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**A FRAMEWORK FOR THE DEVELOPMENT OF A COMMUNITY - BASED
WATERSHED MANAGEMENT PLAN FOR
THE CEDAR RIVER WATERSHED:
A PROPOSAL FOR THE LONG-TERM SUSTAINABILITY OF
THE FISHERY RESOURCE**

by

Steven S. Wall

**A Practicum
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree**

MASTER OF NATURAL RESOURCES MANAGEMENT

**Natural Resources Institute
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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree
of
Master of Natural Resources Management**

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ABSTRACT

Stakeholders in the Cedar River Watershed, located in Northern Ontario, are concerned about the sustainability of the watershed under current resource management practices exercised by the Ontario Ministry of Natural Resources (OMNR). The main issue of concern among stakeholders was the sustainability of the fishery resource. The OMNR has begun to develop a community - based watershed management plan (CBWMP) in order to address resource management problems.

The two principle objectives of the research were: 1) to formulate a framework/model that could be used for the continued development of a CBWMP for the Cedar River Watershed, centered about the current issue of the fishery resource - with applications to other Northern Ontario watersheds; and 2) to determine and recommend strategies/tactics that will be most acceptable to Cedar River Watershed stakeholders for the effective management of the fishery resource.

The objectives were addressed through survey research and analysis, and through a review of current literature and government reports. The model for a CBWMP is based upon seven basic components found in several examples of CBWMP's across Canada and around the world, and a decision making process of consensus.

The research found that stakeholders in the Cedar River Watershed were receptive to the development of a CBWMP, and had many common interests and goals on how to maintain the fishery and other watershed resources. Differences did exist in opinions on which management strategies would be best for achieving the goals. However, the survey also revealed a significant number of management strategies that would be acceptable to the majority of stakeholders and stakeholder groups.

A CBWMP takes an holistic approach to both the environmental aspects (land, water and air), and the community aspects (economic, social and cultural) of resources management necessary for sustainability. The CBWMP provides a common basis where communication between all stakeholders can be fostered to lead to sustainability in resources management.

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The faculty of the Natural Resource Institute provided an environment conducive to continued education and learning. Thanks to the extraordinary efforts and abilities of the NRI faculty, I am confident that I have acquired the skills and knowledge that will assist me in furthering my career.

I am greatly indebted to my family for their support while I was conducting this research. The experience was much easier knowing my family was behind me 100%. Thanks to my parents for allowing me to “put my feet under the old man’s table” for a while longer.

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TABLE OF CONTENTS

Abstract

Acknowledgments

CHAPTER ONE

1.0 INTRODUCTION	1
1.1 PREAMBLE	1
1.2 BACKGROUND	2
1.3 STATEMENT OF THE PROBLEM	6
1.4 THE OBJECTIVES	7
1.5 METHODS	8
1.5.1 Literature And Government File Review	8
1.5.2 Survey Of Stakeholders	9
1.5.2a) Survey Of Cottage Owners	13
1.5.2b) Survey Of Commercial Tourist Operators And Residents	14
1.5.2c) Survey Of Wabauskang First Nation Residents	14
1.5.2d) Survey Of Visiting Anglers	15
1.5.3 Summary Of Methods	16
1.6 SCOPE AND LIMITATIONS	17
1.7 ORGANIZATION	17

CHAPTER TWO

2.0 RESOURCE USE IN THE CEDAR RIVER WATERSHED	19
2.1 LANDS FOR LIFE: ONTARIO'S NEW LAND USE PLANNING SYSTEM	19
2.2 RESOURCE USE IN THE CEDAR RIVER WATERSHED	23
2.3 CHAPTER SUMMARY	32

CHAPTER THREE

3.0 COMMUNITY - BASED WATERSHED MANAGEMENT	33
3.1 THE LOGIC OF WATERSHED MANAGEMENT	33
3.2 A BRIEF OVERVIEW OF CURRENT WATERSHED MANAGEMENT IN ONTARIO: A NEED FOR CHANGE	35
3.3 COMMUNITY - BASED WATERSHED MANAGEMENT EQUALS SUSTAINABILITY	37
3.4 COMPONENTS OF A COMMUNITY - BASED WATERSHED MANAGEMENT PLAN	41
3.4.1 The Steering Committee	41
3.4.2 Technical Advisory Group	48
3.4.3 Public Involvement: A Cornerstone For Success	50
3.4.4 Public Education: Creating Awareness	51
3.4.5 Public Communications	52

3.4.6 Legislation	54
3.4.7 Implementation and Monitoring	60
3.4.8 Summary	62
3.5 THE PLANNING PROCESS: PUTTING IT ALL TOGETHER	64
3.5.1 Organization Of The Planning Process	64
3.5.2 Planning For Action: Developing Visions, Goals And Objectives.....	68
3.6 MULTI-STAKEHOLDER DECISION MAKING PROCESS:	
AGREEING TO WORK TOGETHER	71
3.6.1 Conflict.....	71
3.6.2 Discovering Common Interests: Getting Past Individual Positions	72
3.6.3 Consensus.....	74
3.6.4 Degree Of Decision Making Authority.....	79
3.7 CHAPTER SUMMARY	85

CHAPTER FOUR

4.0 ANALYSIS OF SURVEY RESULTS	86
4.1 BACKGROUND OF SURVEY RESPONDENTS	87
4.1.1 Response Rate	87
4.1.2 Background Of Stakeholders	89
4.1.3 Importance Of Fishery	89
4.1.4 Values Associated With Fishery	92
4.1.5 Trends In Fishing As Perceived By Stakeholder Groups.....	96
4.2 PREFERRED MANAGEMENT STRATEGIES/TACTICS	98
4.2.1 Strategies For Walleye	100
4.2.2 Strategies For Northern Pike	104
4.2.3 Strategies For Smallmouth Bass	110
4.2.4 Strategies For Lake Trout	115
4.2.5 Strategies For Muskellunge	119
4.2.6 Strategies For Yellow Perch	122
4.2.7 Strategies For Lake Whitefish	1265
4.2.8 Possession Limits Revisited: Possession Limits For The Cedar River Watershed Vs All Northern Ontario.....	126
4.2.9 Access Points.....	130
4.2.10 Non-Resident Camping	132
4.2.11 Summary	134
4.3 CHAPTER SUMMARY	138

CHAPTER FIVE

5.0 A FRAMEWORK FOR THE DEVELOPMENT OF A COMMUNITY - BASED MANAGEMENT PLAN FOR THE CEDAR RIVER WATERSHED	139
5.1 FRAMEWORK FOR A COMMUNITY - BASED WATERSHED MANAGEMENT PLAN IN THE CEDAR RIVER WATERSHED: WITH APPLICATIONS TO OTHER WATERSHEDS IN NORTHERN ONTARIO.....	140
5.2 OTHER ISSUES IN THE CEDAR RIVER WATERSHED	160

5.3 STAKEHOLDER SUPPORT FOR A COMMUNITYY - BASED WATERSHED MANAGEMENT PROCESS	162
5.4 CHAPTER SUMMARY.....	164

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS	166
6.1 SUMMARY OF RESEARCH FINDINGS	166
6.2 WHY COMMUNITY - BASED WATERSHED MANAGEMENT.....	169
6.3 RECOMMENDATIONS	171
6.4 SOME FINAL CONCLUDING REMARKS	172
REFERENCES	174
APPENDIX I: STAKEHOLDER QUESTIONNAIRE	180
APPENDIX II: WABAUSKANG FIRST NATION INTERVIEW FORM.....	201
APPENDIX III: SUMMMARY OF ANSWERS TO QUESTIONNAIRES.....	207
APPENDIX IV: SUMMARY OF ANSWERS TO WABAUSKANG FIRST NATION INTERVIEWS	256
APPENDIX V: OTHER MANAGEMENT STRATEGIES FOR SUSTAINING THE FISHERY AS SUGGESTED BY STAKEHOLDERS.....	266
APPENDIX VI: NOFC RECOMMENDATIONS FOR FISH REGULATIONS	271
APPENDIX VII: ANSWERS TO QUESTIONS 34 TO 39 OF QUESTIONNAIRES AND INTERVIEWS	286

LIST OF TABLES

Table 2.1:	Timber management guidelines for the protection of fish habitat: A summary.....	27
Table 2.2:	Abundance of sport fish species and amount of angling pressure for the larger lakes within the Cedar River Watershed	30
Table 3.1:	Major provincial legislation relating to water quality	55
Table 3.2:	Major federal legislation relating to fish habitat and water quality.....	56
Table 3.3:	Major provincial legislation related to water quantity.....	57
Table 3.4:	Major federal legislation related to fish habitat and water quantity	58
Table 3.5:	Major provincial and federal legislation related to land management	59
Table 4.1:	Average rating of importance of the fishery in the Cedar River Watershed to respondents' income, yearly diet, recreation and family/social tradition	90
Table 4.2:	Importance of the fishery in the Cedar River Watershed in regards to income, diet, enjoyment and tradition according to the respondents from Wabauskang First Nation	91
Table 4.3:	Importance of catching fish for eating vs catching trophy fish to stakeholders' fishing enjoyment in the Cedar River Watershed	94
Table 4.4:	Preferred management strategies for walleye in the Cedar River Watershed as chosen by stakeholder groups.....	102
Table 4.5:	Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for walleye in the Cedar River Watershed	103
Table 4.6:	Ideal eating sizes for walleye in the Cedar River Watershed as considered by stakeholder groups	103
Table 4.7:	Percent of stakeholders in favour of possession limit reductions for walleye in the Cedar River Watershed	104
Table 4.8:	Preferred management strategies for northern pike in the Cedar River Watershed as chosen by stakeholder groups	106
Table 4.9:	Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for northern pike in the Cedar River Watershed	107
Table 4.10:	Ideal eating sizes for northern pike in the Cedar River Watershed as considered by stakeholder groups	108

Table 4.11:	Percent of stakeholders in favour of possession limit reductions for northern pike in the Cedar River Watershed	109
Table 4.12:	Preferred management strategies for smallmouth bass in the Cedar River Watershed as chosen by stakeholder groups	112
Table 4.13:	Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for small mouth bass in the Cedar River Watershed	113
Table 4.14:	Ideal eating sizes for smallmouth bass in the Cedar River Watershed as considered by stakeholder groups	113
Table 4.15:	Percent of stakeholders in favour of possession limit reductions for smallmouth bass in the Cedar River Watershed	115
Table 4.16:	Preferred management strategies for lake trout in the Cedar River Watershed as chosen by Wabauskang First Nation respondents	116
Table 4.17:	Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for lake trout in the Cedar River Watershed	117
Table 4.18:	Ideal eating sizes for lake trout in the Cedar River Watershed as considered by stakeholder groups	117
Table 4.19:	Preferred management strategies for muskellunge in the Cedar River Watershed as chosen by stakeholder groups	120
Table 4.20:	Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for muskellunge in the Cedar River Watershed	121
Table 4.21:	Stakeholder responses to suggested possession limits for yellow perch in the Cedar River watershed they would most prefer	123
Table 4.22:	Fishing techniques employed by respondents from Wabauskang First Nation and how often they fish this way	126
Table 4.23:	Percent of stakeholders in favour of possession limit reductions for walleye in the Cedar River Watershed only vs all of Northwestern Ontario	129
Table 4.24:	Percent of stakeholders in favour of possession limit reductions for northern pike in the Cedar River Watershed only vs all of Northwestern Ontario	130
Table 4.25:	Percent of stakeholders in favour of possession limit reductions for smallmouth bass in the Cedar River Watershed only vs all of Northwestern Ontario	130
Table 4.26:	Stakeholder support of different management strategies regarding public access points in the Cedar River Watershed	131

Table 4.27:	Stakeholder support for different management strategies regarding non-resident camping in the Cedar River Watershed	133
Table 4.28:	Percent of stakeholders who preferred recommended maximum size limits and recommended protected slot sizes for smallmouth bass	136
Table 4.29:	Percent of stakeholders who preferred recommended maximum size limits and recommended protected slot sizes for lake trout	136
Table 5.1:	List of Cedar River Watershed stakeholders currently interested in, or affecting the fishery resource	159
Table 5.2:	Degree of stakeholder involvement in the watershed managing process	162

LIST OF FIGURES

Figure 1.1:	Location of Cedar River Watershed in Northwestern Ontario	3
Figure 1.2:	Anishinabi Falls	4
Figure 1.3:	People come from abroad to enjoy the renowned fishing provided by the Cedar River Watershed	6
Figure 1.4:	Flow diagram summarizing the application of the proposed methods to the formulation of a community - based watershed management plan for the Cedar River Watershed.....	16
Figure 2.1:	Map of Land for Life regional planning areas and location of the Cedar River Watershed	20
Figure 2.2:	The OMNR planning system for natural resources. Steps in the Lands for Life process	22
Figure 2.3:	Proposed 1999 to 2004 Whiskey Jack Forest allocation map	26
Figure 3.1:	Louise Rapids	34
Figure 3.2:	Public meeting held in the spring of 1996 to discuss issues concerning the Cedar River Watershed	43
Figure 3.3:	Muskellunge being released back into Cliff Lake	51
Figure 3.4:	Local stakeholders learning how to sample fish to assist with creel surveys being done in the Cedar River Watershed	60
Figure 3.5:	The interactions between the steering committee, the technical advisory board, the public and the government in a community - based watershed management process	64
Figure 3.6:	An outline of the community - based watershed management planning process	65
Figure 3.7:	Relationship of visions, goals and objectives using an example related to a walleye fishery.....	69
Figure 3.8:	Illustration of how two different group's positions can share underlying common interests	73
Figure 3.9:	Arnstein's "Ladder of Citizen's Participation"	82
Figure 3.10:	Connor's "New Ladder Of Citizen Participation"	82

Figure 3.11:	A schematic representation of public participation in protective area management	83
Figure 4.1:	Distribution of values of relative importance of fishery in the Cedar River Watershed to income as ranked by responding residents	91
Figure 4.2:	Distribution of values for the relative importance of catching a limit to respondents' fishing enjoyment in the Cedar River Watershed.....	93
Figure 4.3:	Distribution of values for the relative importance of the chance to catch a trophy fish to respondents' fishing enjoyment in the Cedar River Watershed ...	95
Figure 4.4:	Distribution of values for the relative importance of catching eating size fish to respondents' fishing enjoyment in the Cedar River Watershed	95
Figure 4.5:	Distribution of responses made by stakeholders regarding preferred possession limits for yellow perch in the Cedar River Watershed	124
Figure 4.6:	Distribution of responses to whether reduced possession limits would effect the return of anglers to the Cedar River Watershed while no reductions occurred else where in Northern Ontario	127
Figure 4.7:	Distribution of responses to willingness to support a reduction in possession limits for the Cedar River Watershed if similar reductions occurred in all Northern Ontario	128
Figure 5.1:	Diagram of model for community -based watershed management for the Cedar River Watershed	158

Map of Cedar River Watershed - large map provided in pocket on back cover

Chapter 1

1.0 INTRODUCTION

1.1 PREAMBLE

The Ontario Ministry of Natural Resources (Kenora District) is currently taking steps towards the development of a community - based watershed management plan for the Cedar River Watershed located in rural Northwestern Ontario. The watershed stakeholders¹ are concerned about the continued sustainability of the fishery resource within the Cedar River Watershed. Public forums are currently being held in the spring and fall of each year to discuss issues related to the watershed. As a result of these biannual meetings, projects to enhance and assess the current fishery within the watershed have begun. In addition, the Cedar River Watershed has been designated as its own separate fisheries management division (22A) by the Ministry of Natural Resources as of 1997. The Ministry of Natural Resources hopes that by developing a comprehensive community - based watershed management plan for the Cedar River Watershed, effective and efficient solutions for the long term sustainability of the fishery, and other watershed resources, will result.

¹ There are several definitions and criteria available in the literature that can be used to identify who constitutes a stakeholder (for example refer to Borrini-Feyerabend, 1996). Also there is a certain amount of controversy involved when determining who should be considered as stakeholders. Some, such as First Nations, believe they should be dealing with Ontario on a direct government to government basis, and do not see themselves as one of many stakeholder groups (OMNR, 1998). For the sake of simplicity this practicum will use the definition of stakeholder offered by Hutchinson and Sinclair (1994) as being those people who use the watershed resources and who can affect, or are affected by, resource management decisions in the watershed, or those who could block or delay these decisions (Hutchinson, 1995).



The research presented in this paper focuses upon the continued development of a community - based watershed management plan for the Cedar River Watershed, with applications towards a framework for community - based watershed management in Northern Ontario. The following research has three principal goals. 1) to provide a more organized and structured approach to community - based watershed management for the Cedar River Watershed, centered about the current issue of the fishery resource; 2) to determine and recommend strategies/tactics that will be most acceptable (preferred) by watershed stakeholders for the effective management of the fishery resource in the Cedar River Watershed; and 3) to provide a framework that can be used to establish other community - based watershed management plans in Northern Ontario, using the Cedar River Watershed as an example. The above listed goals are achieved through survey research and analysis, and through a review of current literature and government reports.

1.2 BACKGROUND

The Cedar River Watershed is located in Northwestern Ontario northwest of the community of Dryden and southwest of Ear Falls, crossing the Red Lake Highway (Hwy. #105) at several points (Figure 1.1). The watershed occupies an area of 1741 square kilometres drained by the Cedar River which flows from south to north eventually emptying into the English River system at Rice Lake (see map provided at back cover).

The Cedar River Watershed is home to the residents of the hamlet of Perrault Falls, as well as other permanent residents throughout the watershed. The watershed is also home to the Wabauskang First Nation community who reside on a reservation area along Wabaskang Lake. There are 27 tourist resorts in the watershed area located on the



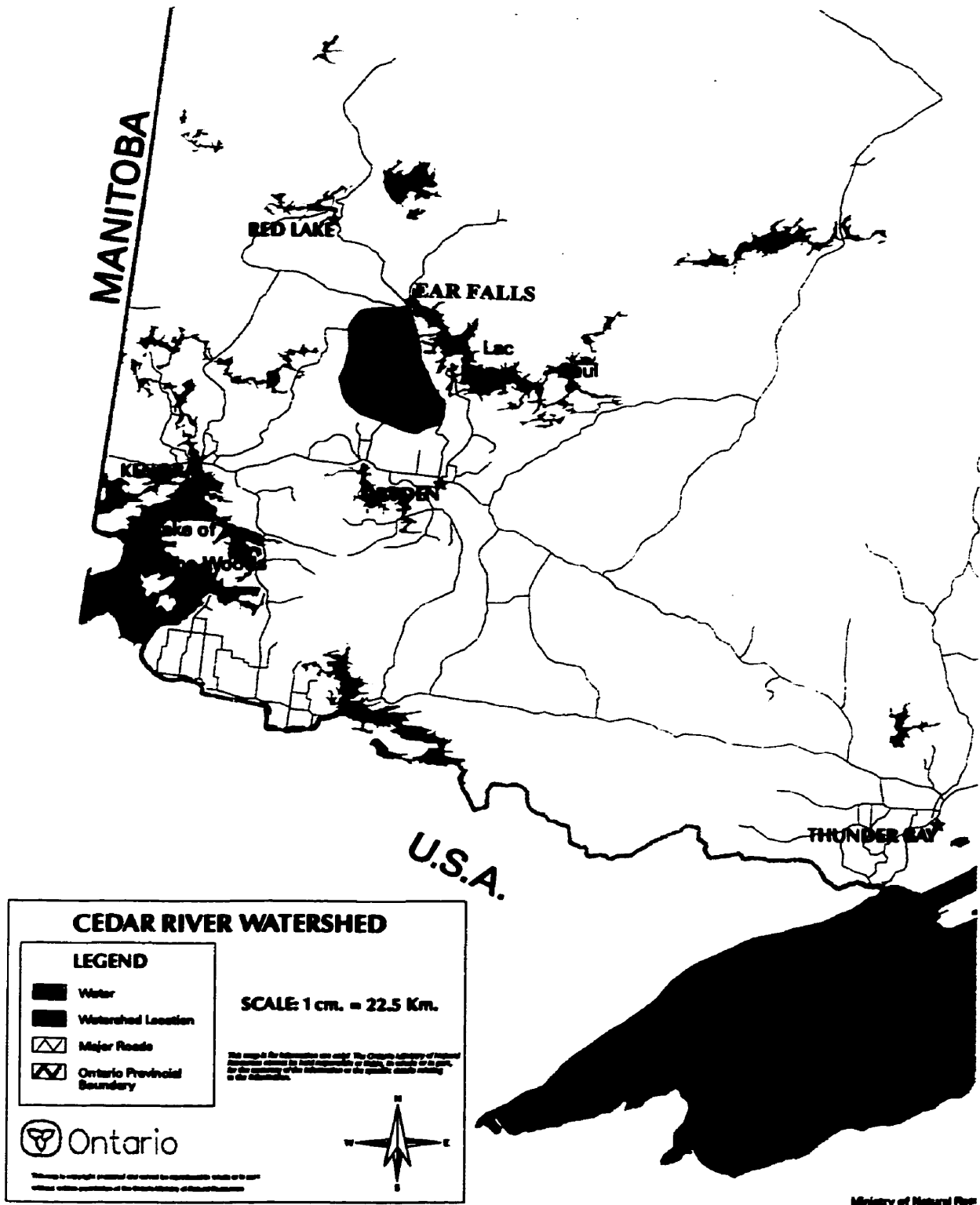


Figure 1.1: Location of the Cedar River Watershed in Northwestern Ontario

Ministry of Natural Resources

Open House 2000 Ontario
Watershed 20-225-1000 10/00 P



various lakes within the watershed. The watershed also contains several cottage properties.

In Northern Ontario, forestry, mining and tourism constitute the main economic activities. Many communities rely upon the fishery resource available within regional watersheds to generate economic activity in the form of tourism. Many tourists come from abroad to experience the natural beauty of the area's watersheds and to enjoy the accessible sport fishing experience that is renowned world wide. In smaller rural

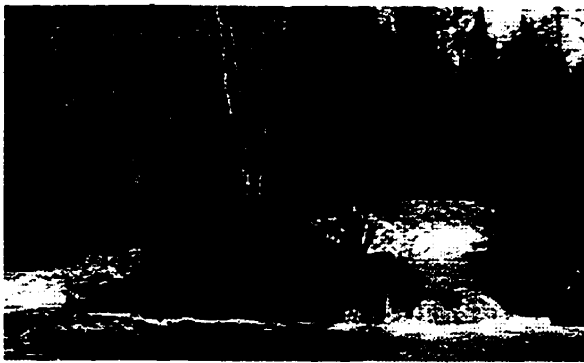


Figure 1.2: Anishinabi Falls - part of the spectacular natural scenery in the Cedar River Watershed

communities of Northern Ontario, such as the Cedar River Watershed, the tourism created by a healthy sport fishery resource is very important to the local economy. The fishery resource is also valuable to the watershed stakeholders in the form of recreational value,

subsistence value, and the aesthetic value provided by the natural beauty of a healthy watershed. There are commercial fishing operations for lake whitefish in the Cedar River Watershed region, but on a much smaller scale than the sport fishing industry. Presently the main watershed resource issues in the Cedar River Watershed are related to the fisheries resource, and to the effects of timber management activities, especially water crossings, on stream and lake environments.

Community - based watershed management is increasingly being used as a management strategy across Canada, (e.g. Credit River Water Management Strategy in Ontario, Fraser River Management Plan in British Columbia, Winkler Aquifer Management Plan in Manitoba), and in other parts of the world, (e.g. Phalen Lakes



Watershed Management Plan in Minnesota, Hampshire Avon Catchment Management Plan in Wales U.K.). Community - based watershed management involves the active participation of stakeholders, along with government facilitators, towards the management of watershed resources. Community - based management is considered an effective tool for watershed management for several reasons. A watershed management plan is designed to take an ecological approach to long term water resource management. The watershed provides a natural boundary for which human activities on land and water affect the aquatic and terrestrial ecosystem (Ontario Ministry of Environment and Energy, 1993). By taking an holistic ecosystem approach to watershed management the effects of the diverse land/water development demands upon the watershed can be anticipated, and potential environmental problems can be avoided, eliminating the need for expensive remedial measures (Ontario Ministry of Environment and Energy, 1993).

Traditionally the Ontario government has employed a top down approach to watershed management, involving several different governmental sectors. This type of approach by governments has resulted in poor communications between the different land and water use planners, and between these planners and the public (Viessman, 1990). A community - based watershed management plan takes a bottom up approach and involves active communication between stakeholders and government facilitators regarding important watershed management issues. Community - based watershed management pools the available expertise together, thereby eliminating duplication. Also, by discussing issues amongst the stakeholders, important issues and goals can be brought to the forefront, allowing for efficient channeling of available budgets.



Most of the focus in Ontario for developing watershed management plans has been on urban communities in Southern Ontario, where the main issues pertain to water quality and quantity, and the effects of urban land development on the water resources. Although the information available from Southern Ontario watershed plans is useful, Northern Ontario consists of many rural communities, such as the Cedar River Watershed community, that have unique watershed resource issues. This research report is designed to formulate a watershed management planning strategy for Northern Ontario communities, based upon the principles of community - based watershed management, capable of addressing these unique resource issues.

1.3 STATEMENT OF THE PROBLEM

The community within the Cedar River Watershed has concerns about the sustainability of the watershed under current resource management practices exercised by the Ontario Ministry of Natural Resources (OMNR). Currently the main issue of concern



Figure 1.3: People come from abroad to enjoy the renowned fishing provided by the Cedar River Watershed for such species as walleye, lake trout, smallmouth bass, and muskellunge (above left to right), as well as northern pike and yellow perch.

among stakeholders is the sustainability of the fishery resource. In order to address the issues concerning the local stakeholders, the OMNR has begun the development of a community - based watershed management process in the Cedar River Watershed. The purpose of this research paper is to formulate a guideline/framework that can be used to develop a comprehensive

community - based watershed management plan for the long term sustainability of the



Cedar River Watershed - an approach that can be applied to other watersheds in Northern Ontario. The development of a community - based watershed management plan for the Cedar River Watershed will be centered about the current issue of the fishery resource. The proposed management plan formed around the fisheries issue will establish a community - based watershed management plan that will be in place to deal with other watershed issues as they arise.

1.4 THE OBJECTIVES

The first objective was to construct a factual base of the current watershed condition and resource uses.

The second objective was to determine what elements and conditions are required to formulate an effective community - based watershed management plan.

The third objective was to identify issues, visions, goals and objectives that stakeholders have that are important to the development of a community - based watershed management plan in the Cedar River Watershed.

The fourth objective was to ascertain and recommend strategies/tactics that will be most acceptable (preferred) by watershed stakeholders, and most practical for the effective management of the fishery resource in the Cedar River Watershed.

The fifth objective was to formulate a guideline/framework for the development of a comprehensive community - based watershed management plan, based upon the information obtained from the above objectives, for the Cedar River Watershed.

The sixth objective was to make recommendations towards the development of a framework for community - based watershed management in Northern Ontario.



1.5 METHODS

The procedures used for the research consisted of two parts, these being a review of related literature and government files, and a survey of stakeholders in the Cedar River Watershed. The research procedures were designed to answer the following questions important to the development of a community - based watershed management plan for the Cedar River Watershed centered around the current issue concerning the sustainability of the fishery resource.

Literature And Government File Review

1. What components are necessary for the formation of an effective community - based watershed management plan?
2. What are the current resource uses existing in the watershed?

Survey Of Stakeholders

3. What is the history and resource use of stakeholders?
4. What is the value of the fishery resource to stakeholders?
5. What possible management tactics will be acceptable or preferred by stakeholders regarding the management of the fishery resource?
6. What vision do the stakeholders have for the future of the watershed?
7. What are the goals and objectives of the stakeholders regarding the management of the watershed?
8. What additional issues and problems, other than that of the fishery resource, are of significance to the stakeholders within the watershed?

1.5.1 Literature And Government File Review

An extensive review of related literature was conducted to determine what was



required for an effective community - based watershed management plan. Several examples of community - based watershed management plans were reviewed from journal articles, publications and government reports. The planning elements and ideas from these examples were assessed and compared to what is already taking place in the Cedar River Watershed. Upon assessment and comparison, those aspects and elements that were found to be effective were extracted and applied to the development of a community - based watershed management plan for the Cedar River Watershed. Likewise, literature related to multi-stakeholder decision making processes and public participation was reviewed and applied to community - based watershed management planning in the Cedar River Watershed.

A review of government files was completed to ascertain the current conditions and resource uses within the watershed. Ecological and resource use boundaries were established from information obtained from provincial government files, indicating land and water resource uses within the watershed (e.g. forest management units), and other ecological boundaries (e.g. fish sanctuaries). Also government legislation was reviewed to determine what legislation would be necessary to assist in the planning process.

1.5.2 Survey Of Stakeholders

A stratified sample of watershed stakeholders were surveyed based upon the following five groups.

1. Permanent local residents (not including Wabaskang First Nation residents, or commercial tourist operators)
2. Commercial tourist operators (i.e. resort/lodge owners)
3. Wabaskang First Nation residents



4. Cottage owners
5. Visiting anglers (anglers visiting the watershed who form the clientele for the tourism based industry)

Although it was possible for some stakeholders to belong to more than one group, (e.g. a commercial tourist operator could also be a permanent local resident; and a Wabauskang First Nation resident is also a permanent local resident), stakeholders were included in a single group only. The above five groups were chosen based upon how stakeholders would respond differently to the survey according to: 1) degree of vested interest in the watershed resources; 2) cultural background (i.e. aboriginal vs non-aboriginal resident); and 3) differences in rights and resource uses (i.e. Wabauskang First Nation treaty and aboriginal rights).

All resort owners who responded to the survey were included in the commercial tourist operator group. Responses given by resort owners would be influenced by the direct importance of the fishery to their income and business opportunities, and differ from the views of other residents or anglers.

Wabauskang First Nation residents were in a separate group from other local residents due to this indigenous group's unique culture, and constitutional rights that would affect responses differently than those of a non-aboriginal resident.

Cottagers were in a separate group due to the differences in fishing opportunity as compared to those of a local resident. For example: cottagers visit during certain times of the year, whereas residents can fish all year round; cottagers are most concerned about the resources around the particular lake where their cottage is located, whereas a local resident, being more mobile, accesses a larger variety of lakes; and a local resident views



the watershed as home and a place to work and live, whereas a cottager views the watershed as a place to visit and relax.

Although all stakeholders are potential anglers, visiting anglers were considered in a group of their own because of differences in vested interest. All other stakeholder groups own property in the watershed and are less easily able to move to another watershed if resources are depleted. A visiting angler can easily move to fish another watershed with no personal loss to them.

A stratified sample was taken for two reasons. One, because of the diversity of the stakeholders involved, each group will have unique ideals and interests due to differences in resource use, cultural diversity, dependency on the fishery for income, etc., as described above. Secondly, a stratified sample minimizes any bias that may take place in the case where one group responding is larger than another group. For example, the total number of cottage owners in the Cedar River Watershed was approximately 261 of which 42 responded to the survey, whereas the total number of Wabauskang First Nation households was 22 of which 14 responded to the survey. From this example it is easy to see how results could be skewed towards the ideals of the larger group if all groups were analyzed together as one.

In order to survey such a diverse group of stakeholders, three questionnaires were designed, while ensuring each was capable of meeting the objectives of the research. Commercial tourist operators, permanent residents and cottage owners were given the same questionnaire as shown in Appendix I. Visiting anglers were given a questionnaire identical to that presented in Appendix I, with the exception that questions 28 to 36 inclusive and question 39 were not included. The main purpose of surveying visiting



anglers was to determine their attitudes towards various fishing management tactics and strategies. Questions 28 to 32 were considered, upon review by commercial tourist operators, to be a potential discouragement to the return of resort guests, and were thus excluded. The other exempted questions 33 to 36 pertained to the formation of a community - based watershed management organization, and question 39 to watershed issues other than the fishery.

Wabaskang First Nation residents were given the questionnaire presented in Appendix II in the form of interviews. The questions contained in Appendix II were designed to be more understandable from the point of view of a person of First Nation culture, taking into account the special rights and cultural attitudes of aboriginals.

Due to the establishment of treaty (Treaty #3) and aboriginal rights, the Wabauskang First Nation people are not subject to the same fishing regulations as other stakeholder groups. Fishing regulations that can be shown to have a direct effect on the sustainability and conservation of a species (e.g. sanctuaries to protect spawning walleye) are to be acknowledged by aboriginal people according to the *Constitution (Section 35, Aboriginal Rights)*. With the establishment of aboriginal rights, First Nation people do not have to abide by other regulations such as size restrictions and possession limits. However, most fishing pressure in the Cedar River Watershed comes from non-aboriginal, non-resident anglers, and regulations pertaining to these anglers are very important to protect the fishery from an aboriginal view point. The questions referring to fishing regulations asked Wabauskang First Nation people what strategies would be considered most effective to sustain the fishery. Questions dealing with exact strategies, such as what particular



protected slot size or limit would be preferred, were not asked of First Nation people who are not subjected to these specific measures.

Also, First Nation people do not commonly fish for “trophy size” fish, but consider all harvested fish to be used for subsistence (Berkes, *pers. comm.*, 1998). Thus questions concerning the size of ideal eating and ideal trophy size fish were not included in the questionnaire of Appendix II.

Before the survey was conducted a scoping process took place. First the survey questions were reviewed by academics and by the Ethics Committee of the Natural Resource Institute (University of Manitoba) to ensure that the questions proposed would meet the research objectives and be ethically acceptable. Once the survey questions were reviewed and modified accordingly, pilot tests were performed on each of the five stakeholder groups to affirm that the survey questions were understandable and queried the required responses. Once again survey questions were modified appropriately to produce the final drafts presented in Appendices I and II.

Surveys were performed on a household basis, or group basis in the case of anglers visiting the watershed. Therefore the questionnaires and interviews returned were to represent the opinions of those living in a household (e.g. family) or a group of anglers visiting together.

1.5.2a) Survey of Cottage Owners

Cottages are located on each of the various lakes and tributaries throughout the watershed which covers an area of 1741 square kilometres. Some cottagers stay in the watershed for the majority of the summer months, while a large number visit for a week or



weekend throughout the year. Because of the large area to cover and the variability of time in which cottagers are within the watershed, questionnaires were mailed out to this group during the first week of April 1998. A list of patent land owners and their addresses were received from the Ministry of Natural Resources (Kenora District), and a mailing list was compiled. Questionnaires were sent with return envelopes for all recipients, and return postage was included for those mailed to Canadian addresses to maximize return rates. A total of 261 questionnaires were sent out and responses were received in the months of May and June 1998.

1.5.2b) Survey of Commercial Tourist Operators and Residents

Commercial tourist operators (camp owners) and residents received questionnaires distributed in person, with some residents receiving questionnaires by mail (i.e. 11 respondents). When time permitted, these stakeholders were asked to fill out questionnaires in the form of an interview by the surveyor. Otherwise questionnaires were dropped off in person and retrieved in person. Having the researcher present when the questionnaire was completed was intended to maximize the return rate. Surveys were conducted during the summer months of 1997 and 1998.

1.5.2c) Survey of Wabauskang First Nations Residents

All First Nation people surveyed were surveyed by conducting interviews to maximize response. A member of the Wabauskang First Nation community was employed to assist in the interviews and act as an interpreter in cases where people were more comfortable speaking Ojibway. Also, another assistant, who was familiar to the community, was employed to assist in the interviewing process. By conducting interviews



and having people that were familiar to the community assist, it was thought that responses were maximized. A total of 14 First Nation residents were interviewed from 14 households out of a possible 22 households. Surveys were conducted in August of 1998.

1.5.2d) Survey of Visiting Anglers

There are many thousands of anglers that visit the watershed each year, most of which are from the United States of America. It was decided that a sample of anglers who represent the clientele to the tourism industry generated by the fishery resource should be surveyed to determine the attitudes of visiting anglers towards various fishery management regulations. In order to survey visiting anglers from as many lakes as possible, and to maximize the numbers of visiting anglers surveyed, assistance from various tourist operators was enlisted. Questionnaires were distributed to participating resort owners to be redistributed to their guests. It was requested that anglers given the questionnaire should have been visiting the area for a minimum of three years to avoid bias in the data. For example, if an angler has visited the area only once and experiences a “really good” fishing trip or a “really bad” fishing trip, this may bias the responses given to the questionnaire. However, a visiting angler who has experience fishing in the area over a period of two years or more should have a more realistic viewpoint of the fishery and answer accordingly.

It was also requested that questionnaires be distributed to visiting anglers throughout the summer months as the type of angler changes from month to month. In the months of May and June anglers visiting the watershed are usually more serious and are interested in catching large numbers of fish. During the later summer months visiting anglers are more



of the family vacation type and are not as serious about catching fish. Also the type of fish sought after varies during different times of the year. For instance, during the spring of the year lake trout and walleye are very popular depending upon the type of lake fished. As the summer progresses there are more smallmouth bass fishermen in the warmer months. Later summer brings more muskellunge and pike fishermen to the area.

A total of 20 anglers responded to the questionnaire, most being from Cliff, Cedar and Wabaskang lakes.

1.5.3 Summary of Methods

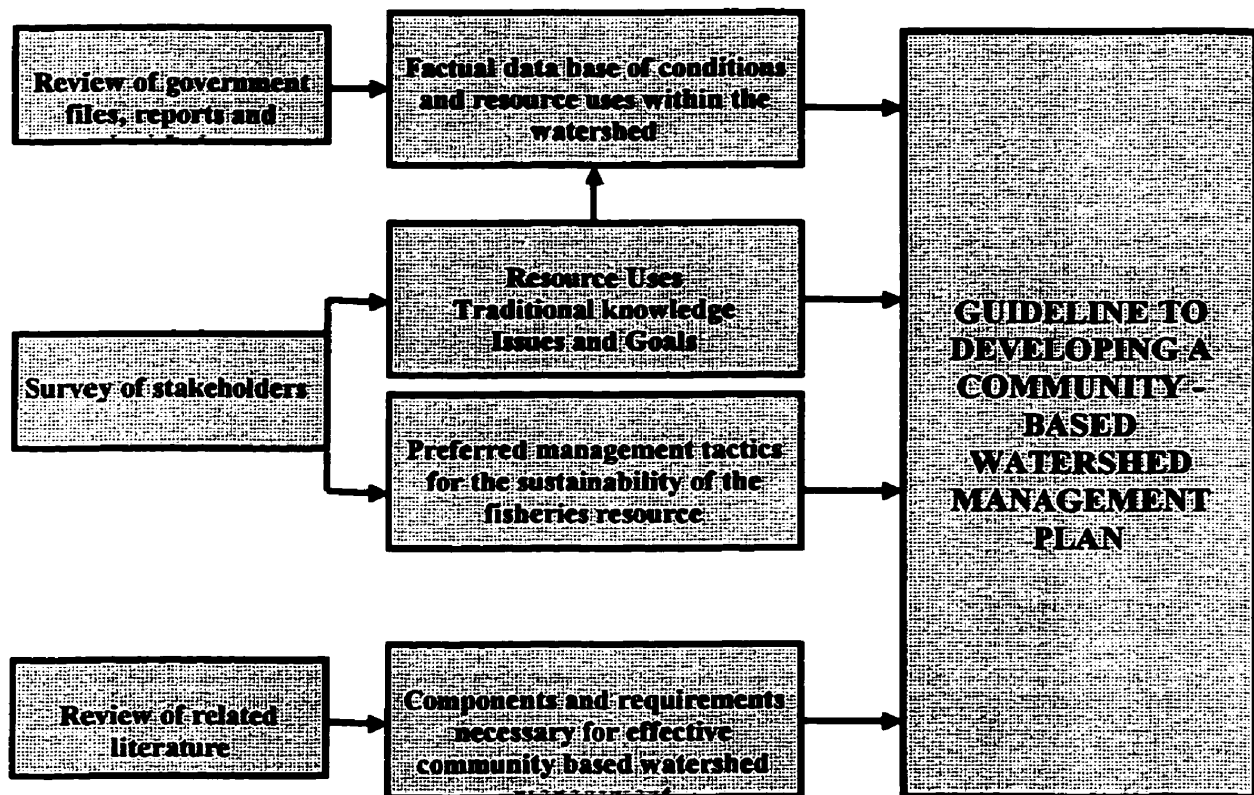


Figure 1.4: Flow diagram summarizing the application of the proposed methods to the formulation of a community - based watershed management plan for the Cedar River Watershed.



1.6 SCOPE AND LIMITATIONS

The purpose of this research paper is to provide a guideline/framework for the development of a community - based watershed management plan for the Cedar River Watershed with applications for similar developments in other Northern Ontario watershed communities. The actual watershed management plan must be designed by the stakeholders within the community. This research provides a starting point at which the process for developing a community - based watershed management plan can be elaborated in the Cedar River Watershed by using the model provided.

The development of the community - based watershed management plan is centered about the current issue of the sustainability of the fishery resource. This research paper focuses on the fishery resource and does not go into detail regarding other resource uses or issues within the watershed. The goals and objectives identified regarding the fishery resource issue will provide the necessary basis around which the stakeholders can be brought together to develop a community - based watershed management plan for the Cedar River Watershed. Once the basic structure of a community - based watershed management plan is in place, the stakeholders within the Cedar River Watershed community will have an organized, effective means to address additional watershed issues that may arise

1.7 ORGANIZATION

The research paper is organized into six chapters. The first chapter provides an outline of the research and research area, why the research was conducted, and the methods used. The second chapter gives an overview of the resource uses within the



Cedar River Watershed. The third chapter describes the components and elements that make up a community - based watershed management plan, as well as the processes involved. The fourth chapter presents a summary of the results of the survey which were used to determine which management strategies for ensuring the sustainability of the fishery resource in the Cedar River Watershed would be most acceptable or preferred by stakeholders. The fifth chapter combines the information from the previous two chapters and additional information available from the survey results to formulate a guideline/framework for developing a community - based watershed management plan for the Cedar River Watershed - a model that can be applied to other watersheds in Northern Ontario. The final chapter contains a summary, conclusions and recommendations for the application of a community - based watershed management plan in the Cedar River Watershed.



Chapter 2

2.0 RESOURCE USE IN THE CEDAR RIVER WATERSHED

2.1 LANDS FOR LIFE: ONTARIO'S NEW LAND USE PLANNING SYSTEM

Ontario's land and water base is comprised of over 87% Crown Land, of which most is located in Northern Ontario. The Ontario Ministry of Natural Resources (OMNR) is mainly responsible for managing the natural resources available on Crown Land. In the early 1980's the OMNR developed a land use system based upon broad regional land and water base use called *Strategic Land Use Plans* (SLUPs), and more sub-regional land and water bases called *District Land Use Guidelines* (DLUGs). The purpose of SLUPs and DLUGs was to provide the province with direction to manage Crown Land resources for the environmental, economic and social benefit of the people of Ontario, and to provide for the sustainability of these resources and benefits.

Since the development of the SLUPs and DLUGs in the early 1980's, the understanding of natural systems has continued to evolve and change, along with society's interests. Government agenda and policies have attempted to adjust to meet these changing needs and increasing complexities involved in resource management. In 1997 the OMNR began a revision of its planning process for Crown Land and natural resource management, and initiated the Lands for Life planning system. The purpose of the Lands for Life planning system was to involve the public more directly in the allocation of resources and resource management decisions.



Under the Lands for Life program, part of Ontario was divided into three broad regional sectors: Boreal West, Boreal East, and the Great Lakes - St. Lawrence planning areas (Figure 2.1). There are 39 million hectares of Crown Land contained in the three areas. Also, there are approximately six million hectares of private land, federal lands, and First Nation reservations contained in the three areas. The planning areas were selected based upon the large amount of Crown Land and resource use comprised within these areas. The area south of the planning areas is mostly privately owned, and the area north of the planning areas has very few people and little resource use (OMNR, 1998).

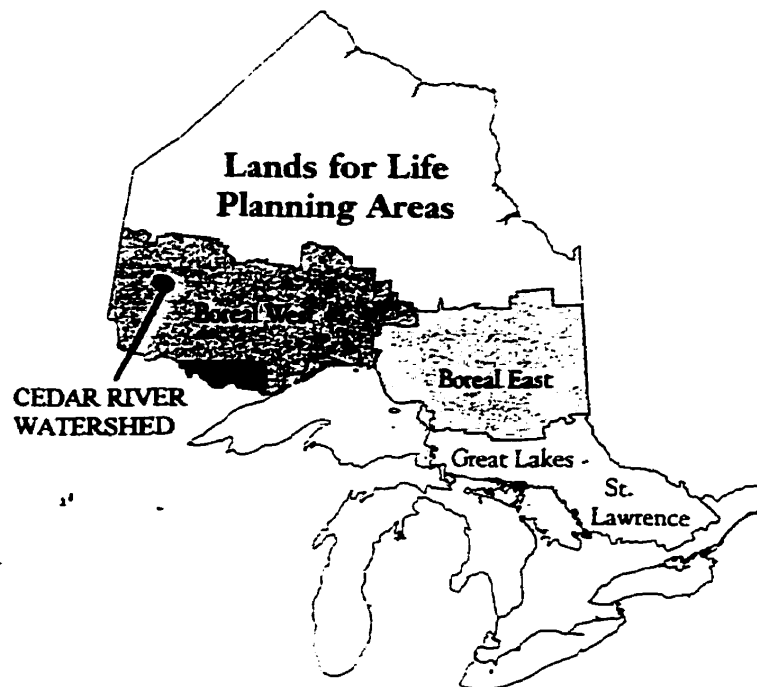


Figure 2.1: Map of Lands for Life regional planning areas and location of the Cedar River Watershed (OMNR, 1998)

Three Round Tables, consisting of representatives from various stakeholder groups, were appointed by the Minister to develop a regional land use strategy for the regions represented. Public consultation was included in the planning process. Recommendations



presented to the Minister were arrived at through a process of consensus. The objectives of the Lands for Life program are as follows (OMNR, 1998).

- To complete Ontario's system of provincial parks and other protected areas.
- To recognize the land use planning needs of the resource-based tourism industry.
- To provide the forest, mining and other resource industries with greater land and resource use certainty.
- To enhance angling, hunting and other Crown land recreational opportunities.

The new planning system developed by the Lands for Life process will be phased in over several years (figure 2.2). The following principles will apply during the transition phase as stated in "A Land Use Planning System for Ontario's Natural Resources" (OMNR, 1997 a).

1. *Strategic Land Use Plans* (SLUPs) will no longer be used as a source of direction. These will be replaced by the Lands for Life *Regional Land Use Strategies* (RLUSs) recommended by the Round Tables and directed by provincial legislation (e.g. *Public Lands Act, Mining Act, Environmental Assessment Act, Crown Forest Sustainability Act etc.*) and policy. As each RLUS is developed a review of these policies and proposed strategies will take place to apply to the administrative region or broader ecological region.
2. *District Land Use Guidelines* (DLUGs) will continue to guide local resource allocation decisions until the guidelines are replaced by *Regional Land Use Strategies* and *Sub-Regional Land Use Plans*.
3. Forest Management Plans and Park Management Plans will continue to be prepared and amended under existing processes. Other local resource management plans such as District Fisheries Management Plans may continue to be amended to provide local resource management direction. New local planning decisions will be scheduled to ensure a smooth transition.



