

NORTHEAST OHIO FOUR COUNTY REGIONAL PLANNING AND DEVELOPMENT ORGANIZATION

Nimishillen Creek Comprehensive Watershed Management Plan - Phase II

Final Report

November 2000

The preparation of this report was financed through a water quality management planning grant provided through the State of Ohio Environmental Protection Agency under the provisions of Section 604(b) of the Clean Water Act, and with funds from NEFCO's dues-paying members.

The Comprehensive Watershed Management Plan (CWMP) is a watershed-based approach to restoring and protecting the integrity of water quality for streams within the Nimishillen Creek Watershed. This report is submitted in fulfillment of the three milestones of Phase II. The scope calls for NEFCO to conduct macroinvertebrate monitoring at four sites in the watershed using the Scenic River Methodology. It also calls for NEFCO to identify priority areas and predominant land uses that have the potential of impacting the waters of the watershed. Finally, the scope calls for NEFCO to develop a preliminary action plan that will describe possible responses to threats on water quality.

Table of Contents

| | <u>Page</u> |
|--|-------------|
| List of Tables | iii |
| List of Figures | iii |
| List of Appendices | iii |
| Summary | 1 |
| Introduction | 1 |
| I. Macroinvertebrate Sampling | 3 |
| II. Land Use Characterization Rating Table | 7 |
| Ranking of 25 Land Uses | 8 |
| III. Watershed Action Plan | 13 |
| IV. Technical Advisory Committee Meeting Summaries | 14 |
| Conclusion | 18 |
| References | 19 |

List of Tables

| <u>Table</u> | | <u>Page</u> |
|--------------|--|-------------|
| 1 | Cumulative Index Values and Stream Segment Conditions Based on Macroinvertebrate Surveys at Selected Sites | 4 |
| 2 | Correlation of Nimishillen Creek Watershed Land Use Characterization to the Ohio Comparative Risk Project's (OCRPs) Ranked Threats | 9 |
| 3 | Weighting Factors and Ranking Scores for each Identified Land Use in the Nimishillen Creek Watershed | 10 |
| 4 | Ranking of 25 Land Uses in the Watershed and Land Use Characterization Ratings for each Subwatershed | 11 |

List of Figures

| <u>Figure</u> | | <u>Page</u> |
|---------------|---|-------------|
| 1 | Macroinvertebrate Monitoring Stations (map) | 2 |
| 2 | Composition of Selected Macroinvertebrate Groups for six stations in the Nimishillen Creek Watershed (Pie chart) Stations 1-3 | 5 |
| 3 | Composition of Selected Macroinvertebrate Groups for six stations in the Nimishillen Creek Watershed (Pie chart) Stations 4-6 | 6 |

List of Appendices

| <u>Appendix</u> | | <u>Page</u> |
|-----------------|--|-------------|
| A | ODNR Stream Quality Assessment and Stream Inventory Forms for Analysis of Stations 1 through 6 | 20 |
| B | Land Use Characterization Table | 45 |
| C | Brief Summary of the Ohio Comparative Risk Project (OCRPs) | 54 |
| D | Abandoned Drinking Water Wells | 56 |
| E | Registered and Leaking Underground Storage Tanks Report | 66 |
| F | Ranking of 25 Land Uses for Each Subwatershed of the Nimishillen Creek Watershed | 76 |
| G | Action Plan Model | 81 |
| H | March 16 and June 8, 2000 Nimishillen Creek CWMP Phase II Planning Meeting Materials | 105 |