

NORTHEAST OHIO FOUR COUNTY REGIONAL PLANNING AND DEVELOPMENT ORGANIZATION

Nimishillen Creek Macroinvertebrate Survey

Final Report

March 2003

The preparation of this report was financed by the City of Canton.

The scope of services called for NEFCO to identify and survey a total of 16 sites in Nimishillen Creek and its tributaries for macroinvertebrate communities, based on input from the City of Canton; and to produce a report with the results of the sampling.

Table of Contents

	<u>Page</u>
List of Tables	iii
List of Figures	iii
List of Appendices	iii
Summary	1
Introduction	2
Methodology	3
Results	6
West Branch	11
Middle Branch	11
East Branch	14
Hurford Run	14
Sherrick Run	14
Mainstem	14
Discussion	15
Physical Characteristics	15
Stream Temperature	15
Benthic Macroinvertebrate Monitoring	16
West Branch	16
Middle Branch	16
East Branch	17
Hurford Run	17
Sherrick Run	17
Mainstem	17
CIV vs. Land Use	17
Sampling Method	18
2002 vs. 2000 Results	20
Mean CIV	21
Physical Characteristics	21
CIV vs. Land Use	23
Recommendations	23
Conclusion	25
References	27

List of Tables

<u>Table</u>		<u>Page</u>
1	Locations of the Macroinvertebrate Stations, Nimishillen Creek Watershed . .	5
2	Comparison of Selected Physical Characteristics of the Nimishillen Creek Macroinvertebrate Sampling Sites	7
3	Mean Cumulative Index Values (CIVs) and Stream Segment Conditions based on Macroinvertebrate Surveys at Selected Sites	12
4	Change in Mean CIVs from 2000 to 2002 based on macroinvertebrate surveys at selected sites	22

List of Figures

<u>Figure</u>		<u>Page</u>
1	Macroinvertebrate Monitoring Stations, Nimishillen Creek Watershed	4
2	Mean Stream Segment Condition, Nimishillen Creek Watershed	13
3	2002 CIV vs. Composite Rating Score	19
4	2000 CIV vs. Composite Rating Score	24

List of Appendices

<u>Appendix</u>		<u>Page</u>
A	Stream Quality Assessment and Stream Inventory - Watershed Assessment Forms	28
B	Photo Album of Macroinvertebrate Monitoring Sites	109
C	Composition of Selected Macroinvertebrate Groups of Sixteen Stations in the Nimishillen Creek Watershed	137
D	Subwatershed Land Use Characterization Ratings for the Nimishillen Creek Watershed	154