now been abandoned after analyzing the relative impact of each and deciding how to best invest future maintenance dollars. In a recent evaluation, not only are there biological communities in Little Raccoon Creek, most of the mainstem of the Little Raccoon Creek meets and exceeds state standards for macroinvertebrate and fish communities. The cumulative result of treating the extensive acid producing material and consistent evaluation and reevaluation of treatment success with active partnership between Raccoon Creek Partnership, Ohio University, and the Ohio Department of Natural Resources has led to a series of successful projects and a successful application of watershed-scale water quality management[3].

Additional Key Words: acid mine drainage, passive treatment, biological recovery, land reclamation

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3. Work reported here was conducted near 39°04'05.8"N 82°31'29.8"W.