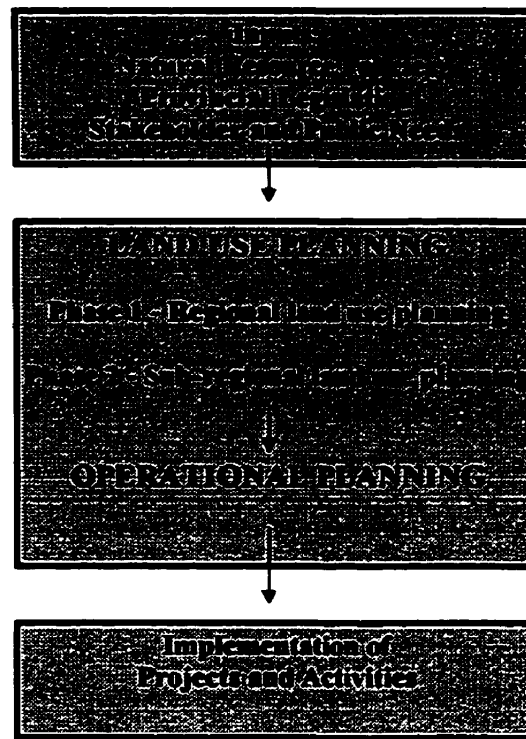
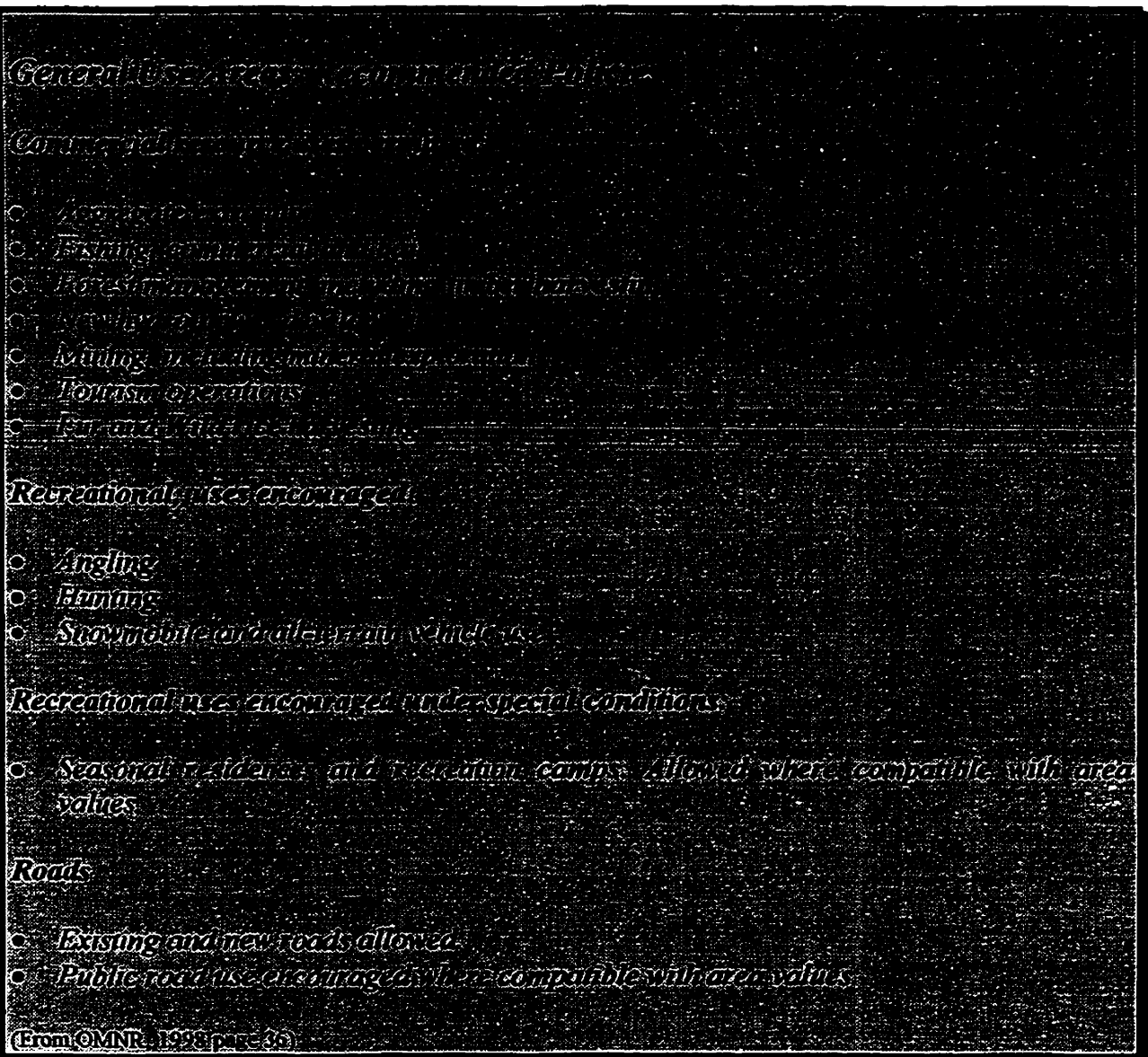


Figure 2.2: The OMNR planning system for natural resources. Steps in the Lands for Life process (OMNR, 1997 b)

Seven land use designations were recommended by the Round Tables which included new provincial parks, new conservation reserves, stewardship reserves, enhanced management areas, heritage waterways, Great Lakes heritage coastlines, and general use areas (OMNR, 1998). The Cedar River Watershed is located in the Boreal West planning area and is designated as a general use area. Under the *Boreal West Regional Land Use Strategy*, “general land use areas allow for a full range of resource and recreational uses. Significant heritage values would still be protected and land and resources would still be managed to a superior standard, as required by Ontario public lands legislation and policies such as the *Mining Act*, the *Crown Forest Sustainability Act*, 1994, and the *Class Environmental Assessment for Timber management*” (OMNR, 1998).





2.2 RESOURCE USE IN THE CEDAR RIVER WATERSHED

The following section provides a summary of the dominant resource uses within the Cedar River Watershed. Other resource uses exist in the watershed such as trapping, blueberry picking, snow mobiling, wildlife viewing etc., but are not listed below. Resource uses within the Cedar River Watershed are currently subject to the above *Boreal*



West Regional Planning Strategy, the Dryden District Land Use Guidelines Area 7 and Area 9 (OMNR, 1983), and applicable government legislation and policy.

Forestry Resource

The forestry industry is a major source of economic activity in Northwestern Ontario. Planned cutting areas are contracted out and provide many residents with employment opportunities. Soft woods (jack pine and spruce) and semi-hardwoods (poplar) supply pulp and paper mills in Kenora, Fort Frances and Dryden. Wood also goes to a stud mill in Ear Falls and a saw mill in Hudson. Poplar is supplied to a veneer mill in Nipigon.

Forest management planning is based upon forest management units (FMUs). Forest management plans are designed by the forestry industry companies under the guidelines of applicable governmental legislation and policy. It is a mandatory requirement that the public be consulted before any cutting is permitted. The final plan is submitted to the OMNR for approval. The Cedar River Watershed is located in the Whiskey Jack Forest Management Unit where Abitibi Consolidated Inc. holds the cutting rights.

Concern about the effects of cutting around water bodies on fish habitat and fish health, wildlife, and upon aesthetic values is an issue in the Cedar River Watershed. Most cutting is done as clear cut operations. Areas selected for timber harvesting that are adjacent to shore-lands that require protection to preserve fish habitat or water quality are identified as "areas of concern" (OMNR, 1988; OMNR, 1991). Timber harvesting in areas of concern must be modified as appropriate (Table 2.1). Forestry companies are allowed three harvesting options within areas of concern: no harvesting (i.e. area of



concern is designated as a reserve); selection cutting (removal of individual trees or small groups of trees) on a restricted basis; and shelterwood or limited clear cutting (e.g. strip or block cuts). The harvesting option allowed depends upon what is consistent with the protection of fish habitat (OMNR, 1988) and water quality (OMNR, 1991).

Areas of concern adjacent to lake trout lakes require special protection due to the sensitivity of these fish to sedimentation and water turbidity. At most, forestry companies are allowed to practice selection cutting in areas of concern adjacent to lake trout lakes (Table 2.1). Lakes classified as lake trout lakes in the Cedar River Watershed include Cliff Lake, Anishinabi Lake, Aerobus Lake and Wine Lake (OMNR, 1983). Sensitive areas such as walleye spawning grounds must also receive special protection (OMNR, 1988).

Bald eagles, white pelicans and piping plovers require extra protection under the *Endangered Species Act*. Osprey nesting sites and blue heron rookeries are also given special consideration, as well as moose aquatic feeding areas. A detailed map is provided at the back cover that shows the locations of bird nesting sites and moose aquatic feeding areas located in the Cedar River Watershed.

Forest companies are under no legislated obligation to leave forest reserves along highways or roads (OMNR, 1996). Guidelines are provided by the OMNR to assist forestry companies in creating more visually appealing cut patterns around highways and roads by employing a variety of cutting techniques (e.g. select cutting, shelterwood, block clear cuts, etc.) and clear cutting patterns (OMNR, 1987). The requirement of public consultation before a cutting plan is approved was designed to address the public's concern about the potential negative effects of cutting on the visual and aesthetic value of wilderness areas. However, resource based tourist outfitters have voiced dissatisfaction



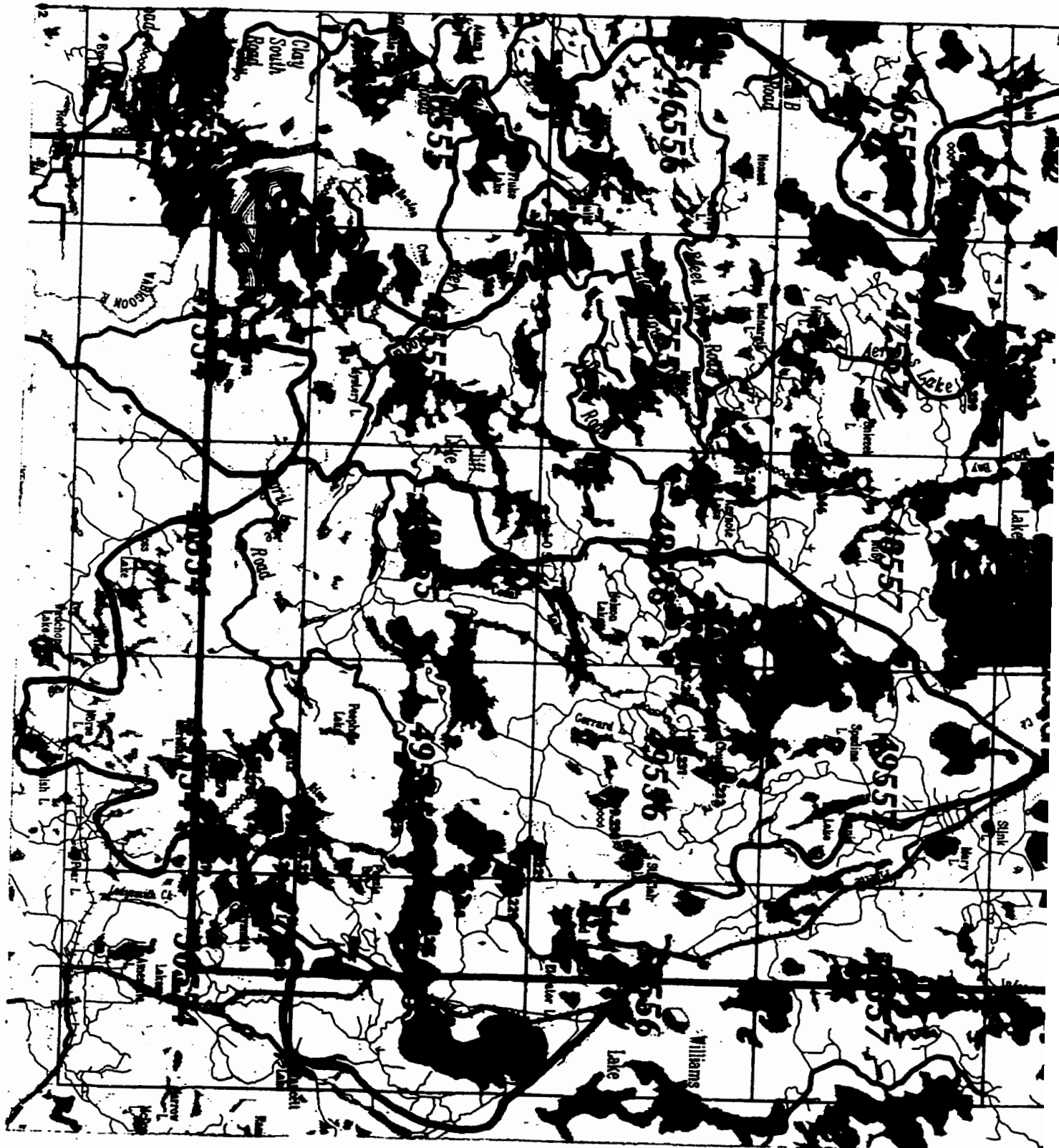
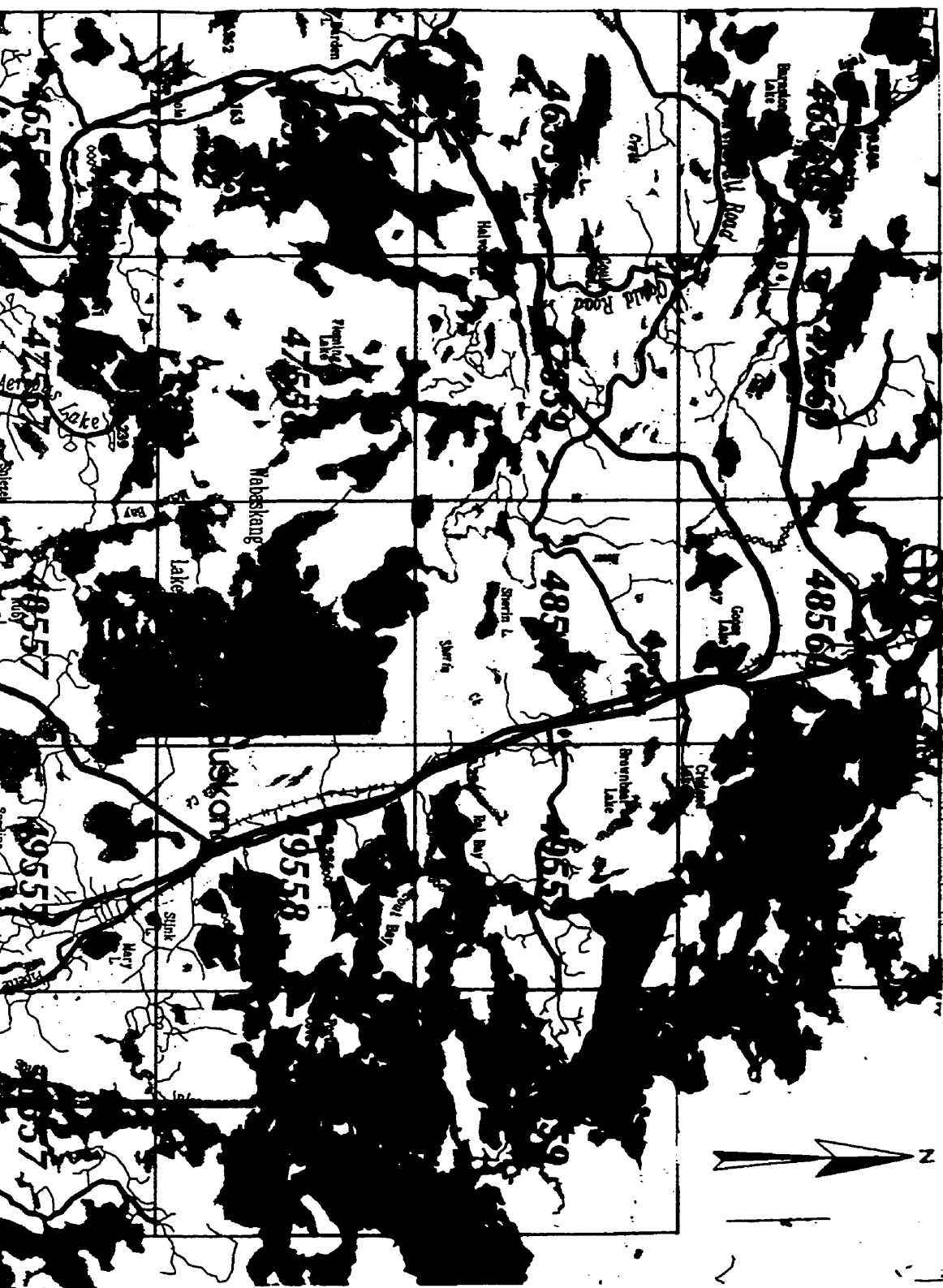
















Figure 2.3: Proposed 1999 to 2004 Whiskey Jack Forest Allocation Map (Abitibi Consolidated Inc. 1998)

**Whiskey Jack Forest
Management Plan
For The
Cedar River Watershed**

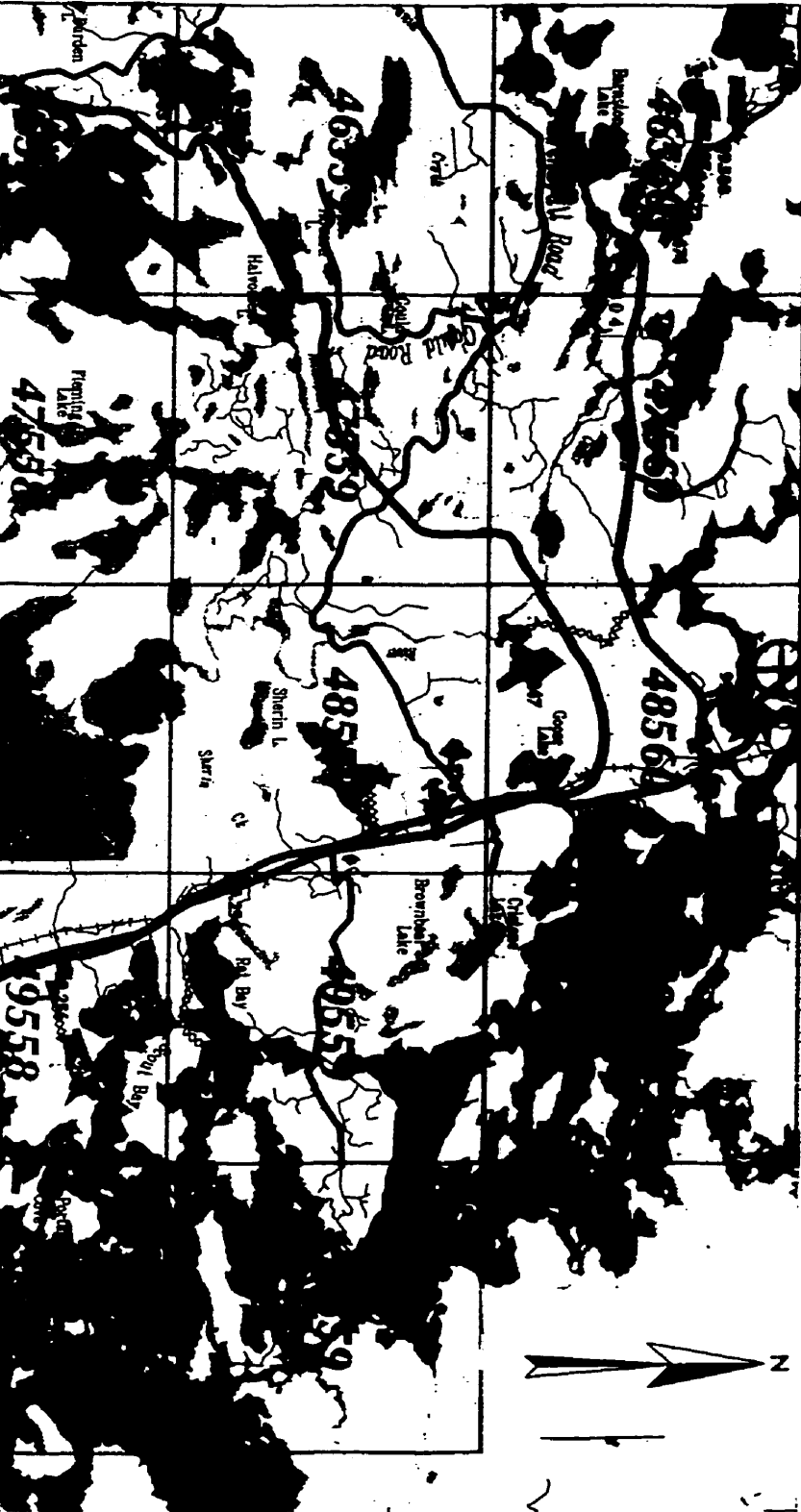


-  Highway
-  Railway
-  Road
-  Trail
-  Forest Management (F.M.A.) Boundary
-  Lake
-  Planned Area
-  Previously Approved Cutting Area Not Yet Harvested
-  Ontario Base Map (Map Sheets)
-  Proposed Secondary Road
-  Proposed Tertiary Road
-  Proposed Road Corridor
-  Wabauskang First Nation
-  Cedar River Watershed Boundary





Whiskey Jack Forest Management Plan For The Cedar River Watershed

















-  Highway
-  Railway
-  Road
-  Trail
-  Forest Management Area (F.M.A.) Boundary
-  Lake
-  Planned Area
-  Previously Approved Cutting Area Not Yet Harvested
-  Ontario Base Map (OBM) Map Sheets
-  Proposed Secondary Road
-  Proposed Tertiary Road
-  Proposed Road Corridor
-  Wabauskang First Nation
-  Cedar River Watershed Boundary

Table 2.1: Timber management guidelines for the protection of fish habitat - A summary (OMNR, 1988 p3)

FISH HABITAT	SLOPE	WIDTH OF AREA OF CONCERN*	MODIFICATIONS TO TIMBER MANAGEMENT OPERATIONS WITHIN AREAS OF CONCERN			
			Roads	Landings	Harvest Options	Mechanical Site Preparation
1. Lake Trout Lakes, Self Sustaining Brook Trout Lakes, Aurora Trout Lakes	0 - 15% 16 - 30% 31 - 45% 46 - 60%	30m 50m 70m 90m	NO	NO	<ul style="list-style-type: none"> ♦ No harvesting ♦ Selection cutting on restricted basis; avoid damaging banks, keep debris away, avoid occurrence of erosion 	NO
2. Other Lakes	As above	As above	NO	NO	<ul style="list-style-type: none"> ♦ No harvesting ♦ Selection cutting on a restricted basis ♦ Shelterwood or limited clear cutting; do not cut near critical fish habitats or roads 	Restricted; minimize exposure of mineral soil, orient furrows at right angles to slope
3. Cold water streams	As above	As above	Stream crossings only	NO	Same as #1, Lake Trout Lakes; maintain shade on both sides	NO
4. Cool water and Warm water Streams	As above	As above	Stream crossings only	NO	Same as #2, Other Lakes; no shelterwood or clear cutting upstream of critical fish habitats	Same as for #2, Other Lakes

* Width may have to be greater to reduce the risk of blowdown

with the amount of input they have when it comes to making decisions about where and how to cut. To address this problem, the Lands for Life Round Tables have made recommendations to increase the input of tourist outfitters into forest management planning, (e.g. the size of “buffer areas” (i.e. reserves)), through the establishment of resource stewardship agreements between forestry companies, tourist outfitters and the provincial government (OMNR, 1998 - recommendations 45 to 55).

Road construction and water crossings can have a significant impact on fish habitat (e.g. spawning grounds), water quality (e.g. turbidity) and fish migration. Road and water crossing construction must follow the Environmental Guidelines for Access Roads and Water Crossings whose standards are enforced by the *Crown Forest Sustainability Act*. The *Crown Forest Sustainability Act* states that forest companies must follow the Forest Operations and Silvicultural Manual which lists the above guidelines.

Forestry companies require permits or applications of approval from federal and provincial Acts before access roads and water crossings can be constructed (OMNR, 1990). Federal Acts include: *The Fisheries Act*, *Navigable Waters Protection Act*, and *The Railway Act* for example. Provincial Acts include: *Crown Forest Sustainability Act*, *Environmental Assessment Act*, *Environmental Protection Act*, *Forest Fire Prevention Act*, *The Lakes and Rivers Improvement Act*, *The Mining Act*, *Ontario Water Resources Act*, and the *Public Lands Act* as examples.

Mining Resource

Exploration and extraction for mineral resources is permitted in the Cedar River Watershed (OMNR, 1983). Currently there are no mining sites in the Cedar River



Watershed. Mineral exploration and claim staking has taken place over the years by mining companies and prospectors, but as of yet no areas have been developed.

Tourism Resource

Tourism generates a large portion of the economic activity in the Cedar River Watershed. There are currently 27 tourist establishments located on the various lakes throughout the Cedar River Watershed (see map provided at back cover). The tourism industry is very closely related to the fishery resource as many people come from abroad to the Cedar River Watershed to experience the sport fishing. The fishery resource is described below. Hunting also provides some tourist activity as well as the natural wilderness and the scenery provided by the watershed.

Fishery Resource

The fishery resource is a very important resource to the Cedar River Watershed. Most fishing activity in the Cedar River Watershed is in the form of sport or recreational fisheries which are the focus of this research report. The tourism industry, which provides a large amount of economic activity in the watershed, is heavily dependent upon the sport fishery.

Walleye is the main species of sport fish sought by anglers. Other important game fish found in the Cedar River Watershed include the northern pike, smallmouth bass, muskellunge, lake trout and yellow perch.



Table 2.2: Abundance of sport fish species and amount of angling pressure for the larger lakes within the Cedar River Watershed.

Lake	Walleye	Northern Pike	Smallmouth Bass	Lake Trout	Muskellunge	Yellow Perch
Ord & Thaddeus	AS	AS	SS	NON	SS	AS
Cedar	AS	AS	AS	NON	SS	AS
Cliff	SS	SS	AS	AS	SS	AN
Perrault	AS	AS	AS	NON	NON	AS
Wabaskang	AS	AS	SS	SS	NON	AS
Florence	AS	AS	NON	NON	NON	AS
Wine	AS	AS	SS	AS	NON	AS
Anishinabi	NON	AS	NON	AS	NON	AN
Aerobus	NON	AS	NON	AS	NON	AS

AS = abundant population; sought by anglers

SS = small population; sought by anglers

AN = abundant population; not commonly sought by anglers

NON = not known to lake; possible rare occurrence

Commercial fishing for lake whitefish occurs on Cliff, Cedar, Perrault and Wabaskang lakes within the watershed. Cedar, Perrault and Wabaskang are licensed to be commercially fished for lake whitefish every year. Cliff Lake is licensed to be commercially fished for lake whitefish every two years. Fishing occurs in the fall, usually October, when the lake whitefish are migrating in large schools to spawning areas. Fishing large schools of lake whitefish along migration routes minimizes by-catch (i.e. fish caught in nets other than those sought) of other fish species.

Bait fishing is also allowed in the Cedar River Watershed (OMNR, 1983). Bait fishing is licensed in areas called bait fishing blocks. Commercial bait fishermen provide the watershed and surrounding areas with minnows (Cyprinidae and Catostomidae) for tourist resorts and bait outlets.



Hunting

Hunting opportunities exist in the watershed for small game such as ruffed grouse and ducks, as well as larger game including moose and bear. Hunting provides opportunities for tourism, as well as recreational and subsistence hunting for both aboriginal and non-aboriginal residents.

Wild Rice

Wild rice picking is permitted in the Cedar River Watershed (OMNR, 1983) to be harvested by aboriginal peoples. Wild rice stands are located in Keynote Lake, Goose Lake, Gawley's Bay on Wabaskang lake, Florence Creek and where Florence Creek flows into Wabaskang Lake, and where Jack Fish Creek flows into Perrault Lake. Wild rice harvesting provides an important part of the First Nation people's income and diet.

Cottaging

Cottage developments are permitted on most every large accessible lake within the watershed (see map provided at back cover). The Ontario Strategic Lands Initiative is promoting the sale of Crown Land (to begin in 1999) which will include some recreational camps and cottage lots. Crown Land on trout lakes is not open for development until provincial policy on lake trout lakes presently being reviewed is released (Ward, *pers. comm.*, 1998).



2.3 CHAPTER SUMMARY

The above chapter outlines the main resource uses that occur in the Cedar River Watershed. Forestry and tourism generate most of the resource use in the watershed. The tourism industry is heavily dependent upon the fishery resources within the watershed. The fishery resource is also important to both aboriginal and non-aboriginal residents for enjoyment and food. Cottagers are other resource users that value the fishery resources. It is apparent that many resource users either depend upon the fishery resource for their personal well being, or can affect the fishery through the development of other resources (e.g. forestry). Due to the variety of resource uses and interests within the watershed, conflicts to resource management are not uncommon.

The focus of this research paper is the development of a community - based watershed management plan as a means to arrive at workable solutions for managing the watershed resources that are compatible to all stakeholder interests. The development of this watershed management plan is centered about the issues regarding the sustainability of the fishery resource.

The following chapter three reviews watershed management in Ontario; examples of community - based watershed management plans from Ontario, Canada, and abroad; and approaches to multi-stakeholder decision making processes. The findings made in chapter three are then applied to the construction of a framework for community - based watershed management in the Cedar River Watershed, with applications towards watershed management in other Northern Ontario communities.



Chapter 3

3.0 COMMUNITY - BASED WATERSHED MANAGEMENT

3.1 THE LOGIC OF WATERSHED MANAGEMENT

A watershed is an ecological unit which is comprised of all the land drained by a river and its tributaries, including all bodies of water contained therein (e.g. lakes). The boundary of the watershed provides a physical definition of the area considered, providing a natural boundary for which human activities on land and water affect the aquatic and terrestrial ecosystem (Ontario Ministry of Environment and Energy, 1993). Because of the ecological links between land and water, watershed management allows for a holistic approach to be taken to natural resource management. By basing management decisions on the watershed unit as a whole, the effects these decisions have on the delicate balance between terrestrial systems and aquatic systems are taken into consideration. In order for natural resources to be managed in a sustainable manner, these relationships must be taken into account. For example, a forest may be managed on a sustainable yield basis by deciding upon how much forest to cut, when to cut, how to replant, and so forth. However, in order for the management plan to be truly sustainable, the effects forest cutting may have upon the aquatic and other systems must also be taken into account. It is well known that the removal of trees close to water systems can be devastating to the aquatic ecosystem due to such problems as erosion, the removal of shading, etc. Planning of where and how to build roads necessary to get access to the trees, present additional



potential problems because of the effects of sedimentation caused by water crossings. Taking a holistic approach at a watershed level helps to assess the cumulative effects of water crossings (and clear cutting) on downstream aquatic environments (partially addressed in the *Forest Management Planning Manual for Ontario's Crown Forests* under second order watersheds).

Not only does watershed management take an holistic view towards ecosystems, but it also considers the relationship between the ecosystem and the human systems of economy and society. There is often a community of people living within or near the watershed boundary who use and depend upon the watershed resources for their economic and social well-being. Watershed management allows for the interdependency of environment, economy and society to be considered when making resource management decisions. True sustainability can only be accomplished when all the above three factors of community are taken into account in the management strategy.



Figure 3.1: Louise Rapids is not only a beautiful place, but also serves as an important spawning ground for walleye in Cedar Lake.

Community - based watershed management is a strategy that combines the aspects of community and environment towards the sustainable management of natural resources. A community - based watershed management plan is a management strategy that involves the active participation of, and the cooperation between, government agencies, the public, and other stakeholders that have a vested interest in the watershed, towards developing policies for the long-term sustainability of the watershed resources (Manitoba Department of Natural Resources, 1992; Fraser Basin Management Program, 1993; National Rivers



Authority, 1993). The following sections further describe the concept of community - based watershed management, the components there of, and how this strategy for resource planning leads to sustainability.

3.2 A BRIEF OVERVIEW OF CURRENT WATERSHED MANAGEMENT IN ONTARIO: A NEED FOR CHANGE

Management of natural resources on a watershed basis is not new to Ontario. In the early 1940's the *Conservation Authorities Act* was established. This act gave conservation authorities jurisdiction over natural areas based upon watersheds in the more populated areas of Southern Ontario (Ontario Ministry of the Environment and Energy, 1993). Conservation authorities are legislating bodies created by the Ontario government when requested by two-thirds of the participating municipalities (Osborne, 1995). In the early stages of watershed management, provincial authorities concentrated upon taking inventories of existing conditions in the watershed, gradually moving towards concerns about the carrying capacity and integrity of the ecosystem (Ontario Ministry of the Environment and Energy, 1993). Although conservation authorities were viewed as a practical response to dealing with watershed problems (Pope, 1981 as cited in Osborne, 1995), water use and land use management strategies were not integrated together (Ontario Ministry of the Environment and Energy, 1993). Also, the provincial government traditionally used a "top down" approach when dealing with watershed issues and problems. Watershed management decisions have been made by different levels of government and various agencies, with little to no communication between departments, and between government and the public (Viessman, 1990). This type of piecemeal



approach by government towards the solving of watershed management problems is often costly and/or ineffective because of overlapping jurisdictions, inefficient delivery of services, and gaps where no one seems to be in charge (Fraser Basin Management Program, 1993). Better coordination among planning and management agencies, and greater consistency among plans, regulations and actions remains a problem (Viessman, 1990).

The multidisciplinary nature of environmental problems makes it impossible for one agency to find the solution (Pizor and Holler, 1987), but requires a partnership of government and other stakeholders to agree upon a course of action to accomplish attainable solutions (Manitoba Department of Natural Resources, 1992). Viessman (1990) stated that there is a need for a watershed management plan that will provide for coordination and consistency among the several levels of government that is critical for both efficiency and success of watershed management. Emphasis must be placed on the development of regional institutions devised to take an holistic approach to watershed management.

According to Irland (1975), as cited in Pizor and Holler (1987), citizen participation (i.e., the active involvement of publics in planning and decision-making) is a necessary part of a legitimate watershed planning process. Political conflict between administrators, managers, engineers, and planners over resource use results in management decisions that do not satisfy all public interests (Pizor and Holler, 1987). Planners with a heightened awareness of public preferences can formulate meaningful planning solutions to watershed management (Pizor and Holler, 1987). The Ontario Ministry of Environment and Energy recommended that stakeholders be invited to participate in watershed management



planning. The province sees stakeholder participation in planning processes as a way to boost planning efficiency by reducing duplication, overlaps, delays and information gaps, which will in turn reduce costs (Ontario Ministry of the Environment and Energy, 1993).

The above section indicates that in order to manage watershed resources effectively and practically management plans must take an holistic, regional and ecological approach to management issues, and facilitate the cooperation and communication between all managing agents. This implies a watershed management plan that involves all related government agencies as well as stakeholders and the public citizens within the watershed region in the planning process. With the reduction of provincial government staff and programs, communities in Northern Ontario, such as the Cedar River watershed, are in need of comprehensive, community oriented, watershed management plans to ensure the sustainability of watershed resources.

3.3 COMMUNITY - BASED WATERSHED MANAGEMENT EQUALS SUSTAINABILITY

The sustainability of natural resources, and the social and economic benefits derived from these resources, is often referred to in the literature in the terms of the concept of “sustainable development”. Sustainable development is proposed as a solution to sustainability problems that takes into account the links between economy, society and the environment (Hart, 1997; Manning, 1990).

Sustainable development was defined by the World Commission on Environment and Development (or Brundtland Commission) (1987) as “development that meets the needs of the present without compromising the ability of future generations to meet their own



“Natural resources should be managed on a sustainable basis to provide for the environmental, social and economic well being of the people of Ontario.” (Ontario Ministry of the Environment and Energy, 1993).

needs.” Canada’s National Task Force on the Environment and Economy defines sustainable development as “development which ensures the utilization of resources and the environment today does not damage prospects for their use by future generations” (National Task Force on the Environment and Economy, 1987). Sustainable development is viewed by Manning (1990), as an optimistic concept which can provide solutions to sustainability problems, while still permitting and even encouraging development, as long as this development builds upon the strengths of the environmental resource base, and does not violate natural constraints.

The fate of the watershed rests largely with the people that live within the watershed and upon those who have a vested interest in the watershed resources (Manitoba Department of Natural Resources, 1992). Decisions that effect sustainability are made by every individual within the watershed during the daily routine of their lives. Adopting a sustainable watershed management plan will require input, and possible changes, from all levels and sectors of society. In the past, changes that have been necessary to promote sustainability have not successfully occurred when orchestrated using a “top down” approach (Baily, 1990). Successful changes require “the coordination of efforts of all members of the (watershed) community working in their own ways, within their own sphere of influence toward a common goal for sustainability” (Baily, 1990). Manning (1990) stated that it is a must to find ways to involve all decision makers as partners in the solutions towards sustainability. Public participation and input are extremely important



“Sustainable development means the provision of a high quality of life for watershed stakeholders and residents to enjoy the amenities of the watershed and its surroundings for outdoor recreation, fish and wildlife, and a beautiful place simply to enjoy in harmony with food production and economic activity.” (Manitoba Department of Natural Resources, 1992).

elements of a successful and effective watershed management plan aimed towards sustainability (Gilles, 1989; Beesley, 1994).

A community - based watershed management plan is a management strategy that involves the active participation of, and the cooperation between, government agencies, the public and other stakeholders that have a vested interest in the watershed, towards developing policies for the long term sustainability of the watershed resources (Manitoba Department of Natural Resources, 1992; Fraser Basin Management Program, 1993; National Rivers Authority, 1993). Case studies in British Columbia on community - based watershed management by Pinkerton and Weinstein (1995), showed that local groups and watershed stakeholders are usually the best judges as to what type of management plans are most likely to work towards the sustainability of the watershed.

Due to its relatively small geographical area, a watershed has a high likelihood that stakeholders and residents will have influence on each other for the purpose of group involvement in resource management planning (Osterman et. al., 1989; Fraser Basin Management Program, 1993). Community - based watershed management, by occurring at the watershed level, allows for the stakeholders and citizens involved to feel they are part of a community and recognize the dynamics of activities occurring in the watershed (Osterman et. al., 1989). Because a community - based watershed management plan includes input from all stakeholders and government agencies in the making of



“The innovation and commitment required to solve environmental, economical, and social problems will only come from the cooperative and coordinated efforts of the residents (and other stakeholders) whose interests are most affected. Watersheds logically bring people together over the vital requirements of (land) and water. Perhaps real, measurable progress towards sustainable livelihoods can occur within watershed communities.”
(Osborne, 1995)

management decisions, broad regional objectives, and coordination among agencies in watershed management are possible, which are important parts of a comprehensive watershed management plan (Gilles, 1989). Regional goals acknowledge the distinct characteristics of a region and encourage more focused approaches to watershed management (Beak, 1992).

In summary, watersheds provide an ideal setting for the establishment of community - based management strategies. By including local citizens and other stakeholders, who have a vested personal interest in the watershed resources, in management decisions, community - based watershed management plans:

1. Are motivated towards sustainability.
2. Present a broad regional and holistic view to watershed management.
3. Are focused and efficient watershed management strategies.



3.4 COMPONENTS OF A COMMUNITY -BASED WATERSHED MANAGEMENT PLAN

3.4.1 The Steering Committee

The steering committee is the keystone to the community - based management plan. It is the steering committee that has the responsibility for developing and implementing a plan of action that reflects the various views of the stakeholder groups represented (Manitoba Department of Natural Resources, 1992). It is also the responsibility of the steering committee to provide advice and recommendations to the government regarding the implementation of planning objectives (Gilles, 1989).

The steering committee can also be referred to as the round table and/or the advisory board, all of which serve the same basic function (see for example: Assiniboine River Management Advisory Board, 1995; PEI Round Table on Resource Land Use and Stewardship, 1996; Fraser Basin Management Program, 1995). The steering committee is an organized assembly of representatives from the various watershed stakeholder and citizen groups that accommodates all interests within the watershed (Manitoba Department of Natural Resources, 1992). The general public, as well as government organizations, must be widely and equally represented as members of the committee (Bailey, 1990; Manning, 1990; Ontario Round Table on the Environment and Economy, 1997). Members of the steering committee should include representatives from the federal, provincial, local and First Nations governments, as well as representatives from the community including business, environmental, educational, labour and public interest groups affected by the sustainability of the watershed (Fraser Basin Management Program, 1993; Assiniboine River Management Advisory Board, 1995;



PEI Round Table on Resource Land Use and Stewardship, 1996). By representing both government and non-government agents, the steering committee brings together a diverse collection of expertise and knowledge. Equal representation encourages the development of strategies based upon what is best for the entire assortment of watershed stakeholders, and discourages strategies based on a narrow viewpoint of one or a few stakeholders (Fraser Basin Management Program, 1993).

Who Are The Watershed Stakeholders?

Watershed management decisions will affect various stakeholders. Barry Feyerabend (1995) lists the following groups as being most affected by management decisions and thus having the most stake in the watershed:

- 1. The communities who live within or close to the watershed.*
- 2. The people who receive a benefit from the watershed's natural resources.*
- 3. The people who possess knowledge, capacities and aspirations that are relevant to the watershed's management.*
- 4. The people who recognize in the watershed a unique cultural, religious or recreational value.*
- 5. Businesses and industries (e.g. tourist operators, water users) who can be significantly affected by the status of natural resources within the watershed.*
- 6. Special agents such as government agencies and administrative authorities who deal with various resource sectors.*

In this paper, stakeholders will be defined according to the definition offered by Hutchinson and Sinclair (1994), as being those people who use the watershed resources and who can affect, or are affected by, resource management decisions in the watershed, or those who could block or delay these decisions (Hutchinson, 1995).

Adapted from Barry Feyerabend, 1995, p. 6. Research unreported.



Representatives on the steering committee must be well informed about issues particular to the watershed (Pinkerton and Weinstein, 1995). It is believed that a better informed group makes better decisions. It is also advised that the steering committee not be too large, while at the same time still able to represent the views of all stakeholder groups. If there are too many people on the steering committee there may be too many interests for a workable process (UMA Environmental, 1997). There needs to be a degree of balance when assembling the steering committee (Pinkerton and Weinstein, 1995). Members of the steering committee are strictly volunteers and should not expect any



Figure 3.2: Public meeting held in the spring of 1996 to discuss issues concerning the Cedar River Watershed.

compensation for any personal expenditures that may occur while attending meetings (Manitoba Department of Natural Resources, 1996). The role of the committee and the responsibilities of each member should be clearly defined at the start of the process. The members chosen to be on the

committee should have the authority, time and commitment to donate to the watershed management plan, and be willing to negotiate and work together on a group level to resolve potential conflicts and differences that may arise (UMA Environmental, 1997).

Working together can be very challenging and a coordinator or facilitator is highly recommended for successful functioning of the steering committee (e.g. Fraser Basin Management Program, 1993; Manitoba Department of Natural Resources, 1996; Osterman et. al., 1989; Ontario Ministry of Environment and Energy et al, 1995; UMA Environmental, 1997 etc.). The facilitator must be perceived to have appropriate stature, power, and purpose (Pinkerton and Weinstein, 1995). Provincially organized community -



Choosing the Steering Committee

Members of the steering committee should be chosen from among the watershed's stakeholders. The steering committee should be representative of the watershed's community and should include members from all major sectors of the watershed's community.

Guidelines for Choosing the Steering Committee

1. Community representation (e.g., residents, users, and businesses)
2. Geographic representation (e.g., all major sectors of the watershed)
3. Balance of interests (e.g., users, businesses, and residents)
4. Loss of interests (e.g., users, businesses, and residents)
5. Historical and cultural values (e.g., users, businesses, and residents)
6. Degree of economic and social relations (e.g., users, businesses, and residents)
7. Degree of political and social relations (e.g., users, businesses, and residents)
8. Equity in the process (e.g., users, businesses, and residents)
9. Compatibility of the interests and values of the stakeholders with cultural and conservation and development policies
10. Present or potential impact of activities of the stakeholders on the resource

Stakeholders who score high on several of these criteria may be considered as primary stakeholders and be considered as candidates for the steering committee. As resource issues change and evolve, more stakeholders may need to be added to the steering committee. Thus, the committee should be flexible to incorporate all stakeholders involved as needed.

The selection of members to the steering committee will be unique to each watershed and resource issue. The above guidelines are meant to offer assistance when deciding upon the steering committee. Any decisions made should include the input from all people within the watershed's community.

Adapted from *Watershed Management*, 1995, p. 28.



based watershed management plans recommend that the facilitator be a member of the provincial government with expertise in the field of resource management planning, usually a member of the provincial natural resources department (see for example Manitoba Department of Natural Resources, 1992 and 1996; Ontario Ministry of the Environment and Energy, 1993; Fraser Basin Management Program, 1993; etc.). A facilitator from the provincial government also provides another important function in that decisions made by the steering committee must fall within the bounds of applicable legislation. A facilitator from the provincial government will be familiar with legislation that any decisions made by the committee must adhere to.

The steering committee is to meet on a regular basis to discuss issues and possible solutions regarding the management of the watershed. Rules for procedure of the meetings are to be established, agreed upon, and consequently honored by all members. Members of the committee are expected to attend meetings and show up on time. Meetings should start at the time agreed upon to encourage punctual attendance (Towle, *pers. comm.*, 1997). The meetings should be organized and structured. An agenda of each meeting should be sent to each member of the steering committee and the public well in advance. This will ensure that committee members are able to prepare themselves for an informed discussion at the meeting, and also enable them to confer with the stakeholder group they represent. This is very important as each committee member is responsible for representing the views of the stakeholder group they represent, and not just their own individual views (Towle, *pers. comm.*, 1997). If a stakeholder group expresses dissatisfaction with the committee member representing them, it is up to the committee to find a suitable replacement.



A steering committee chairperson and vice-chairperson should be elected. In some instances the chairperson also fills the role of facilitator (UMA Environmental, 1997). It is also necessary to have a secretary appointed to record the minutes of each meeting and a treasurer to handle and keep track of funds (Towle, *pers. comm.*, 1997). Other positions may be decided upon by the committee as is required to meet particular planning needs. Subgroups may be appointed to handle various tasks as necessary, as directed by the steering committee (UMA Environmental, 1997). Each position may rotate amongst the members of the steering committee as the plan matures according to what is preferred by the group. All minutes from meetings, and transactions made by the steering committee must be made easily and readily available to the general public.

Stakeholder involvement requires educational and technical assistance (Manitoba Department of Natural Resources, 1996). The government authorities are responsible for providing the steering committee with the necessary support staff and resources required to successfully accomplish the watershed management plan (Minnesota Department of Natural Resources, 1992; Fraser Basin Management Board, 1993). The formation of a technical advisory group can provide the necessary technical and scientific information required by the steering committee. Section 3.4.2 provides a more detailed description of the formation and function of a technical advisory group.

Efforts should be taken to make the stakeholders the dominant force in the implementation of the watershed management plan (Osterman et. al., 1989). Stakeholders need to be involved not just consulted (Fraser Basin Management Program, 1993). The steering committee must be a true co-manager with the government in that the decisions



Sample Rules for the Steering Committee Meeting

- All members of the steering committee should be present at all meetings.
- Meetings will start at 7:00 p.m. and end at 9:00 p.m.
- Minutes will be taken and all committee members will be responsible for reviewing them.
- Each member will be given 10 minutes to discuss any agenda item.
- The Chair will manage all agenda items.
- One designated time will speak and there will be no interruptions.
- No one participant will dominate the discussion and the Chair will set a time limit if necessary.
- A ten-minute "cool off" break will be called if discussion becomes personal or confrontational.
- Group decisions will be made by consensus. Where consensus cannot be reached the decision will be revisited at the next meeting or an alternative method for making a decision unanimously agreed upon by the committee will be used.
- The public may be permitted to attend committee meetings as an audience, but are not involved in the decision-making process.
- The audience can be requested by the Chair to provide input, or may request the Chair to include their presentation as an agenda item.

Adapted from EPA Environmental (1997), Part C, page 9.

made by the committee will be seriously addressed by the governing officials and no decisions will be overturned without principled and clearly articulated reasons explained fully to the stakeholders (Pinkerton and Weinstein, 1995). If the government frequently overturns planning strategies made by the steering committee without explanation, the community-based watershed management plan will fall apart and old problems will return



(Pinkerton and Weinstein, 1995). Section 3.6 provides more detail on multi-stakeholder decision making processes and degree of decision making power involved in community - based watershed management planning.

