

The Impacts of Acid Mine Drainage Remediation Projects on Water Quality, Aquatic Macroinvertebrate, and Fish Populations in the Deckers Creek Watershed, Monongalia and Preston Counties, West Virginia¹

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Abstract: In 2007, Friends of Deckers Creek began installing active and passive acid mine drainage (AMD) remediation projects on abandoned mine lands throughout the Deckers Creek watershed in Monongalia and Preston Counties, West Virginia. These projects have reduced the loading of heavy metals and acidity entering nearby streams, successfully improving the water quality and habitat for fish and macroinvertebrates. As a result, the abundance and diversity of the aquatic biota has improved in several reaches of the Deckers Creek mainstem as well as one major tributary. In 2002, Friends of Deckers Creek began tracking trends in water quality quarterly along thirteen sampling sites throughout the watershed from the thalweg of the stream; these sites include nine along the Deckers Creek mainstem and four tributaries. In 2007, Friends of Deckers Creek began sampling fish and macroinvertebrate populations at these thirteen sites annually. Fish populations were analyzed utilizing a backpack electroshocker along a 100m representative reach and macroinvertebrates populations were analyzed following the protocol described in the West Virginia Stream Condition Index. As the number of AMD remediation projects continues to increase, so does the abundance and diversity of the fish and macroinvertebrate populations. Despite these positive trends, the Deckers Creek mainstem and many of its tributaries are still on the EPA's 303(d) list of impaired streams due to additional mine discharges that still require remediation.

Additional Key Words:

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