Biocriteria Study and Riparian Corridor Assessment Report

West Creek
Cuyahoga County, Ohio
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Executive Summary

Vegetation Communities
A variety of vegetation communities exist along West Creek. Most significant are the upland woods, which should be preserved. Successional woods, shrub thickets, and upland old fields are also common within the study area. A surprising number of undisturbed areas are found within this urbanized area.

Wetlands
Relatively few wetlands occur along West Creek. They are mostly small and isolated. The wetlands range from low to moderate quality and include lowland woods, scrub/shrub wetlands, and wet meadows.

Water Quality
Overall, the water quality of West Creek is indicative of degraded conditions. At most sites, biological communities and biological indices fall below standards set for WWH in this region of the state. However, several sites are at the higher end of non-attainment which strongly suggests West Creek may still be capable of supporting well-balanced aquatic communities.

Although riparian and habitat disturbances are certainly adding to the poor water quality of West Creek. This is probably not the greatest factor limiting West Creek and preventing it from achieving its WWH designation. Throughout most of it reach, West Creek supports good physical habitat. Most of the stream maintains a vegetated riparian corridor and there is ample instream habitat for fish and aquatic wildlife. Despite these good conditions, fish and macroinvertebrate communities fall below expected standards. In these circumstances, it is likely some unseen factor (chemical pollutants) that is impacting water quality and preventing biological communities from achieving their true potential.

Enhancement
The results of this study suggest that water quality is limited by a combination of factors. Point and non-point sources of pollution, failing septic systems, riparian disturbances, and instream modifications all act in concert to lower the quality of water of West Creek. Efforts to improve these conditions should focus on activities within the entire watershed, identification of pollution sources, and restoration of degraded physical conditions.

Efforts that address both instream habitat and watershed characteristics could potentially improve the water quality of West Creek, establish a balanced ecosystem, and restore this stream to full attainment of Warmwater Habitat criteria.

Preservation
The West Creek watershed is largely developed and many of its smaller tributaries have been culverted, deforested, or channelized. Every effort should be made to preserve all remaining natural areas within the watershed and especially along the riparian corridor of West Creek and its associated tributaries. The benefits of these natural areas are well documented and have profound benefits for protecting water quality.