In summary, the steering committee plays a very important role in the development of a community - based watershed management plan. The steering committee is responsible for representing all stakeholders for the development and implementation of the community - based watershed management plan. The roles, leadership and responsibilities of each member must be clearly defined regarding the committee and the represented public. The steering committee is also responsible for keeping all community members informed and involved in the watershed management planning process. A list of stakeholders for the Cedar River Watershed is given in Table 5.1, and recommendations on a process to select steering committee members is outlined in chapter five.

3.4.2 Technical Advisory Group

The establishment of a technical advisory group for the process of community - based watershed management is recommended in many community - based watershed management plans including the Fraser River Management Plan, the Gander River Management Association, the Dauphin Lake Basin Management Plan and the Winkler Aquifer Management Plan for example. The technical advisory group is comprised of representatives from various provincial and federal agencies that can provide the technical support necessary for the watershed management plan development (Manitoba Department of Natural Resources, 1996). It is recommended that the steering committee have the authority to request government to make available such employees of



governmental departments as may be necessary to provide technical advice and information on various issues relating to the watershed (Manitoba Department of Natural Resources, 1996).

Commonly the technical advisory group prepares a background report as to the current situation of the watershed and the watershed resources, and presents this to the watershed stakeholders and residents at the beginning of the planning process (Manitoba Department of Natural Resources, 1992). The information contained in the background report, and all other additional and future information, should be made available to members of the public in a form that the general public can understand (National Rivers Authority, 1993). In other watershed management projects concern about having readable understandable information has been expressed by public members within the watershed (Ontario Ministry of Environment and Energy et al, 1995; Towle, *pers comm.*, 1997)

The steering committee and technical advisory group must be able to work together as a team of resource owners, users and managers to formulate an effective watershed management plan (Manitoba Department of Natural Resources, 1996). A directory for all technical advisory group and steering committee members should be made available to the public.



3.4.3 Public Involvement: A Corner Stone For Success

It is recommended that, in addition to the meetings held between steering committee members, the steering committee should also hold regular meetings that include all the members of the community (Manitoba Department of Natural Resources, 1992; Fraser Basin Management Program, 1993; Manitoba Department of Natural Resources, 1996). Area residents should be encouraged to share local knowledge of the watershed at regular public meetings (Manitoba Department of Natural Resources, 1992). The public meetings are to follow a structured agenda (Pinkerton and Weinstein, 1995), and be designed for the stakeholders and residents of the watershed to:

1. Discuss concerns and issues regarding the watershed (Osterman et. al., 1989).
2. Be kept up to date on what is happening within the watershed (Manitoba Department of Natural Resources, 1992; National Rivers Authority, 1993).
3. Identify management problems and gain an understanding of the impacts these problems create (Osterman et. al., 1989; National Rivers Authority, 1993).
4. Obtain grass roots input to matters relating to watershed resource management (Gilles, 1989).
5. Develop a consensus on problem solving goals for the watershed (Fraser Basin Management Program, 1993).
6. Build a community and a personal responsibility towards the implementation of the watershed planning goals (Osterman et. al., 1989).
7. Increase public awareness (Fraser Basin Management Program, 1993; Baily, 1990).
8. Encourage continuous public input regarding issues and problems which promotes a dynamic planning process (Fraser Basin Management Program, 1993).

Public meetings are critical to the planning process by establishing a group approach to solving watershed problems (Osterman et. al., 1989). Public involvement in the watershed planning process translates into stakeholder willingness to advance the plan,



fund or volunteer services for plan implementation, and comply with mandates/responsibilities in accordance with the watershed management plan (Ontario Ministry of the Environment and Energy ,1993). Public involvement in an open forum of discussion also provides an opportunity to educate people, while at the same time empowering the general public to make informed contributions to the decision making process, and to take action upon those decisions (Baily, 1990). Continuous public consultation is a necessary ingredient for the effective functioning of a community - based watershed management plan.

3.4.4 Public Education: Creating Awareness

The success of a community - based watershed management plan depends upon an educational process that will inform all watershed users of processes that are causing the issues of concern, and identify opportunities available to remedy the problem (Manitoba



Figure 3.3: More and more anglers are learning of the importance of catch and release fishing. Here a muskellunge is being released back into Cliff Lake.

Department of Natural Resources, 1992). Education is an essential component to consensus building, as the members of the community must have a minimum understanding of the current ecological, social and economic conditions within their communities and the region (Bailey, 1990). Without this common understanding of the situation and

problems within the watershed, there is a great risk that members of the watershed community will propose solutions that suit their own needs rather than the community as a whole (Bailey, 1990).



Education can illustrate the ways that local citizens and stakeholders affect such watershed resources as fishing, water quality, etc. (Minnesota Department of Natural Resources, 1992). Providing good examples of sustainable resource management practices, and educating the public about the value of natural resources can go a long way toward making improvements in water quality and the fishery of the watershed (Minnesota Department of Natural Resources, 1992).

The watershed management plan must address educational programs for citizens and make information available. Education programs should increase the knowledge regarding watershed environment, issues, responsibilities, and opportunities (Manitoba Department of Natural Resources, 1992). Citizens educated in this way will be more able to adopt conservation plans, implement conservation practices, and provide ongoing administration and monitoring of watershed management plans (Osterman et. al., 1989).

3.4.5 Public Communications

Information and education programs can be made available to the public by several means. As mentioned earlier, public meetings provide opportunities for the exchange of information between all the players within the watershed. Public information can also be made available through news letters and/or the media. News letters should look professional and should cover what happened during steering committee and public meetings (Manitoba Department of Natural Resources, 1996). The news letters should include progress that has been made and positive accomplishments to encourage and maintain support for the management plan. Various groups are to be encouraged to present their views and opinions as long as they are willing to take responsibility for these



views (Manitoba Department of Natural Resources, 1996). Media coverage is a good way to promote the activities accomplished by the community - based watershed management plan and the steering committee (UMA Environmental, 1997). Public information can also be presented at small-group workshops. Workshops provide opportunities for stakeholders within the watershed to exchange information and increase the public knowledge base (Fraser Basin Management Program, 1993).

The Fraser River Management Program (1993) provides information to the public through news letters, profile reports, computer bulletin boards via the Internet, and published source books. Demonstration projects are also effective means of communication and can develop and promote improved management programs by utilizing existing projects and by beginning new projects to implement management plans (Fraser Basin Management Program, 1993). Demonstration projects are an effective way to get community members actively involved in the implementation of watershed management plans. Demonstration projects also provide a means to show the positive aspects of community - based watershed management plans, and encourage more citizen and stakeholder participation. By creating public awareness through education and communication, problems can be turned into action (Fraser Basin Management Program, 1993).

Effective means of public communication will vary between communities in Northern Ontario depending upon the availability of such resources as access to Internet facilities and access to readily available media coverage. Demonstration projects do have applicability in the case of the Cedar River Watershed as the initiatives taken by way of



creel surveys and spawning ground enhancement programs, offer excellent opportunities to encourage participation of the watershed stakeholders.

3.4.6 Legislation

All relative provincial and federal legislation must be applied to the development of the watershed management plan. Members of the steering committee need to be made aware of what can and cannot be done according to legislation before planning commences (Manitoba Department of Natural Resources, 1996). The issues and recommended actions put forth in the development of a community - based watershed management plan within Ontario will involve the jurisdictions and mandates of a range of agencies. Agencies may include municipalities, conservation authorities, federal and/or provincial ministries, First Nations and private interests. Some of the important building blocks towards an effective community - based watershed management plan included in legislation are: the identification of what government structures are already in place; the discovery of who does what in the watershed; and a means to efficiently integrate efforts towards sustainability (Fraser Basin Management Program, 1993).

There are several pieces of provincial and federal legislation and government agencies that may need to be consulted upon the formulation of a watershed management plan (Tables 3.1 to 3.5). The community - based watershed management plan for the Cedar River Watershed will concentrate mainly on fisheries issues and legislation related to those issues. The plan will eventually evolve through time to deal with other important watershed issues, if necessary, such as water quality/quantity issues, forestry issues, tourism issues etc., as these different issues are brought into the forefront.



Table 3.1: Major provincial legislation relating to water quality (UMA Environmental, 1997 p9)

PROVINCIAL LEGISLATION	ADMINISTRATING AGENCY	DESCRIPTION OF LEGISLATION	IMPLEMENTING AGENCY
<i>Ontario Water Resources Act</i>	Ministry of Environment and Energy (MOEE)	Allows for the regulation of water supply; Allows surveillance and monitoring of all surface and ground water in Ontario; Regulates sewage disposal and controls water pollution; Allows MOEE to construct and operate waste water facilities or require this to be done by an industry or municipality.	MOEE, municipalities
<i>Environmental Protection Act</i>	MOEE	Forbids the discharge of any contaminant to the natural environment in amounts exceeding regulations; Prohibits the discharge of any substance that is likely to impair the natural environment; Requires that spills of pollutants be reported and cleaned up promptly and establishes a liability on the party at fault.	MOEE
<i>Environmental Assessment Act</i>	MOEE	Requires the assessment of any major public or private undertaking so that it may be altered or canceled if found to be environmentally unacceptable.	MOEE
<i>Pesticides Act</i>	MOEE	Controls the use of chemicals for the destruction of plant and animal pests, investigates possible harmful effects of pesticides on the environment.	MOEE
<i>Conservation Authorities Act</i>	Ministry of Natural Resources (MNR)	Establishes Conservation Authorities (CAs) and provides them with a mandate to operate dams for water quality enhancement, to undertake water quality surveys and to comment on planning documents.	CAs
<i>Lakes and Rivers Improvement Act</i>	MNR	Ensures that proposed water works do not adversely affect water quality nor cause undue erosion and siltation.	MNR
<i>Planning Act</i>	Ministry of Municipal Affairs (MMA)	Guides municipal planning activities (i.e., requires local governments to assess the impact of a proposed new subdivision on existing water supplies).	MMA, municipalities

Table 3.2: Major federal legislation relating to fish habitat and water quality (UMA Environmental, 1997 p10)

FEDERAL LEGISLATION	ADMINISTRATING AGENCY	DESCRIPTION OF LEGISLATION	IMPLEMENTING AGENCY
<i>Fisheries Act</i>	Department of Fisheries and Oceans (DFO)	Protects fish habitat by prohibiting disturbance and deposition of deleterious substances in water frequented by fish.	DFO, MNR
<i>Environmental Contaminants Act</i>	Environment Canada, HWC.	Prevents dangerous contaminants from entering the environment.	Environment Canada, HWC
<i>Canada Shipping Act</i>	Transportation Canada	Controls pollution from ships by imposing penalties for dumping of pollutants or failing to report a spill.	Transportation Canada
<i>Canada Water Act</i>	Environment Canada	Authorizes agreements with provinces for designation of water quality management areas and other special projects.	Environment Canada
<i>Canada Environmental Protection Act</i>	Environment Canada	Controls the manufacture, transportation, use and disposal of chemicals and wastes not adequately regulated by other legislation.	Environment Canada
<i>Pest Control Products Act</i>	Agriculture Canada	Regulates products used for the control of pests via registration according to prescribed standards.	Agriculture Canada

Table 3.3: Major provincial legislation related to water quantity (UMA Environmental, 1997 p11)

PROVINCIAL LEGISLATION	ADMINISTRATING AGENCY	DESCRIPTION OF LEGISLATION	IMPLEMENTING AGENCY
<i>Conservation Authorities Act</i>	Ministry of Natural Resources (MNR)	Authorizes Conservation Authorities (CAs) to prohibit or regulate fill, construction and watercourse alteration. Allows for construction and maintenance of flood and erosion control structures.	CAs
<i>Lakes and Rivers Improvement Act</i>	MNR	Empowers MNR to regulate the construction and operation of water works. Requires that new water works be approved.	MNR
<i>Public Lands Act</i>	MNR	Authorizes MNR to construct and operate dams and acquire land for their purpose. Authorizes power generation projects on Crown Land.	MNR
<i>Municipal Act</i>	Ministry of Municipal Affairs (MMA)	Allows municipalities to enact bylaws for the construction, repair and maintenance of drains. Prohibits the injury or fouling of drains in rivers. Empowers municipalities to pass bylaws governing the construction and maintenance of dams and the straightening of water courses for flood protection.	MMA municipalities
<i>Public Utilities Act</i>	MMA	Empowers municipalities to acquire and operate water works and divert a lake or river for their purposes.	MMA, municipalities
<i>Ontario Water Resources Act</i>	Ministry of Environment and Energy (MOEE)	Requires that a permit be obtained for water withdrawals greater than 50,000 litres per day. Requires that a well construction permit be obtained for ground water withdrawals. Allows MOEE to allocate water among competing users. Allows municipalities to establish or replace water works with Ministerial approval.	MOEE

Table 3.4: Major federal legislation related to fish habitat and water quantity (UMA Environmental, 1997 p12)

FEDERAL LEGISLATION	ADMINISTRATING AGENCY	DESCRIPTION OF LEGISLATION	IMPLEMENTING AGENCY
<i>Navigable Waters Protection act</i>	Transport Canada	Prohibits dumping of wastes which may interfere with navigation. Prohibits construction in navigable waters.	Transport Canada
<i>Fisheries Act</i>	Department of Fisheries and Oceans (DFO)	Protects fish habitat by prohibiting disturbances. Ensures construction of a fish-way around any obstruction in a waterway.	DFO, MNR
<i>Canada Water Act</i>	Environment Canada	Authorizes agreements with provinces for the delineation of floodplains and hazardous shorelines for the purpose of flood erosion control.	Environment Canada
<i>International Rivers Improvement Act</i>	External Affairs, Environment Canada	Prohibits the damming or changing the flow of a river flowing out of Canada.	Environment Canada

Table 3.5: Major provincial and federal legislation related to land management (UMA Environmental, 1997 p13)

LEGISLATION	ADMINISTERING AGENCY	DESCRIPTION OF LEGISLATION	IMPLEMENTING AGENCY
Drainage Act	Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	Facilitates for construction, operation and maintenance of rural drainage works. Provides a legal mechanism where riparian landowners can drain their lands and divide the costs among themselves.	OMAFRA, municipalities
Tile Drainage Act	OMAFRA	Provides for low interest loans to farmers from municipalities for the purpose of tile draining their property.	OMAFRA, municipalities
Planning Act	Ontario Ministry of Municipal Affairs (MMA)	Provides for and governs land use planning. Provides for the development of statements of provincial interest to be regarded in the planning.	MMA, municipalities
Public Lands Act	Ontario Ministry of Natural Resources (MNR)	Authorizes MNR to manage and control activities on Crown Land.	MNR
Mining Act	Ontario Ministry of Northern Development and Mines (MNDM)	Registers mining lands and lands forfeited to the Crown. Exempts lands and mining rights from taxes.	MNDM, MNR
Beds of Navigable Waters Act	MNR	Declares the beds of navigable waters as the responsibility of the Crown.	MNR
Public Transportation and Highway Improvement Act	Ministry of Transportation Ontario (MTO)	Requires that a permit must be obtained prior to commencement of any work which may be carried out within the right-of-way of a provincial highway.	MTO
Conservation Authorities Act	MNR	Empowers Conservation Authorities (CAs) to manage, regulate or acquire floodplains, hazardous shorelines and conservation lands.	CAs
Environmental Assessment Act	Ontario Ministry of Environment and Energy	Requires environmental assessments for designated land use activities.	MOEE
Fisheries Act	Federal Department of Fisheries and Oceans (DFO)	Controls erosion and sedimentation for the purpose of fish habitat preservation.	DFO, MNR

3.4.7 Implementation And Monitoring

Plan implementation is a dynamic process required to effectively move from ideas into action, and requires continual monitoring and evaluation (Manitoba Department of Natural Resources, 1996). Implementation of the watershed management plan will require coordination and cooperation of all stakeholders, government representatives, and area residents in order to succeed (Manitoba Department of Natural Resources, 1992). A hands on approach that allows for stakeholders to participate in the implementation of the watershed plan is suggested (Minnesota Department of Natural Resources, 1992).

Likewise monitoring programs need not be too sophisticated or complicated, but can



Figure 3.4: Local stakeholders learning how to sample fish to assist with creel surveys being done in the Cedar River Watershed.

involve the local citizens and stakeholders to watch for and report on changes in environmental conditions. Monitoring programs that are within the public's abilities provides stakeholders and citizens with a tangible opportunity to participate in the achievement of the watershed management plan's goals and objectives. Assessments of the watershed plan's progress must ensure all stakeholders have an opportunity for input (Praxis, Northern River Basins Study, 1994).

According to the Ontario Ministry of the

Environment and Energy (1993) two major components to monitoring are:

1. Monitoring the success of the plan in terms of the achievement of its goals and objectives.
2. Monitoring the performance and success of the tactics used to achieve the objectives developed by the plan.



The watershed management program should establish practical indicators for measuring sustainability in the watershed (Fraser Basin Management Program, 1993). An indicator is something that points to a problem or condition with the purpose of showing how well a system is working (Hart, 1997). The choice of suitable indicators is a challenging process as indicators are unique to each particular community or region. A pilot project on developing these indicators is recommended in the Fraser River Management Plan. The indicators should be applicable to specific planning objectives and in assessing progress towards sustainability in the watershed in terms of ecological integrity, natural resources, economic viability, and social well-being (Fraser Basin Management Program, 1993). According to Hart (1997) effective indicators of sustainability have the following characteristics:

1. **Relevant to sustainability:** The indicator must measure or describe facts that are related to sustainability.
2. **Understandable to the community at large:** A sustainable management plan is based upon the involvement of the people living in the watershed community. It is the people who make sustainable communities happen, so they need to understand the indicators. Thus indicators need to be understood by ordinary people not just highly trained specialists.
3. **Developed and accepted by the people in the community:** Indicators of sustainability need to be selected by the members of the watershed community. This can be done through the steering committee and through public forums. The definitions and selection of indicators needs to be agreed upon by members of the watershed community.
4. **Link economy, society, and environment:** Indicators need to show the link between the economic, social and environmental parts of the watershed community. Indicators should point out these links whenever possible.
5. **Focus on long range view:** Because sustainability is defined as long term community well being, the indicators chosen to measure progress must also take a long term view.



6. Advance local sustainability, but not at the expense of others: Sustainable watershed indicators should not measure local sustainability at the expense of a distant community.
7. Based upon reliable information: An indicator must be reliable. Reliability is not the same as precision. An indicator does not necessarily need to be precise, but needs to give a reliable picture of the system it is measuring.
8. Based upon timely information: In order for an indicator to be useful it must provide information while there is still time to correct the problem.

This research focuses on the sustainability of the fishery resource in the Cedar River Watershed. Suggestions for indicators of a sustainable fishery are made in chapter five.

The watershed management plan is a dynamic process. Therefore it is advised that the original plan be evaluated on a regular basis (e.g. every five years) (UMA Environmental, 1997). Monitoring will enable planners to determine the effectiveness of the plan, and whether any changes need to take place. The plan may need to be modified to address new issues, monitored changes, new technology and new watershed information (UMA Environmental, 1997). Implementation and monitoring are crucial elements necessary for an effective watershed management plan.

3.4.8 Summary

The above section outlines the main components needed to be included in the development of a community - based watershed management plan. These components are identified as:

1. *The Steering Committee*: Delegates from all stakeholder groups are equally represented within this core group. It is the steering committee that is responsible for making the decisions and implementing those decisions to drive the community - based management planning process forward. The steering committee is referred to in some circles as the “*action nucleus*” of the watershed management plan.



2. **Technical Advisory Group:** A group consisting of representatives from various provincial and federal agencies (as required) whose responsibility is to provide the steering committee with technical support necessary for the watershed management plan's development.
3. **Public Involvement:** It is important for the steering committee to hold regular meetings with the public to keep the community involved and informed, and to allow for the general public's continued input into the planning process.
4. **Public Education:** A program to educate the public about the value of sustaining natural resources; how they affect sustainability; and what they can do to promote a sustainable watershed is a necessary part of the watershed management plan. A well informed public is more able to adopt conservation plans; implement conservation practices; and provide ongoing administration and monitoring of watershed plans.
5. **Public Communication:** In order to involve and inform the public about the watershed management plan, effective communications must be in place. Effective means of communication include, for example: public meetings, news letters, media coverage, workshops and demonstration projects.
6. **Legislation:** Knowledge and awareness of applicable legislation is important to the watershed planning process. Any decisions made must be within the bounds of current legislation.
7. **Implementation and Monitoring:** Moving from ideas to action, i.e. implementation, can be the most challenging part of the watershed management plan. Effective implementation involves the whole community using a hands-on approach. Once implemented, the effectiveness of the plan must be monitored and changes made if necessary. Indicators should be selected that determine the effectiveness of the plan. Monitoring should also involve the participation of the community as much as possible.
8. **Decision-Making Process:** This is a very important and complex element of the community - based watershed management plan involving a *multi-stakeholder* decision-making process. The decision-making process must be agreed upon by all members of the steering committee. A process of consensus is recommended by all community - based watershed management plans reviewed in this practicum. Due to its importance and complexity, the following section 3.7 has been designated to explain this process.

The above components have been identified as being crucial to the development of a community based watershed management plan. Section 3.5 describes the planning process and how these components come together to formulate a watershed management plan.



3.5 THE PLANNING PROCESS: PUTTING IT ALL TOGETHER

3.5.1 Organization Of The Planning Process

The planning process includes the steering committee and the technical advisory board identifying issues, and preparing a draft plan. Public input is obtained and incorporated into the final plan. The plan is submitted to the government agency involved for approval and input as necessary.

The watershed management plan should be built upon the strengths of what people in the watershed are already doing to promote sustainability of watershed resources (Fraser Basin Management Program, 1993). The steering committee identifies what is already working in the watershed, what needs to be done and how governmental and non-governmental groups can work together without duplicating efforts (Fraser Basin Management Program, 1993). Initiatives currently underway within the watershed provide

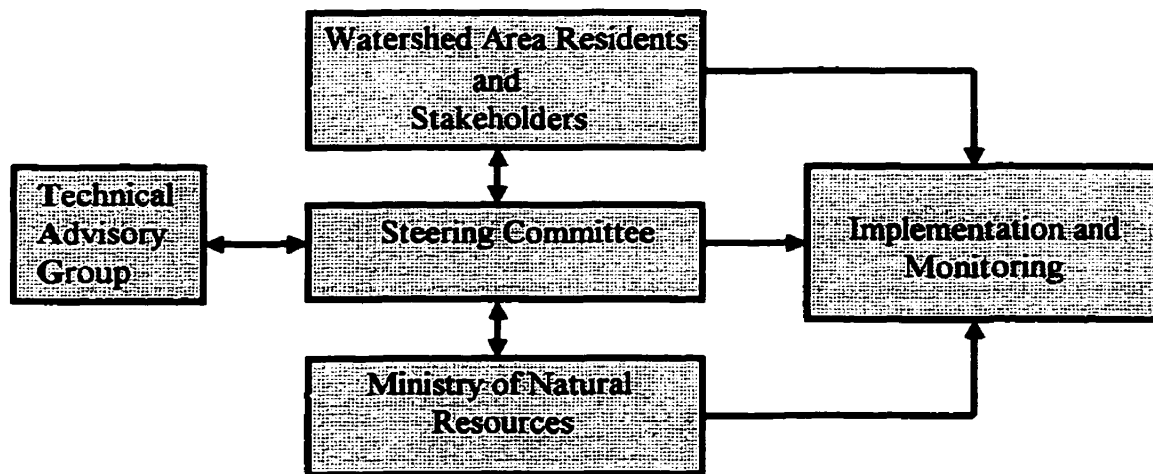


Figure 3.5: The interactions between the steering committee, the technical advisory board, the public and the government in a community - based watershed management process (Manitoba Department of Natural Resources, 1996).



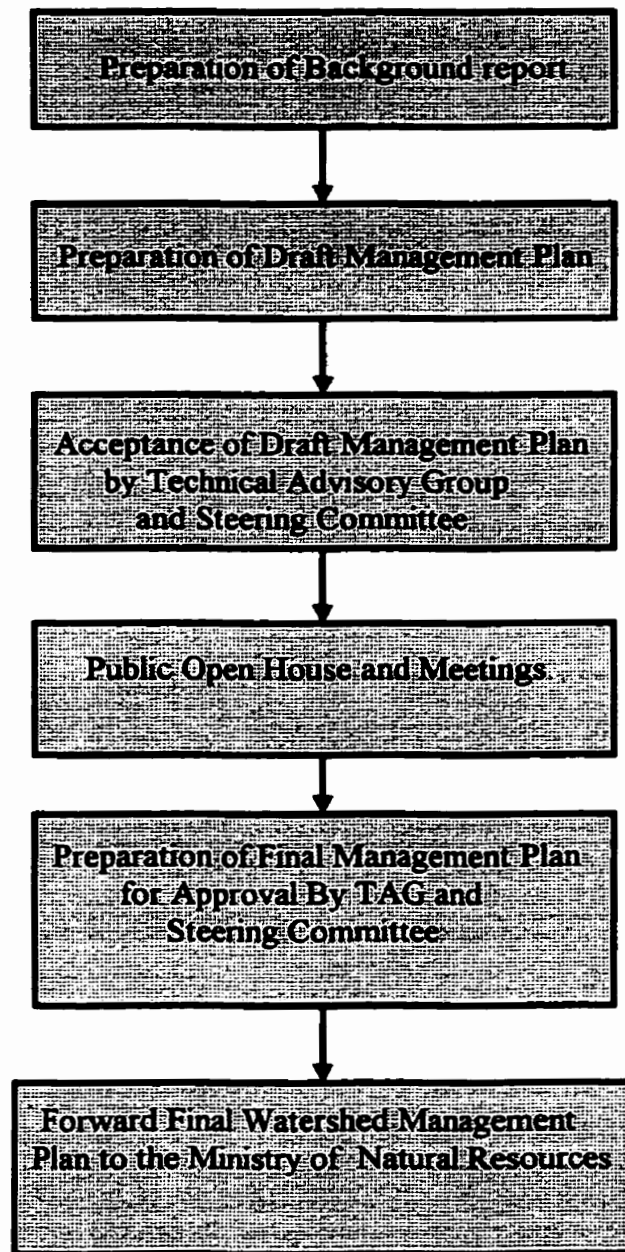


Figure 3.6: An outline of the community - based watershed management planning process (Manitoba Department of Natural Resources, 1996).



a base upon which to build progress (Manitoba Department of Natural Resources, 1992). Existing information about the watershed should be utilized to provide necessary information and identify gaps (Ontario Ministry of the Environment and Energy, 1993). A creel survey study currently being completed within the Cedar River Watershed is an example of a program that can be used to fill information gaps. Also, the incorporation of local and traditional knowledge into planning procedures is of importance (Pinkerton and Weinstein, 1995).

Plan action must take place on three levels: individual, community, and institutional (Fraser Basin Management Program, 1993). The individual must be willing to participate; the community must be organized to take action; and the formal watershed management plan agreed upon by the community forms the institutional basis on which action can be taken. Different regions will develop different solutions in ways that work best for that region (Fraser Basin Management Program, 1993). The plan should be adaptive and flexible. Effective watershed management is an iterative process that adapts by taking advantage of successes and failures to change for the better, and by being flexible to accommodate for unforeseen difficulties and circumstances (Ontario Ministry of the Environment and Energy, 1993). Mechanisms for adaptiveness include the ability of the management committee to receive feedback about success or problems and the ability to change in response to new problems or opportunities. Viessman (1990) stated that watershed management plans should :

1. Be dynamic processes with periodic opportunities for review and redirection.
2. Select implementation strategies that accommodate new technologies and shifts in public views.



3. Be an interactive interface between planners and the public
4. Identify potential sources of conflict amongst stakeholders and offer options for resolving potential conflicts before a combative situation emerges.
5. Recognize and address society's goals.
6. Identify and confront the "right" problems.
7. Function effectively within the legal /institutional frameworks.
8. Accommodate both short and long term scenarios.
9. Embrace public input as part of the planning process.
10. Be flexible and adaptable.
11. Drive regulatory processes.
12. Foster coordination among planning partners and consistency among related plans.
13. Recognize and deal with conflicts.
14. Produce implementable recommendations.

The above section outlines the planning process and emphasizes the importance of the active participation of stakeholders and public citizens in the process. The plan must be open and flexible to changes in information and/or public opinion, and unforeseen problems. The community - based watershed management plan is a dynamic process that is influenced by public input.



3.5.2 Planning for Action: Developing Visions, Goals and Objectives

The starting point for a community - based watershed management plan is to identify the issues and goals that stakeholders have regarding the watershed. The success of the community - based watershed management plan depends upon the identification of stakeholder concerns and issues (Praxis, Northern River Basins Study, 1994). The steering committee should realize that all ideas and goals of the watershed management plan can not be realized at once, and priorities should be identified (Manitoba Department of Natural Resources, 1992). The following describes the process for identifying the vision, goals and objectives needed in order to address the issues and concerns expressed by the watershed community.

One of the first steps in devising a plan of action is for the steering committee, with the public's input, to formulate a vision or mission statement for the watershed. The vision statement is a starting point that defines what the watershed community hopes to achieve. The vision statement presents the big picture of what the stakeholders want for the sustainability of "their" watershed, and acts as a guideline for the steering committee to follow so that decisions made can be checked to see if the watershed management plan is meeting the community's vision for a sustainable watershed (UMA Environmental, 1997).

From the vision statement the goals of the watershed management plan can be set. The goals are defined as the specific outcomes needed in order to reach the vision (UMA Environmental, 1997). Goals of the watershed management plan must be agreed upon by the stakeholders within the watershed (Fraser Basin Management Program, 1993). Goals should be attainable and flexible to accommodate changes that may occur as more



knowledge and information is accumulated (Ontario Ministry of the Environment and Energy ,1993).

The next step is to establish objectives. Objectives are defined as the steps that must be taken to reach the goals set by the steering committee (UMA Environmental, 1997). Objectives should be related to specific goals and ideally have a time frame attached. The objectives chosen should be attainable and the effects measurable (ORTEE, 1997). The visions, goals and objectives of the Cedar River watershed community were identified using a survey analysis and are presented in chapter five.

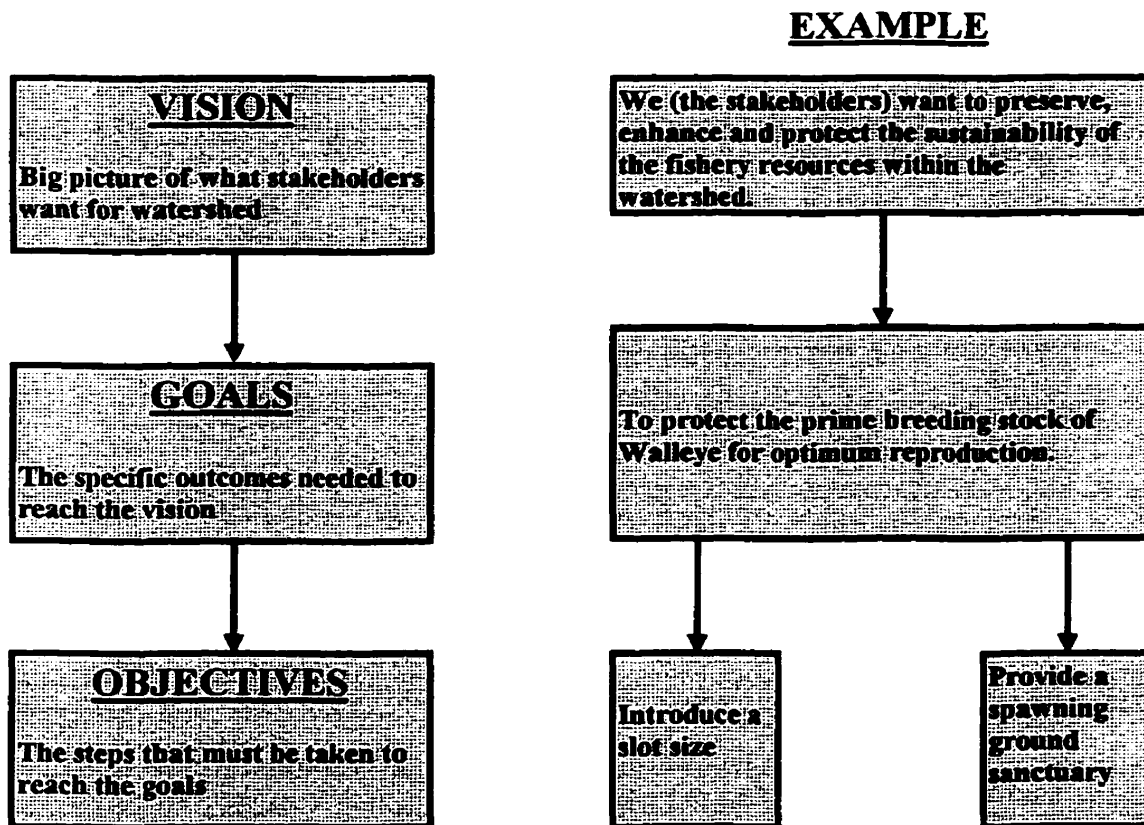


Figure 3.7: Relationship of visions, goals and objectives using an example related to a walleye fishery. Adopted from UMA Environmental (1997) Part B p6.



It is important to get people to agree upon, or come to consensus about, the vision and goals of the watershed management plan. The vision and goals are quite broadly based and represent general ideals about sustainability that most people can identify with, although some conflict may occur (Bateld, 1985). The challenge occurs when deciding upon the type of objectives necessary to implement a plan for sustainability. The objectives are quite specific and can involve regulatory measures, as is in the case of deciding upon what management strategies/tactics are necessary to achieve a sustainable fishery within the Cedar River Watershed. Most controversy and conflict will occur at this stage in the planning process as it is the objectives that will most directly affect stakeholders. The following section 3.6 on the multi-stakeholder decision making process and dealing with conflict discusses how decisions can be reached.



3.6 MULTI-STAKEHOLDER DECISION MAKING PROCESS: AGREEING TO WORK TOGETHER

3.6.1 Conflict

“Conflict is also an essential element of a dynamic society. It is through conflict that issues are raised, new constituencies formed, and social changes are effected” (British Columbia Round Table on the Environment and the Economy, 1991a).

When involving various diverse stakeholder groups in resource management planning it is inevitable that some conflict over resource use is going to occur. Although most people do not enjoy being in conflict with others, conflict can also have a positive side to it. It can be through conflict that issues are raised, new ideas and points of view are expressed, and changes are brought about. Conflict can allow for people to see the other’s point of view and the reasons they have for being in disagreement. The identification as to “why” a person is of a conflicting opinion can reveal new ideas that the others may not have been aware of or have considered.

The British Columbia Round Table on the Environment and the Economy (1991a) describes four ways in which people deal with conflict as summarized by Hutchison (1995, p. 69).

1. By avoiding or walking away from the problem, usually when the costs (time and energy) of resolving it are perceived to be greater than the benefits that would be reaped.
2. By relying on a higher authority, such as a government official, arbitrator, appeal board, or court.
3. By resorting to the use of power, such as lobbying, elections, strikes, or civil disobedience in an effort to impose one’s will.



4. By reaching some accord, reconciling interests through collaboration and joint problem solving.

All of the above approaches can be used in the decision-making process or conflict resolution, some (i.e. options 2 and 3) of which are adversarial and result in winners and losers (Hutchison, 1995). In order to lessen contention amongst stakeholder groups, common interests must be established and differences resolved in a non-adversarial manner (i.e. option 4). Option 4 above is most closely related to a consensus-based approach (Hutchison, 1995). The process of consensus as an approach to the multi-stakeholder decision making process is described in section 3.6.3. The discovery of common interests is an important part of the decision making process through consensus of a community - based management plan.

3.6.2 Discovering Common Interests: Getting Past Individual Positions

Each group involved in the decision making process can have a preconceived position regarding issues related to the management of the watershed resources. For example, in the case of fish habitat protection for watershed management, stakeholders such as mining, forestry and tourism groups may have positions that directly or potentially conflict with those of local angling groups. The challenge that the decision making process faces is to get past the positions and find common interests shared by all groups. The key to finding common interests is through education and information. When people and institutions are made more aware, common ground for effective resource management can be found even amongst highly polarized groups (Maldonado, 1996).

Through the process of community - based watershed management, conflicting groups can learn more, (i.e. acquire information through education), about the concerns of



other groups and be more willing to discuss measures that need to be taken to protect watershed resources with the least impact on the stakeholders involved (Pinkerton and Weinstein, 1995). Stakeholders may find that they have overlapping interests (as illustrated in figure 3.8), and form positive alliances with each other (Osterman et. al., 1989). Only common understanding will engender the cooperation needed to formulate,

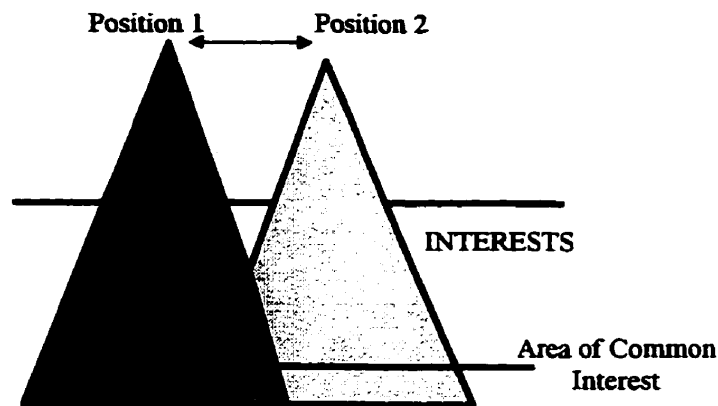


Figure 3.8: Illustration of how two different group's positions can share underlying common interests. Two pyramids represent two groups positions. Top of pyramid above line represents the position held by the group. The base of the pyramid below the line represents the interests upon which the positions are based. Area in middle represents common interests. The challenge of consensus is to get past the opposing positions and find a common interest on which to build a cooperative working relationship (Sinclair, *pers. comm.*, 1997).

implement and maintain a successful long-term stewardship plan for the watershed (Manitoba Department of Natural Resources, 1996). Perhaps the main reason that community - based watershed management committees are likely to be successful is the presence of important overlapping interests of the stakeholders involved (Pinkerton and Weinstein, 1995).

Increased awareness, education, and cooperation within the watershed community has enabled stakeholders in the Missouri Flat Creek (1989) watershed to reach consensus on



goals for resource management of the watershed. Key principles that made the Missouri Flat Creek watershed group process work were (Osterman et. al. 1989):

1. People who participate in decisions have a greater willingness to implement measures designed to solve problems.
2. Stakeholders, if given accurate data and a process by which to discuss their problems, can generate workable solutions.

3.6.3 Consensus

A consensus-based process as a means of achieving agreement among stakeholders involved in the designing of a community - based watershed management plan is cited in many community - based watershed management plans (e.g. Winkler Aquifer Management Plan, 1996; Fraser River Management Program, 1993; Dauphin Lake Basin Management Plan, 1992), as well as in many case studies of community - based watershed management (e.g. Osterman et. al., 1989; Pinkerton and Weinstein, 1995). The process for consensus building is to identify problems and find agreeable solutions among the stakeholders (Osterman et. al., 1989). “Although all (stakeholders) may not agree with all aspects of the agreement, consensus is reached if all participants are willing to live with the ‘total package’” (National Round Table on the Environment and Economy, 1996). In other words, even though there may be some individual aspects of the decision that are not agreed upon, consensus is reached when the parties agree upon the decision as a whole (British Columbia Round Table on the Environment and Economy, 1991 b).

The National Round Table on the Environment and Economy (1996) lists the following principles that characterize consensus decision making.



1. *Purpose driven*: The stakeholders must have a common interest or purpose that has caused them to be of the opinion that a problem exists and that some form of action is needed.
2. *Inclusive not exclusive*: All stakeholders and watershed residents must have an equal chance to participate in the planning process.
3. *Voluntary participation*: All people involved in the planning process must do so voluntarily.
4. *Self design*: The people of the watershed decide upon the final plan.
5. *Flexibility*: There is room for changes as planning stages progress.
6. *Equal opportunity*: All stakeholders and area residents have an equal opportunity to be heard.
7. *Respect for diverse interests*: Related to principle # 6 above; i.e. all viewpoints will be heard.
8. *Accountability*: Those stakeholders representing a group will be accountable to that group to present the group's view points. Conversely, the stakeholder group will be responsible for what the group's representative presents at round table meetings.
9. *Time limits*: A schedule should be determined as to when goals and objectives are to be accomplished setting 'targets' for the plan.
10. *Implementation*: A procedure for implementing the plan is very important. If the plan is not implemented the project will dissolve.

There are several advantages to the consensus process as outlined in the British Columbia Round Table on the Environment and the Economy (1991a & 1991 b) as follows.

1. *Greater focus on real issues* that are at stake. By encouraging stakeholder groups involved to find common underlying interests to their respective interests, focus is put on the real issues rather than on divergent opinions.
2. *Avoids hardening of positions*. By focusing on common interests, stakeholders are less likely to develop adversarial positions.



3. *Encourages creativity* in solving problems. By bringing a diversity of knowledge and expertise together, more informed and therefore better decisions can be made.
4. *Improves the quality of government service*. Involvement of stakeholders and citizens in the decision making process allows government the opportunity to address the real concerns of the community.
5. *Greater commitment* to decisions made. By being involved in the decision making process, stakeholders are more likely to comply to the decisions that are made seeing it as “their” decision, and not as one forced upon them from a higher authority. When stakeholders are not involved in the decision making process even good decisions may experience resistance.
6. *Builds working relationships*. Stakeholder involvement in the decision making process can establish positive relations and channels of communication among groups that are normally at opposing positions to one another.
7. *No winners vs losers scenario*. By reaching an agreement that all stakeholders can “live with”, no one walks away angry or embittered, which can result when a vote is held or when adjudication by a higher authority is sought.

Even if consensus is not reached benefits can still be realized as decision makers become more aware of the real concerns and issues of stakeholders, and stakeholders develop a greater understanding and respect for each other’s concerns (British Columbia Round Table on the Environment and Economy, 1991 b).

Despite the above mentioned benefits of consensus, some disadvantages can exist also. For example a decision making process by consensus can be time consuming and expensive. This may prove frustrating for those who “simply want to get the job done” (British Columbia Round Table on the Environment and Economy, 1991b).

In order for a consensus process to succeed, it is important that all members participating in the process agree as to how consensus is defined. A study by Hutchison (1995) on various multi-stakeholder decision making organizational bodies found that in



order for the process to work, a formal definition of consensus must be understood and agreed upon by all parties involved. Hutchison (1995) considers the formal definition of consensus to be one of the ground rules needed to be established in order for the consensus process to succeed. Several operational definitions of consensus include:

1. 100% agreement (unanimous consensus)
2. Lack of dissension (i.e. silence means acceptance)
3. Agreement by the vast majority (i.e. all but a few of the parties)
4. Lack of unanimous consensus leads to an alternative form of decision making such as voting

(Hutchison, 1995 p71)

The Consensus Process

- Establish clear goals and objectives
- Gain agreement on the rules of the process
- Develop and agree on a formal working definition of consensus
- Structure the process with work including meetings (one-to-one, one-to-many, with sub-groups, consensus table, requirements and guidelines)
- Establish rules and responsibilities of participants
- Determine how government will respond to the results of the process
- Clearly establish what will happen if consensus is not achieved - i.e. an alternate decision making process

Adapted from: The Basin Council Board Table on the Environment and Economy (1994) and The National Round Table on the Environment and Economy (1996) p30



A second ground rule for the operation of consensus in the decision making process given by Hutchison (1995) is “for there to be clear understanding of what the consequences are for not reaching consensus on a decision.” The members must agree upon what alternative decision making process should be employed if consensus can not be reached. Alternatives include voting by majority rule, deferring the decision to a higher authority, or other, but it should be clearly understood that the alternatives are less favourable to consensus, and result in win/lose situations (Hutchison, 1995).

Pinkerton and Weinstein (1995), through case studies of community - based management programs in fishery co-management, have listed the following indicators to ascertain if a consensus building community - based management process will likely succeed.

1. Are there enough human, financial, and biological resources?
2. Do interests overlap sufficiently to find common ground?
3. Are important stakeholders able to look beyond a dominant perception of the problem in order to consider other view points that lean towards the sustainability of the resource?
4. Is the government facilitator able to secure a “level playing field” for all stakeholders involved to ensure that a more forceful party does not dominate decisions?

According to the National Round Table on the Environment and the Economy (1996), the consensus process can take many forms due to the uniqueness of each situation or problem. The participants need to adopt a process that is specifically suited to take into consideration their abilities, circumstances, and issues.

The ultimate decision making, in respect to the adoption of proposed watershed management strategies, will lie with the ruling governmental bodies concerned. As



mentioned earlier, it is important that the steering committee be a true co-manager, and that the government seriously address the decisions made by the steering committee, assuring that no decisions are overturned without clear reasons of principle (Pinkerton and Weinstein, 1995). The degree of decision making authority of a multi-stakeholder planning process can vary depending upon the context of each forum. Section 3.6.4 discusses the degree of decision making authority as it relates to community - based watershed management planning.

3.6.4 Degree of Decision Making Authority

In a community - based watershed management plan there are different levels at which the community can be included in the decision making process. In her paper entitled “A Ladder Of Citizen Participation,” Sherry Arnstein (1969) proposed that there are eight levels of citizen participation that can be illustrated by a ladder (Figure 3.9). The bottom two rungs of the ladder are “non-participatory” and involve more of an information transfer where citizens are not really participating in the decision making, but are being informed of policies and decisions already made. At the next three levels, called the “degree of tokenism,” the public is allowed to voice their opinions, but their views are not required to be taken into consideration when decisions are made. At these levels of participation the chances of the public’s input having any affect on the decisions made are unlikely. The top three rungs of the ladder represent levels of public participation where citizens have increasing degrees of decision making authority from partnerships, giving



citizens the power to negotiate, all the way up to citizen control where citizens have full management power.

Arnstein (1969) is very critical of the lower levels of participation as illustrated by her ladder of citizen participation, and indicates that anything short of partnership will not lead to solutions to problems acceptable to public opinion. Unlike Arnstein (1969), Connor (1994) suggests in his "New Ladder Of Citizen Participation" (Figure 3.10) that there is a logical progress of public involvement where each level builds upon the other. Connor argues that "resolution/prevention" (i.e. solution to controversy, or problem/prevention of controversy or problem before it occurs) can take place at various levels of public participation depending upon the given situation. Managers can employ more than one level at a time to reach a solution. Connor (1994) states that "there is no one best way to design and manage a public participation program; it must reflect the specifics of the given situation."

Borrini-Feyerabend (1997) has developed another schematic representation of public participation (Figure 3.11) that shows stakeholders participating at various degrees of public involvement. Borrini-Feyerabend agrees with Connor (1994) that every management issue is different, and effective solutions can occur at more than one place on the continuum. Borrini-Feyerabend (1997) also states that management plans can change and evolve, thus the level of public participation on the continuum can change through time.

Figures 3.9 to 3.11 show where community - based watershed management plans reviewed in this research report were located with respect to degree of decision making power. As watershed management evolves and includes sharing of authority with agencies



in charge, or complete devolution of authority, changes to legislation and possibly the *Constitution* itself would need to take place. The Australian Great Barrier Reef Marine Park Authority (Kelleher, 1996) and the Japanese fishery co-management agreements (Pinkerton and Weinstein, 1995) are two examples of community - based watershed management plans where legislative authority exists in the management agreement. Borrini-Feyerabend (1997) states that community - based management organizations enshrined in policy and legislation can strengthen a management partnership, but is not absolutely necessary for its success. A problem that does exist when giving authority to public groups is the question of accountability and representation of all interests, including those of the peoples outside the watershed community.

