

The Upper Thames River Watershed Report Cards 2001

Written and Published by the
Upper Thames River Conservation Authority

Principal Authors

Karen Maaskant, Water Quality Specialist
Cathy Quinlan, Terrestrial Biologist
Ingrid Taylor, Water Quality Specialist

Other Contributors

Ted Briggs, Acting Coordinator, Planning and Research Unit
Terry Chapman, GIS/Mapping Specialist
Eleanor Heagy, Communications Specialist
Christie Nowak, Graphic Design Specialist
John Schwindt, Aquatic Biologist
Ian Wilcox, Coordinator, Planning and Research Unit

Copies of this report may be obtained from:

The Upper Thames River Conservation Authority

1424 Clarke Road, London, ON N5V 5B9

Phone: (519) 451-2800 Fax: (519) 451-1188

A pdf version of this report may be downloaded from the UTRCA web site at www.thamesriver.on.ca

Copyright © Upper Thames River Conservation Authority 2001

Second printing 2002

ISBN 1-894329-05-8

Executive Summary

The Upper Thames River Conservation Authority (UTRCA) has developed watershed report cards to assess surface water and forest conditions in 28 subwatersheds of the Upper Thames River watershed. The report cards describe the general health of the watercourses and forests by giving these elements a letter grade from A to F.

Indicators of forest and surface water health were selected from an extensive list of parameters. Forest condition indicators include percentage forest cover, forest density and forest interior. Values were derived using GIS technology and digitized National Topographic Series maps. Surface water quality indicators include benthic score, total phosphorus, bacteria, and conductivity. The data were obtained primarily from the UTRCA benthic monitoring program and the Ministry of the Environment's Provincial Water Quality Monitoring Network.

Points were assigned to each indicator value; then the points were added together using a simple weighted formula to achieve an overall total and grade.

Additional resource information on land use, soils, dams, rare species, significant natural areas and other relevant features were also compiled and presented in each report card to provide a more complete picture of local environmental conditions. A list of local actions needed for improvement is presented in each watershed report card. Some actions are specific to the needs of individual watersheds, while others promote widely accepted, best management practices.

The watershed report cards provide effective and transparent watershed based environmental reporting. They present useful and relevant information synthesized from large volumes of data. The brief and simple layout enables the report cards to be used by the public as well as resource agencies, municipalities and other interested groups. A full appendix is included in this report to provide additional detail.

By discovering where the best and poorest environmental conditions exist in the Upper Thames basin, efforts can be targeted to watersheds that are in most need of protection or restoration. The report cards may also assist groups and agencies that are developing their own local strategies for action.

Table of Contents

Executive Summary	i
Table of Contents	ii
List of Tables	ii
List of Figures	ii
Chapter 1 Background	1
1.1 Introduction	1
1.2 The Process	3
Chapter 2 Forest Conditions	5
2.1 Introduction	5
2.2 Indicators and Grades	5
2.3 Data Source	6
2.4 Results	6
2.5 Additional Information	10
2.6 Actions for Improvement	10
2.7 Information Gaps	10
Chapter 3	
Surface Water Quality	11
3.1 Introduction	11
3.2 Indicators and Grades	11
3.3 Data Source	12
3.4 Results	13
3.5 Watershed Features	16
3.6 Actions for Improvement	16
3.7 Information Gaps	17
Chapter 4 Next Steps	21
Glossary	22
Bibliography	23
Map References	24
Appendix A	
Watershed Features	A
1. a. Municipalities within each Subwatershed	A-1
b. Subwatersheds within each Municipality	A-2
c. Subwatersheds within each County	A-3
d. Municipalities within each County	A-3

2. Watershed Areas	A-4
3. Land Use	A-5
4. Soil Type	A-6
5. Soil Erosion and Delivery	A-7
6. Physiography	A-8
7. Stream Flow	A-9
8. a. Fishery Resources - Avon River to Komoka Creek	A-10
b. Fishery Resources - Medway Creek to Reynolds Creek	A-12
c. Fishery Resources - River Bend to Wye Creek	A-14
9. Dams and Impoundments	A-16
10. Sewage Treatment Plant Facilities	A-17
11. Woodlot Size Distribution	A-18
12. Riparian Forest Cover	A-19
13. Species At Risk	A-20
14. Significant Natural Areas and Wetlands	A-23
15. Spills	A-28

Appendix B

28 Watershed Report Cards B

List of Tables

1. Description of Indicators of Forest Conditions	6
2. Forest Conditions: Indicator Data, Points and Grades	7
3. Final Forest Condition Grades	9
4. Description of Surface Water Quality Indicators ...	9
5. Surface Water Quality: Indicator Data, Points and Grades	14
6. Final Surface Water Quality Grades	16
7. Information Gaps in Water Quality Data	19

List of Figures

1. Map of the Upper Thames River Watershed in Southern Ontario	2
2. Map of 28 Subwatersheds of the Upper Thames River Watershed	4
3. Map of Forest Conditions Grades by Subwatershed	8
4. Distribution of Grades, Forest Conditions	9
5. Map of Surface Water Quality Grades by Subwatershed	15
6. Distribution of Grades, Surface Water Quality	13
7. Map of Reported Spills per Subwatershed, 1988-2000	18
8. Map of Water Quality Monitoring Sites	20