

# AVIFAUNAL USE OF A CONSTRUCTED WETLAND RECEIVING MINE WATER DRAINAGE<sup>1</sup>

by

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**Abstract.** Birds were surveyed at the Simco #4 wetland near Coshocton, Ohio, during May and June of 1988, 1989 and 1990, as part of an overall assessment of the wildlife habitat suitability of a mine reclamation project. The constructed wetland was established in November 1985 to serve as a treatment system for a deep mine discharge, and was composed of a series of three cattail (*Typha latifolia*) cells totalling 0.3 ha in size. Comparison surveys were also completed at three nearby natural wetland sites similar in size and dominant wetland vegetation. Data were evaluated at the species and guild level and examined for patterns of abundance, richness, dominance, evenness, and diversity. Results demonstrated that the constructed wetland exhibited the fewest number of bird feeding guilds per survey but an intermediate level of bird abundance relative to all sites examined. Significant differences in species diversity and feeding guild diversity patterns were not detected among sites; however, the constructed wetland supported a bird community with a significantly lower species evenness index, suggesting a more harsh and variable habitat relative to the natural wetlands. We attribute this response to some species gaining a competitive advantage over others and occupying the constructed wetland in greater numbers. Our data suggested that the availability of adequate nesting habitat strongly influenced the patterns for avian diversity observed.

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