Community - based watershed management plans reviewed by this research were found to be effective at an advisory level, where decisions made were based upon a consensus of all stakeholders, including government. In effect, participants acted as partners in deciding what type of action to take. In this case the agency in charge still has the final word upon what decisions will be implemented and is fully accountable for these decisions. However, in order for this level of public participation to be effective, the government agency in charge must take the decisions made by the community - based management group seriously, assuring that no decisions are overturned without clear reasons of principle.



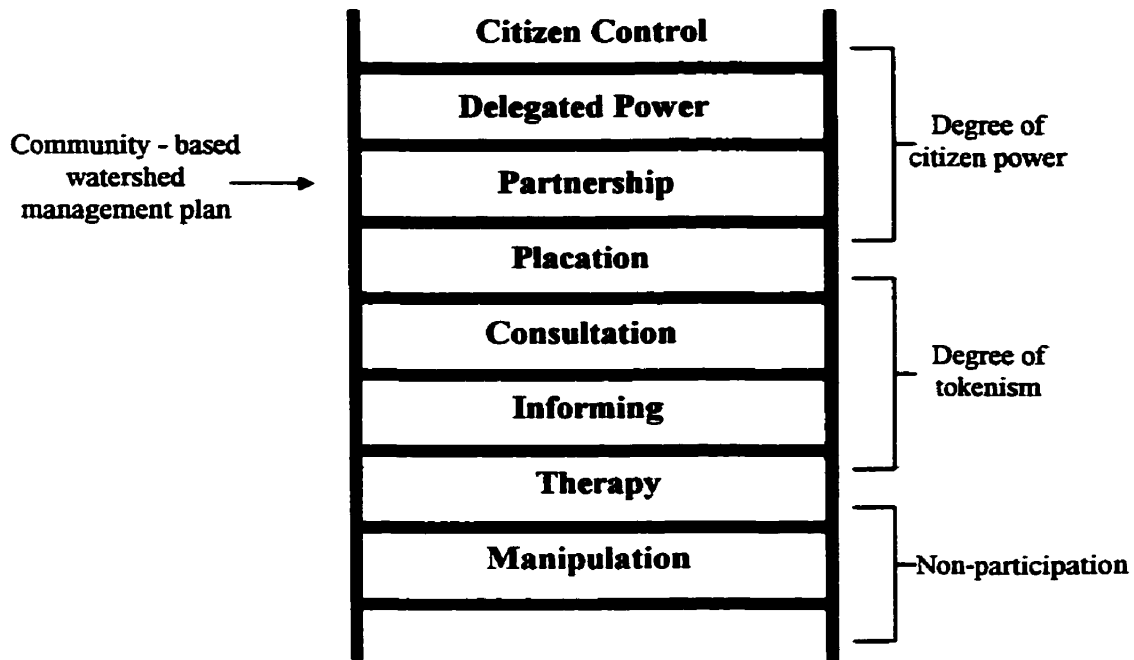


Figure 3.9: Arnstein’s “Ladder of Citizen’s Participation” (Arnstein 1969) modified to show where community - based watershed management is on the ladder. Community - based watershed management could evolve to upper rungs of ladder with time.

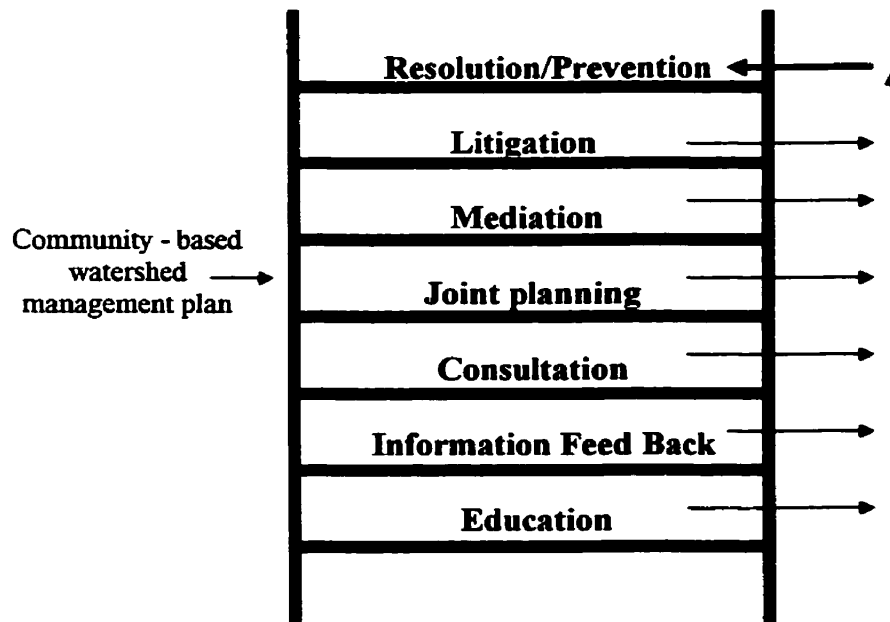


Figure 3.10: Connor’s “New Ladder Of Citizen Participation” (Connor, 1994). The version above is modified in that the higher rungs of participation include all stakeholders and not just leaders as shown in Connor (1994). A criticism of Connor’s new ladder of participation is that he only includes leaders in the higher rungs of participation. More people should be involved at these levels, not just leaders, for effective public participation to occur. Also the level at which community based management is located is shown.



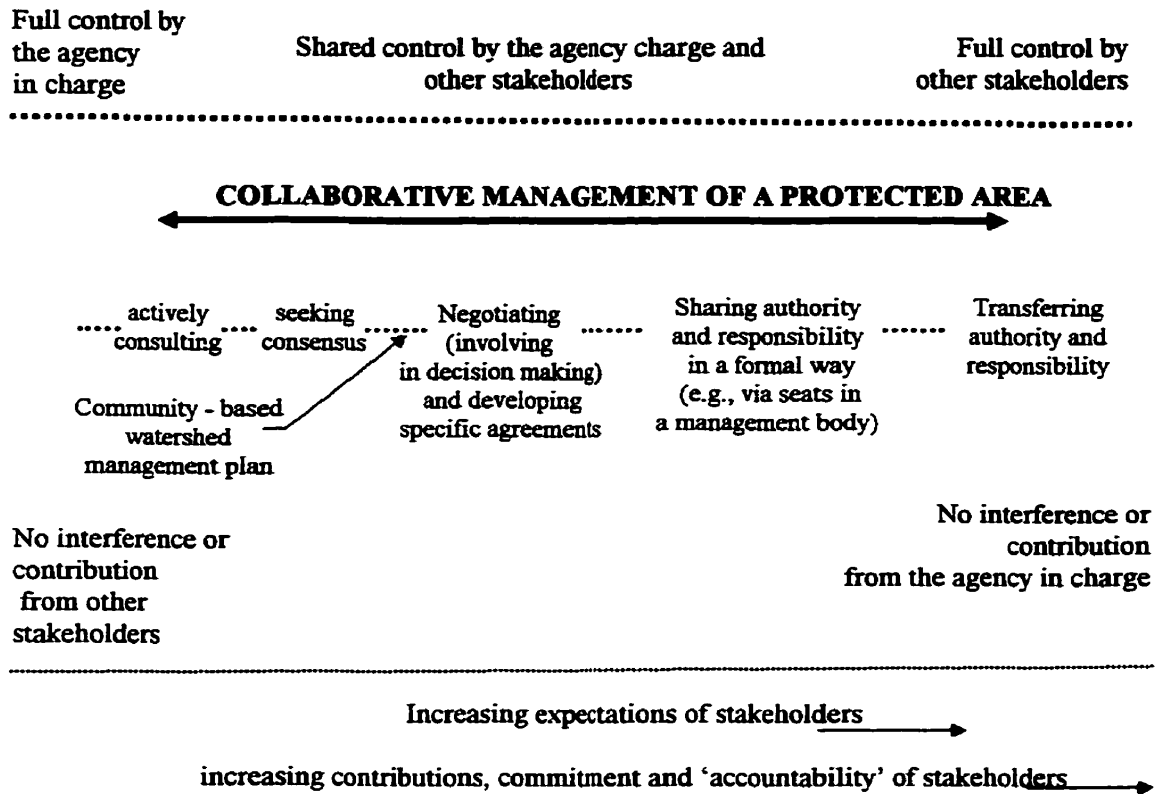


Figure 3.11: A schematic representation of public participation in protective area management (Borrini-Feyerabend, 1997). Modified to show where community - based watershed management planning is located in the continuum.

When decisions are made on a consensus approach involving various stakeholders, as in community - based management, there is some concern that government authority may be compromised (British Columbia Round Table on the environment and Economy, 1991b). The role of government in the consensus process used in community - based watershed management planning must be made clear. The British Columbia Round Table on the Environment and Economy (1991 b) outline five general rules that need to be applied when determining the role of government in the consensus process.

1. Limiting an official's discretion should not be an objective of the collaborative approach. The aim of the collaborative effort should be to find solutions to issues that satisfy those who are most directly affected. The process should be perceived as a



- means of confirming the will of constituents and building a solid foundation on which to make decisions.
2. The primary role of government should be to ensure that the interests of the general public are represented and that statutory requirements and public policies are observed in the process and decisions made.
 3. The ultimate decision maker (e.g. the minister) should not participate directly in the process. Staff members other than the ultimate decision maker would represent the government.
 4. Any decision made by the collaborative effort should be advisory only, with the ultimate decision left to the government involved to ensure that decisions made are consistent with the law and public policy. In return the parties involved in the process can expect that so long as any agreement meets applicable legal and regulatory requirements, it should be regarded favourably by government decision makers.

If the government decision makers feel that the agreement reached by the consensus process can not be implemented, even if the decision meets all legal and regulatory requirements, then they are obligated to provide reasons for this decision.

The degree of decision making power held by steering committee can be difficult to determine. Different management problems and situations may require different levels of public participation. Borrini-Feyerabend (1997) states that at least a 'mild' form of public participation (i.e. the consultation and seeking of consensus with stakeholders regarding watershed management) "is essential in all cases". 'Strong' versions of citizen participation (i.e. the inclusion of stakeholders in a management board or outright devolution of specific authority and responsibility) may or may not be appropriate according to the specific conditions at stake. Community - based watershed management plans operating at an advisory level, based upon a process of consensus, appear to be the most effective means for public participation in decision making and management of watershed resources.



3.7 CHAPTER SUMMARY

The above chapter has presented a background of watershed management in Ontario and its evolution towards community - based management as a means to ensure the sustainability of watershed resources. Several examples of community - based watershed management plans from Ontario, Canada, and the world were used to identify what components were most effective for the functioning of a community - based management plan. The processes involved in community - based management were also reviewed, including multi-stakeholder decision making processes, as well as the degree of decision making power of such processes.

Emphasis of this research report is placed upon the issue of sustaining the fishery resource within the Cedar River Watershed. Chapter four presents the results obtained from a survey of stakeholders within the Cedar River Watershed used to ascertain what management strategies/tactics would be most acceptable or preferred by the watershed stakeholders. Chapter five presents a framework or guideline for a community - based management plan for the Cedar River Watershed - applicable to other watersheds in Northern Ontario, that incorporates the results from the survey of the watershed stakeholders with the above chapter's findings.



Chapter 4

4.0 ANALYSES OF SURVEY RESULTS

As described in chapter one, a survey consisting of the distribution of questionnaires and the conducting of interviews was used to determine what strategies/tactics for managing the fishery resource would be most acceptable to the various stakeholders making up the Cedar River Watershed community. Due to the large volume of data accumulated from the questionnaires and interviews, Appendices III and IV contain a detailed summary of responses given for each question. The following chapter discusses the more significant findings from the survey and analyzes these findings according to the objectives of the research with reference to the data contained in Appendices III and IV.

The first section of this chapter discusses the response rate from each stakeholder group and background information as related to the use and value of the watershed and fishery resources. The following section applies the survey results to ascertain and recommend strategies/tactics that will be most acceptable (preferred) by watershed stakeholders, and most practical for the fishery resource in the Cedar River Watershed.



4.1 BACKGROUND OF SURVEY RESPONDENTS

4.1.1 Response Rate

Wabauskang First Nation Response: A total of 14 First Nation people from 14 resident households were interviewed, out of a possible 22 households, making a return rate of 64%. Those interviewed represented a wide range of age groups from 18 years old to the oldest elder who was 86 years old.

Resident Response: A total of 17 resident households returned questionnaires out of an estimated possible 35 households¹ that make up the permanent residents of the Cedar River Watershed. Of these 35 households 11 were residents that were also tourist resort owners and were analyzed in this survey as camp owners according to the methods described in chapter one. Therefore the return rate of resident questionnaires was approximately 17 out of 24 or 71%. Two residents that responded were commercial business operators, one owning the general store and the other a bait service operator. Four respondents were trappers, and one was an aboriginal who was not part of the Wabauskang First Nation community.

Camp Owner Response (commercial tourist operators): A total of 23 camp owners returned questionnaires. Of these, three camp owners were located outside the Cedar River Watershed, but indicated that they frequently sent their guests to lakes within the watershed. There were a total of 26 tourist camps located inside the Cedar River Watershed at the time of the survey. Of these, 20 replied making a return rate of 77%.

¹ The Cedar River Watershed is comprised of the community of Perrault Falls, which is an unorganized township, and of other residents living throughout the watershed area. Due to these circumstances, a population estimate for the whole watershed was not available from Statistics Canada. A population of permanent residents was estimated using local knowledge, the phone book and mailing addresses from the Perrault Falls post office.



Cottage Owner Response: Questionnaires were sent by mail to 261 cottage owners and 57 were returned for a return rate of 22%. Of those questionnaires returned, eight were received from cottagers outside the Cedar River Watershed and were not considered in this survey. Eleven of the questionnaires returned were from people who were considered as permanent residents of the watershed. One questionnaire was returned from a stakeholder who lived outside the watershed but indicated he frequently visited the watershed as an angler and therefore was included in the visiting angler group.

Visiting Angler Response: The number of anglers visiting the Cedar River Watershed is estimated to be in the thousands. The survey of visiting anglers was designed to give an idea of how these anglers viewed various management strategies for enhancing the fishery resource. A total of 20 questionnaires were filled out by visiting anglers. Thirty percent of respondents were visiting Wabaskang Lake, 30% were from Cedar Lake and 30% were from Cliff Lake. Each of these lakes represents the different types of fishing opportunities according to lake type and species composition for anglers, as described in chapter two. The remaining 10% of anglers were visitors from tourist resorts that operated by having fishing opportunities in the less accessible lakes within the watershed. The times of visitation ranged from May to September representing the main fishing season, and the variety of anglers fishing according to the time of year (i.e. concentration of effort on fishing different species occur at different times of the year).



4.1.2 Background of Stakeholders

The results given in Appendices III and IV indicate that the majority of the respondents in all stakeholder groups have had a history in the Cedar River Watershed of at least five years and many of 20 years or more (35% to 57% across groups). Many stakeholders responding have had at least two generations of family living and/or visiting the watershed. A First Nation person indicated that at least nine generations (i.e. a great grandmother's great grandparents) of her family had lived in the watershed, and a resident indicated as many as six generations. All respondents implied some degree of angling experience and days spent fishing.

The history of the respondents among all the stakeholder groups, and the respondents fishing experience, should have resulted in their capability to discern fishing trends within the watershed and what was important to them regarding the sustainability of the fishery and other resources for them and future generations.

4.1.3 Importance of Fishery

Respondents indicated participation in a variety of activities within the Cedar River Watershed. The activity of fishing was most popular to all stakeholder groups. Other activities that were important to stakeholder groups were: wildlife viewing to all groups; boating to residents, camp owners and cottagers; photography to cottagers, camp owners and visiting anglers; and ice fishing to residents, and camp owners who were also residents (Table 7, Appendix III).

The watershed offered a variety of resource uses for the various stakeholder groups surveyed, but fishing was the predominant activity participated in. The importance of the



fishery to the income, diet, enjoyment and traditional values of each stakeholder group was asked during the survey (Question 11, Appendix III; Question 5, Appendix IV). Respondents were asked to rate the importance of the fishery to the above values on a scale of one to ten, with one being of little importance to ten being very important. Wabauskang First Nation people were asked to indicate the importance of the fishery as very important, not important or of middle importance. The results showed that the fishery was of high importance to the camp owners' income, but not very important to other stakeholder groups' incomes (Table 4.1 and 4.2). What was significant was the importance of the fishery to the incomes of the people that live in the watershed year round who are not camp owners. The fishery was not considered of importance to the family incomes of First Nation people with only 14% considering it of importance, while the remaining 86% said it was not important. Residents also ranked the fishery as being of little importance to their incomes with an average rating of 4.3 out of 10. The majority of resident respondents considered the fishery resource to be not important to their incomes with some considering it very important (Figure 4.1).

Table 4.1: Average rating of importance of the fishery in the Cedar River Watershed to respondents' income, yearly diet, recreation and family/social tradition based on an ordinate scale of 1 to 10, with 1 being not at all important to 10 being very important*

	Income	Yearly diet	Recreation	Tradition
Residents	4.1	4.5	8.1	8.0
Camp owners	9.3	3.0	7.7	6.5
Cottagers	1.4	2.8	8.9	8.3
Visiting anglers	1	2.2	8.2	5.8

*Average was calculated as an average of those who answered the question. Figures 11a to 11d in Appendix III show the distribution of responses.



Table 4.2: Importance of the fishery in the Cedar River Watershed in regards to income, diet, enjoyment and tradition according to the respondents from Wabauskang First Nation

	Income	Diet	Enjoyment	Tradition
Importance of fishery	Percent	Percent	Percent	Percent
Very important	14%	57%	43%	43%
Of middle importance	0%	14%	36%	21%
Not important	86%	29%	21%	36%

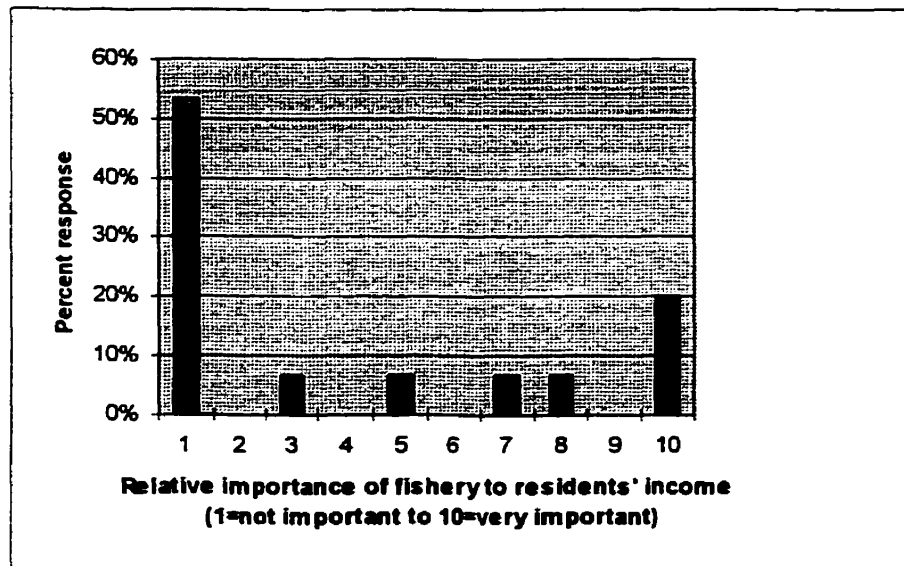


Figure 4.1: Distribution of values of relative importance of fishery in the Cedar River Watershed to income as ranked by responding residents.

The value of the fishery to diet was ranked to be of importance to 73% of First Nations people, with 57% of respondents considering it to be very important. Other stakeholder groups ranked the importance of the fishery to diet of lower than middle importance (i.e. less than five). The fishery was ranked to be of high importance to the enjoyment of all stakeholder groups. The importance of the fishery to family and social traditional values was shown to be highest among residents, First Nation people and cottagers.



In summary the Cedar River Watershed fishery was considered of importance to the stakeholder groups in various ways. For all groups the fishery was deemed very important to their enjoyment. In addition, the fishery was important to camp owners for income. For First Nation people the fishery was also important for their diet or subsistence and family/social traditions. For residents and cottagers the fishery was important to their family/social traditions as well as recreational enjoyment. For visiting anglers the fishery was mainly important for recreational enjoyment.

4.1.4 Values Associated With Fishery

The survey was also interested in what aspects of the fishery were important to the stakeholders' fishing experience. Stakeholders were asked to rate the importance of various aspects of the fishing experience on a scale of one to ten, one being not important and 10 being very important. Wabauskang First Nations were asked to indicate if each aspect was very important, not important or of middle importance.

Aspects of high importance to the fishing experience common to all stakeholder groups included pleasant scenery, fishing wilderness areas and seeing wildlife (Table 13, Appendix III; Table W7, Appendix IV). Catching a limit of fish was shown to be of middle importance if one regards an importance value of five to be of medium importance. Catching a limit of fish was not shown to be a main concern for the majority of stakeholders during their fishing experience, although it was for some (Figure 4.2). Wabauskang First Nation residents were not asked about the importance of catching a limit of fish because First Nation people are not subject to regulations regarding possession limits.



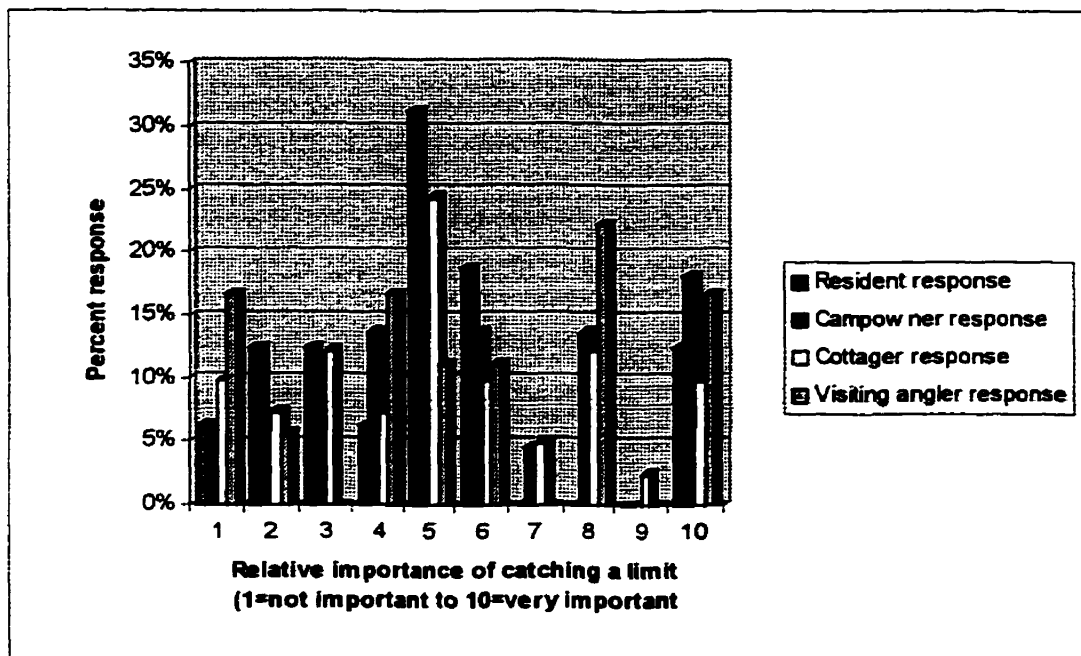


Figure 4.2: Distribution of values for the relative importance of catching a limit to respondents' fishing enjoyment in the Cedar River Watershed

Catching fish for eating, or eating size fish, was ranked of high importance to all stakeholder groups except for the Wabauskang First Nations where only 50% of respondents considered this to be of importance, with 43% considering it very important (Table 13, Appendix III; Table W7, Appendix IV). This result was surprising considering that the fishery was very important to the diet of Wabauskang First Nation people as discussed in section 4.1.3. Possible explanations for this apparent discrepancy are:

- 1) Some of the people interviewed did not fish very often (mostly females) compared to others. Some of the people also fished with nets, predominately for lake whitefish, which was used for subsistence. The fish that was caught by net was to be shared amongst all the people of the Wabauskang First Nation community. Therefore, a respondent who did not fish often may not have deemed catching fish for eating as



important to their fishing experience, yet, because the fish caught by net was shared, can still depend on the fishery as a means of subsistence.

- 2) First Nation people may have interpreted the question somewhat differently than assumed, in that the size of fish was not important to them (i.e. smaller fish could still be eaten).

When asked what was most important regarding catching eating size fish, trophy fish, or catching both eating fish and trophies, respondents indicated that catching eating size fish as well as the chance to catch a trophy was very important to all stakeholder groups (Table 4.3). When comparing catching eating size fish to catching trophy size fish, catching eating size fish was shown to be more important to stakeholder groups (Figures 4.3 and 4.4). The chance to catch a trophy was important to visiting anglers and camp owners, while cottagers and residents rate catching a trophy as below a value of five on a scale of one to ten (Figure 4.3). Wabauskang First Nation residents were not asked to distinguish between eating size fish and trophy fish as it was thought that people of aboriginal culture do not fish for trophies, but are more interested in fishing for food.

Table 4.3: Importance of catching fish for eating vs catching trophy fish to stakeholders' fishing enjoyment in the Cedar River Watershed

Preferred type of fish to catch	Percent resident response	Percent camp owner response	Percent cottager response	Percent visiting angler response
Mostly eating size	47%	17%	36%	20%
Eating size as well as trophy	47%	79%	60%	60%
Mostly trophy size	6%	4%	2%	10%
Catch and release all fish	0%	0%	0%	10%



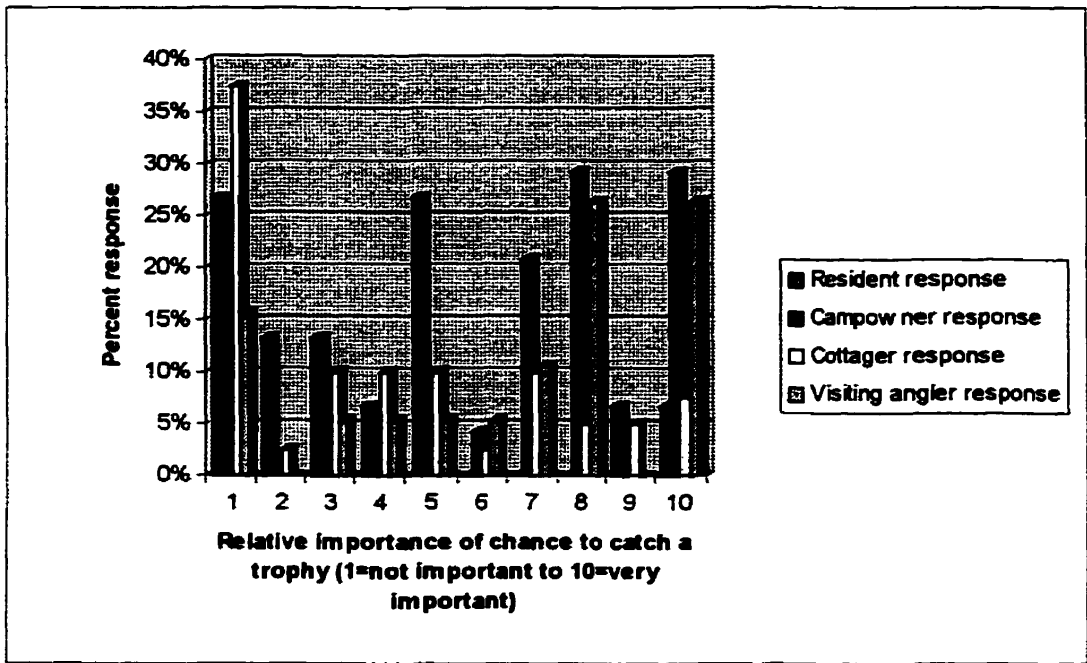


Figure 4.3: Distribution of values for the relative importance of the chance to catch a trophy fish to respondents' fishing enjoyment in the Cedar River Watershed

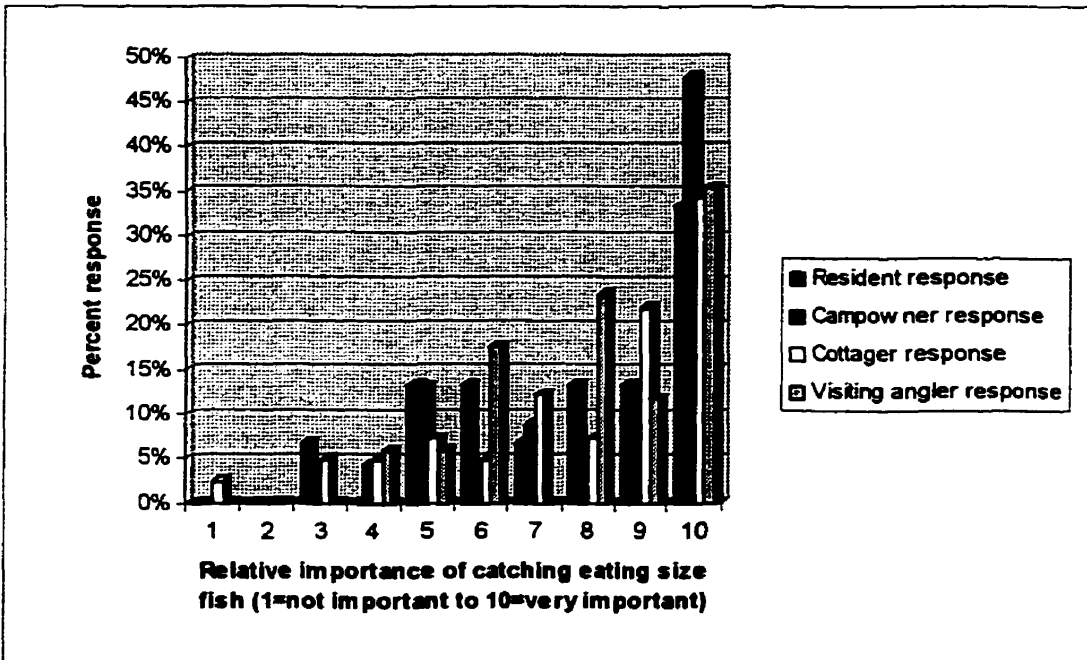


Figure 4.4: Distribution of values for the relative importance of catching eating size fish to respondents' fishing enjoyment in the Cedar River Watershed



In summary, the above information indicates that for all stakeholder groups catching fish for eating was very important to their fishing experience. Some local residents, in particular Wabauskang First Nation people, depend upon the fishery as a source of food. The importance of catching eating size fish over trophy fish has significant implications on determining management strategies that will be most acceptable to stakeholder groups. These implications are expanded upon in section 4.2.

4.1.5 Trends In Fishing As Perceived By Stakeholder Groups

During the survey, stakeholders were asked to compare fishing in 1997 or 1998, depending upon when surveyed, to fishing two, five and ten years ago in terms of quality (size) and quantity. All stakeholder groups indicated the perception of a downward trend in fishing as compared to fishing in the past (Figures 10a to 10d, Appendix III; Figure W4, Appendix IV). When asked what time period would be considered to have had the ideal fishing conditions, most stakeholders replied 10 to 20 years ago (Table 12, Appendix III; Table W6, Appendix IV). Some, who had been living or visiting in the watershed long enough, gave time periods of greater than 20 years ago. Of those respondents who indicated ideal fishing conditions existed in the past, the following reasons were given as listed below in order of greatest response.

- **more and bigger fish** - Two respondents specified more and bigger walleye in the past. One respondent indicated that walleye fishing was better in the past, but lake trout fishing is about the same and smallmouth bass fishing is better today.
- **less fishing pressure** - Some residents and cottagers (six respondents) equated this with less resorts and therefore less resort guests fishing. Three of these six respondents claimed that tourists were “fishing out” fish populations. One First Nation resident stated that there were too many white people fishing indiscriminately now. Four camp owners felt that more pressure today, which led to less than ideal



conditions, is due to greater access to the area and the fact that the area is less secluded.

- **fish were easier to catch** - Respondents who indicated better overall fishing in the past were included here.

Other reasons for choosing the past as having ideal conditions included: more common sense 20 yrs ago and less interference with nature. One cottager stated that fishing was better before the 19.7 inch size limit on walleye.

One resident chose present conditions as ideal because “fishing is about the same.” Two camp owners chose the present as having ideal fishing conditions as “fishing is very good today.” One visiting angler and two camp owners chose present conditions as ideal because fishing is improving along with conservation initiatives, and that the 19.7 inch maximum size limit on walleye is working. Those respondents who did not know indicated that they had not been in the area long enough to determine when fishing was best.

When considering the results of the above section it is important to remember that the trends in fishing indicated are those perceived by the stakeholders. Whether or not there is a scientific basis to the above perceived decline in the watershed fishery is difficult to discern due to the lack of trend through time data of the watershed fishery. Before the creel studies and walleye tagging projects that began in 1995, the last creel study performed in the Cedar River Watershed occurred in 1968. The last walleye tagging project in the Cedar River Watershed occurred in 1957. No comprehensive study has been conducted to evaluate what effect the introduction of the maximum size limit of 19.7 inches for walleye may have had on the walleye population (N. Ward, *pers. comm.*, 1998). Other lakes, such as Shoal Lake and Lake of the Woods, that have more trend through time data available can be compared to similar lakes in the Cedar River Watershed. Shoal



Lake represents a walleye fishery that has collapsed, while the south end of Lake of the Woods represents a walleye fishery that is stressed, both due to over fishing. Upon comparing indicators such as growth rates, catch per unit effort, rod hours/hectare etc. of walleye in the Cedar River Watershed to the trend through time data collected for Shoal Lake and the south end of Lake of the Woods, the walleye fishery in the Cedar River Watershed shows a stressed fishery (N. Ward, *pers. comm.*, 1998).

The above information makes it apparent that most stakeholders in the Cedar River Watershed view the fishery as having declined over the last ten years, and would like to return to conditions that enabled them to catch more and bigger fish with less effort. Management strategies/tactics can be used to preserve and enhance the fishery that exists today, so that it can be improved and sustainable for the future. The following section 4.2 discusses management strategies/tactics that would be acceptable or preferred by stakeholders to enhance and sustain the Cedar River Watershed fishery.

4.2 PREFERRED MANAGEMENT STRATEGIES/TACTICS

The following section examines different management strategies regarding the various species of fish found in the Cedar River Watershed, along with other issues of importance to the watershed. Data obtained from a survey of stakeholders was used to determine which management strategies would be most acceptable to stakeholders of the Cedar River Watershed. Management strategies currently used to sustain the fishery in Northern Ontario include the following.

- **Seasons:** Seasons restrict the time when people are allowed to fish and are designed to protect important brood stock during spawning season when large numbers are



congregated together in a relatively small area, making them particularly vulnerable to anglers.

- **Sanctuaries:** Sanctuaries are designed to give brood stock extra protection during and after spawning. Sanctuaries are set up in areas where spawning is known to occur, or where large numbers of brood stock are known to gather after spawning. The establishment of a sanctuary in a spawning or post spawning area prohibits fishing, until a certain time, when brood stock have a chance to disperse from the spawning grounds. Currently in the Cedar River Watershed there are sanctuaries located on Cedar, Ord, Perrault and Wabaskang lakes to protect the walleye brood stock.
- **Protected slot sizes:** Protected slot sizes are designed to protect fish that are of breeding size. A protected slot is a range of sizes believed to be representative of a species' brood stock size in which all fish caught in this range must be released. In Ontario, in order for a trophy fish to be kept, most protected slot sizes allow for one over the maximum slot size to be kept. For example a protected slot size for northern pike could be: no fish allowed to be kept between 27.5 inches and 35.4 inches of which only one kept may exceed the maximum size of 35.4 inches.
- **Maximum size limits:** Maximum size limits are designed to provide the same function as a protected slot size. In this case only one fish is allowed to be kept over the maximum size limit.
- **Minimum size limits:** Minimum size limits apply to muskellunge in the Cedar River Watershed. Muskellunge are large fish and primarily sought as trophy fish. Minimum size limits are designed to enhance the amount of large trophy size muskellunge in a body of water by allowing only fish over the minimum size to be kept. All those under must be released.
- **Possession limits:** Possession limits limit the amount of fish an angler is allowed to keep in possession. Possession limits prevent the over harvesting of fish, as most people would have a tendency to keep as many fish as they catch if it were not for these limits. However, it should be noted that voluntary catch and release fishing is growing more popular in Northern Ontario.

Recently, in Northern Ontario, changes to the current management strategies for managing recreational fisheries have been proposed by the Northwest Ontario Fisheries Committee (NOFC) (1998). Appendix VI presents a summary of these proposals.

The survey used in this research report was oriented around the above management strategies, and was used to determine which strategies would be most acceptable to



stakeholders in the Cedar River Watershed. The strategies found to be most acceptable or preferred by stakeholders were then compared to those proposed by the NOFC.

4.2.1 Strategies For Walleye

Fishing for walleye was ranked as the most important activity by all stakeholder groups (Table 13 Appendix III; Table W7, Appendix IV). Walleye is the most popular game fish in Northwestern Ontario and is found in most lakes within the Cedar River Watershed. In particular Cedar, Perrault, Ord, Florence, Wabaskang and Wine lakes have abundant walleye populations, and resorts are most dependent upon the availability of walleye for their guests' enjoyment. Resorts from other lakes have access to lakes with walleye populations. Cliff Lake has some walleye, but due to its morphology and water quality (i.e. it is a clear deep lake) walleye are not as abundant here as in the shallower, more productive lakes mentioned above. Walleye are very important to the fishing experience of residents (both non-aboriginal and aboriginal), cottagers and anglers visiting the watershed.

In order to protect this important game fish, current regulations include: a possession limit of six; a maximum size limit of which only one fish in possession may exceed 19.7 inches; a closed season from April 15th to the third Friday in May; and sanctuaries in some of the lakes within the Cedar River Watershed (i.e. Cedar, Ord, Perrault and Wabaskang lakes). Concern over the sustainability of the walleye fishery and other fisheries has prompted movements within the watershed and outside (Northwestern Ontario Fisheries Committee, 1998) to adopt new management strategies. Stakeholders in the Cedar River



Watershed were asked which management strategies would be most preferred for sustaining the walleye fishery (Question 25 Appendix III; Question 9 Appendix IV).

The most preferred management strategy for walleye chosen by all stakeholder groups was the development of sanctuaries in May to protect brood stock (Table 4.4). The second most preferred strategy for managing walleye chosen was a protected slot size by all stakeholders but First Nation respondents who chose no fishing zones. It is important to mention here that no fishing zones were considered by First Nation respondents to apply to non-aboriginal peoples. Some of the elders like to fish near the reservation which was not of concern to the respondents. First Nation people are concerned with anglers fishing in front of the reservation, at times fishing very close and casting into shore where children play and swim. The third most popular strategy, as chosen by residents, camp owners and cottagers, was a protected slot between the current maximum size of 19.7 inches and what would be considered as trophy size. First Nation respondents and visiting anglers preferred a reduced possession limit as a third choice, which was also chosen third by residents along with the protected slot between 19.7 inches and trophy size.

Stakeholders suggested strategies for walleye management other than those given in the survey (Appendix V). Some of the suggested strategies included:

- allow one trophy fish (i.e. one over maximum size limit) to be taken out for mounting purposes only (i.e. the fish cannot be filleted or gutted, but must be whole) (five respondents)
- use barbless hooks only (three respondents)
- increase time of closure of sanctuaries (three respondents)
- reduce non-resident limits (a resident and cottager suggested this)
- make Ord and Thaddeus lakes conservation zones, meaning that only a conservation limit (i.e. 2) may be taken



Table 4.4: Preferred management strategies for walleye in the Cedar River Watershed as chosen by stakeholder groups (more than one strategy could be chosen)

PREFERRED STRATEGIES FOR MANAGEMENT OF WALLEYE				
Wabaskang 1st Nation	Residents	Camp Owners	Cottagers	Visiting Anglers
Sanctuaries in May (86%)	Sanctuaries in May (77%)	Sanctuaries in May (67%)	Sanctuaries in May (71%)	Sanctuaries in May (55%)
No fishing zones (64%)	Protected slot size (41%)	Protected slot size (33%)	Protected slot size (45%)	Protected slot size (55%)
Reduced possession limits (57%)	Protected slot between 19.7" and trophy size (35%) or Reduced possession limit (35%)	Protected slot between 19.7" and trophy size (33%)	Protected slot between 19.7" and trophy size (26%)	Reduce possession limit (25%)

Size Restrictions (Protected slot size and Maximum size limit)

Stakeholders were asked which of three protected slot sizes they would be most in favour of for walleye (Question 18, Appendix III). Responses indicated that there was no preferred slot size for walleye among stakeholder groups, and many respondents suggested slot sizes other than those given, as well as other management ideas (Table 18, Appendix III). However, other questions asked in the survey (i.e. Question 22 and 23 in Appendix III) were used to determine what slot size for walleye would be most preferable to stakeholders.

The range of average trophy size for walleye considered by stakeholders was 27 inches to 28.5 inches, or approximately seven pounds to eight and a half pounds (Table 4.5). As demonstrated earlier in Section 4.1.4 it was found that all stakeholder groups considered catching eating size fish to be very important to their fishing experience. The majority of all stakeholder groups considered a size range of 14 inches to 18 inches to be ideal for eating (Table 4.6).



Table 4.5: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for walleye in the Cedar River Watershed

	Resident Response	Camp Owner Response	Cottager Response	Visiting angler Response
Range	24" to 31"	19.7" to 31"	24" to 34"	24" to 31"
Average	28.1"	27.0"	27.4"	28.5"

Table 4.6: Ideal eating sizes for walleye in the Cedar River Watershed as considered by stakeholder groups

Total Length	Resident response	Camp owner response	Cottager response	Visiting angler response
11" up to 14"	0%	17%	14%	20%
over 14" up to 18"	0%	83%	81%	70%
over 18"	0%	0%	2%	5.0%

Note: The above columns may not add up to 100%. The remaining percent is made up of people who did not reply or who did not know.

From the above results it can be seen that a maximum size limit of 18 inches, with one over 18 inches allowed to be kept, would be acceptable to the majority of stakeholders. A maximum size limit of 18 inches is in concordance to the proposed maximum size by the Northwest Ontario Fisheries Committee, 1998 (Appendix VI). The above results also demonstrate that a slot size between 18 inches to a trophy size in the range of 27.0 inches to 28.5 inches would be very acceptable to stakeholder groups in the Cedar River Watershed. Wabauskang First Nation residents were not asked what specific size restrictions would be preferable to them as aboriginal people are not subject to regulations regarding size restrictions, and because it was thought that people of aboriginal culture do not discriminate between what size of fish would be more acceptable for food.



Possession limits:

Stakeholders were asked which possession limit for walleye they would be most in favour of for the Cedar River Watershed (Question 17, Appendix III). Of the stakeholder groups, residents were the most in favour of limit reductions followed by cottagers and camp owners (Table 4.7). Visiting anglers were least in favour of limit reductions. Of the Wabauskang First Nations people 57% showed support for reductions to walleye limits (Table W9a, Appendix IV). Only residents showed a majority in favour of reductions to four or less at 59% which has been proposed by the NOFC. Other stakeholder groups were not highly in favour of a limit reduction to four with only 25% of camp owners and visiting anglers surveyed in favour. A possession limit of five would be favourable to the majority of stakeholders with the exception of visiting anglers who were only 30% in favour. Wabauskang First Nation people were not asked which specific limits they would prefer because aboriginal people are not subject to regulations regarding possession limits.

Table 4.7: Percent of stakeholders in favour of possession limit reductions for walleye in the Cedar River Watershed

Limit	Resident Response	Camp owner response	Cottager response	Visiting angler response
6	29%	46%	38%	70%
5 or less	71%	54%	60%	30%
4 or less	59%	25%	45%	25%

4.2.2 Strategies For Northern Pike

On a scale of one to ten, fishing for northern pike was ranked as the second most important activity next to fishing for walleye by both camp owners and cottagers (Table



13, Appendix III). Camp owners ranked the average value of importance of fishing for northern pike at 6.8, and cottagers ranked fishing for pike at an average value of 5.8. Fishing for northern pike was ranked third by residents and visiting anglers with average value scores of 5.1 and 5.0 out of ten respectively. Of the Wabauskang First Nation people interviewed 50% said that fishing northern pike was important and 29% said northern pike fishing was very important (Table W7, Appendix IV).

Northern pike are becoming a more popular game fish in Northwestern Ontario and are found naturally in many lakes within the Cedar River Watershed. Shallower weedy lakes like Cedar, Ord, Florence, and Wabaskang lakes have particularly abundant populations of northern pike. Smaller remote lakes often have an abundance of northern pike as well as the deeper more clear lakes. Aerobus Lake is a deep clear lake that has a large northern pike population which is very important to the camp owner located there.

In order to protect this game fish current regulations include: a possession limit of six, a maximum size limit of which only one fish in possession may exceed 27.5 inches, and a closed season the same as for walleye. Stakeholders in the Cedar River Watershed were asked which management strategies for ensuring the sustainability of northern pike would be most preferred (Question 26, Appendix III; Question 9, Appendix IV).

Unlike the choices for management strategies concerning walleye, there was no clear preference for one management strategy for northern pike, except in the case of Wabauskang First Nation respondents of whom 64% chose sanctuaries, followed by no fishing zones at 57% (Table 4.8). For an explanation of no fishing zones refer to section 4.2.1 above. Although no strategy was clearly preferred over another, strategies for managing northern pike that received the three highest responses from each group were



similar. A protected slot size of some form was the strategy chosen most over all groups, followed by sanctuaries in May, the same season as for walleye, no change to current management strategy and reduced limits.

Stakeholders suggested strategies for northern pike management other than those given in the survey (Appendix V). Some of the suggested strategies included:

- allow one trophy fish (i.e. one over maximum size limit) to be taken out for mounting purposes only (i.e. the fish cannot be filleted or gutted, but must be whole) (five respondents)
- tag trophy like moose or bear to eliminate upgrading¹
- use barbless hooks only (three respondents)
- reduce non-resident limits (a resident and cottager respondent suggested these)

Table 4.8: Preferred management strategies for northern pike in the Cedar River Watershed as chosen by stakeholder groups (more than one strategy could be chosen)

PREFERRED STRATEGIES FOR MANAGEMENT OF NORTHERN PIKE				
Wabaskang 1st Nation	Residents	Camp Owners	Cottagers	Visiting Anglers
Sanctuaries in May (64%)	Protected slot size from 27.5" to trophy size or Sanctuaries in May (47%)	Protected slot between 27.5" and trophy size or Season same as walleye (42%)	Protected slot size or Sanctuaries in May (31%)	No change (45%)
No fishing zone (57%)	Season same as walleye (41%)	Protected slot size or No change (29%)	No change (29%)	Protected slot size or Season same as walleye (30%)
Reduced creel limits (50%)	Protected slot size or Minimum size limit or Combination of creel reductions and size limits (29%)	Reduce creel limit (25%)	Protected slot size between 27.5" and trophy size (26%)	Sanctuaries in May (25%)

¹ Upgrading refers to the practice of exchanging a previously kept "trophy fish" over the maximum size limit with a larger fish by releasing or eating the smaller fish. By requiring that a fish over the maximum size limit must be tagged immediately upon being kept will eliminate upgrading. The tags would be constructed in such a way that it is not physically possible to take the tag off and put it on another fish without being able to tell. In this way the tag could only be used once to be legal.



Size Restrictions (Protected slot size and Maximum size limit)

Stakeholders were asked which of three protected slot sizes they would be most in favour of for northern pike. As in the responses given for walleye slot sizes, responses indicated that there was no clear preferred slot size for northern pike among stakeholder groups, and many respondents suggested slot sizes other than those given as well as other management ideas (Table 19, Appendix III). Both residents and visiting anglers showed a preference for a slot size of 27.5 inches to 35 inches, having 47% and 40% choosing this slot size respectively (Table 19, Appendix III). Questions 22 and 23 in Appendix III were used to determine what slot size for northern pike would be most preferable to stakeholders.

The range of average size of northern pike considered by stakeholders to be of a trophy size was found to be 37.4 inches to 39.7 inches, or approximately 14 pounds to 18 pounds (Table 4.9).

Table 4.9: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for northern pike in the Cedar River Watershed

	Resident Response	Camp Owner Response	Cottager Response	Visiting angler Response
Range	35" to 46"	27.5" to 42"	35" to 42"	35" to 42"
Average	39.0"	37.4"	38.8"	39.7"

Northern pike are sought after for eating as well as for trophies. The majority of all stakeholders considered a northern pike between 19 inches up to 27.5 inches to be of an ideal eating size (Table 4.10). No residents indicated that they would prefer a northern pike over 27.5 inches for eating. Approximately 10% (8% to 10%) of other stakeholder groups considered a northern pike over 27.5 inches ideal for eating.



Table 4.10: Ideal eating sizes for northern pike in the Cedar River Watershed as considered by stakeholder groups

Total Length	Resident response	Camp owner response	Cottager response	Visiting angler response
14" up to 19"	0.0%	0%	5%	0%
over 27.5"	0%	8%	10%	10%

Note: The above columns may not add up to 100%. The remaining percent is made up of people who did not reply, who did not know, or who indicated that they did not eat northern pike.

The results presented in this section show that a maximum size limit of 27.5 inches of which one over 27.5 inches could be kept, would be acceptable to a large majority of stakeholders. A protected slot size from 27.5 inches up to between 37.5 inches and 39 inches would be acceptable to the majority of stakeholders. A protected slot size of 27.5 inches to 35.4 inches has been proposed by the Northwest Ontario Fisheries Committee, 1998 (Appendix VI). The proposal by the Northwestern Ontario Fisheries Committee would probably be acceptable to most stakeholders in the Cedar River Watershed as the maximum size of the proposed slot is less than that shown to be preferred by the stakeholders. This means that the slot size proposed by the NOFC provides more opportunity to keep a trophy fish. However, if the stakeholders were to feel that northern pike should be protected to a larger size as shown in this report, a larger slot size may be preferred.

Wabauskang First Nation residents were not asked what specific size restrictions would be preferable to them as aboriginal people are not subject to regulations regarding size restrictions, and because it was thought that people of aboriginal culture do not discriminate between what size of fish would be more acceptable for food.



Possession limits:

Stakeholders were asked which possession limit for northern pike they would be most in favour of for the Cedar River Watershed (Question 17, Appendix III). Of the stakeholder groups, camp owners and cottagers (67%) were most in favour of limit reductions followed by residents (65%). Wabauskang First Nation respondents showed 50% in favour of reductions to possession limits of northern pike (Table W9d, Appendix IV). As with walleye, visiting anglers were least in favour of limit reductions (45%). Although the majority of camp owners were in favour of limit reductions of five or less, only 29% were in favour of reductions of four or less. Visiting anglers indicated that 40% were in favour of reductions to four or less. Both residents and cottagers showed a majority in favour of reductions down to four or less at 59% and 57% respectively.

Table 4.11: Percent of stakeholders in favour of possession limit reductions for northern pike in the Cedar River Watershed

Limit	Resident Response	Camp owner response	Cottager response	Visiting angler response
6	24%	33%	31%	55%
5 or less	65%	67%	67%	45%
4 or less	59%	29%	57%	40%

The possession limit reduction to four northern pike proposed by the NOFC would be acceptable to a slight majority of residents and cottagers, but would not be to camp owners or visiting anglers. A reduction to five northern pike in possession would be favoured by a large majority of all stakeholder groups except for visiting anglers (45%). Wabauskang First Nations people were not asked which specific limits they would prefer as aboriginal people are not subject to possession limits.



4.2.3 Strategies For Smallmouth Bass

On a scale of one to ten, visiting anglers ranked the average value of importance of fishing for smallmouth bass at 6.1, making fishing for smallmouth bass the second most important activity to this stakeholder group. Fishing for smallmouth bass was ranked third to fishing for other species by camp owners and cottagers with average values of importance of 6.3 and 4.5 out of ten respectively. Residents ranked the importance of fishing for smallmouth bass fourth at an average value of 4.7 out of ten behind walleye (7.2), lake trout (7.1) and northern pike (5.1) (Table 13, Appendix III). Of the Wabauskang First Nation people interviewed 50% said that fishing for smallmouth bass was important and 21% said smallmouth bass fishing was very important (Table W7, Appendix IV).

Smallmouth bass is not native to the Cedar River Watershed and is thought to have been introduced to Cliff Lake in the 1930's to 1940's according to local residents. Since the introduction of smallmouth bass to the watershed, this exotic species of fish has spread north through the watershed becoming well established in Cliff, Cedar and Perrault lakes. Smallmouth bass are becoming established in Wabaskang Lake, as this species migrates further north, and some are now being found in Wine Lake. Smallmouth bass is becoming an important game fish to the watershed, as well as other areas in Northern Ontario where this fish was also introduced. The smallmouth bass fishery is of particular importance to resorts located on Cliff Lake where walleye populations are not very abundant. The large population of smallmouth bass in Cliff Lake is an important fishery for the promotion of the resorts there. Cedar and Perrault lakes enjoy an abundant population of smallmouth bass, and the resorts there promote this fishery also.



The current regulation for smallmouth bass is a possession limit of six. Fishing for smallmouth bass is presently open all year round in the watershed. Stakeholders in the Cedar River Watershed were asked which management strategies for ensuring the sustainability of smallmouth bass would be most preferred (Question 24, Appendix III; Question 9, Appendix IV).

The establishment of sanctuaries in June was the most popular strategy chosen by residents (53%), camp owners (33%) and cottagers (38%) (Table 4.12). Of Wabauskang First Nation respondents, 29% chose sanctuaries while the majority (71%) chose no fishing zones (for an explanation of no fishing zones refer to section 4.2.1 above). Sanctuaries were chosen by 20% of visiting anglers (Table 24, Appendix III), while a protected slot size was chosen by 40% of visiting anglers. A size restriction in the form of a protected slot or a maximum size, with one over the maximum size allowed to be kept, was a strategy seen to be popular amongst all groups. For example 57% of Wabauskang First Nation respondents chose a protected slot size as well as 40% of visiting anglers. Maximum size limits were chosen by 47% of residents, 33% of camp owners and 31% of cottagers.

Stakeholders suggested strategies for smallmouth bass management other than those given in the survey (Appendix V). Some other strategies suggested for managing smallmouth bass included:

- use barbless hooks only (three respondents); allow hooks with only one treble
- enhance spawning areas (two respondents)
- develop strategies that would best protect bass from watershed studies (two respondents)
- catch and release all bass and teach proper catch and release techniques to anglers



Table 4.12: Preferred management strategies for smallmouth bass in the Cedar River Watershed as chosen by stakeholder groups (more than one strategy could be chosen)

PREFERRED STRATEGIES FOR MANAGMENT OF SMALLMOUTH BASS				
Wabaskang 1st Nation	Residents	Camp Owners	Cottagers	Visiting anglers
No fishing zones (71%)	Sanctuaries in June (53%)	Sanctuaries in June or Maximum size limit (33)%	Sanctuaries in June (38%)	Protected slot size (40%)
Reduced limit or Protected slot (57%)	Maximum size limit allowing one over to be kept (47%)	One over maximum size limit or Combine creel reductions with size restrictions or Minimum size limit (21%)	Maximum size limit allowing one over to be kept (31%)	Maximum size limit allowing one over to be kept or Catch and release only in June (30%)
Sanctuaries in June (29%)	Protected slot or Season closed in June (29%)	Catch & release in June or Reduce creel limit (17 %)	No change (29%)	Reduce creel limit or No change (25%)

Size Restrictions (Protected slot size and Maximum size limit)

Stakeholders were asked which of three protected slot sizes they would be most in favour of for smallmouth bass (Question 21, Appendix III). Residents (41%), cottagers (31%) and visiting anglers (40%) showed preference for a slot size of 14.5 inches to 18.5 inches (Table 21, Appendix III). Camp owners showed no preference for any given slot size. A significant number of respondents from each stakeholder group suggested other slot sizes and management strategies concerning a preferred protected slot size. Questions 22 and 23 in Appendix III were used to determine what slot size for smallmouth bass would be most preferable to stakeholders.

The range of average trophy size for smallmouth bass considered by stakeholders was 19.4 inches to 20.7 inches, or approximately four and a half pounds to five pounds (Table



4.13). The majority of all stakeholders consider a smallmouth bass between 11 inches up to 16 inches to be of an ideal eating size (Table 4.14).

Table 4.13: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for smallmouth bass in the Cedar River Watershed

	Resident Response	Camp Owner Response	Cottager Response	Visiting angler Response
Range	18.5" to 26"	17" to 23"	18.5" to 23"	18.5" to 23"
Average	20.4"	19.4"	20.2"	20.7"

Table 4.14: Ideal eating sizes for small mouth bass in the Cedar River Watershed as considered by stakeholder groups

Total Length	Resident response	Camp owner response	Cottager response	Visiting angler response
9" up to 11"	0%	4%	5%	0%
over 11" up to 13"	0%	0%	0%	0%
over 13" up to 15"	0%	0%	0%	0%
over 15" up to 16"	0%	0%	0%	0%
over 16" up to 17.5"	0%	4%	2%	5%
over 17.5"	0%	0%	0%	0%

Note: The above columns may not add up to 100%. The remaining percent is made up of people who did not reply, who did not know, who did not eat small mouth bass, who did not fish for, or who catch and release smallmouth bass.

The above results show that a maximum size limit of 16 inches, of which one may be kept over 16 inches, for smallmouth bass would be acceptable to the larger majority of stakeholders. A protected slot size from 16 inches up to between 19.5 inches and 20.75 inches would be acceptable to a large majority of stakeholders. A maximum size of 13.75" of which none over can be kept from December 1st to July 1st has been proposed by the Northwest Ontario Fisheries Committee, 1998 (Appendix VI). The proposal by the Northwestern Ontario Fisheries Committee would not be acceptable to most stakeholders



in the Cedar River Watershed. The majority of all stakeholder groups prefer to eat smallmouth bass above 13 inches (Table 4.14). A maximum size limit of 14.5 inches would prove more acceptable by a majority of stakeholders than the proposed 13.75 inches.

Wabauskang First Nation residents were not asked what specific size restrictions would be preferable to them as aboriginal people are not subject to regulations regarding size restrictions, and because it was thought that people of aboriginal culture do not discriminate between what size of fish would be more acceptable for food.

Possession limits:

Stakeholders were asked which possession limit for smallmouth bass they would be most in favour of for the Cedar River Watershed (Question 17, Appendix III). Of the stakeholder groups, residents (65%), Wabauskang First Nations people (57%) and cottagers (57%) were most in favour of limit reductions followed by visiting anglers (45%) (Table 4.15; Table W9b, Appendix IV). Camp owners were least in favour of limit reductions (42%).

For limit reductions of four or less residents were the most in favour followed by cottagers and visiting anglers. Very few camp owners favoured a reduction in smallmouth bass limits to four or less with only 17% in favour. Visiting anglers (25%) showed the most support for a creel limit of two or less. The remaining stakeholder groups showed little support for limit reductions of two or less with support ranging from 12% down to 8%. Wabauskang First Nations people were not asked which specific limits they would prefer as aboriginal people are not subject to regulations regarding possession limits.



The NOFC (1998) has proposed two reductions in possession limits for smallmouth bass to occur during a season (Appendix V). One reduction is proposed to occur from December 1st to June 31st where smallmouth bass limits are to be reduced to a limit of two. A possession limit of two does not meet with the support of stakeholder groups. The other limit reduction proposed by the NOFC (1998) is to occur from July 1st to November 30th where creel limits will be reduced to four. A reduction to four was not favoured by the majority of camp owners as shown above. The other stakeholder groups showed support for a limit reduction to four ranging from 53% in favour down to 40%.

Table 4.15: Percent of stakeholders in favour of possession limit reductions for smallmouth bass in the Cedar River Watershed

Limit	Resident Response	Camp owner response	Cottager response	Visiting angler response
6	24%	46%	38%	40%
5 or less	65%	42%	57%	45%
4 or less	53%	17%	45%	40%
2 or less	12%	8%	10%	25%

4.2.4 Strategies For Lake Trout

On a scale of one to ten, fishing for lake trout was ranked as the second most important activity next to walleye fishing by residents at an average rating of 7.1 (Table 13, Appendix III). Lake trout fishing was ranked second in importance to cottagers tied with northern pike fishing at an average value of 5.8 on a scale of one to ten. Of the Wabauskang First Nation people interviewed 33% said that fishing for lake trout was important and 29% said lake trout fishing was very important (Table W7, Appendix IV). Lake trout fishing was ranked fourth in importance to camp owners at an average value of



5.5. Visiting anglers ranked the importance of fishing lake trout at an average value of 3.3 on a scale of one to ten.

Lake trout inhabit lakes that have deeper areas with cold, clear water. Of the larger lakes in the Cedar River Watershed, Cliff, Aerobus, Anishinabi, and Wine lakes have abundant populations of lake trout. Wabaskang Lake also has an area located in the northwest arm, where Aerobus Lake drains into, that supports a population of lake trout. Lake trout are important game fish to resorts located on lakes that support large populations of this fish. As indicated above, residents, who have access to lake trout lakes, also consider this fish as important.

The current regulation for lake trout in the Cedar River Watershed is a possession limit of two, and a closed season from October 1st to December 31st. Wabauskang First Nation residents were asked which management strategies for ensuring the sustainability of lake trout would be most preferred (Question 9, Appendix IV). Other stakeholder groups were asked questions regarding protected slot sizes, trophy sizes and ideal eating sizes.

The establishment of sanctuaries for lake trout was the most popular strategy chosen by Wabauskang First Nation respondents at 79% (Table 4.16) illustrating their concern to protect brood stock (Table W8, Appendix IV).

Table 4.16: Preferred management strategies for lake trout in the Cedar River Watershed as chosen by Wabauskang First Nation respondents (more than one strategy could be chosen)

Strategy	Percent in favour
Sanctuaries	79%
Reduced possession limits	57%
No fishing zones	50%
Protected slot	28%



Size Restrictions (Protected slot size and Maximum size limit)

Stakeholders were asked which of two protected slot sizes they would be most in favour of for lake trout (Question 20, Appendix III). Residents (71%) showed a high preference for the larger protected slot size suggested (22 inches to 25.6 inches). Cottagers (41%) also showed a preference for a protected slot size between 22 inches and 25.6 inches. Camp owners and visiting anglers did not show a preference for any given slot size. Each stakeholder group suggested other slot sizes and management strategies concerning a preferred protected slot size. Questions 22 and 23 in Appendix III were used to determine what slot size for lake trout would be most preferable to stakeholders.

The range of average trophy size for lake trout considered by stakeholders was 29.8 inches to 31.3 inches or approximately 19 pounds to 22 pounds (Table 4.17). The majority of all stakeholders considered that lake trout between 18.5 inches and 24 inches were ideal eating size (Table 4.18).

Table 4.17: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for lake trout in the Cedar River Watershed

	Resident Response	Camp Owner Response	Cottager Response	Visiting angler Response
Range	25.6" to 36"	25" to 34"	25.6" to 38.5"	25.6" to 36"
Average	30.3"	29.8"	30.5"	31.3"

Table 4.18: Ideal eating sizes for lake trout in the Cedar River Watershed as considered by stakeholder groups

Total Length	Resident response	Camp owner response	Cottager response	Visiting angler response
18.5" up to 22"	77%	63%	76%	55%
18.5" up to 24"	9.2%	13%	38%	36%
over 24"	0.0%	4%	0%	0%



From the above results it can be seen that a maximum size limit for lake trout of 24 inches, of which one over could be kept, would be acceptable to the majority of stakeholders. A protected slot size from 24 inches to approximately 30 inches would be acceptable to the majority of stakeholders. Wabauskang First Nation residents were not asked what specific size restrictions would be preferable to them as aboriginal people are not subject to regulations regarding size restrictions, and because it was thought that people of aboriginal culture would consider all fish harvested as being acceptable for food, not preferring one size over another.

A maximum size of 22 inches, of which one over can be kept for the month of September, has been proposed by the Northwest Ontario Fisheries Committee, 1998 (Appendix VI). Many respondents from each stakeholder group would find a maximum size of 22 inches acceptable, although not as acceptable as a maximum size of 24 inches (Table 4.18).

Although the information in this section indicates sizes of fish that are preferred as trophies and eating size and uses this data to find acceptable maximum size limits and protected slot sizes, it is not meant to imply that as management strategies these size restrictions would be preferred. Stakeholders have voiced concern over survival rate of lake trout that are angled in deep water, pulled to the surface, and then released¹. More education and information is needed regarding the catch and release of lake trout.

¹ Concern shown by questionnaire respondents regarding the survival of released lake trout is shown in Appendix VII. This was also a topic at a public meeting held with stakeholders in the Cedar River Watershed.



4.2.5 Strategies for Muskellunge

On a scale of one to ten, fishing for muskellunge was ranked by camp owners to have an average value of importance of 4.9. Other average values for the importance of muskellunge fishing given by other stakeholder groups were 3.2 by cottagers, 3.1 by visiting anglers and 2.3 by residents (Table 13, Appendix III). Of the Wabauskang First Nations respondents, 43% considered fishing for muskellunge important and 14% said it was very important (Table W7, Appendix IV).

Muskellunge is primarily fished for sport as a trophy fish. This species can grow to a large size. In the Cedar River Watershed Cliff, Cedar and Thaddeus lakes have muskellunge populations, which are sought by anglers. Some of the smaller, remote lakes throughout the watershed also have muskellunge populations. In order to protect this sport fish current regulations include: a daily limit of one and a possession limit of two, a minimum size limit of 40 inches, and a closed season from December 1st to the third Friday in June. Stakeholders in the Cedar River Watershed were asked which management strategies for ensuring the sustainability of muskellunge would be most preferred (Question 27 in Appendix III; Question 9 Appendix IV). It should be noted that the choices given to Wabauskang First Nation respondents were not the same as those given to other stakeholder groups. First Nation people expressed concern with protecting the breeding stock of muskellunge (Table W8, Appendix IV), and also with anglers fishing close to the reservation as explained in section 4.2.1. The management strategies chosen by Wabauskang First Nation respondents reflected this concern (Table W9c, Appendix IV). The other stakeholder groups were given choices mostly to do with size restrictions and catch and release only (Question 27, Appendix III).



No management strategy stands out as being preferred over another by any of the stakeholder groups with the exception of Wabauskang First Nation respondents (Table 4.19). The top three strategies selected by other stakeholder groups are approximately divided equally, receiving about one third support for each.

Table 4.19: Preferred management strategies for muskellunge in the Cedar River Watershed as chosen by stakeholder groups (more than one strategy could be chosen)

PREFERRED STRATEGIES FOR MANAGEMENT OF MUSKELLUNGE				
Wabaskang 1st Nation	Residents	Camp Owners	Cottagers	Visiting anglers
Sanctuaries (64%)	No change (35%)	No change (29%) or	No change (36%)	No change or Increase minimum size (30%)
No fishing zone (50%)	Increase minimum size (29%)	Increase minimum size (29%) or	Catch and release only (26%)	Catch and release only (25%)
Protected slot (21%)	Catch and release only (12%)	Catch and release only (29%)	Lower minimum size (4%)	Lower minimum size (10%)

Other strategies for the management of muskellunge suggested by stakeholders are presented in Appendix V. Some of these suggestions are shown below.

- Reduce possession limit to one (nine respondents)
- have a muskellunge tag in order for a trophy fish to be kept at extra cost in addition to license fees
- set a minimum size limit for each lake according to the size of muskellunge (e.g. Fluke Lake has smaller muskellunge, so a minimum size limit of 36 inches would be better)

Size Restrictions (Minimum size limit)

The range of average size for muskellunge considered by stakeholders to be of a trophy size was approximately 43 inches to 45.5 inches, or about 20 pounds to 26 pounds (Table 4.20).



Table 4.20: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for muskellunge in the Cedar River Watershed

	Resident Response	Camp Owner Response	Cottager Response	Angler Response
Range	34" to 50"	34" to 50"	34" to 50"	34" to 50"
Average	45.4"	45.5"	42.9"	45.2"

A minimum size limit of 54 inches (i.e. no fish under 54 inches can be kept) allowing only one fish equal to or over 54 inches to be kept was initially proposed by the Northwest Ontario Fisheries Committee, 1998 (Appendix VI). This initial proposal has since been withdrawn and replaced by a provincial recommendation of five minimum sizes to be based upon female growth rates. The recommended sizes are 36 inches, 40 inches, 44 inches, 48 inches and 60 inches (N. Ward, *pers. comm.*, 1999).

A minimum size limit of approximately 45 inches for muskellunge would be acceptable to most stakeholders surveyed. However, some lakes in the watershed have smaller muskellunge than others. It has been suggested at public meetings held with Cedar River Watershed stakeholders that a class system should be used to determine the minimum size limit for muskellunge based upon the size of muskellunge in each lake. For example a lake that has larger muskellunge, 54 inches or over, could be classed as a lake with a minimum size limit of 60 inches, whereas a lake that has smaller muskellunge that get as large as 36 inches or over could be classed as a lake with a minimum size limit of 40 inches. Minimum size limits of muskellunge based upon the size of muskellunge in each lake is in agreement with the new provincial recommendations.



A possession limit reduced from two to one would be acceptable to most stakeholders as they have indicated in the survey that muskellunge is angled primarily as a trophy, sport fish. This is in agreement with the possession limit of one proposed by the NOFC.

4.2.6 Strategies for Yellow Perch

The importance of fishing for yellow perch was not ranked very high by any stakeholder group (Table 13 Appendix III). When compared to the importance values assigned to fishing for yellow perch given by other stakeholder groups, fishing for yellow perch was ranked highest by camp owners at an average value of 4.3 out of ten and lowest by residents at an average value of 1.8 out of ten. Fishing for yellow perch was considered to be important to 21% of respondents from Wabauskang First Nations, with no one considering it to be of great importance (Table W7, Appendix IV).

Yellow perch are abundant in most every lake within the Cedar River Watershed inhabiting shallow weedy areas, and are an important source of food for larger piscivores such as northern pike and walleye. Yellow perch are also a favourite game fish to some anglers, particularly those from the United States. In Aerobus Lake the yellow perch fishery is an important promotional factor for the resort located there.

Currently there are no regulations for managing this game fish other than the requirement of a legal fishing license by those who need a license to fish. Because the yellow perch fishery is becoming more important to Northwestern Ontario, the NOFC (1998) has proposed a possession limit of 50. Stakeholders in the Cedar River Watershed were asked what possession limit would be most preferred for yellow perch (Question 16, Appendix III). Most stakeholder groups preferred no change to the limit of yellow perch



with the exception of camp owners where 50% preferred a limit of 25 (Table 4.21). Among the other stakeholder groups, the two most numerous replies were no limit and a limit of 25 (Figure 4.5). First Nation people were not asked which possession limit would be preferable to them as aboriginal peoples are not subject to regulations regarding possession limits.

Table 4.21: Stakeholder responses to suggested possession limits for yellow perch in the Cedar River watershed they would most prefer

LIMIT	Resident Response	Camp owner Response	Cottager Response	Visiting angler Response
No change (i.e. no limit)	59%	21%	55%	40%
50	0%	21%	2%	10%
25	29%	50%	21%	30%
10	0%	4%	14%	5%
OTHER*	12%	4%	7%	15%

***Other responses included:**

Residents: no interest; a limit of two

Camp owners: no reply

Cottagers: should catch all perch as they are full of worms; have creel limits that would assure no over abundance nor deficiency; no reply.

Visiting anglers: perch are full of worms so don't keep; never fish for; just enough to eat during visit



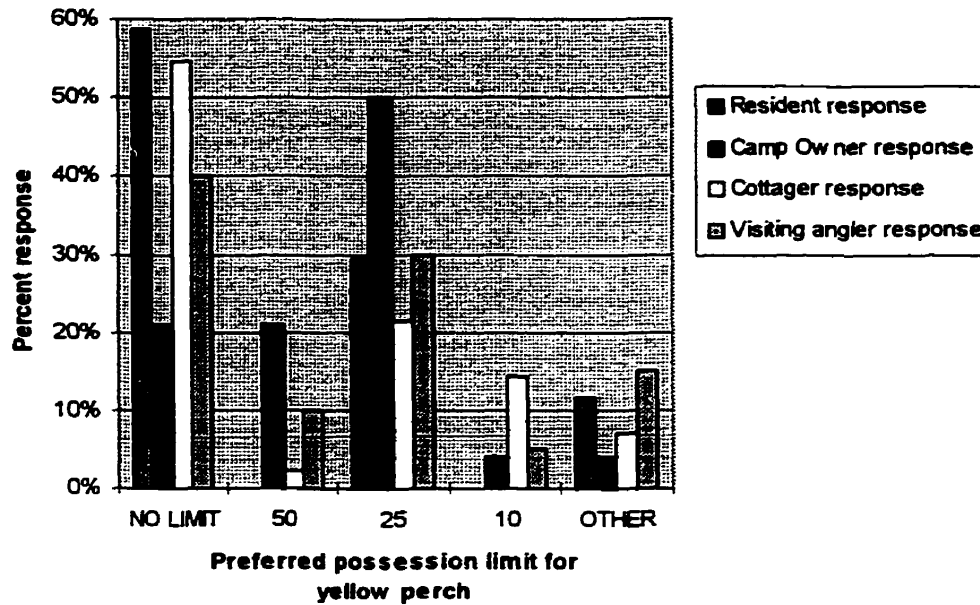


Figure 4.5: Distribution of responses made by stakeholders regarding preferred possession limits for yellow perch in the Cedar River Watershed.

From the above data it is difficult to determine if stakeholders would be in favour of the proposed limit of 50 or not. Data from the questionnaires showed that many who selected no limit for perch also did not consider the yellow perch fishery of importance (i.e. chose one which equaled not important at all on a scale of one to ten). However, a significant number of stakeholders who chose limits of 50 or less also regard perch as not important on a scale of one to ten.

It is interesting to note that some of the responses from stakeholders indicated that there were respondents who did not care for yellow perch, and some respondents even considered this fish as worthless due to the fact that yellow perch can become infected with parasites (worms). Some respondents went as far as to recommend that yellow perch be removed from the system. Opinions like these about yellow perch strongly suggest that people need to be educated about the importance of yellow perch to the ecosystem, and



the role this species serves as a prey fish for more desirable species such as walleye and northern pike.

4.2.7 Strategies for Lake Whitefish

Currently regulations regarding lake whitefish include an angling possession limit of 25. There is no regulated season for lake whitefish, which can be caught by angling any time of year. As a sport fish, lake whitefish is not very well known, though some do angle for this fish. The importance of fishing for lake whitefish was ranked last on a scale of one to ten by camp owners, cottagers and visiting anglers when compared to other fish species. Average values for the importance of fishing lake whitefish were 2.5, 2.8, and 1.5 for camp owners, cottagers and visiting anglers respectively (Table 13, Appendix III). Fishing for lake whitefish was more important to residents, who gave lake whitefish fishing an average value of importance of 4.3 on a scale of one to ten.

Lake whitefish was found to be most important to Wabauskang First Nation respondents of which 43% indicated that fishing for lake whitefish was very important to them (Table W7, Appendix IV). Lake whitefish is an important fish used by First Nation residents for subsistence use. Of those people from the Wabauskang First Nation interviewed, 29% stated that they fish lake whitefish with nets on Wabaskang Lake (Table 4.22). During interviews with respondents from the Wabauskang First Nation, it was stressed by many that the fish caught by net was to be shared amongst all the people on the reservation for the people's subsistence use.



Table 4.22: Fishing techniques employed by respondents from Wabauskang First Nation and how often they fish this way. Fishing by net was done mostly for lake whitefish, while fishing by rod was done predominantly for species other than lake whitefish.

Fishing Technique	Number who fish this way	Percent		
Net	4	29%		
Rod	12	86%		
How often	Number who fish with net	How often	Number who fish with rod	
once/year	0	<once/week	5	
twice/year	2	once/week	3	
three times/yr	1	twice/week	0	
> three times/yr	1	>twice/week	4	

Lake whitefish is an important part of the diet of Wabauskang First Nation people, as well as an important commercial fish as described in chapter two. Presently there are no plans to change the current regulations regarding lake whitefish. However, there has been some concern expressed by stakeholders as to how much by-catch, (i.e. species caught in nets other than those sought), is included in the commercial fishery catches. Suggestions have been made at public meetings within the watershed to have a study done to show how many more valuable sport species are being caught in commercial nets and how this may affect the overall watershed fishery.

4.2.8 Possession Limits Revisited: Possession limits For The Cedar River Watershed Vs All Of Northern Ontario

Camp owner, resident and cottage owner stakeholder groups were asked how a reduction in possession limits for the Cedar River Watershed would effect the return of visiting anglers if the rest of Northern Ontario remained at higher possession limits (Question 28, Appendix III). Respondents from each stakeholder group were divided as



to what the effect of reduced possession limits would be on the return of visiting anglers to the watershed region (Figure 4.6). There were a significant number of respondents who were of the opinion that reduced possession limits would greatly reduce the return of visiting anglers (value of one), and also a significant number who were of the opinion that a reduction in possession limits would have no effect of returning anglers (value of 10) (Figure 4.6).

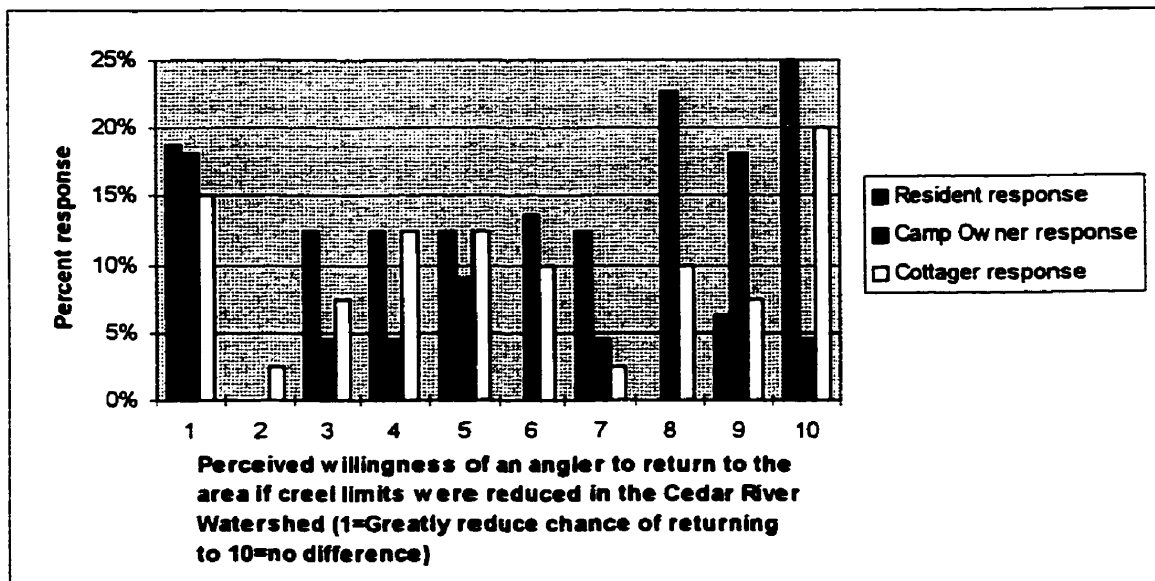


Figure 4.6: Distribution of responses to whether reduced possession limits would effect the return of anglers to the Cedar River Watershed while no reductions occurred elsewhere in Northern Ontario. Average between 1 and 10 were: Residents = 5.6, camp owners = 6 , cottagers = 5.8.

The above stakeholder groups were also asked if they would be more willing to support a reduction in possession limits in the Cedar River Watershed if all of Northern Ontario adopted the same reductions (Question 29, Appendix III). Most residents were not more willing to support a reduction in possession limits in the Cedar River Watershed if all of Northern Ontario were to adopt the same reductions (Figure 4.7). Camp owners were divided as to how much more willing they would be to support limit reductions



(Figure 4.7). Cottagers indicated a tendency to be more willing to accept limit reductions if all of Northern Ontario were to do the same (Figure 4.7).

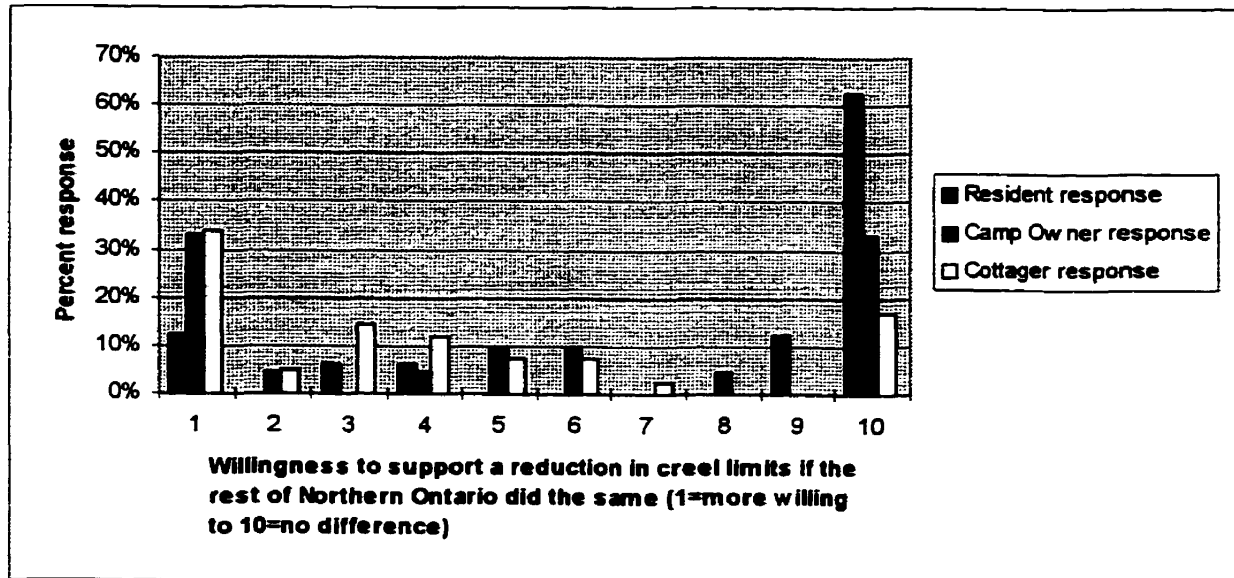


Figure 4.7: Distribution of responses to willingness to support a reduction in possession limits for the Cedar River Watershed if similar reductions occurred in all Northern Ontario. Average value for residents = 7.9; for camp owners = 5.4; for cottagers = 4.0.

Camp owners, residents and cottage owners were then asked what possession limits they would be most in favour of for walleye, northern pike and smallmouth bass if limit reductions were to be the same across all of Northern Ontario (Question 29, Appendix III). The preferred possession limits given to be applied to the Cedar River Watershed only were compared to the preferred possession limits given for all of Northern Ontario.

There was no significant difference in preferred possession limits for walleye for all of Northern Ontario vs the Cedar River Watershed according to resident and cottager respondents (Table 4.23). However, more camp owners were in favour of a possession limit of five or less for walleye with an increase in support from 54% to 67%, an increase



of 13%. Camp owners in favour of a possession limit of four or less for walleye increased from 25% to 33%, an increase of 8%.

Possession limits preferred for northern pike remained approximately the same with no significant differences (Table 4.24). In the case of resident responses those preferring a limit of six remained the same, but those preferring limits of five or less and four or less increased due to more people answering this question (Question 30, Appendix III) than the previous (Question 17, Appendix III).

The preference for possession limits of smallmouth bass in the Cedar River Watershed only vs all of Northern Ontario remained approximately the same for residents and cottagers with no significant difference (Table 4.25). Increases in resident responses for limits of five or less and four or less were also due to more people answering one question more than the other. Camp owners in favour of a possession limit of five or less for smallmouth bass increased from 42% to 54%, an increase of 13%. Camp owners in favour of a possession limit of four or less increased from 17% to 25%, an increase of 8%. The amount of stakeholders in favour of 2 or less as a possession limit for smallmouth bass remained the same across all groups.

Table 4.23: Percent of stakeholders in favour of possession limit reductions for walleye in the Cedar River Watershed (CRW) only vs all of Northwestern Ontario (NWO)

Limit	Resident Response		Campowner Response		Cottager Response	
	CRW	all NWO	CRW	all NWO	CRW	all NWO
6	29%	29%	49%	25%	38%	36%
5 or less	71%	71%	51%	67%	60%	64%
4 or less	59%	59%	35%	32%	45%	43%



Table 4.24: Percent of stakeholders in favour of possession limit reductions for northern pike in the Cedar River Watershed (CRW) only vs all of Northwestern Ontario (NWO)

Limit	Resident CRW	Response all NWO	Camp owner CRW	Response all NWO	Cottager CRW	Response all NWO
6	24%	24%	33%	29%	31%	33%
5 or less	65%	77%	67%	63%	67%	67%
4 or less	59%	65%	29%	33%	57%	60%

Table 4.25: Percent of stakeholders in favour of possession limit reductions for smallmouth bass in the Cedar River Watershed (CRW) only vs all of Northwestern Ontario (NWO)

Limit	Resident CRW	Response all NWO	Camp owner CRW	Response all NWO	Cottager CRW	Response all NWO
6	24%	24%	36%	29%	38%	33%
5 or less	65%	77%	49%	56%	57%	62%
4 or less	53%	59%	31%	25%	45%	50%
2 or less	12%	12%	8%	10%	10%	10%

The increase in camp owners in favour of limit reduction across all of Northern Ontario, rather than just to the Cedar River Watershed, reflects concern for economic advantages that other resorts across Northern Ontario may gain by having higher possession limits. Even with the increase in those in favour of limit reductions, there is still a low percentage of camp owners in favour of those limits proposed by the NOFC.

4.2.9 Access Points

There had been some concern expressed by stakeholders, during public meetings held in Cedar River Watershed, about the accessibility of lakes within the Cedar River Watershed. Question 31, Appendix III was designed to determine what management strategies would be most acceptable to stakeholders regarding public access points. Most



respondents favoured the introduction of stricter regulations or no change in current conditions, but some did favour closing down all access points (Table 4.26).

Table 4.26: Stakeholder support of different management strategies regarding public access points in the Cedar River Watershed

Strategy	Resident response	Camp owner response	Cottager response
A) Make no changes	29%	25%	43%
B) Introduce stricter regulations for monitoring day trippers and for controlling the effects of erosion	29%	33%	38%
C) Close off all access points	12%	8%	7%
D) Other	12%	31%	12%
E) No reply	18%	2%	0%

Other management strategies suggested for public access points were as follows:

Residents: locals are not a problem but tourist resorts are; no more access points; B & close access points on heavy trafficked logging roads for safety reasons

Camp owners: B & C - reduce pressure and allow access through tourist resorts who have a financial incentive to protect fishery and also allow for a better idea of what is being taken out of lakes (two respondents); only allow conservation limits for resort guests from one lake using another lake; limit access points to one on smaller lakes - residents could monitor and enforce regulations; not given question

Cottagers: enforce limits for day trippers; access points are not a problem; stronger regulations for Americans; improve access points (three respondents - one respondent also selected B); use moneys obtained from fishing licenses to maintain access points

The above results show that very few stakeholders are in favour of closing off public access points. A management strategy that provides better monitoring of day trippers and controls the effects of erosion would be most acceptable to the Cedar River Watershed stakeholders. Increased monitoring and enforcement of regulations concerning day trippers into a lake would involve an increase in manpower and funds for conservation officers. A solution that involved the participation of stakeholders living near access



points, or near the lakes being accessed, in the monitoring process would be favourable. Some camp owners have suggested that access to lakes be through their resorts in order to monitor day trippers. More discussion on how to monitor access points effectively and impartially is needed to come up with a workable and feasible solution.

4.2.10 Non-Resident Camping

The issue of concern related to non-resident camping is that people from a foreign country (predominately from the United States) can come fish in the Cedar River Watershed for the price of a fishing license and a camping permit. Non-resident campers are allowed to take resources from the watershed and give very little in return. Also there are concerns about lack of monitoring and enforcement of campers on the lakes, as well as concerns about the amount of garbage left by some of these campers. As one First Nation respondent said, “these people take our resources for the mere price of a license and we have no idea what they are doing out there.”

Current regulations designed to encourage non-resident campers to stay at tourist resorts or parks are the requirements of a camping permit, and restriction of non-resident campers to camp at a distance of at least one half kilometre away from most lakes within the watershed. On lakes such as Wabaskang, non-resident campers are allowed to camp on the lake shore with the possession of a permit. Respondents suggested a variety of solutions to the problem of non-resident camping, but the most numerous response was the banning of this practice (Table 4.27)



Table 4.27: Stakeholder support for different management strategies regarding non-resident camping in the Cedar River Watershed

Strategy	Resident response	Camp owner response	Cottager response
A) Make no changes	12%	13%	50%
B) Increase distance to 1 km	6%	13%	7%
C) Increase distance to 2 km	12%	4%	10%
D) Ban all non-resident camping			
E) Other	0%	25%	5%
F) No reply	12%	0%	2%

Other included:

Camp owners: D or increase fees to \$25 and decrease limits to 2 fish and none taken home; D and guest of tourist resort can camp one night; follow up regulations with game warden checks for permits; not given question

Cottagers: no problem; don't know (two respondents)

The results above show that most stakeholders would like non-resident camping banned from the Cedar River Watershed, or at least the distance from the shoreline increased, with exception of cottagers of which 50% wanted no changes. The group classified as cottagers were comprised of 45% Canadian (resident) and 55% Americans (non-resident). Further analysis showed that only one cottager who was an American resident chose a strategy to ban all non-resident camping. Fifteen American cottagers elected to make no changes to non-resident camping making up 36% out of the 50% that preferred this decision.

The percent of Wabauskang First Nation respondents in favour of a regulation requiring non-resident campers to be located at least ½ km from the shore of all lakes within the Cedar River Watershed was 71%. One respondent wanted the ½ km distance to apply to resident campers as well as non-residents. Another respondent wanted non-resident camping to be banned in the watershed. Reasons given for restricting non-resident



camping were that one does not know what campers are doing out there, and non-resident campers are fishing for the mere price of a license. Two respondents were not in favour of a ½ km distance from shore requirement, and one stated the reason being that some lakes are more isolated than others and thus “less to worry about.” One respondent stated that she did not know.

The majority of stakeholders would be in favour of an increase to the distance required by non-resident campers to be from the shoreline, and many would be in favour of banning non-resident camping all together with the exception of non-resident cottagers. An alternative strategy not mentioned above, which may prove more acceptable to all stakeholders including non-resident cottage owners, would be to ban all non-resident camping in the Cedar River Watershed except for those non-residents who own a cottage in the Cedar River Watershed and their blood relatives. Also friends of cottage owners, or the friends of blood relatives of cottage owners, should be allowed to camp in the Cedar River Watershed as long as they are accompanied by the owner or blood relative of the owner of the cottage.

4.2.11 Summary

The above section discussed several different management strategies for the various species of fish in the Cedar River Watershed and other management strategies regarding access and non-resident camping. Data obtained from a survey of stakeholders was used to determine which management strategies would be most acceptable to stakeholders of the Cedar River Watershed. A summary of those management strategies deemed to be most acceptable to Cedar River Watershed stakeholders is presented below.



Recommendations are given for some management strategies based upon findings in the survey and at public meetings held within the Cedar River Watershed.

Walleye

Sanctuaries were chosen as the number one strategy by a large majority of all stakeholder groups. A protected slot size was the second most popular strategy.

Maximum size: 18 inches

Protected slot size: 18 inches to 28 inches

Possession limit: 5

Northern Pike

No clear favourite strategy selected, except by Wabauskang First Nation who chose sanctuaries as the number one choice followed by no fishing zones. A protected slot size was a common choice amongst all groups.

Maximum size: 27.5 inches

Protected slot size: 27.5 inches to 38 inches

Possession limit: 5

Smallmouth Bass

No clear favourite strategy. Sanctuaries in June and a variation of size restrictions (i.e. protected slot or maximum size) most common choice amongst stakeholder groups.

Maximum size: 16 inches;

14.5 inches chose by a majority also but not as popular as 16 inches (Table 4.28)

Protected slot size: 16 inches to 20 inches;

14.5 inches to 20 inches by a majority but less popular than 16 to 20 inches (Table 4.28)

Possession limit: 5



Table 4.28: Percent of stakeholders who preferred recommended maximum size limits and recommended protected slot sizes for smallmouth bassPercent who preferred a maximum size limit of 16 inches or a protected slot size of 16 to 20 inches

Residents	Camp Owners	Cottagers	Visiting Anglers
89%	92%	71%	80%

Percent who preferred a maximum size limit of 14.5 inches or a protected slot size of 14.5 to 20 inches

Residents	Camp Owners	Cottagers	Visiting Anglers
71%	71%	52%	65%

Lake Trout

Wabauskang First Nation majority in favour of sanctuaries and reduced limits. Other stakeholder groups were not asked to choose a preferred strategy.

Maximum size: 24 inches

22 inches majority support but not as many as support 24 inches (Table 4.29)

Protected slot size: 24 inches to 30 inches majority support and most popular

22 inches to 30 inches majority support (Table 4.29)

Table 4.29: Percent of stakeholders who preferred recommended maximum size limits and recommended protected slot sizes for lake troutPercent who preferred a maximum size limit of 24 inches or a protected slot size of 24 to 30 inches

Residents	Camp Owners	Cottagers	Visiting Anglers
94%	83%	88%	70%

Percent who preferred a maximum size limit of 22 inches or a protected slot size of 22 to 30 inches

Residents	Camp Owners	Cottagers	Visiting Anglers
77%	63%	76%	55%

Muskellunge

Wabauskang First Nation residents were most in favour of sanctuaries. Other groups were asked about size restrictions and catch and release only. No clear choice was given amongst stakeholder groups other than Wabauskang First Nation.

Minimum size: 43 inches to 45 inches

Recommendation:

Some lakes have larger muskellunge than others. Design a class system so that minimum size is suited to the size of muskellunge found in each body of water.



Yellow Perch

Possession limit: No clear choice. Most preference shown for no limit and limit of 25.

Recommendation:

Due to negative attitudes expressed by a significant number of stakeholders towards yellow perch, education of stakeholders as to the role yellow perch play in the ecosystem and the importance of this species as a food source for other more valued fish is recommended.

Lake Whitefish

Important to the Wabauskang First Nation peoples' subsistence. Also fished commercially by licensed commercial fishermen.

Recommendation:

Study to determine how many other species are being caught as by-catch and how this may affect other species populations.

Public Access Points

Recommendation:

Keep public accesses open but improve monitoring and enforcement of day trippers. Also monitor and control erosion problems if occurring. Possibly involve public in monitoring access by allowing access through tourist resorts only, where possible, or involving residents in monitoring of public access. Gull Rock Lake north of watershed can provide insight into public monitoring if it was decided to put into practice the above recommendation. The stakeholders of Gull Rock Lake have organized the construction of a gate at the public access to the lake in cooperation with the MNR. People who want to access Gull Rock Lake are required to get a key from a nearby stakeholder (i.e. a camp owner who has staff available). By controlling the entrance to the public landing, stakeholders are able to monitor the access to the lake.

Non-Resident Camping

Recommendation:

Ban non-resident camping in watershed with the exception of non-resident cottage owners. Allow non-resident cottage owners and blood relatives to camp. Also allow friends of cottage owners or friends of blood relative to camp as long as accompanied by cottage owner or blood relative.



4.3 CHAPTER SUMMARY

The results included in the above chapter demonstrated that the Cedar River Watershed fishery was important to the surveyed stakeholders in various ways. Most respondents from all stakeholder groups felt the fishery was declining and would like to see the fishery improved to a status similar to that enjoyed in past years. Stakeholders were asked to indicate what aspects of the fishery were important, and to choose from several different management strategies designed to sustain and enhance the fishery.

Section 4.2 above discussed several management strategies, and where possible, the management strategy that was most preferred by the stakeholder groups. Preferred size restrictions and limits were also found using the survey results for each species of fish. It is important to be aware that the recommended preferred size limits or possession limits are not meant to suggest that the concept of these strategies are also preferred by stakeholders. For example, it was possible through the survey to determine a preferred protected slot size for lake trout based upon information regarding preferred trophy size and preferred eating size. This does not mean that stakeholders are in favour of the concept of a protected slot size. In fact many stakeholders express concern over the survival rate of catching and releasing lake trout. The slot size given is a preferred slot size should the stakeholder groups elect to choose this type of management strategy. Also, the strategies recommended above were based upon the preferences of stakeholders only. There was no scientific basis used to determine the above recommended strategies. It is strongly suggested that before any management strategy is adopted that there be scientific data to back the effectiveness of that strategy. The *Fisheries Management Support System* (FMSS) is an example of a model available to the MNR that can be used



to predict the effects that management strategies will have upon the fishery based upon scientific parameters.

The preferred strategies and recommendations listed in section 4.2.11 above are not meant to be taken as the only basis for making decisions as to what tactics should be employed to sustain the fishery resource. The recommendations made are meant only to provide a starting point where the suggested management strategies can be debated and chosen by stakeholders involved in a true community-based management planning process. Strategies should also be debated based upon the data that has been collected during creel studies, tagging experiments and any other pertinent scientific information available about the Cedar River Watershed. Before any of the recommendations of the above chapter are to be implemented, the recommended management strategies must be decided upon by the stakeholders within the Cedar River Watershed community based upon a consensus process. The following chapter five provides a guideline to the community - based management process, and the decision making processes therein, to enable stakeholders of the Cedar River Watershed to make decisions based upon the recommendations of this research report.



Chapter 5

5.0 A FRAMEWORK FOR THE DEVELOPMENT OF A COMMUNITY - BASED MANAGEMENT PLAN FOR THE CEDAR RIVER WATERSHED

The following chapter provides a framework or guideline for developing a community based watershed management plan for the Cedar River Watershed, (with applications towards other watersheds in Northern Ontario), based upon the findings of the previous chapters. The framework (model) presented in this chapter is based upon the following assumptions.

1. That there is an issue or problem that needs to be addressed by the watershed community. Stakeholders are interested in being involved in resolving the issue. In the case of the Cedar River Watershed the issue being addressed is the sustainability of the watershed's fishery resource.
2. That the government agency most responsible for managing the watershed resources (in this case the OMNR), is interested in initiating the process and is willing to provide the political will power to legitimize the process.
3. That a coordinator will be provided or appointed by the initiating government agency to follow the model below.
4. That there is an interest in the watershed to develop a process in which the local stakeholders will be more involved in managing the watershed resources. In the case of the Cedar River Watershed, the process was initiated jointly by the Cedar Lake Conservation Group, a group of stakeholders interested in the conservation of Cedar Lake, and the Ontario Ministry of Natural Resources (Kenora District). Studies involving the participation of the stakeholders were initiated based upon the sustainability of the Cedar Lake fishery. These initial studies led to studies throughout the entire watershed involving more and more of the public.



The model provided below is designed to specifically address the continued development of a community - based watershed management plan for the Cedar River Watershed centered about the issue of sustaining the fishery resource. However, the general guideline can be applied to other watersheds in Northern Ontario.

This chapter also includes other issues of concern that the Cedar River Watershed stakeholders have about the watershed resources. These additional issues should also be part of the management plan. The degree of support for a community - based watershed management plan is also included in this chapter, along with what stakeholders expect to gain from the process, what conservation initiatives stakeholders are currently involved in or would like to see started in the watershed, and what knowledge and information stakeholders may have that would be important to the management process.

5.1 FRAMEWORK FOR A COMMUNITY -BASED WATERSHED MANAGEMENT PLAN IN THE CEDAR RIVER WATERSHED- WITH APPLICATIONS TO OTHER WATERSHEDS IN NORTHERN ONTARIO

Forming the steering committee

The formation of a steering committee is the first step to the development of a community - based management plan. As described in chapter three, the steering committee is made up of representatives from the various stakeholder groups in the watershed. The steering committee is responsible for developing and implementing the planning process.



Stakeholders for the steering committee are identified by the coordinator or a hired facilitator from a list of potentially interested stakeholders. As each stakeholder is contacted by the coordinator, a more comprehensive list is compiled by asking if these stakeholders know of others interested in the process (Hutchison, 1995; Towle, *pers. comm.*, 1997). The initiating coordinator then decides which stakeholder groups should be represented on the steering committee. As the management plan evolves and more issues arise, more stakeholders may need to be added to the list. For example, if a mining development was to be started in the Cedar River Watershed, representatives from the mining company and the Ministry of Northern Development and Mines would need to be added to the group. A list of stakeholder groups currently interested in, or affecting the fishery resource is presented in Table 5.1. It is recommended that members from each of the stakeholder groups listed in Table 5.1 be represented on the steering committee.

A watershed, such as the Cedar River Watershed, is normally made up of various types of lakes with different morphologies, chemistries and species compositions. Because of these differences between lakes, management decisions that are favourable for one lake may not be favourable to another lake. According to Felt (1995), a decentralized approach to community watershed management for recreational fisheries (i.e. a lake by lake approach), rather than a "broad brushed approach", is necessary to generate the maximum economic, environmental and social benefits for each lake in the watershed. An example of how the differences between lakes with respect to the biophysical and economy needs to be taken into consideration in order to make sound management decisions was illustrated by the original proposals of the Northwest Ontario Fisheries Committee (NOFC).



The original proposal put forth by the NOFC regarding regulations for smallmouth bass was to make fishing for smallmouth bass during the month of June catch and release only. This proposal would be feasible for lakes such as Cedar, Perrault and Wabaskang in which there are other species of fish available for people to catch for shore lunch or for a meal at camp. However, for a lake such as Cliff Lake, where people come to fish and eat smallmouth bass predominately during the month of June, this proposal would have proved disastrous for the economy generated by the tourism there. Even though the NOFC was well represented by various stakeholder groups, the above problem was overlooked due to the fact that no one on the committee was able to identify with the importance of smallmouth bass fishing during the month of June to the survival of resorts on Cliff Lake.

In order to fully represent stakeholders in a community based watershed management process, representation should be on a lake by lake basis. This is of particular importance to the Cedar River Watershed when determining effective and acceptable fishing regulations for a variety of lakes. However, to have a representative on the steering committee from each stakeholder group from each lake in the Cedar River Watershed would produce a very large committee. Too many steering committee members would make it difficult for decisions to be made based upon a consensus approach. In order to accommodate the views of all stakeholder groups it is recommended that two committees be formed. One committee, which shall be referred to as the Cedar River Watershed Association (CRWA), should include representatives from each stakeholder group from each lake where possible. Where organizations already exist for a stakeholder group from a particular lake such as camp owner associations (e.g. Cedar Lake Conservation Group,



Cliff Lake Camp Owners Association) and cottage associations (e.g. Chicago Point Cottagers Association), representatives from these groups should be selected to this association. On lakes where no such organizations exist it should be encouraged that they be formed. Representatives should be selected by each stakeholder group at meetings of existing organizations or through news letters, public forums etc. designed to introduce the concepts of a community - based management process to the public. The CRWA should have membership open to all stakeholders interested in taking part.

From the CRWA representatives of each stakeholder group should be selected and appointed to form the steering committee. The meetings held by the CRWA should function along the basis of public meetings (as described below under public involvement on page 163) to provide public input into the decisions made by the steering committee. The CRWA should have representation on a lake by lake basis and provide public input to assist decisions made by the steering committee. The decisions made by the steering committee should be based upon the advice and guidance provided by the CRWA. The steering committee should be accountable to the CRWA and the stakeholder groups represented. The steering committee should also function as the organizational structure to the CRWA and be responsible for organizing and running the CRWA meetings.

Organizing the steering committee

Once a steering committee has been selected an initial meeting should be held where stakeholders are encouraged to get to know each other and each others' interests and values within the watershed. The coordinator or a hired facilitator experienced in multi-



stakeholder decision making processes should be present to explain the processes involved in the management planning. During the initial meetings the following organizational steps need to be taken.

Selection of a facilitator

A facilitator should be selected to coordinate meetings. The facilitator should be someone who is perceived to have appropriate stature, power and purpose, and should be respected by the members of the committee.

Allocating responsibilities to the committee

The selection of a chair, vice chairman, secretary and treasurer are essential to the steering committee's functioning. The facilitator may also act as the chair and run the meetings according to agenda, which is usually the case during the first meetings. The vice chairman assists the chair and fills the responsibilities of the chair if the chair is unable to attend meetings. The secretary is necessary to record the minutes. The treasurer keeps track of funding and expenses. Those who are to be responsible for organizing meetings, communicating to the group, preparing agendas, and communicating to the public should be decided upon. Other positions may become necessary as time progresses. Some of these additional responsibilities can be delegated to members of the CRWA as necessary. Positions can remain the same or be alternated amongst committee members, as preferred by the group.



Provision of background scientific and technical information

The appropriate government agencies are responsible to furnish the steering committee with the scientific and technical information necessary to assist in the planning process. A technical advisory group as described in chapter three may be formed if deemed necessary by the group.

Define the roles and responsibilities of committee members

Each member is responsible to represent the views of his/her stakeholder group at committee meetings. Members of the committee are to regularly inform their stakeholder group as to what took place during each meeting. The minutes from each meeting should be sent to each stakeholder in the form of a news letter to keep constituents informed.

Government representatives are responsible for ensuring that any decisions made by the committee are within the bounds of applicable legislation. An explanation of the legislation involved may be required, and should be provided for by the government agency represented. Government representatives are also responsible for ensuring that the decisions and recommendations arrived at by the committee are presented and reviewed by the appropriate government agency. The decision of the government agency to accept or not accept committee recommendations is to be communicated directly to the committee by the government representatives.

Define limits of discussion (non-negotiables)

A study of various multi-stakeholder decision making forums done by Hutchison (1995) found that most forums established a set of topics that were not to be a part of the



discussions of the committee. These are to be agreed upon by the committee and usually include treaty rights and other related legislation.

Designing the process

Structure of meetings

The steering committee should meet on a regular basis. Frequency of meetings can be scheduled according to the needs of the group. Currently in the Cedar River Watershed public meetings are held biannually in the spring and fall of the year. It may become necessary to schedule meetings to accommodate cottagers who are only available during the summer months.

Rules for the procedure of meetings should be established, agreed upon, and consequently honored by all members. Members of the committee are expected to attend and show up on time. Meetings are to start on time and finish on time. For meetings to run as smoothly as possible it is to be acknowledged by all members that only one person is to speak at a time with no interruptions. The chair, with the help of the facilitator when necessary, is responsible to ensure that the above rule is followed and that everyone gets a chance to speak.

Meetings should proceed according to a pre-planned agenda. Agendas should be distributed to committee members and the public well in advance of meetings to allow them to prepare. Sending out agendas early ensures that committee members are able to prepare themselves for an informed discussion at the meeting, and also enables them to confer with the stakeholder group they represent.



The agenda should be followed with discussion of one agenda item at a time. Time limits for each item are to be set and adhered to during meetings. This ensures that all the time is not spent on one item and other items are rushed through or not covered. It is important that the amount of items on an agenda, and times allotted to each, be able to be accommodated during the meetings. Agendas should be followed as closely as possible; however, agendas should also be flexible if the entire group decides that more time should be spent on an item than originally scheduled.

Public attendance

The public should be permitted to attend steering committee meetings as observers to the process and may be allowed to make presentations on agenda items if the committee is informed in advance. The public is not to be involved in the decision making process unless previously agreed upon by the committee members. Otherwise the public is invited to committee meetings strictly as an audience and are to respect the forum of the meeting.

Define the decision making process

A consensus process as a means of making decisions is recommended in all community-based watershed management plans and multi-stakeholder decision making forums reviewed in this research report.



Agree upon a formal definition of consensus

The process of consensus is to identify problems and find agreeable solutions among stakeholders (for more on the process of consensus refer to chapter three pages 79 to 84). It is not very common that all stakeholders will be in total agreement with decisions made by a consensus process. However, stakeholders should not be so against the decision made that they can not accept it. It is very important that all members of the committee agree upon an acceptable workable definition of consensus. Some formal definitions of consensus from chapter three (page 83) include:

1. 100% agreement (unanimous consensus)
2. Lack of dissension (i.e. silence means acceptance)
3. Agreement by the vast majority (i.e. all but a few of the parties)
4. Lack of unanimous consensus leads to an alternative form of decision making such as voting

Consensus can not be made until all points of view have been heard by the committee.

Agree upon what to do if consensus can not be reached

An alternate decision-making process to consensus must be agreed upon by all members of the steering committee. Alternates to the consensus process are to be considered as a very last resort and the consequences of this alternative should be realized. The most common alternatives to consensus in a multi-stakeholder decision making forum as cited by Hutchison (1995) were:

1. To take a break from the issue being discussed allowing for a “cool down period” and return to the item later when people have had a time to settle down. Items may be returned to later on, during the same meeting, or if need be at a later meeting.



2. If consensus is impossible the issue can be brought to a higher authority which will make the decision.

Voting is also another alternative to consensus that is very familiar in our democratic society. Voting is not highly recommended due to the following reasons.

1. Voting will result in a winner vs loser situation which can result in hard feelings. If a particular group is always defeated in a voting process they will inevitably lose interest and drop out of the committee.
2. If people can sense a majority in their favour they may be quick to advocate a vote rather than go through the process of consensus. Because they are comfortable that they have the majority on their side they may not participate fully in the consensus process, which will result in the situation described in #1 above.
3. Due to the diversity of represented stakeholder groups, one particular group may have a lot of representatives while another may not. In the Cedar River Watershed for example, many representatives from various camp owner and cottager associations could outnumber the one or two (depending upon what is decided by the committee) representatives of First Nation people. It would have to be decided upon how much voting power each representative will have in order for voting to be equal and fair. Should a camp owner of American citizenship have as much voting power as a camp owner with Canadian citizenship? Or should a camp owner of Canadian citizenship hold equal voting power to a First Nation resident? The scenarios are numerous and complex. As it can be seen deciding upon voting power can be a difficult process which could lead to even more strife between members.

If voting is decided upon as an alternative decision making process by the committee,

scenario number three above will need to be addressed as well as deciding upon what constitutes a majority vote. For example 50% plus one or two thirds vote could constitute a majority.

Degree of decision making power must be agreed upon and acknowledged

Some decisions made by the steering committee will not affect governmental legislation such as: what projects need to be done in the watershed; what projects should



have priority; the allocation of funds to perform projects; and other decisions that do not involve government legislation or policy.

The steering committee should also be involved in making decisions based upon government legislation that would affect the watershed community. In cases where decisions affect government legislation, policy or mandate, the degree of decision making power that the steering committee has must be decided upon by the government agencies involved and made clear to, and agreed upon, by all members of the committee. The degree of decision making power of most community - based watershed management groups was at an advisory level to government. The steering committee would decide upon what recommendations should be made to government. The final decision making, in respect to the adoption of proposed watershed management strategies, lay with the ruling government bodies concerned. However, it is crucial to the success of the process that the steering committee be a true co-manager, and that the government seriously addresses the recommendations made by the steering committee. It is expected that recommendations made by the committee that fall within government mandate will be accepted. If a committee recommendation is overturned then clear reasons for the denial must be given to the committee.

The steering committee should be accountable to the stakeholder groups they represent in so far as that the recommendations made to the government regarding management decisions for the watershed are to be representative of the stakeholder groups within the community and not of self interest. The government agency involved in making the final decisions as to which strategies are to be adopted to government



legislation or policy are strictly accountable. The steering committee is not to be held accountable for the final governmental decision.

Vision and goals for the Cedar River Watershed

Decide upon a vision statement for the planning process

Once the steering committee and the rules of process for functioning and arriving at decisions have been established and agreed upon, the next step is to develop a vision and goals to guide the community - based planning process. The following visions of the ideal watershed according to the stakeholders surveyed were as follows. These visions are listed in order of the number of responses.

- Maintenance and enhancement of the pristine natural beauty offered by the fishery, wilderness and wildlife of the Cedar River Watershed for many generations to come.
- Maintenance and enhancement of the fisheries at a sustainable level to be enjoyed by future generations.
- Clean and healthy environment now and for the future. Respect for the environment.
- Respect and equality amongst all watershed users.
- Make the Cedar River Watershed one of the best fisheries in Northern Ontario, while maintaining its remoteness and level of tourism at a sustainable level. (Tourist Outfitters).

The above visions of the Cedar River Watershed summarized from the survey results can be used to help develop a vision statement for the Cedar River Watershed management plan. The vision statement which is the overall guideline that the management process is to follow must be decided upon by all stakeholder groups.



Define goals needed to achieve the vision statement

The following is a summary of the goals given by survey respondents seen as necessary to achieve the vision of the ideal Cedar River Watershed. These goals are listed in order of the number of responses.

- **Protect fish brood stock**
- **Increase fish stocks**
- **Control and reduce timber cutting and clear cutting**
- **Provide education programs for anglers**
- **Improve enforcement of fishing regulations**
- **Maintain water quality**
- **Reduce fishing pressure and harvest to sustainable levels**

The goals adopted by the management plan must be agreed upon by all stakeholders. The next step to forming goals is to develop the objectives that are the specific steps needed to be taken to realize the goals. The focus of this research was on the sustainability of the fishery resource and objectives in the form of management strategies/fishing regulations are presented in chapter four (pages 143 to 146). The objectives, like the vision statement and goals must be agreed upon by all stakeholders. The management strategies recommended in chapter four are to be used as a starting point for developing strategies that are agreed upon by all stakeholders.



Public involvement

Public meetings

It is important for the steering committee to hold regular meetings with the public in addition to committee meetings to keep everyone involved and informed. All watershed stakeholders are to be encouraged to share their input at these meetings. The public meetings should also follow a structured agenda and be run by steering committee members. The meetings held by the CRWA shall function along the basis of public meetings to provide public input into the decisions made by the steering committee.

During public meetings held in the Cedar River Watershed, some stakeholders expressed frustration when meetings were spent discussing issues, such as walleye sanctuaries on particular bodies of water, that may not have been of great concern to all attending. It is important to keep the meetings on schedule in order to retain everyone's interest. If sticky issues are foreseen to be a problem among a particular group of stakeholders (e.g. stakeholders deciding upon a walleye sanctuary on the lake they represent) separate meetings involving these stakeholders should be held with the aid of a facilitator to resolve the issue. Once the issue is resolved then it can be brought up at the association and/or committee meetings to be discussed by the entire group.

If a stakeholder group remains divided on certain issues then representatives of all sides should be allowed to attend committee meetings. This will ensure that all sides of the issue are heard by the steering committee. Consensus of all attendants of the meeting should be sought.



Public communication

The public should be kept informed about the watershed planning process. A copy of the minutes from each steering committee meeting and association meeting should be made available for public review. A news letter is a practical form of communication. A comprehensive mailing list of all stakeholders in the watershed should be compiled to ensure news letters, meeting minutes, invitations to public forums, and information on upcoming agenda and steering committee meetings will be distributed effectively. Local media, electronic mail, web sites and workshops also provide effective means of communication where available. The Cedar River Watershed is comprised of a diversity of stakeholders that may not always be present in the area (e.g. cottagers), thus a news letter would be the most effective form of communication. A member or members of the steering committee need to be appointed to be responsible for news letters which should include minutes of meetings and any upcoming events.

Education programs

An informed public makes informed decisions. Education of the public was one of the goals of the Cedar River Watershed stakeholders. People who have attended meetings in the Cedar River Watershed have recommended ideas on how to educate people about the watershed fishery and the need to protect brood stock for sustainability. Suggestions included: "Did you know.." posters explaining the value of breeding size fish to the fishery, showing proper catch and release techniques and other information. Posters were suggested to be distributed in tourist camps fish houses as well as local businesses and meeting places. Pamphlets containing information were also suggested.



Implementation and monitoring

Implementation

Implementation should involve all stakeholders in the watershed. The steering committee should be responsible for implementing the watershed plan. Realistic goals should be set and the responsibilities of each member and stakeholder group should be decided. A method to take action on issues is to be organized. Time lines and deadlines should be set for the accomplishment of set goals. Management plans must be flexible and dynamic to accommodate any changes or adjustments that may need to take place.

Monitoring

Monitoring is necessary to ensure that the plan and methods of action are achieving the set goals. Monitoring also shows where plans may need to be adjusted if necessary in order to be more effective. Monitoring need not be complex but can be done by stakeholders in the community. For example, in the Cedar River Watershed, stakeholders are currently helping to take samples of aging structures of fish for monitoring the fishery, monitoring water quality by taking secchi-disk readings and water samples, recording angler diaries and assisting in creel surveys.

Indicators

A set of indicators that can be used to monitor progress should be decided upon by the watershed planning process. Examples of effective indicators for the sustainability of the fishery include: growth rates, age distribution, angling hours, catch per unit effort, and



water quality. All these indicators can be monitored by sampling and analysis of age structures, water samples, angler diaries and creel surveys.

Examples of water quality indicators include: dissolved organic compounds (DOC); total phosphorus, which is an indicator of productivity; and conductivity, which also indicates DOC. Secchi-disk readings can be partly used to determine DOC and conductivity. Water samples can be analyzed to ascertain the total phosphorus.

The government agencies involved are to be responsible for any scientific and/or technical services that may be required to assess indicators. Creel surveys also provide indicators on the economic and societal aspects of the fishery. Each watershed is unique and a set of indicators should be decided upon by the watershed stakeholders.

Funding

Sources of funding for the Cedar River Watershed management program included:

Provincial Sources:

- The Community Fisheries and Wildlife Involvement Program (CFWIP)
- The Fish and Wildlife Enhancement Fund
- The Environmental Youth Corps.

Other sources of funds that have been used in the Cedar River Watershed have come from local businesses (i.e. tourist outfitters and marinas) who have volunteered to provide boats, motors and gasoline to assist in creel surveys.

Funding can become more readily available if the steering committee registers itself and/or the association it is contained within (e.g. Cedar River Watershed Association), as a recognized non-profit organization. Registering as a non-profit organization is estimated



to cost about \$600 in legal fees for the Cedar River Watershed Association. Once registered as a non-profit organization, the CRWA and steering committee can hold funding events such as raffles. Local businesses can be asked to donate such items as boats, motors and trailers to be raffled off with the proceeds going to the Cedar River Watershed Association.

By having the watershed organization registered, and by being able to present a vision statement, set goals and objectives to achieve these goals, the group will receive better credibility with funding organizations.



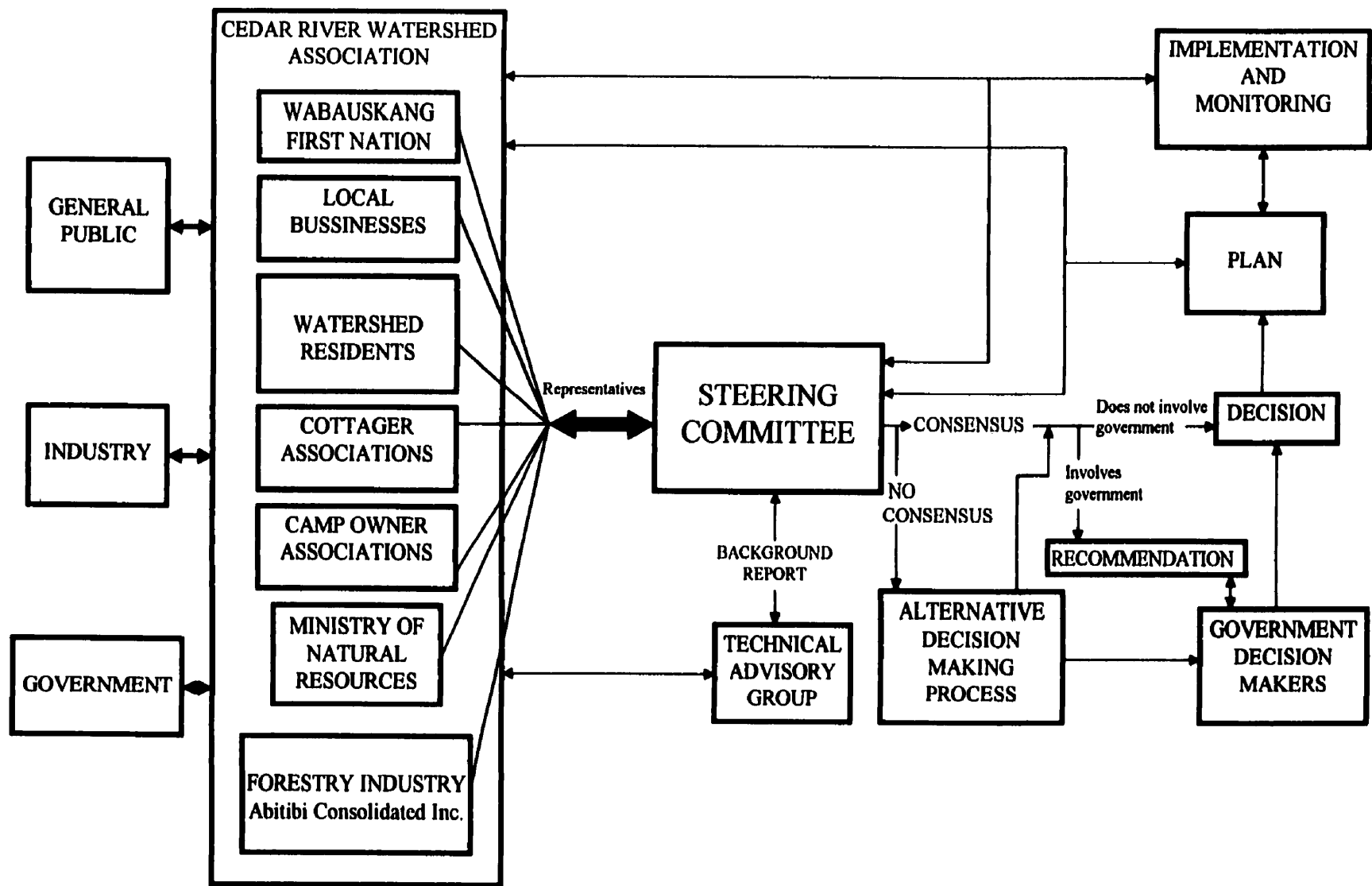


Figure 5.1: Diagram of model for community - based watershed management plan for the Cedar River Watershed

Table 5.1: List of Cedar River Watershed stakeholders currently interested in, or affecting the fishery resource

Provincial government agencies Ministry of Natural Resources (Kenora District)	<i>Camps on Wabaskang Lake:</i> Tall Pines Iverson's Kingfisher Camp Lundy's Wilderness Camp Gawley's Park View Camp Wabaskang Lake Camp Sleepy Dog Cabins
First Nations government Wabauskang First Nation	
Local residents Residents of Perrault Falls Other residents throughout the watershed	<i>Camps on Perrault Lake:</i> Rocky Shores Lodge Manotak Lodge Perrault lake Camp Rainbow Point Resort
Local Businesses: Sunset Restaurant Dutchie's General Store B & P Variety Store	<i>Camps on Aerobus lake:</i> Timber Point Camp
Forestry Companies: Abitibi Consolidated Inc.	<i>Camps on Florence Lake:</i> Skyline Camp
Commercial Fisheries: Ralph Hale Harvey Aho	<i>Camps on Anishinabi Lake:</i> Anishinabi Lake Camp
Special interest groups: Northern Ontario Tourist Outfitters (NOTO) Patricia Region Tourist Outfitters Association Ontario Federation of Anglers and Hunters (OFAH)	<i>Camps on Wine Lake:</i> Wine Lake Camp
Tourist Outfitters (Camp Owners)	<i>Camps on Thaddeus and Ord Lake:</i> Rob's Canadian Wilderness Resort
<i>Cedar Lake Conservation Group:</i> Cedar Point Resort Cedar Lake Camp Cedar Lake Lodge Keystone Lodge Wogenstahl's Trailer Park and Resort	<i>Other Camps:</i> Gold Arrow Camp Pickerel Creek Camp
<i>Cliff Lake Camp Owners Association:</i> Lost Bay Resort Clif's Wilderness Camp Hilbert's Hideaway Sharpe's Cliff Lake Lodge Jack's Campground	Cottagers: <i>Chicago Point Cottage Association (Perrault Lake)</i> Cottagers throughout watershed



5.2 OTHER ISSUES IN THE CEDAR RIVER WATERSHED

Appendix VII contains a complete list of the issues of concern other than the fishery that respondents had for the Cedar River Watershed. Below is a summary of the most common issues that were voiced by respondents. Issues are listed in order of the number of responses.

1. **Timber management:** Stakeholders were concerned with clear cutting and the negative effects this cutting technique has on scenery, wildlife and wilderness areas. People were particularly upset about the recent clear cutting that was done right up to the highway just south of Perrault Falls. Larger reserves were requested by stakeholders to protect wildlife and the aesthetic value of scenery. Spraying is also an issue related to forestry that was raised by stakeholders. Stakeholders indicated that they would like more control over timber management.
2. **Pollution and Garbage:** Stakeholders were at issue with the amount of garbage and litter that is being left along shorelines and at shore lunch spots. The leaving of fish guts around the shore and shore lunch areas was included in these concerns over increased garbage. Some solutions to the problem were suggested which included: increase enforcement of littering laws; camp owners should be responsible for the garbage their guests leave behind; all fish guts should have to be taken to a garbage dump not left on shore; and provide a container (i.e. like a composter) to dispose of fish guts that is well removed from shore lunch eating areas. Concerns about maintaining water quality were also expressed.
3. **Hunting:** There were three main issues related to hunting expressed by stakeholders.
 - One concern stated by camp owners was about bear management areas (BMA's). Some camp owners were at odds with grouse hunters hunting on their BMA's and interfering with the bear hunt. Camp owners indicated that they would like more control over the management of BMA's.
 - Another hunting issue stated by residents was to do with fairer allocation of adult moose tags. Residents indicated that they would like more adult moose tags to be allocated to locals by having a certain amount of tags guaranteed for local residents.
 - The Wabauskang First Nation respondents also had hunting issues. First Nation people were concerned with non-aboriginal hunters hunting on reservation land. Wabauskang First Nation respondents also voiced concern about duck hunters hunting in wild rice stands while the people are picking rice. During an interview



one elder told of having lead pellets raining down on her while she was trying to pick rice on First Nation territory. Also complaints of hunters shooting ducks in front of the reservation (“right off my dock”) were expressed. Wabauskang First Nation would like people to have more respect for the reservation land and the safety of people. First Nation respondents also indicated disapproval of the spring bear hunt because of the possibility of orphaned cubs. One respondent suggested a maximum height limit of 30 inches for bears in spring to lessen the chances of killing a mother.

4. **Development:** Many respondents indicated that they would like further development restricted within the watershed. Respondents from all stakeholder groups expressed the view that they would like to be consulted before any new developments were to proceed.
5. **Access:** Access to lakes was an issue with many respondents. A number of resident and cottager respondents indicated favour with opening up access to more remote lakes to distribute the fishing pressure more evenly throughout the watershed. A number of tourist outfitter respondents expressed the view that access should be limited to ensure better control of fishing and to protect their boat caches.

Other issues voiced by respondents included:

- Wild rice stands should be protected and seeded if seeding would be advantageous (Wabauskang First Nation).
- Tourists “cleaning out” blueberry patches. First Nations should be given priority over blueberry patches (Wabauskang First Nation).
- Historical sites such as old trails and grave yards should be preserved and protected (Wabauskang First Nations).
- Loons and cormorants should be culled to limit the fish eaten by these birds¹.
- Limit tourist rights to harvest resources (Residents)

¹ Research has shown that loons and cormorants seldom feed upon species of game fish, and do not impact game fish populations. More education about the function of these bird species as a part of the ecosystem is recommended to dispel the negative attitudes of some towards these birds.



5.3 STAKEHOLDER SUPPORT FOR A COMMUNITY - BASED WATERSHED MANAGEMENT PROCESS

The majority of respondents indicated willingness to participate in the watershed management planning process to some degree (Table 5.2). When asked what stakeholders expected to gain from a community - based watershed management process the following replies were made. The responses are given in order of frequency of response.

- A better and improved fishery
- More of a say and more input into how the fishery and other watershed resources are managed.
- A sustainable fishery, wilderness and environment for future generations.
- More understanding, knowledge and education about the watershed and resource management.
- A chance to contribute knowledge and skills to ensure the sustainability of the fishery and environment.
- Develop a respect among stakeholders for each other and each other's needs and promote equality.

Table 5.2: Degree of stakeholder involvement in the watershed managing process

	Resident Response	Camp Owner Response	Cottager Response	Wabauskang First Nation response
Degree of involvement	Percent	Percent	Percent	Percent
Highly involved	29%	24%	24%	29%
Moderately involved	35%	36%	33%	21%
A little involved	18%	24%	21%	21%
Not involved	12%	4%	17%	21%
No Reply	6%	12%	5%	0%

Note: One First Nation respondent stated that she would be highly involved as long as the management process is not against the First Nations' political agenda. Another First Nation respondent, not included in the above table, stated that he would like to be highly involved amongst his own people only.



Stakeholders were asked what type of conservation initiatives they were currently involved in or would like to see occur in the Cedar River Watershed during the survey. Stakeholders indicated participation in practicing and teaching others about the value of catching and releasing fish. Many camp owners (80% respondents) promote catch and release to resort guests by giving away hats and pins for fish released by guests. Other camp owners provide a free return trip to camp from a draw of all guests who practiced catch and release. Some camp owners also promote catch and release by giving special rates for guests who purchase a conservation license. Many camp owners indicated that they would like to see all camps in the Cedar River Watershed provide incentives for catch and release, and some indicated that a watershed wide program could be organized.

Other stakeholders indicated that they assisted with spawning ground enhancement projects within the watershed and would like to see these types of programs continued. Also a watershed education program to educate people about the fishery resources and the value of catch and release was suggested by many respondents.

It should be noted on a specific basis that a significant number of stakeholders located on Cliff Lake would like to organize the removal of beaver dams from Mystery Creek to possibly enhance the spawning of walleye. Five of ten respondents from Cliff Lake indicated this.

Stakeholders also indicated knowledge of the watershed that could prove useful in the management process. First Nation respondents in particular indicated knowledge of fish migration patterns and locations of spawning sites for various fish species in a variety of lakes throughout the watershed. Local residents and other stakeholders also indicated a history and knowledge of the watershed. Traditional Ecological Knowledge (TEK) and



local knowledge are highly valuable sources of information, and are important contributions for the formation of a watershed management plan.

5.4 CHAPTER SUMMARY

The above chapter presented a framework for the development of a community - based watershed management plan for the Cedar River Watershed with applications towards other watersheds within Northern Ontario. Support for the adoption of such a plan for the Cedar River Watershed was shown to be high, and many stakeholders indicated participation in various forms of conservation practices to sustain the fishery resource. Also stakeholders indicated that TEK and local knowledge was available to assist in the planning process. The willingness of people to participate, the existence of conservation projects, and the existence of TEK and local knowledge within the Cedar River Watershed gives evidence of a community that is receptive to stewardship practices and favourable conditions for the development of a community - based watershed management planning process.

Each watershed is different and unique. The above chapter provides a guide line for developing a community - based watershed management program for the Cedar River Watershed that can be applied to other watersheds in Northern Ontario. Community - based watershed management plans are dynamic processes and the development of a such a management plan requires that a common issue be identified by stakeholders. An identified common issue can be rallied around to begin action in the form of a community -



based watershed management plan. The following examples illustrate community - based management plans that were formed about a common issue.

1. *The Winkler Aquifer Management Plan* which is centered about the stakeholder's concern over the sustainability of the local aquifer (Manitoba Department of Natural Resources, 1996).
2. *The Dauphin Lake Basin Management Plan* which is centered about the stakeholder's concern over the decline of the fishery resource (Manitoba Department of Natural Resources, 1992).
3. *The Credit River Water Management Strategy* which is centered about concerns of stakeholder's over water quality and quantity issues (Beak, 1992).

Likewise, the development of a community - based watershed management plan for the Cedar River Watershed was focused upon the current issue of concern among stakeholders, that being the sustainability of the fishery resource. The development of a watershed management plan using the above model must be decided upon by the members of the particular watershed community and based upon the uniqueness of the watershed.



Chapter 6

6.0 CONCLUSIONS AND RECOMMENDATIONS

The focus of this research report was to address the issue of sustaining the fishery resource within the Cedar River Watershed by providing a method by which to manage the watershed resources in a sustainable manner. The concept of community - based watershed management was researched and applied to the Cedar River Watershed as an approach for sustaining the fishery and other watershed resources. A framework or model for the development of a community - based watershed management plan was formulated for the Cedar River Watershed which could also be applied to other watersheds within Northern Ontario. The research report also focused upon ascertaining what management strategies would be most preferable to the Cedar River Watershed stakeholders for sustaining the fishery resource. A discussion of the main findings, conclusions and recommendations of the research is presented below.

6.1 SUMMARY OF RESEARCH FINDINGS

The first objective of the research was to determine the current resource uses within the Cedar River Watershed. It was found that forestry and tourism generate most of the resource use within the watershed. The tourism industry was found to be heavily dependent upon the fishery resources within the watershed. The fishery resource is also important to both aboriginal and non-aboriginal residents for enjoyment and food. Cottagers are other resource users that value the fishery resources.



The research revealed that many resource users within the Cedar River Watershed either depend upon the fishery resource for their personal well being, or can affect the fishery through the development of other resources (e.g. forestry). Due to the variety of resource uses and interests within the watershed, conflicts to resource management are not uncommon. The development of a community - based watershed plan was researched as a means to arrive at workable solutions for managing the sustainability of the fishery and other watershed resources that would be compatible with all stakeholder interests.

The second and third objectives of this research were to determine what components were necessary for the development of a community - based watershed management plan, and to formulate a framework or model for such a management process in the Cedar River Watershed. A literature review was conducted to discern what was required for a community -based watershed management plan (chapter three) and applied to the development of the model. The main organizational components common to the community - based watershed management plans reviewed included: a steering committee, technical advisory board, public involvement, public education, public communication, legislation, implementation and monitoring, and a decision making process.¹

All literature reviewed on community - based watershed management plans recommended that a formal decision making process be agreed upon by all members of the watershed planning organization. The recommended decision making process was a consensus approach (chapter three, section 3.6.3). The amount of decision making

¹ A complete description of each of the components of a community - based watershed management plan, and the processes involved are given in chapter three of the research report. A model of a community - based watershed management plan for the Cedar River Watershed, which uses the findings in chapter three and four, is presented in chapter five.



power regarding changes to government legislation and policy awarded to the watershed management group can vary. The majority of cases of community - based watershed management plans and multi-stakeholder decision making forums reviewed in this research report operated on an advisory level to government. Final decisions regarding government legislation and policy changes were to be made by the government agency involved, which was also to be fully accountable for these decisions. Even though the government had the final say in decisions regarding legislation/policy, all cases reviewed made it clear that the government was to take the recommendations of the watershed planning group seriously. If the recommendations fell within government mandate, it was expected that these recommendations would be adopted, and if not clear reasons as to why were to be explained to the management group.

A survey was also conducted to find what visions, goals and objectives stakeholders in the Cedar River Watershed which were then to be applied to the development of the management plan. The survey focused upon determining what objectives, or management strategies, would be acceptable to stakeholder groups regarding the sustainability of the fishery resource. Stakeholders were divided into five groups based upon diversity of resource use, cultural background, dependency on the fishery for income etc., as described in chapter one. The five stakeholder groups surveyed in the research were: Wabauskang First Nation residents; permanent local residents not including Wabauskang First Nation; commercial tourist operators (i.e. resort/camp owners); cottage owners; and visiting anglers to the watershed who form the clientele for the tourism industry.

The research found that stakeholders in the Cedar River Watershed had many common interests and goals on how to maintain the fishery and other watershed



resources. Differences did exist in opinions on which objectives (i.e. management strategies) would be best for achieving the goals needed to maintain the fishery. However, the survey also revealed a significant number of management strategies that would be acceptable to the majority of stakeholders and stakeholder groups. Recommended strategies for managing the fishery resource are presented in chapter four section 4.2.11.

The survey showed that stakeholders of the Cedar River Watershed are receptive to the development of a community - based management plan. The majority of those surveyed indicated a willingness to participate in the process. The research concluded that the development of a community - based watershed management plan would be possible for the Cedar River Watershed.

Chapter five uses the results from the literature review and the survey to formulate a framework for a community - based watershed management plan for the Cedar River Watershed that could also be applied to other watersheds in Northern Ontario.

6.2 WHY COMMUNITY - BASED WATERSHED MANAGEMENT

The following is a summary of the findings of this research as to why a community - based watershed management plan should be adopted as a management plan to promote sustainability; a review of the decision making process involved; and some comments and conclusions drawn from these findings.

A watershed provides a natural boundary for which human activities on land and water affect the aquatic and terrestrial ecosystem. Because of the ecological links between land and water, watershed management allows for an holistic approach to be taken to



natural resource management. By basing management decisions on the watershed unit as a whole, the effects these decisions have on the delicate balance between terrestrial systems and aquatic systems are taken into consideration. In order for natural resources to be managed in a sustainable manner, these relationships must be taken into account. However, a truly sustainable watershed management plan must also take into account the effects of community upon resources (and *visa versa*). Elements of community, that include society, culture, tradition and economy, are important aspects to watershed management that must also be included in a sustainable management plan.

Community - based watershed management is a strategy that combines the aspects of community (i.e. economy, society, tradition, and culture) and environment towards the sustainable management of natural resources. A community - based watershed management plan is a management strategy that involves the active participation of, and the cooperation between, government agencies, the public, and other stakeholders that have a vested interest in the watershed, towards developing policies for the long term sustainability of the watershed resources.

The concept of cooperation between the various government agencies involved in resource management , and between these agencies and the public, is not new to the management of natural resources. However, the traditional top down approach to resource management has caused a lack of communication and direction, which has resulted in less than sustainable solutions (e.g. cancellation of spring bear hunt in 1999). *The strength of the community - based watershed management process is that it provides a forum where the necessary communication can take place between government agencies, and between government and stakeholders, to arrive at sustainable solutions.*



The word community is derived from the word communicate. By providing a forum for which effective channels of communication between all stakeholders can be accomplished, sustainable resource management strategies that involve community and environment are attainable. The community - based management process allows for the exchange of knowledge, ideas and concerns between a variety of sources to take place that may have previously gone unnoticed using a top down approach. Through the process of community - based watershed management, government agencies have an organized format in which to exchange technical and scientific knowledge with each other and the watershed community. In turn, TEK and local knowledge becomes available to government agencies, and among stakeholders, to arrive at informed decisions.

6.3 RECOMMENDATIONS

1. The conditions in the Cedar River Watershed are favourable to the development of a community - based watershed management plan, and the steps necessary to implement such a planning process are recommended.
2. The strategies recommended for the management of the fishery resource in chapter four were based upon the opinions of the watershed stakeholders to find which would be most preferred or acceptable to them. It is highly recommended that before any management strategies are adopted that they be backed by scientific information. Comparing the results of this research report with the results of the creel surveys being done in the watershed is an excellent way to find how each preferred management strategy would affect the fishery, and whether it would be an effective measure towards sustainability. A report done by the MNR on Lake Nipigon comparing stakeholder preferences to creel survey data furnishes an excellent reference (OMNR, 1995). Also, a management model available to the MNR called the *Fisheries Management Support System (FMSS)* can be used to determine the effects of different management strategies on a fish population over time (Ward, *pers. comm.*, 1998). The model uses known parameters about fish stocks such as population, growth rate, fecundity, etc., to predict the effect regulations will have upon the fish population.



3. Before any strategies are adopted, these strategies must be agreed upon by all stakeholders through the process of consensus, or another mutually approved decision making process, according to the guideline/model for community - based management discussed in chapter five.
4. Due to the diversity of lakes with respect to bio-physical characteristics, species composition and economic and social opportunities in the Cedar River Watershed, stakeholders should be represented on a lake by lake basis through the organization of an association (i.e. Cedar River Watershed Association (CRWA) as described in chapter five). The CRWA is to function as a public forum where the concerns of stakeholders from the various lakes can be voiced and taken into consideration by the steering committee.
5. How much of the decision making process, as to changes to legislation/policy, that is to be shared between government and the stakeholders must be made clear from the onset of the program, and honored by all parties. The government involved must be willing to incorporate the recommendations made by the community - based management process into watershed management or the process will fall apart.

6.4 SOME FINAL CONCLUDING REMARKS

The results contained in this research report provide a guideline for establishing a community -based watershed management plan for the Cedar River Watershed, which is also applicable to other watersheds in Northern Ontario. The suggestions made in the research report regarding management strategies are in no way meant to be taken as absolutes. The findings regarding management strategies are meant to provide a starting point for which suggestions can be made. The final adoption of any vision statement for the plan, goals of the plan, and objectives (i.e. management strategies) are to be decided upon by the watershed stakeholders through the process of community - based management outlined in the framework presented in chapter five.



In final conclusion, the research presented here provides a framework upon which to build a community - based management plan for the Cedar River Watershed and other Northern Ontario watersheds. Community - based management provides an effective and efficient means to manage natural resources in a sustainable manner that is acceptable to both government and the public. Each watershed is unique in its characteristics and the process must be adapted to these particular features. A true community - based watershed management plan must be designed by the people and for the people in order to succeed.



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APPENDIX I
STAKEHOLDER QUESTIONNAIRE

Appendix I: Questionnaire

Appendix I contains the questionnaire given out to stakeholders and the clientele of the fishery resource based tourism (i.e. anglers) of the Cedar River Watershed. The questionnaire was distributed in two formats. One format included all the questions listed in appendix 1 to be distributed to the stakeholders. The other format included questions 1 to 27 inclusive, and questions 37 and 38 to be distributed to visiting anglers.

The following questionnaire was formulated with the assistance of the Ontario Ministry of Natural Resources, French River Cooperative Fisheries Unit, "1992 French River Tourism and Recreational Fishery Survey," and the Ontario Ministry of Natural Resources, Nipigon, Ontario, "Lake Nipigon Special Regulations Questionnaire" as reference material.

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Dear Sir/Madam:

The Ministry of Natural Resources (MNR), Kenora District, has initiated the development of a community - based watershed management plan for the Cedar River Watershed. The Cedar River Watershed consists of all the land drained by the Cedar River and its tributaries including the following main bodies of water: **Cliff Lake, Cedar Lake, Perrault Lake, Wabaskang Lake, Wine Lake, Aerobus Lake, Anishinabi Lake, Ord Lake and Thaddeus Lake.** The Cedar River Watershed Council was formed by local stakeholders and MNR officials as the beginnings of a community - based management system for the watershed to address issues dealing with the watershed's fishery resources. Projects to enhance walleye and northern pike spawning grounds have already begun, along with creel surveys on the various lakes within the watershed.

I am currently undertaking a project to continue the development of a community based watershed management plan for the Cedar River Watershed area as part of the requirements necessary to obtain a Master's degree in Natural Resource Management at the University of Manitoba in Winnipeg, Manitoba. This research is being done under the direction of the Natural Resource Institute (NRI) at the University of Manitoba and has been approved by the NRI Research and Ethics Committee. If you have any concerns or comments regarding this research please feel free to contact either Dr. Fikret Berkes or Dr. John Sinclair at the Natural Resource Institute at the address above. This project is to be sponsored by the Ministry of Natural Resources (Kenora district).

The purpose of the Cedar River community - based watershed management plan will be to deal with fishery issues at a community based level, and other watershed issues as they arise. This plan will be directed towards providing for the protection, enhancement, and preservation of the natural resources within the watershed, emphasizing the economic, social and environmental well being of the watershed now and into the future. A successful management plan will require the input and support of individuals and groups that live, work, and visit in the Cedar River Watershed. The affected people will be involved from the start, to assist the MNR in the development of the plan, by identifying and discussing issues and

objectives, sharing different perspectives, and making choices for themselves and future generations. The following questionnaire has been distributed to you as a means of obtaining your valuable input for the designing of the watershed management plan. It will take approximately 15 to 20 minutes of your time to complete. The emphasis of this questionnaire is to obtain goals, objectives and possible management strategies that will address the current issue of the fishery resource. You are under no obligation to complete this questionnaire and may decide not to with no consequences to yourself. The information you supply, should you choose to do so, will be kept in absolute confidence by the researcher unless prior consent for release is obtained. Results of the survey will be a combination of all the questionnaires and analyzed in total. The results will be presented to the MNR, and also made available to the public, with the exception of any personal information. If you would like to obtain a copy of the results of this study, or any other additional information, please feel free to contact myself at the above address and phone number at the top of the page.

Thank you for your time and consideration to help me with this project. Your efforts are greatly appreciated.

Yours Truly,

Steve Wall

1. As a member of the Cedar River Watershed community which of the following would best describe you (**check all applicable boxes**):
- Permanent resident
 - Seasonal resident
 - Cottage owner
 - Commercial tourist operator (i.e. tourist resort/lodge)
 - First Nations resident
 - Commercial business operator
 - Resort guest
 - Cottage guest
 - Camper on crown land
 - Other (please specify) _____
2. Where is your place of permanent residency?
- Ontario
 - Canada (other than Ontario)
 - United States
 - Other (please specify) _____
3. What area within the Cedar River Watershed are you located? (example: Cedar lake)
- _____
4. How many years have you lived and/or operated in the Cedar River Watershed, or how many years have you been visiting the Cedar River Watershed area?
- 1 to 4 years
 - 5 to 10 years
 - 11 to 20 years
 - more than 20 years
5. If you are a visitor to the area, or a non-permanent resident/cottager, what time(s) of the year do you spend in the Cedar River Watershed? (**check all applicable boxes**)
- | | |
|--|--------------------------------------|
| <input type="checkbox"/> April | <input type="checkbox"/> August |
| <input type="checkbox"/> May | <input type="checkbox"/> September |
| <input type="checkbox"/> June | <input type="checkbox"/> October |
| <input checked="" type="checkbox"/> July | <input type="checkbox"/> Other _____ |

6. How many generations of your family have, or are presently living, visiting and/or operating in the Cedar River Watershed, including yourself?

- Great grandparent(s)
- Grandparent(s)
- Parent(s)
- Child(ren)
- Grandchild(ren)
- Great grandchild(ren)
- Just yourself
- Other(s) (please specify) _____

7. Please indicate how frequently you participate in the following activities in the Cedar River Watershed:

	never	occasionally	frequently
Boating	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fishing (summer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife Viewing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hiking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nature Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canoeing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swimming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Photography	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ice fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Approximately how many days do you fish in the Cedar River Watershed area during a year?

- 1 to 5 days
- 6 to 10 days
- 11 to 20 days
- 21 to 30 days
- more than 30 days

9. How would you rate your level of fishing experience?

- beginner angler
- moderately experienced angler
- very experienced angler

10. How do you compare this year's fishing experience in the Cedar River watershed with your previous years experiences?

2 years ago	improved	same	deteriorated	don't know
success (number of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fishing quality (size of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
scenery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 years ago	improved	same	deteriorated	don't know
success (number of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fishing quality (size of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
scenery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10 years ago	improved	same	deteriorated	don't know
success (number of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fishing quality (size of fish)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
scenery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How important is the fishery resource in the Cedar River Watershed to you in the following ways?

		not at all					very				
		important					important				
For your personal income?.....	1	2	3	4	5	6	7	8	9	10	
As a main part of your yearly diet?.....	1	2	3	4	5	6	7	8	9	10	
For your recreational enjoyment?.....	1	2	3	4	5	6	7	8	9	10	
As a part of your social and/or family tradition?..	1	2	3	4	5	6	7	8	9	10	

12. If you could go back in time to fish the Cedar River Watershed region, which of the following time periods would you consider to have the ideal fishing conditions?

- 20 to 30 years ago
- 10 years ago
- 5 years ago
- Present conditions are ideal
- Don't know
- other _____

Please give reasons as to why above option was chosen.

13. Please think about the kind of fishing you would enjoy the most in the Cedar River Watershed area. Indicate below how important each of the following statements is to you with regards to your fishing enjoyment.

	not at all					very				
	important					important				
Fishing water surrounded by pleasant scenery	1	2	3	4	5	6	7	8	9	10
Catching your limit	1	2	3	4	5	6	7	8	9	10
Chance to catch a larger trophy fish	1	2	3	4	5	6	7	8	9	10
Catching good eating size fish	1	2	3	4	5	6	7	8	9	10
Fishing for walleye.....	1	2	3	4	5	6	7	8	9	10
Fishing for perch.....	1	2	3	4	5	6	7	8	9	10
Fishing for small mouth bass	1	2	3	4	5	6	7	8	9	10
Fishing for northern pike.....	1	2	3	4	5	6	7	8	9	10
Fishing for muskellunge	1	2	3	4	5	6	7	8	9	10
Fishing for white fish	1	2	3	4	5	6	7	8	9	10
Fishing for lake trout	1	2	3	4	5	6	7	8	9	10
Fishing wilderness type areas	1	2	3	4	5	6	7	8	9	10
Fishing alone on a fishing spot	1	2	3	4	5	6	7	8	9	10
“Catch and release” fishing only.....	1	2	3	4	5	6	7	8	9	10
Seeing wildlife	1	2	3	4	5	6	7	8	9	10

14. During your fishing trip which **one** of the following is most important to your fishing enjoyment.

- Catching lots of small eating size fish.
- Catching some small fish for eating as well as catching larger trophy fish.
- Catching larger trophy fish and not so many smaller fish.

15. During a fishing day, which of the following average amounts of time to catch a fish would you consider most acceptable to consider it a “good fishing day”.

- 15 to 30 minutes
- 30 to 45 minutes
- 45 minutes to 1 hour
- 1 hour
- Other _____

16. Which one of the following proposed creel limits for perch would you be most in favour of?

- no change to regulations (i.e. no limit)
- limit of 25
- limit of 50
- limit of 10
- other _____

17. For the following species of fish please circle the possible creel limit you would be most willing to support.

Walleye	6	5	4	3	2
Northern pike	6	5	4	3	2
Smallmouth Bass	6	5	4	3	2

18. For the following species of fish indicate what **minimum** size you would consider as a **trophy** fish.

Walleye

- anything over 24" (5lbs)
- anything over 26" (6lbs)
- anything over 28" (8lbs)
- anything over 31" (10lbs)
- other _____

Northern pike

- anything over 35" (12lbs)
- anything over 38" (15lbs)
- anything over 42" (20lbs)
- other _____

Musky

- anything over 34" (12lbs)
- anything over 40" (18lbs)
- anything over 45" (25lbs)
- anything over 48" (30lbs)
- anything over 50" (35lbs)
- other _____

Smallmouth bass

- anything over 18.5" (4lbs)
- anything over 19.5" (4½lbs)
- anything over 21" (5lbs)
- anything over 23" (6lbs)
- other _____

Lake trout

- anything over 25.6" (12lbs)
- anything over 30.5" (20lbs)
- anything over 34" (25lbs)
- anything over 36" (30lbs)
- other _____

19. For the following species of fish indicate what size you would consider the **ideal eating** size for a creel limit.

Walleye

- over ¾ lb up to 1lb (over 11" up to 14")
- over 1 lb up to 1½ lbs (over 14" up to 16")
- over 1½ up to 2 lbs (over 16" up to 18")
- over 2 lbs (over 18")
- other _____

Northern pike

- 1 lb up to 2 lbs (14" up to 19")
- over 2 lbs up to 4 lbs (over 19" up to 25")
- over 4 lbs up to 5 lbs (over 25" up to 27.5")
- over 5 lbs (over 27.5")
- other _____

Smallmouth bass

- ½ lb up to ¾ lbs (9" up to 11")
- over ¾ lbs up to 1 lbs (over 11" up to 13")
- over 1 lb up to 1½ lbs (over 13" up to 14.5")
- over 1½ up to 2 lbs (over 14.5" up to 16")
- over 2 lbs up to 3 lbs (over 16" up to 17.5")
- over 3 lbs (over 17.5")
- other _____

Lake trout

- 2 lbs up to 4 lbs (18.5" up to 20.5")
- over 4 lbs up to 6 lbs (over 20.5" up to 22")
- over 6 lbs up to 8 lbs (over 22" up to 24")
- over 8 lbs up to 10 lbs (over 24" up to 25")
- over 10 lbs (over 25")
- other _____

20. Which of the following **protected slot sizes** (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) for **walleye** would you be most in favour of?
- Slot size, similar to Lac Seul's, from 18" to 20.9" (2lbs to 3lbs)
 - Slot size, similar to Eagle Lake's, from 18.9" to 22.8" (2 ½ lbs to 4lbs)
 - Slot size, similar to Dogtooth Lake's, from 19.5" to 25.6" (2 ½ lbs to 5½ lbs)
 - other _____
21. Which of the following **protected slot sizes** (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) for **northern pike** would you be most in favour of?
- Slot size from 27.5" to 31.5" (5lbs to 7lbs)
 - Slot size from 27.5" to 35" (5lbs to 12lbs)
 - Slot size from 27.5" to 37.5" (5lbs to 15lbs)
 - other _____
22. Which of the following **protected slot sizes** (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) for **lake trout** would you be most in favour of?
- Slot size from 21" to 24" (4½ lbs to 8lbs)
 - Slot size from 22" to 25.6" (6lbs to 12lbs)
 - other _____
23. Which of the following **protected slot sizes** (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) for **smallmouth bass** would you be most in favour of?
- Slot size from 13" to 16" (1lb to 2 lbs)
 - Slot size from 13 " to 17.5" (1lb to 3lbs)
 - Slot size from 14.5" to 18.5" (1 ½ lbs to 4lbs)
 - other _____

24. Please indicate which of the following management strategies for **smallmouth bass** in the Cedar River Watershed you support? (More than one choice may be selected)

Do not change regulations at all

Introduce a bass season (closed for the month of June)

OR

Introduce catch and release only of bass for the month of June.

OR

Establish bass sanctuaries in good spawning areas for the month of June.

Introduce a maximum size limit for bass. (i.e. allow one fish over the size limit)
AND/OR

Introduce a minimum size limit for bass(i.e. allow no fish under the size limit)

OR

Introduce a slot size for bass (i.e. no fish can be kept within the slot size)

OR

Reduce creel limit

OR

Combine creel limit reductions with size limit reductions.

Allow one fish over the maximum slot size limit.

Implement other types of regulation to enhance the fishery (please indicate) _____

Please give reasons for choosing or not choosing the above possible management strategies.

25. Please indicate which of the following management strategies for **walleye** in the Cedar River Watershed you support? (More than one choice may be selected)

Do not change regulations at all

Introduce catch and release only of walleye over the maximum size limit during the month of May.

OR

Establish walleye sanctuaries in good spawning areas for the month of May.

Introduce a minimum size limit for walleye (i.e. allow no fish under the size limit)
AND/OR

Introduce a protected slot size for walleye (i.e. no fish can be kept within the slot size)

OR

Reduce creel limit

OR

Combine creel limit reductions with size limit reductions.

Allow keeping a trophy only by introducing a protected slot size between 19.5" (50 cm) and trophy size

Implement other types of regulation to enhance the fishery (please indicate) _____

Please give reasons for choosing or not choosing the above possible management strategies.

26. Please indicate which of the following management strategies for **northern pike** in the Cedar River Watershed you support? (More than one choice may be selected)

Do not change regulations at all

Introduce a northern pike season that is the same as the walleye season.

OR

Introduce catch and release only of northern pike that are above the maximum size limit during the month of May.

OR

Establish northern pike sanctuaries in good spawning areas for the month of May.

Introduce a minimum size limit for northern pike. (i.e. allow no fish under the min. size limit).

OR

Introduce a slot size for northern pike (i.e. no fish can be kept within the slot size)

OR

Reduce creel limit

OR

Combine creel limit reductions with size limit reductions.

Allow keeping a trophy only by introducing a protected slot size between 27.5" (70 cm) and trophy size.

Implement other types of regulation to enhance the fishery (please indicate) _____

Please give reasons for choosing or not choosing the above possible management strategies

27. Please indicate which of the following management strategies for musky in the Cedar River Watershed you support? (More than one choice may be selected)

Do not change regulations at all

Increase the minimum size limit of musky even if most musky caught must be released.

OR

Lower the minimum size limit for musky.

OR

Catch and release fishing only for musky.

Implement other types of regulation to enhance the fishery (please indicate) _____

Please give reasons for choosing or not choosing the above possible management strategies

28. How do you perceive the willingness of an angler to return to the area if creel limits were reduced in the Cedar River Watershed?

Greatly Reduce

Chance of Returning

No Difference

1 2 3 4 5 6 7 8 9 10

29. How would you rate your willingness to support a reduction in creel limit if the rest of Northern Ontario also reduced creel limits equivalent to what is done in the Cedar River Watershed?

More Willing

No Difference

1 2 3 4 5 6 7 8 9 10

30. For the following species of fish please circle the possible creel limit you would be willing to support for all Northern Ontario.

Walleye 6 5 4 3 2

Northern pike 6 5 4 3 2

Small mouth Bass 6 5 4 3 2

31. Please indicate which of the following possible management strategies for public access points to lakes in the Cedar River Watershed you would support?

- Make no changes.
- Introduce stricter regulations for monitoring day trippers, and for controlling the effects of erosion at public access points .
- Close off all public access points.
- Other _____

32. Please indicate which of the following possible management strategies for non resident camping around lakes in the Cedar River Watershed you would support?

- Make no changes
- Increase camp site distance to 1 km from nearest shoreline.
- Increase camp site distance to 2 km from nearest shoreline.
- Ban all non resident camping in the Cedar River Watershed.
- Other _____

33. To what degree would you be willing to be involved in the watershed management planning process?

- Highly involved
- Moderately involved
- A little involved
- Not involved

34. What would you expect to gain by being involved in developing a watershed management plan?

35. How would you envision the condition of the ideal watershed for now and into the future?

36. Goals are defined as the specific outcomes needed to reach the vision of the ideal watershed conditions now and into the future as answered above. What are some of the goals that you consider to be necessary in order to achieve the vision of the watershed you stated above?

37. What type of conservation initiatives/programs are you currently involved in or would like to see started in the Cedar River watershed?

38. Do you have information or knowledge about the watershed that you feel would be helpful in planning a watershed management program? If so please list.

39. What other issues of concern regarding the sustainability of the Cedar River Watershed, in addition to the fisheries issue, would you like to see addressed by the proposed community - based watershed management plan?

OPTIONAL

AGE: (If answering as a group please check all applicable ages)

- under 25
- 26 - 35
- 36 - 49
- 50 - 64
- 65 and over

SEX: (If answering as a group please check all applicable boxes)

- Male
- Female

Additional Comments:

**APPENDIX II
WABAUSKANG FIRST NATION
INTERVIEW FORM**

1. How many years have you lived in the Cedar River Watershed?

- 1 to 4 years
 5 to 10 years
 11 to 20 years
 more than 20 years

2. Have your grandparents lived here? yes no
 great grandparents? yes no

3. How do you fish?

a) with net: for food commercially

How often do you fish with a net?

- once/year
 twice/year
 three times /year
 more than three times/year

b) with rod: for food

- < once/week
 once/week
 twice/week
 more than twice/week

4. Do you think fishing is getting better, worse or about the same? _____

Could you tell me more, say about two years ago, how was fishing compared to today regarding:

	better	worse	same
number of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
size of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Five years ago?

	better	worse	same
number of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
size of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ten years ago?

	better	worse	same
number of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
size of fish caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How important is the fishery resource in the Cedar River Watershed to you in the following ways?

For your family income?
 very important not important middle

As a main part of your yearly diet?
 very important not important middle

For your enjoyment?
 very important not important middle

As a part of your family tradition?
 very important not important middle

6. If you could go back in time to fish the Cedar River Watershed region, which of the following time periods would you consider to have had the ideal fishing conditions?

- 20 to 30 years ago
- 10 years ago
- 5 years ago
- Present conditions are ideal
- Don't know
- other _____

Why did you choose the above time?

7. Please think about the kind of fishing you would enjoy the most in the Cedar River Watershed area. Indicate below how important each of the following statements is to you with regards to your fishing enjoyment.

Fishing water surrounded by pleasant scenery	very important	not important	middle
Catching good eating size fish.....	very important	not important	middle
Fishing for walleye.....	very important	not important	middle
Fishing for perch.....	very important	not important	middle
Fishing for small mouth bass	very important	not important	middle
Fishing for northern pike.....	very important	not important	middle
Fishing for muskellunge	very important	not important	middle
Fishing for white fish	very important	not important	middle
Fishing for lake trout	very important	not important	middle
Fishing wilderness type areas	very important	not important	middle
Fishing alone on a fishing spot	very important	not important	middle
Seeing wildlife	very important	not important	middle

8. Do you think that we need to have regulations for recreational fishing that would protect the brood (spawning) fish stock for:

walleye	yes	no
northern pike	yes	no
smallmouth bass	yes	no
lake trout	yes	no
musky	yes	no

9a. To protect brood stock do you consider protected slots (e.g. 18-21 inches for walleye) to be effective for:

walleye northern SM bass lake trout musky

9b. What about other measures such as:

sanctuaries walleye northern SM bass lake trout musky

reduced possession limits walleye northern SM bass lake trout musky

zones where recreational fishing
is disallowed walleye northern SM bass lake trout musky

seasons walleye northern SM bass lake trout musky

other: _____

10. Non resident campers (Americans from the United States) currently have to camp at least ½ km away from the shore of some of the lakes within the watershed. Do you think this distance should apply to the whole watershed? yes no

11. To what degree would you be willing to be involved in the watershed management planning process?

- Highly involved
- Moderately involved
- A little involved
- Not involved

The next questions I am going to ask you are designed so you can tell me what is important to you regarding the watershed.

12. What would you expect to gain by being involved in developing a watershed management plan?

13a. How would you picture the watershed the way you would like it to be now and for the future?

13b. How do we get there? What do we have to do?

14. Do you have information or knowledge about the watershed that you feel would be helpful in developing a watershed plan?

15. **What other issues of concern regarding the sustainability of the Cedar River Watershed, in addition to the fisheries issue, would you like to see addressed by the proposed community - based watershed management plan?**

16. **Is there any other comments you would like to add?**

**APPENDIX III
SUMMARY OF ANSWERS TO STAKEHOLDER
QUESTIONNAIRES**

Question 2: Where is your place of permanent residency?**Table 2: Respondents' place of permanent residency**

Citizenship	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
USA	2	12%	15	63%	23	55%	18	90%
Canada	1	6%	2	8%	9	21%	1	5%
Ontario	14	82%	7	29%	10	24%	1	5%

Question 3: Which lake or river of the Cedar River Watershed is of greatest interest to you? (example: Cedar lake)**Table 3: Respondents' area of greatest interest within the Cedar River Watershed**

AREA	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
Wabaskang Lake	2	12%	5	21%	18	43%	6	30%
Perrault Falls	4	24%	0	0%	0	0%	0	0%
Cliff Lake	2	12%	4	17%	0	0%	6	30%
Perrault Lake	2	12%	3	13%	10	24%	0	0%
Jack Fish Lake	0	0%	1	4%	0	0%	1	5%
Cedar Lake	1	6%	4	17%	9	21%	6	30%
Pickrel Creek	0	0%	1	4%	0	0%	1	5%
Florence Lake	0	0%	1	4%	0	0%	0	0%
Wine Lake	1	6%	1	4%	0	0%	0	0%
Ord & Thadeous	1	6%	1	4%	3	7%	0	0%
Aerobus Lake	0	0%	0	0%	1	2%	0	0%
Keynote Lake	0	0%	0	0%	1	2%	0	0%
Anishinabi Lake	2	12%	0	0%	0	0%	0	0%
Watershed as a whole	1	5.9%	2	8.4%	0	0%	0	0%

Question 4: How many years have you lived and/or operated in the Cedar River Watershed, or how many years have you been visiting the Cedar River Watershed area?

Table 4: Number of years respondents have lived and/or operated within the Cedar River watershed

Number of years	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
1 to 4 yrs	0	0%	4	17%	3	7%	2	10%
5 to 10 yrs	2	12%	4	17%	4	10%	7	35%
11 to 20 yrs	7	41%	7	29%	11	26%	4	20%
> 20 yrs	8	47%	9	38%	24	57%	7	35%

Question 6: How many generations of your family have, or are presently living, visiting and/or operating in the Cedar River Watershed, including yourself?

Table 6: Number of generations of respondents' families that have been living, visiting or operating in the Cedar River Watershed

Generations	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
6	1	6%	0	0%	0	0%	0	0%
5	0	0%	0	0%	0	0%	0	0%
4	9	53%	10	42%	2	5%	0	0%
3	4	24%	3	13%	21	50%	3	15%
2	3	18%	6	25%	18	43%	10	50%
1	0	0%	1	4%	1	2%	7	35%
blank	0	0%	4	17%	0	0%	0	0%

Question 7: Please indicate how frequently you participate in the following activities in the Cedar River Watershed.

Table 7a: Frequency that resident respondents' participate in various activities within the Cedar River Watershed

RESIDENT RESPONSE

	BOATING		FISHING			
	No.	%	No.	%		
FREQU.	7	41%	7	41%		
OCCAS.	7	41%	10	59%		
NEVER	0	0%	0	0%		
BLANK	3	18%	0	0%		
	CANOEING		SWIMMING			
	No.	%	No.	%		
FREQU.	2	12%	500%	29%		
OCCAS.	7	41%	4	24%		
NEVER	4	24%	2	12%		
BLANK	4	24%	6	35%		
	WILDLIFE VIEWING		HIKING		NATURE WALKING	
	No.	%	No.	%	No.	%
FREQU.	9	53%	4	24%	3	18%
OCCAS.	3	18%	7	41%	5	29%
NEVER	0	0%	0	0%	2	12%
BLANK	5	29%	6	35%	7	41%
	PHOTOGRAPHY		WATER SKIING		ICE FISHING	
	No.	%	No.	%	No.	%
FREQU.	5	29%	0	0%	5	29%
OCCAS.	4	24%	2	12%	7	41%
NEVER	2	12%	7	41%	3	18%
BLANK	6	35%	8	47%	2	12%

Table 7b: Frequency that camp owner respondents' participate in various activities within the Cedar River Watershed

CAMPOWNER RESPONSE							
		BOATING		FISHING			
		No.	%	No.	%		
FREQU.		11	46%	10	42%		
OCCAS.		10	42%	12	50%		
NEVER		0	0%	0	0%		
BLANK		3	13%	2	8%		
		CANOEING		SWIMMING			
		No.	%	No.	%		
FREQU.		4	17%	3	13%		
OCCAS.		5	21%	10	42%		
NEVER		9	38%	5	21%		
BLANK		6	25%	6	25%		
		WILDLIFE VIEWING		HIKING		NATURE WALKING	
		No.	%	No.	%	No.	%
FREQU.		14	58%	3	13%	4	17%
OCCAS.		3	13%	9	38%	9	38%
NEVER		2	8%	4	17%	3	13%
BLANK		5	21%	8	33%	8	33%
		PHOTOGRAPHY		WATER SKIING		ICE FISHING	
		No.	%	No.	%	No.	%
FREQU.		7	29%	3	13%	3	13%
OCCAS.		14	58%	2	8%	7	29%
NEVER		0	0%	13	54%	10	42%
BLANK		3	13%	6	25%	4	17%

Table 7c: Frequency that cottager respondents' participate in various activities within the Cedar River Watershed

COTTAGER RESPONSE							
		BOATING		FISHING			
		No.	%	No.	%		
FREQU.		28	67%	29	69%		
OCCAS.		12	29%	13	31%		
NEVER		0	0%	0	0%		
BLANK		2	5%	0	0%		
		CANOEING		SWIMMING			
		No.	%	No.	%		
FREQU.		6	14%	17	40%		
OCCAS.		17	40%	18	43%		
NEVER		8	19%	2	5%		
BLANK		11	26%	5	12%		
		WILDLIFE VIEWING		HIKING		NATURE WALKING	
		No.	%	No.	%	No.	%
FREQU.		27	64%	7	17%	12	29%
OCCAS.		12	29%	21	50%	20	48%
NEVER		1	2%	3	7%	2	5%
BLANK		2	5%	11	26%	8	19%
		PHOTOGRAPHY		WATER SKIING		ICE FISHING	
		No.	%	No.	%	No.	%
FREQU.		18	43%	5	12%	9	21%
OCCAS.		15	36%	12	29%	6	14%
NEVER		1	2%	14	33%	19	45%
BLANK		8	19%	11	26%	8	19%

Table 7d: Frequency that visiting angler respondents' participate in various activities within the Cedar River Watershed

VISITING ANGLER RESPONSE						
	BOATING		FISHING			
	No.	%	No.	%		
FREQU.	4	20%	10	50%		
OCCAS.	6	30%	10	50%		
NEVER	5	25%	0	0%		
BLANK	5	25%	0	0%		
	CANOEING		SWIMMING			
	No.	%	No.	%		
FREQU.	0	0%	0	0%		
OCCAS.	1	5%	3	15%		
NEVER	10	50%	7	35%		
BLANK	9	45%	10	50%		
	WILDLIFE VIEWING		HIKING		NATURE WALKING	
	No.	%	No.	%	No.	%
FREQU.	3	15%	0	0%	0	0%
OCCAS.	10	50%	2	10%	4	20%
NEVER	2	10%	8	40%	7	35%
BLANK	5	25%	10	50%	9	45%
	PHOTOGRAPHY		WATER SKIING		ICE FISHING	
	No.	%	No.	%	No.	%
FREQU.	1	5%	0	0%	2	10%
OCCAS.	11	55%	0	0%	0	0%
NEVER	2	10%	10	50%	8	40%
BLANK	6	30%	10	50%	10	50%

Question 8: Approximately how many days do you fish in the Cedar River Watershed area during a year?

Table 8: Number of days respondents fish during a year in the Cedar River watershed

Days fish/year	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
1 TO 5 DAYS	6	35%	2	8%	3	7%	3	15%
5 TO 10 DAYS	3	18%	6	25%	6	14%	9	45%
10 TO 20 DAYS	2	12%	8	33%	10	24%	1	5%
20 TO 30 DAYS	2	12%	2	8%	10	24%	3	15%
> 30 DAYS	3	18%	4	17%	13	31%	4	20%
OTHER	1	6%	2	8%	0	0%	0	0%

Question 9: How would you rate your level of fishing experience?

Table 9: Respondents' rating of their level of fishing experience

Experience	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
Beginner	0	0%	0	0%	1	2%	0	0%
Moderate	8	47%	11	52%	23	55%	12	60%
very experience	9	53%	10	48%	18	43%	8	40%
Other	0	0%	3	14%	0	0%	0	0%

Question 10: How do you compare this year's fishing experience in the Cedar River watershed with your previous years experiences?

Table 10a: Comparison of this year's fishing experience to previous years experience according to resident respondents

	SUCCESS		QUALITY		SCENERY	
2 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	0	0%	1	6%	0	0%
SAME	9	53%	8	47%	8	47%
DETERATED	5	29%	4	24%	5	29%
DON'T KNOW	2	12%	1	6%	1	6%
NO REPLY	1	6%	3	18%	3	17%
	SUCCESS		QUALITY		SCENERY	
5 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	0	0%	1	6%	0	0%
SAME	7	41%	7	41%	7	41%
DETERATED	6	35%	4	24%	4	24%
DON'T KNOW	2	12%	2	12%	2	12%
NO REPLY	2	12%	3	18%	4	24%
	SUCCESS		QUALITY		SCENERY	
10 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	1	6%	1	6%	1	6%
SAME	4	24%	3	18%	6	35%
DETERATED	8	47%	8	47%	5	29%
DON'T KNOW	2	12%	2	12%	2	12%
NO REPLY	2	12%	3	18%	3	18%

Table 10b: Comparison of this year's fishing experience to previous years experience according to camp owner respondents

	SUCCESS		QUALITY		SCENERY	
2 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	8	35%	4	17%	0	0%
SAME	11	48%	16	67%	15	63%
DETERATED	4	17%	2	9%	8	33%
DON'T KNOW	0	0%	1	4%	1	4%
NO REPLY	0	0%	0	0%	0	0%
	SUCCESS		QUALITY		SCENERY	
5 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	6	26%	3	13%	0	0%
SAME	8	35%	12	52%	12	50%
DETERATED	4	17%	4	17%	8	33%
DON'T KNOW	3	13%	3	13%	3	13%
NO REPLY	2	9%	1	4%	1	4%
	SUCCESS		QUALITY		SCENERY	
10 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	6	26%	4	17%	0	0%
SAME	5	22%	5	22%	9	38%
DETERATED	4	17%	6	26%	7	29%
DON'T KNOW	6	26%	5	22%	6	25%
NO REPLY	2	9%	3	13%	2	8%

Table 10c: Comparison of this year's fishing experience to previous years experience according to cottager respondents

	SUCCESS		QUALITY		SCENERY	
2 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	5	12%	4	10%	1	2%
SAME	21	50%	17	41%	25	60%
DETERATED	12	29%	14	33%	11	26%
DON'T KNOW	4	10%	4	10%	3	7%
NO REPLY	0	0%	3	7%	2	5%
	SUCCESS		QUALITY		SCENERY	
5 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	3	7%	3	7%	1	2%
SAME	16	39%	12	29%	22	54%
DETERATED	19	46%	20	49%	13	32%
DON'T KNOW	3	7%	3	7%	2	5%
NO REPLY	0	0%	3	7%	3	7%
	SUCCESS		QUALITY		SCENERY	
10 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	5	12%	5	12%	1	2%
SAME	10	24%	7	17%	21	51%
DETERATED	19	46%	20	49%	11	27%
DON'T KNOW	6	15%	6	15%	5	12%
NO REPLY	1	2%	3	7%	3	7%

Table 10d: Comparison of this year's fishing experience to previous years experience according to visiting angler respondents

	SUCCESS		QUALITY		SCENERY	
2 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	8	35%	4	17%	0	0%
SAME	11	48%	16	70%	15	63%
DETERATED	4	17%	2	9%	8	33%
DON'T KNOW	0	0%	1	4%	1	4%
NO REPLY	0	0%	0	0%	0	0%
	SUCCESS		QUALITY		SCENERY	
5 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	6	26%	3	13%	0	0%
SAME	8	35%	12	52%	12	50%
DETERATED	4	17%	4	17%	8	33%
DON'T KNOW	3	13%	3	13%	3	13%
NO REPLY	2	9%	1	4%	1	4%
	SUCCESS		QUALITY		SCENERY	
10 YEARS	Number	Percent	Number	Percent	Number	Percent
IMPROVED	6	26%	4	17%	0	0%
SAME	5	22%	5	22%	9	36%
DETERATED	4	17%	6	26%	7	29%
DON'T KNOW	6	26%	5	22%	6	25%
NO REPLY	2	9%	3	13%	2	8%

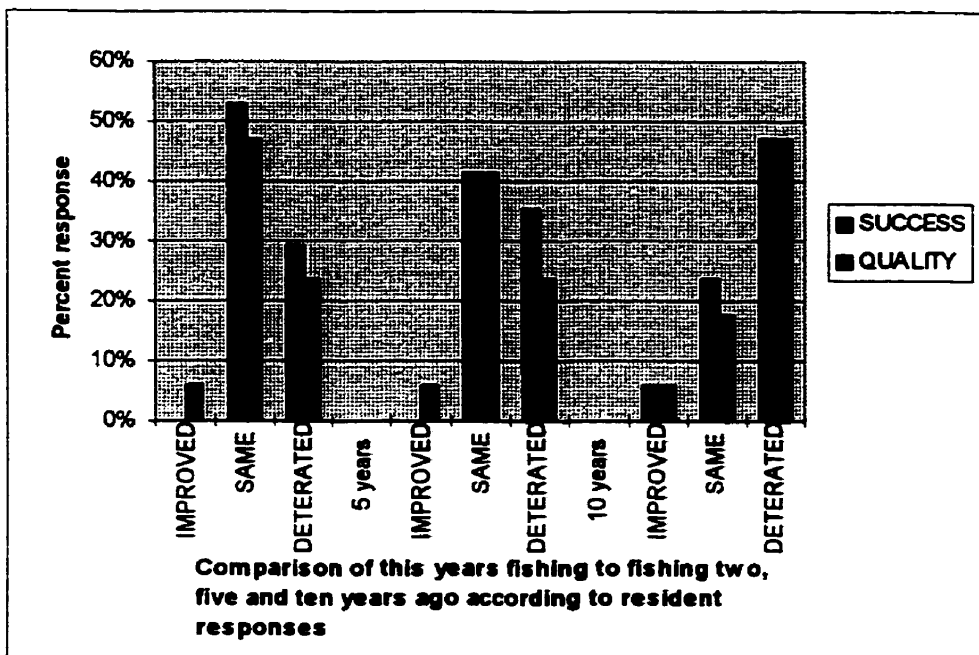


Figure 10a: Trend in fishing regarding success (i.e. quantity of fish caught) and quality (i.e. size of fish caught) over the last ten years according to resident respondents.

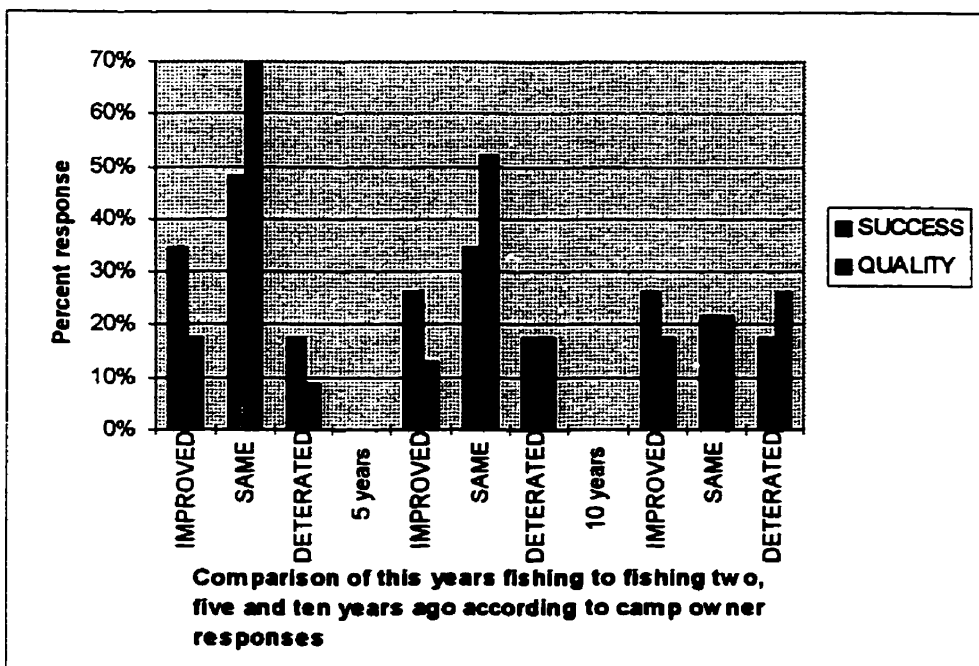


Figure 10b: Trend in fishing regarding success (i.e. quantity of fish caught) and quality (i.e. size of fish caught) over the last ten years according to camp owner respondents

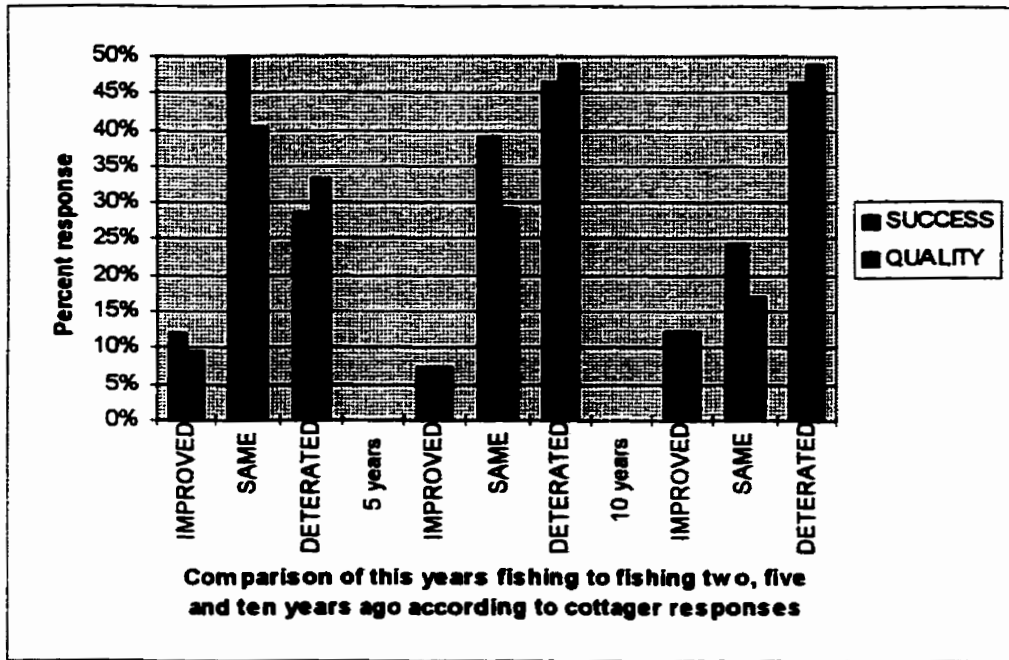


Figure 10c: Trend in fishing regarding success (i.e. quantity of fish caught) and quality (i.e. size of fish caught) over the last ten years according to cottager respondents.

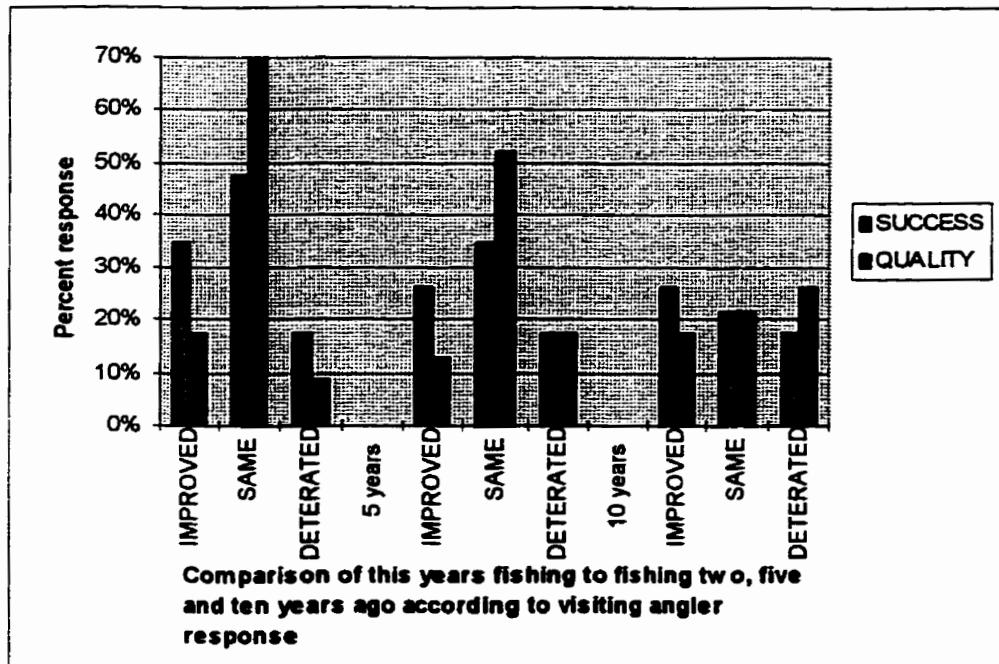


Figure 10d: Trend in fishing regarding success (i.e. quantity of fish caught) and quality (i.e. size of fish caught) over the last ten years according to angler respondents.

Question 11: How important is the fishery resource in the Cedar River Watershed to you in the following ways?

Table 11a: Average rating of importance of the fishery in the Cedar River Watershed to respondents' income, yearly diet, recreation and family/social tradition based on an ordinate scale of 1 to 10, with 1 being not at all important to 10 being very important*

	Income	Yearly diet	Recreation	Family/social tradition
Residents	4.1	4.5	8.1	8.0
Camp owners	9.3	3.0	7.7	6.5
Cottagers	1.4	2.8	8.9	8.3
Visiting anglers	1	2.2	8.2	5.8

*Average was calculated as an average of those who answered the question

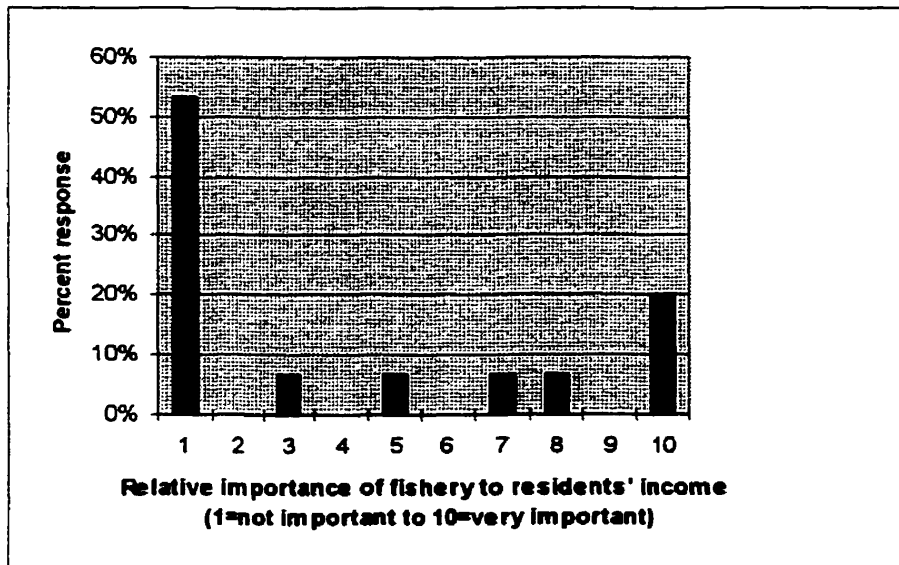


Figure 11a: Distribution of values of relative importance of fishery in the Cedar River Watershed to income as ranked by responding residents

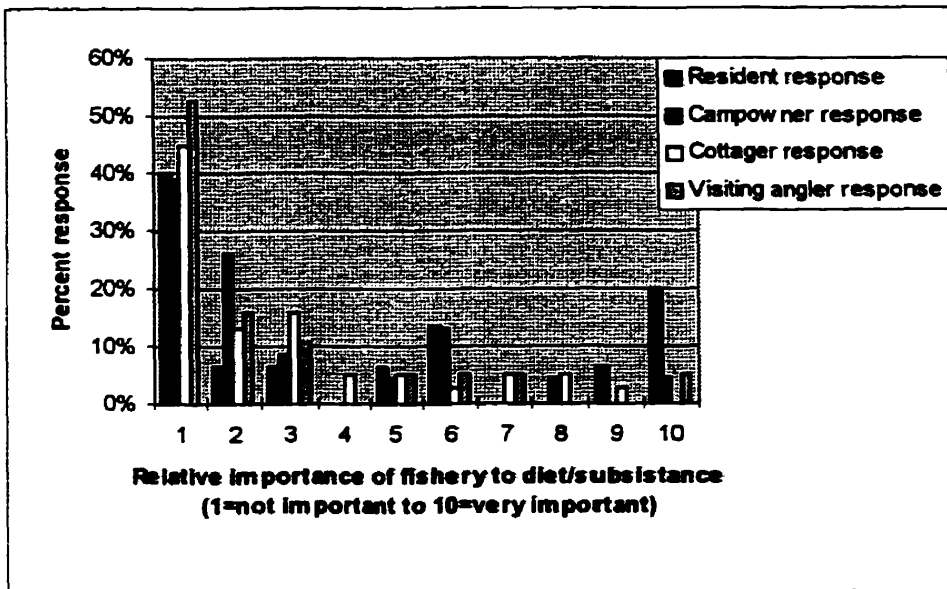


Figure 11b: Distribution of values of relative importance of fishery in the Cedar River Watershed to yearly diet as ranked by respondents

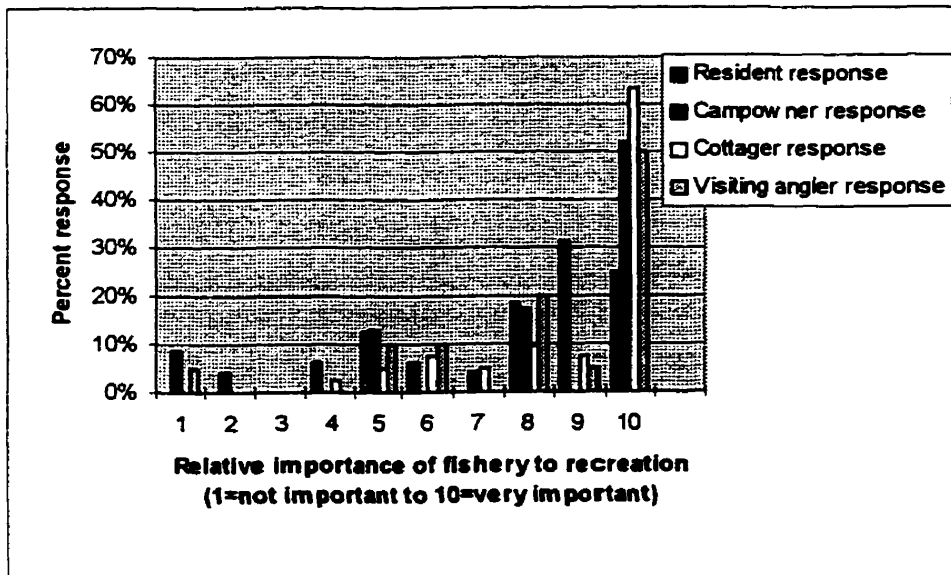


Figure 11c: Distribution of values of relative importance of fishery in the Cedar River Watershed to recreation as ranked by respondents

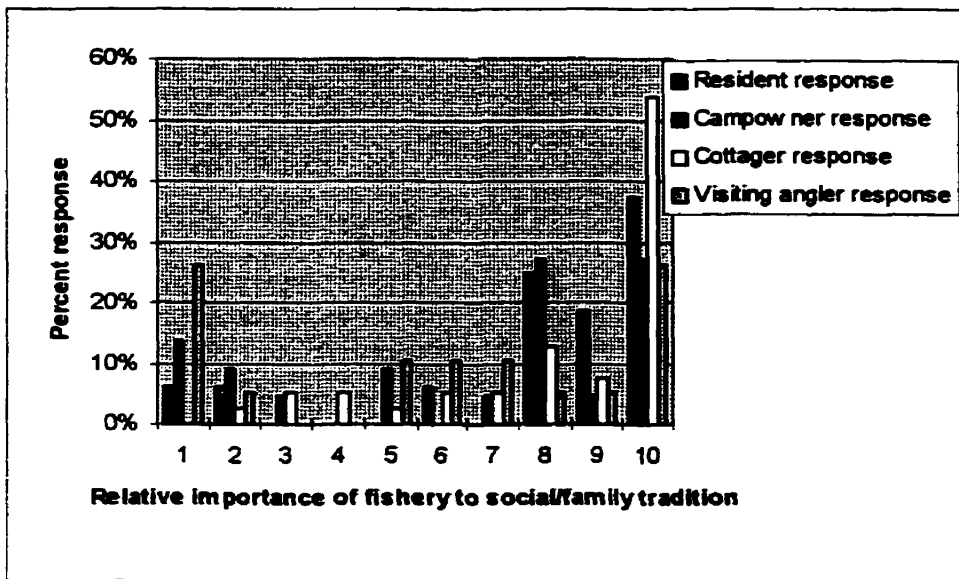


Figure 11d: Distribution of values of relative importance of the fishery in the Cedar River Watershed to social/family tradition as ranked by respondents

Question 12: If you could go back in time to fish the Cedar River Watershed region, which of the following time periods would you consider to have had the ideal fishing conditions?

Table 12: Period in time when respondents' considered fishing conditions to be ideal in the Cedar River Watershed

Time	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
20 to 30 yrs ago	11	100	13	100	29	100	5	100
10 yrs ago	3	100	0	0	2	100	2	100
5 yrs ago	0	0	0	0	0	0	1	100
The present	0	0	6	100	1	100	3	100
Don't know	2	100	3	100	6	100	7	100
Blank	0	0	0	0	2	100	0	0
other	1	100	2	100	2	100	2	100

Other included:

Residents: 40 to 50 yrs ago

Camp owners: "present conditions are "pretty good"; other not specified

Cottagers: other not specified

Visiting anglers: 50 yrs ago; 20 to 30 yrs ago - today is "OK"

Question 12: Reasons for choosing above time periods:

Most of those respondents from all stakeholder groups who chose a time period from the past as having ideal fishing conditions gave the following reasons in order of greatest response

- **more and bigger fish** - Two respondents specified more and bigger walleye in past. One respondent indicated that walleye was better in the past, but trout is about the same and bass is better today.
- **less fishing pressure** - Some residents and cottagers (six) equated this with less resorts and therefore less resort guests fishing. Three respondents claimed that tourists were "fishing out" populations. One first nation resident stated that there were too many white people fishing indiscriminately now. Four camp owners felt that more pressure today which led to less than ideal conditions is due to greater access to the area and the fact that the area is less secluded.
- **fish were easier to catch** - Respondents who indicated better overall fishing were included here.

Other reasons for choosing the past as having ideal conditions included: More common sense 20 yrs ago and less interference with nature. One cottager stated that fishing was better before the 19.7 inch size limit on walleye.

One resident indicated that they chose present conditions as ideal because fishing is about the same. Two camp owners chose the present as having ideal fishing conditions as fishing is very good today. One visiting angler and two camp owners chose present conditions as ideal because fishing is improving along with conservation initiatives and that the 19.7 inch maximum size limit on walleye is working.

Those who did not know indicated that they had not been in the area long enough to determine when fishing was best.

Question 13: Please think about the kind of fishing you (and/or your guests if you are a tourist resort operator) would enjoy the most in the Cedar River Watershed area. Indicate below how important each of the following statements is to you with regards to fishing enjoyment.

Table 13: Average rating of importance of various aspects of the fishing experience in the Cedar River Watershed to respondents' fishing enjoyment based on an ordinate scale of 1 to 10, with 1 being not at all important to 10 being very important*

	Seeing a rainbow	Seeing a trout	Seeing a steelhead	Seeing a cutthroat trout	Seeing a kokoi
Residents	8.7	4.9	3.8	7.7	7.2
Camp Owners	9.4	6.0	7.5	8.1	8.3
Cottagers	9.3	5.2	4.1	7.9	8.7
Visiting anglers	8.5	5.6	6.6	8.1	8.6
	Fishing in yellow water	Fishing in small streams by foot	Fishing in trout-rich pools	Fishing in medium streams	Fishing in wide rivers
Residents	1.8	4.7	5.1	2.3	4.3
Camp Owners	4.3	6.3	6.9	4.9	2.5
Cottagers	3.1	4.5	5.8	3.2	2.8
Anglers	3.9	6.1	5.0	3.1	1.5
	Fishing in the rain	Watching a flycatcher	None of the things listed	Catching a steelhead	Seeing a wildcat
Residents	7.1	8.4	6.1	3.8	8.6
Camp Owners	5.5	8.3	7.4	5.1	9.2
Cottagers	5.8	7.4	7.5	5.1	8.7
Visiting anglers	3.3	7.0	6.8	4.2	7.9

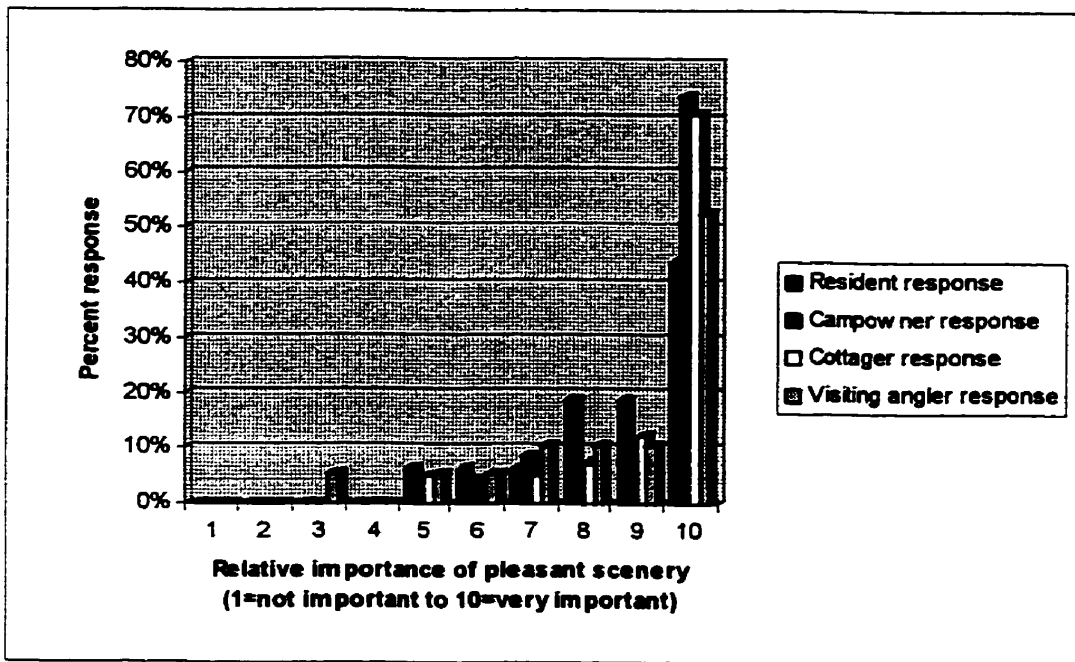


Figure 13a: Distribution of values for the relative importance of scenery to respondents' fishing enjoyment in the Cedar River Watershed

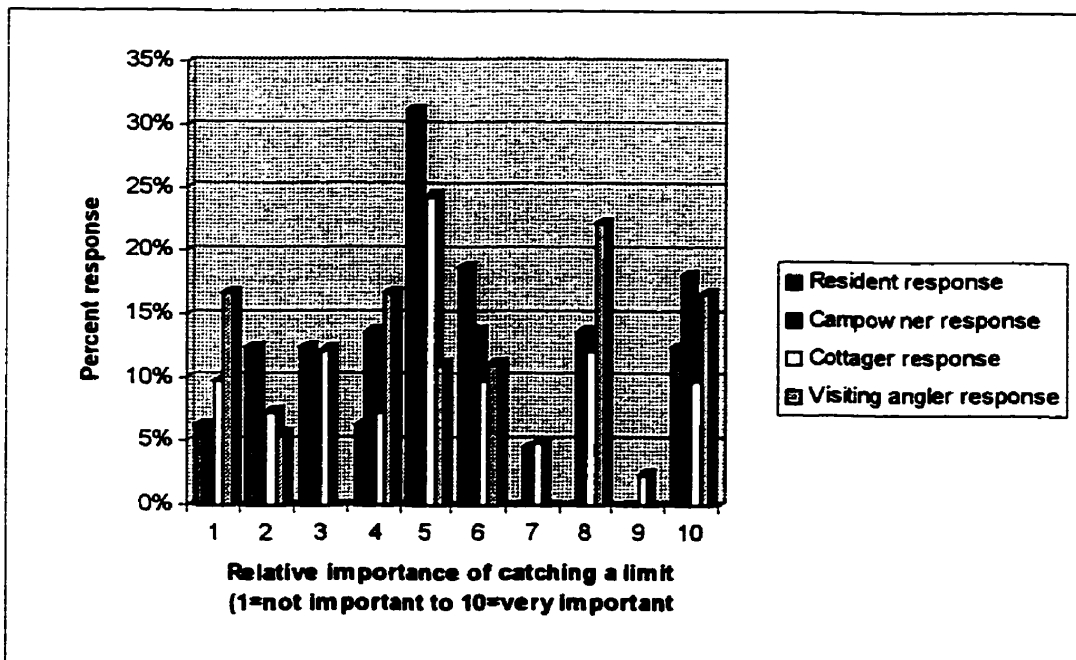


Figure 13b: Distribution of values for the relative importance of catching a limit to respondents' fishing enjoyment in the Cedar River Watershed

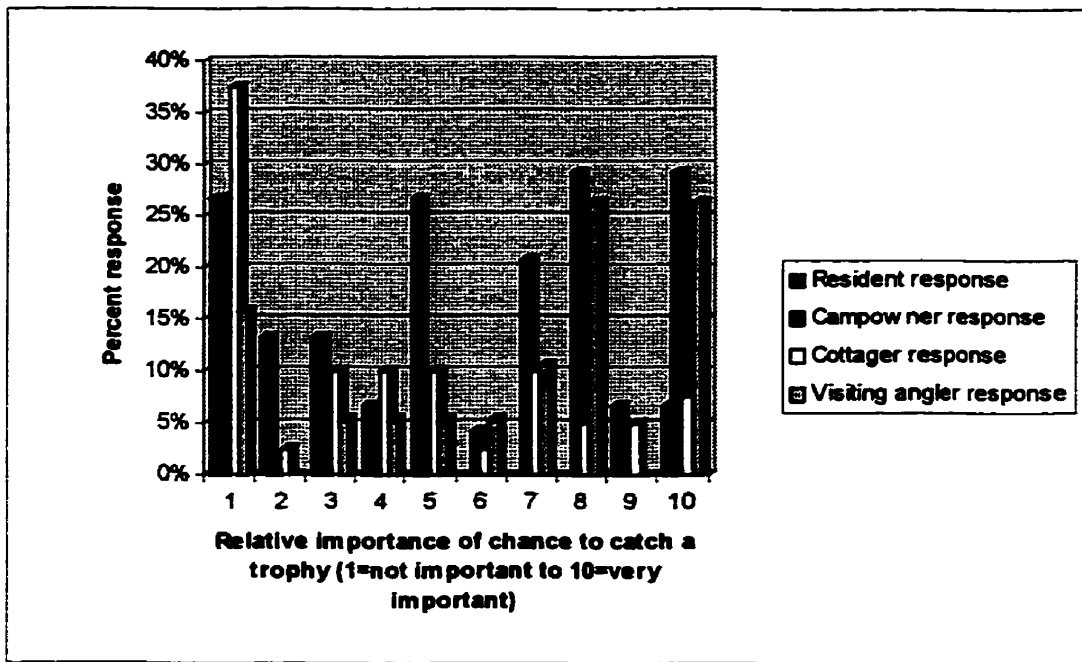


Figure 13c: Distribution of values for the relative importance of the chance to catch a trophy fish to respondents' fishing enjoyment in the Cedar River Watershed

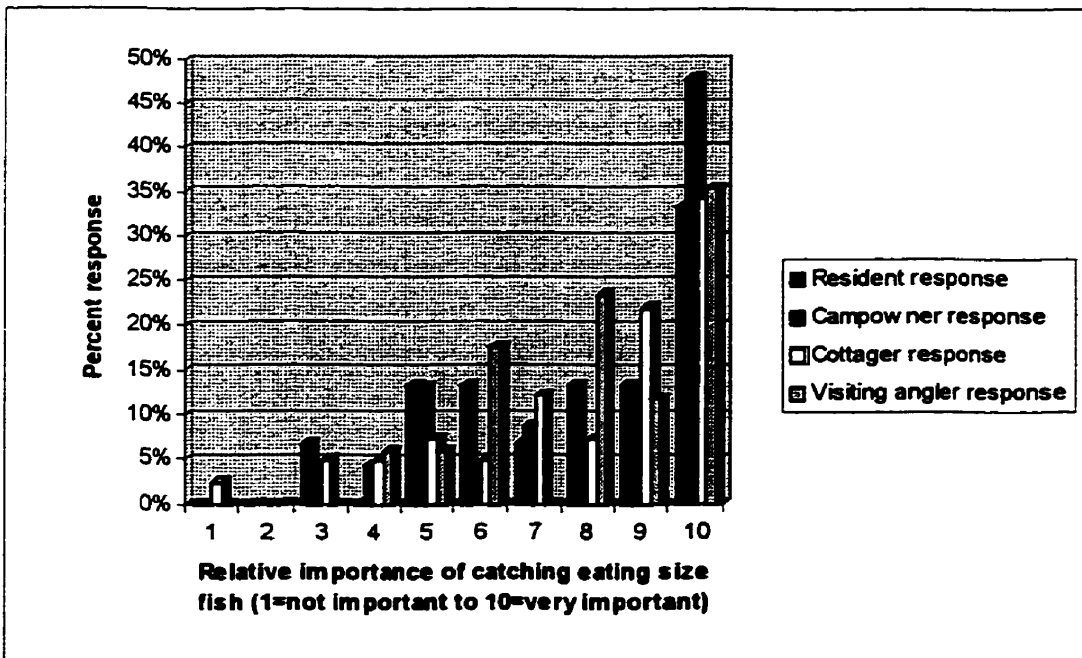


Figure 13d: Distribution of values for the relative importance of catching eating size fish to respondents' fishing enjoyment in the Cedar River Watershed

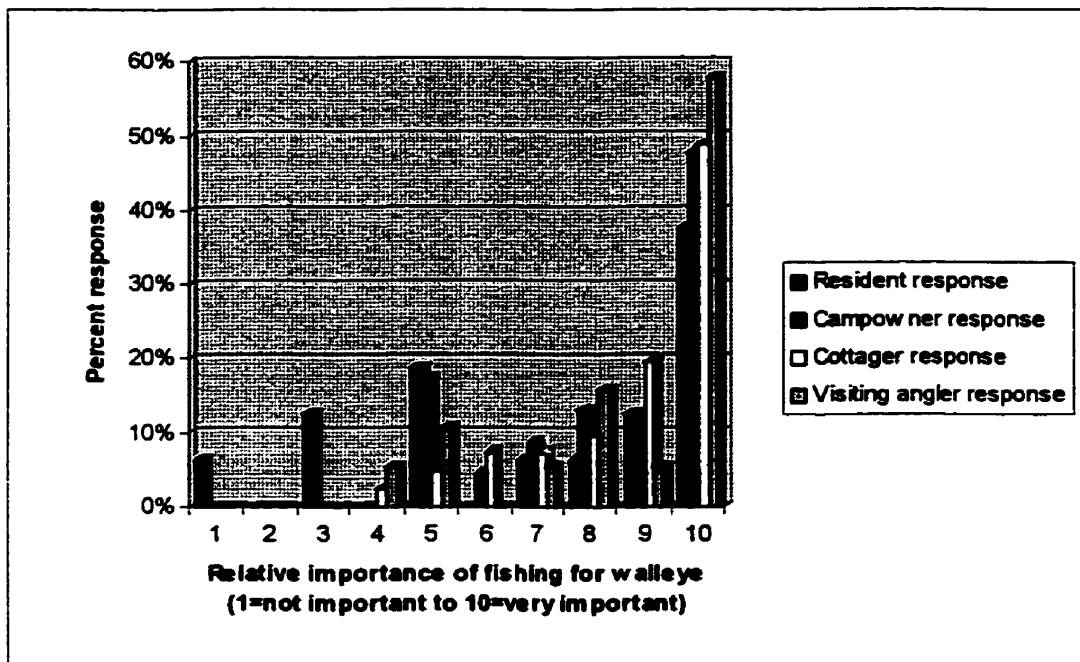


Figure 13e: Distribution of values for the relative importance of fishing for walleye to respondents' fishing enjoyment in the Cedar River Watershed

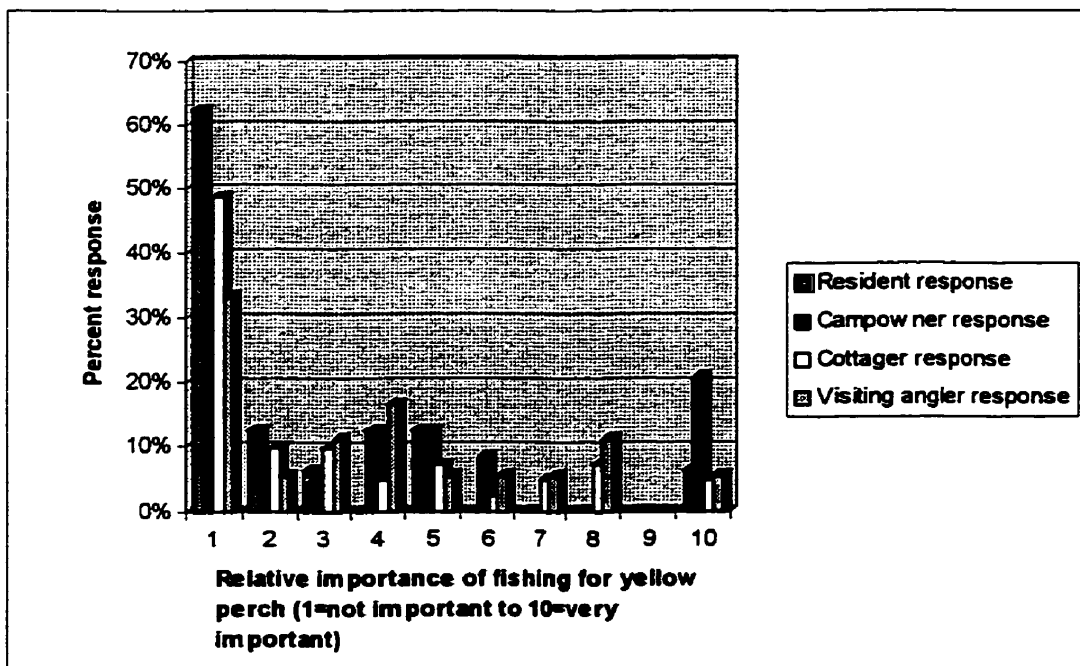


Figure 13f: Distribution of values for the relative importance of fishing for yellow perch to respondents' fishing enjoyment in the Cedar River Watershed

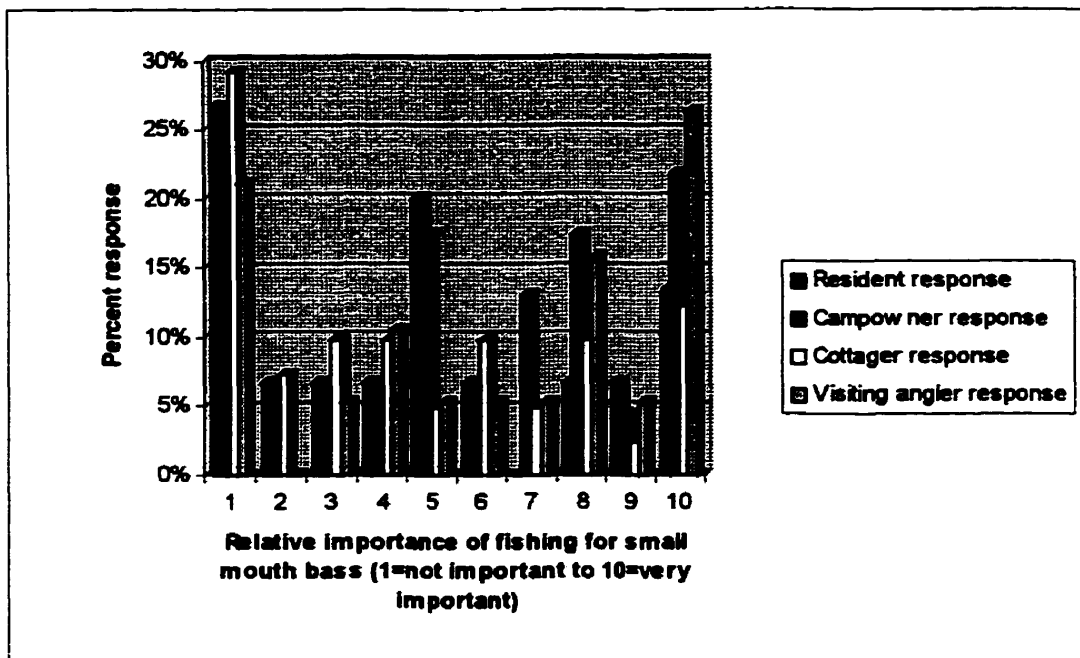


Figure 13g: Distribution of values for the relative importance of fishing for smallmouth bass to respondents' fishing enjoyment in the Cedar River Watershed

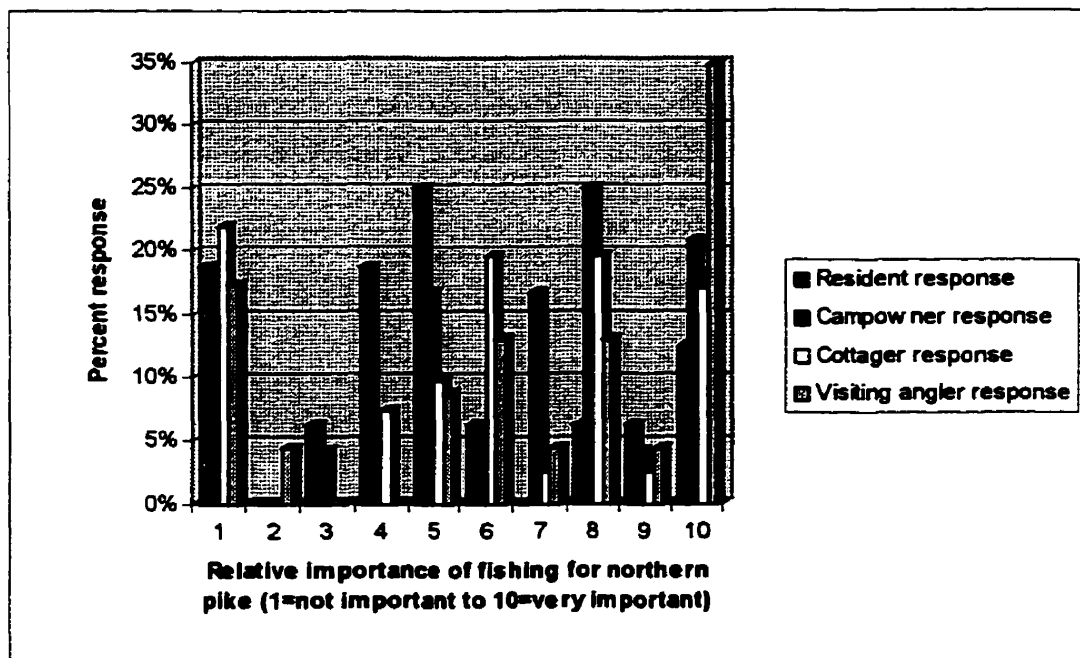


Figure 13h: Distribution of values for the relative importance of fishing for northern pike to respondents' fishing enjoyment in the Cedar River Watershed

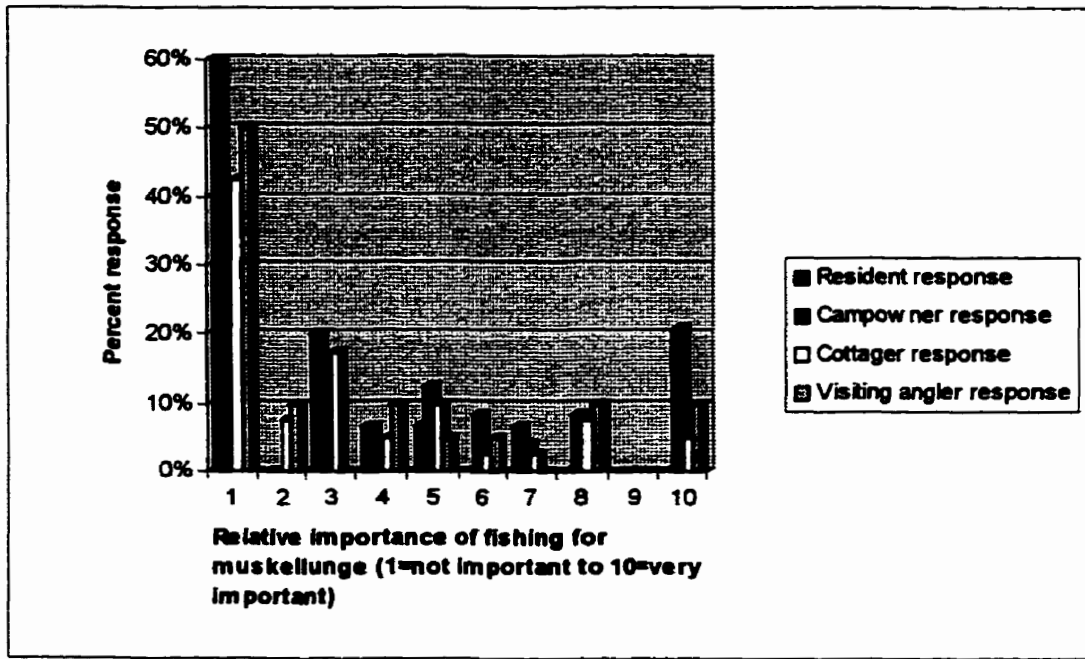


Figure 13i: Distribution of values for the relative importance of fishing for muskellunge to respondents' fishing enjoyment in the Cedar River Watershed

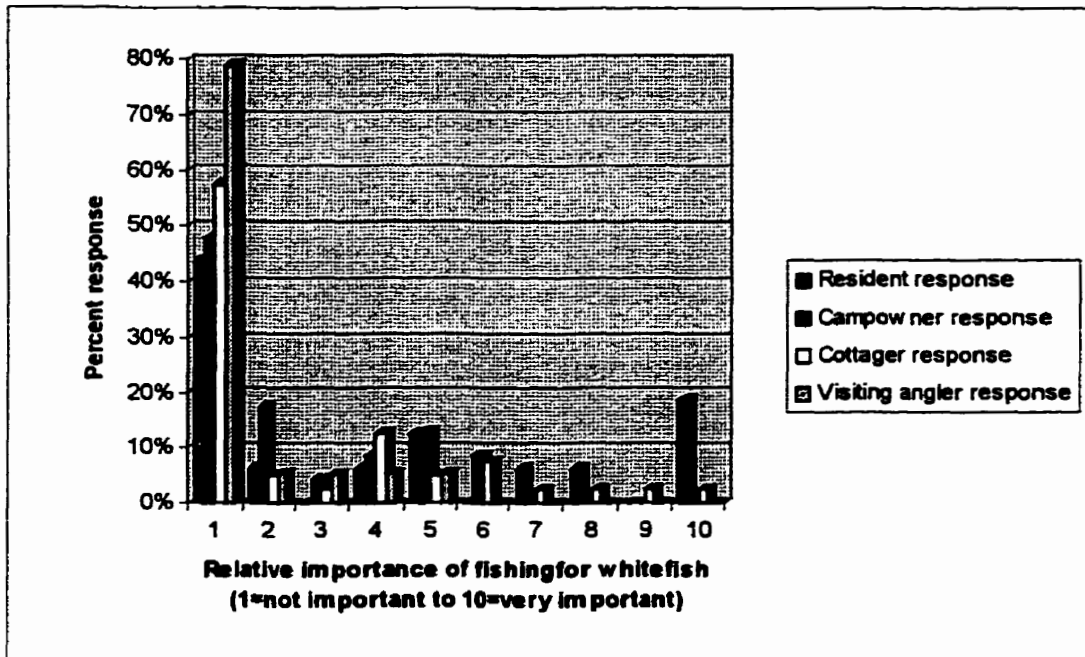


Figure 13j: Distribution of values for the relative importance of fishing for whitefish to respondents' fishing enjoyment in the Cedar River Watershed

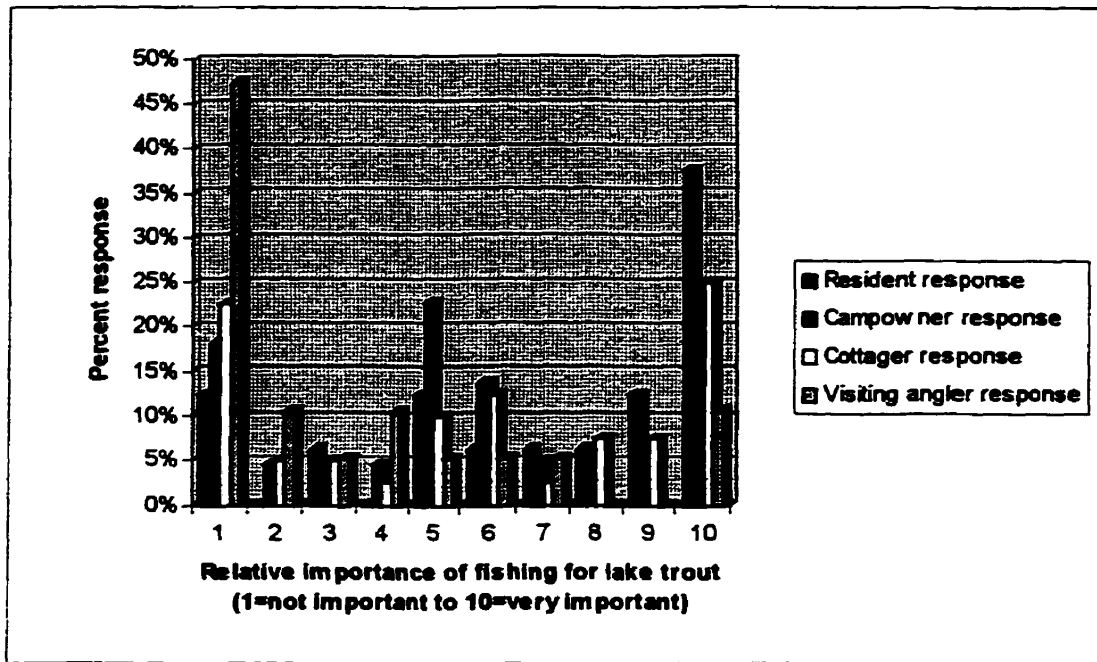


Figure 13k: Distribution of values for the relative importance of fishing for lake trout to respondents' fishing enjoyment in the Cedar River Watershed

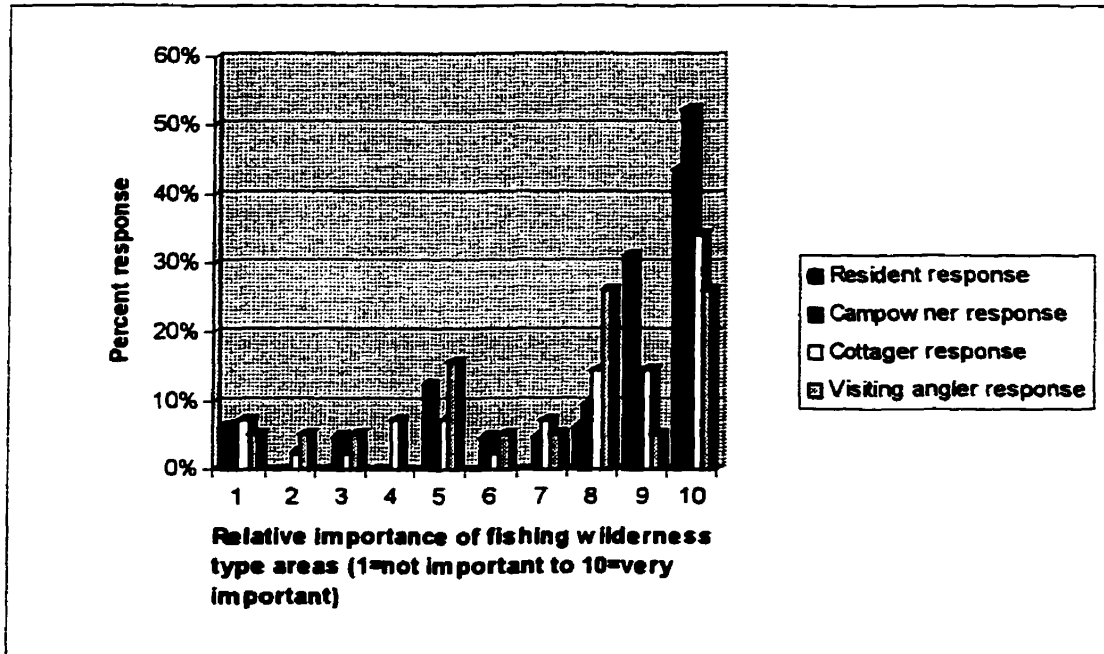


Figure 13l: Distribution of values for the relative importance of fishing in wilderness type areas to respondents' fishing enjoyment in the Cedar River Watershed

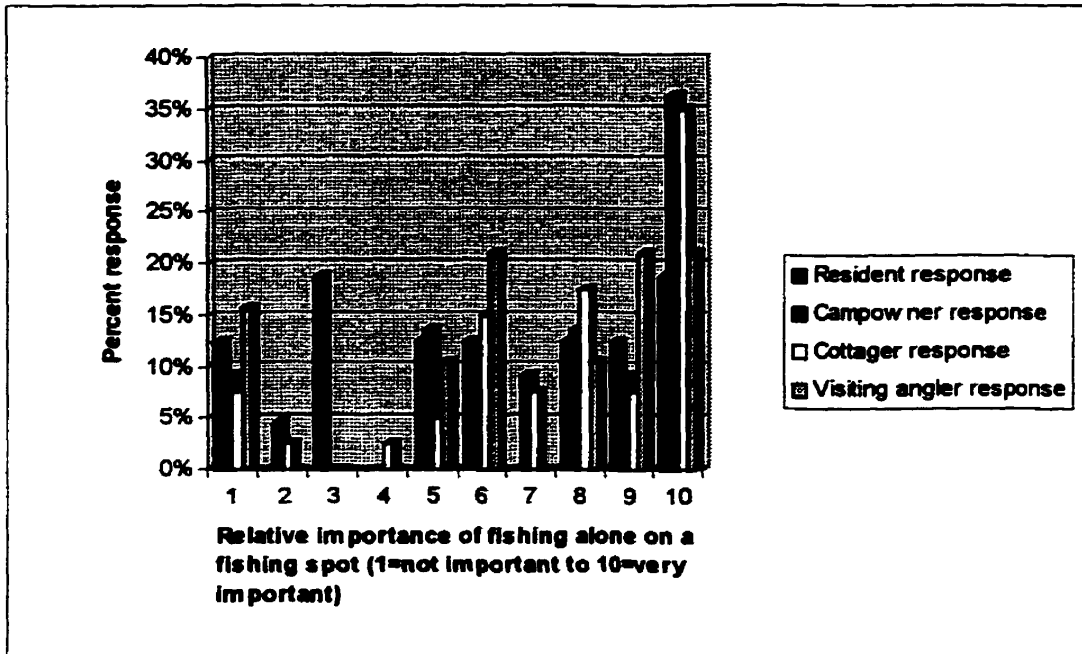


Figure 13m: Distribution of values for the relative importance of fishing alone on a fishing spot to respondents' fishing enjoyment in the Cedar River Watershed

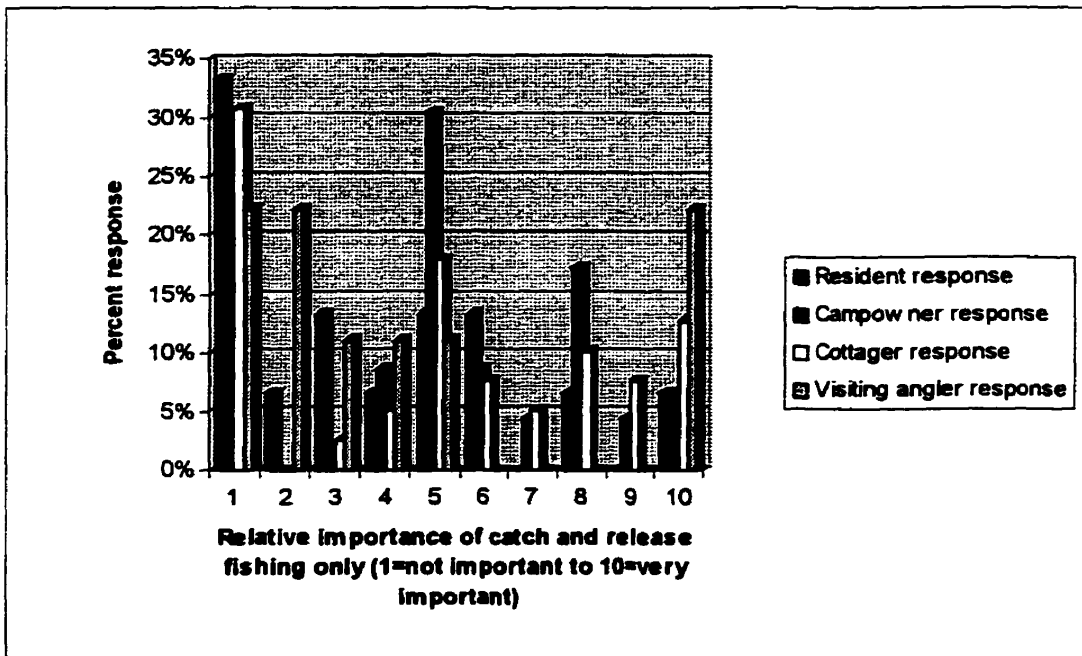


Figure 13n: Distribution of values for the relative importance of catch and release only to respondents' fishing enjoyment in the Cedar River Watershed

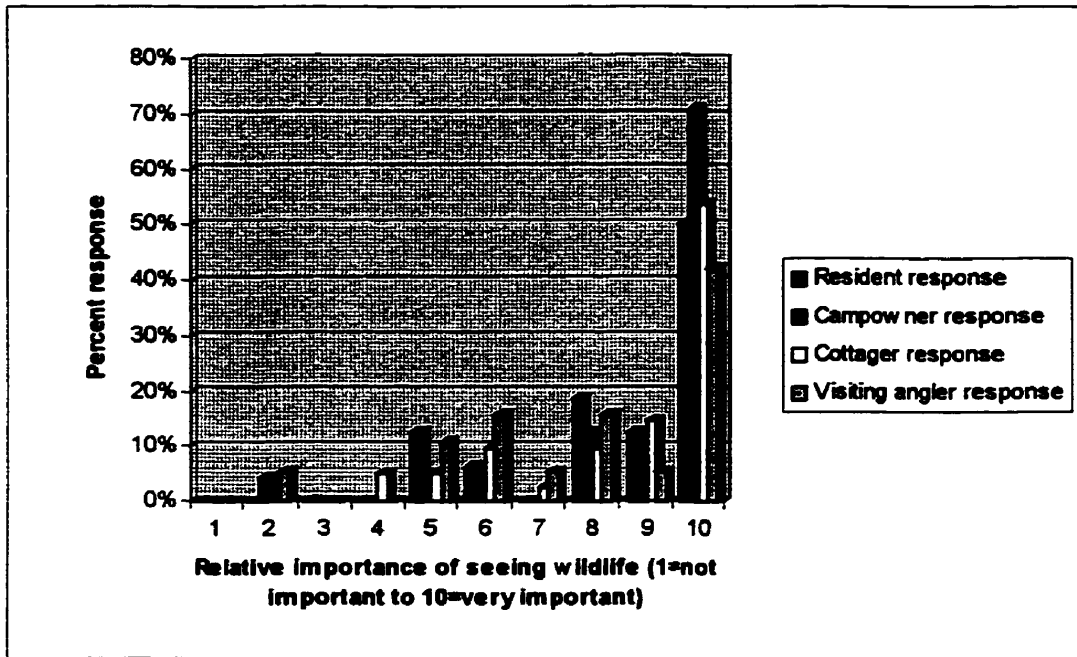


Figure 130: Distribution of values for the relative importance of seeing wildlife to respondents' fishing enjoyment in the Cedar River Watershed

Question 14: During your fishing trip which one of the following is most important to your fishing enjoyment?

Table 14: Importance of catching fish for eating vs trophy fish to respondents' fishing enjoyment in the Cedar River Watershed

	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
Small eating fish	7		4		13		3	
Eating & trophy	8		19		25		12	
Trophy	1		1		1		2	
No reply	0		0		1		0	
Other	1		0		2		3	

Others included:

Residents: catching enough to eat releasing others

Cottagers: catch a few small eaters; catch eating size and release trophies; catch a few for eating - trophies unimportant

Visiting anglers: none of above - catch some eating fish and release trophies; catch and release only; catch and release lots of different sized fish

Question 15: During a fishing day, which of the following average amounts of time to catch a fish would you consider most acceptable for a "good fishing day".

Time	Responses							
	Resident		Camp owner		Cottager		Visiting angler	
	No.	%	No.	%	No.	%	No.	%
15 to 30 min.	8		9		23		9	
30 to 45 min.	6		10		8		8	
45 min. to 1hr	1		3		4		1	
1 hour	1		0		4		2	
No reply	0		1		2		0	
Other	1		1		1		0	

Others included:

Residents: 5 to 10 minutes

Camp owners: one every 6 minutes

Cottagers: ¼ of a day

Question 16: Which one of the following creel limits for perch would you favour most?

Table 16: Stakeholder responses to suggested possession limits for yellow perch in the Cedar River watershed they would most prefer

LIMIT	Resident	Camp Owner	Cottager	Visiting angler
	No.	No.	No.	No.
NO CHANGE	10	5	23	8
50	0	5	1	2
25	5	12	9	6
10	0	1	6	1
OTHER	2	1	3	3

***Other responses included:**

Residents: no interest; a limit of two

Camp owners: no reply

Cottagers: should catch all perch as they are full of worms; have creel limits that would assure no over abundance nor deficiency; no reply.

Visiting anglers: perch are full of worms so don't keep; never fish for; just enough to eat during visit

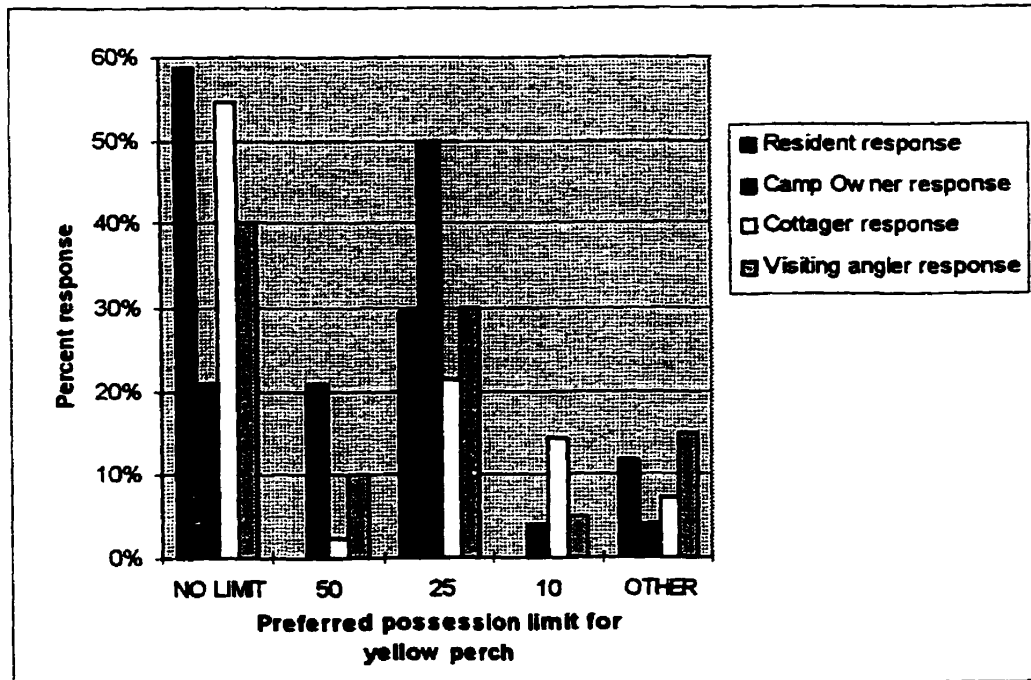


Figure 16: Distribution of responses made by stakeholders regarding preferred possession limits for yellow perch in the Cedar River Watershed.

Question 17: For the following species of fish please circle the possible creel limit you would be most willing to support?

Table 17a: Stakeholder responses to suggested possession limits for walleye in the Cedar River watershed they would most prefer

LIMIT	Responses							
	Resident		Camp Owner		Cottager		Visiting angler	
	No.		No.		No.		No.	
6	5		11		16		14	
5	2		7		6		1	
4	6		5		15		2	
3	3		0		3		0	
2	1		1		1		3	
1	0		0		0		0	
OTHER	0		0		1		0	

Other responses included:

Cottagers: no reply

Table 17b: Stakeholder responses to suggested possession limits for northern pike in the Cedar River watershed they would prefer

LIMIT	Responses							
	Resident		Camp Owner		Cottager		Visiting angler	
	No.		No.		No.		No.	
6	4		8		13		11	
5	1		9		4		1	
4	4		4		14		1	
3	2		0		7		2	
2	4		3		2		5	
1	0		0		1		0	
OTHER	2		0		1		0	

Other responses included:

Residents: no reply (X2)

Cottagers: no reply

Table 17c: Stakeholder responses to suggested possession limits for small mouth bass in the Cedar River watershed they would most prefer

LIMIT	Responses							
	Resident		Camp Owner		Cottager		Visiting angler	
	No.		No.			No.		No.
6	4		11			16		8
5	2		6			5		1
4	6		2			10		2
3	1		0			5		1
2	2		2			3		5
1	0		0			1		0
OTHER	2		3			2		3

Other responses to preferred possession limits for small mouth bass included:

Residents: no reply (X2)

Camp owners: not applicable; no limit

Cottagers: no reply (X2)

Anglers: no limit; no reply

Question 18: Which of the following protected slot sizes (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) would you favour most for walleye?

Table 18: Stakeholder responses to suggested protected slot sizes for walleye in the Cedar River watershed they would most prefer

Slot size	Response			
	Resident No.	Camp Owner No.	Cottager No.	Visiting angler No.
18" to 20.9"	4	5	9	6
18.9" to 22.8"	5	3	15	5
19.5" to 25.6"	7	4	11	4
other slots (OS)	0	3	2	1
no slot (NS)	0	3	0	2
Other than slot (OTS)	1	6	5	2

Other slot sizes included *:

Camp owners: slot of 19.7" to 27.5" (X2); slot of 19" to 24"

Cottagers: slot size of 21" to 28"; slot size of 18.6" to 28"

Visiting anglers: slot size of 19.5" to 28"

Other than slot size included *:

Resident: Base slot size on watershed data

Camp owners: only keep 14" to 19.5"; keep current maximum size limit of 19.7" (X3);
base slot size on watershed data

Cottagers: minimum size limit of 16"; maximum size limit of 23"; maximum size limit 17";
none over slot kept; don't know; didn't understand question

Visiting anglers: minimum size limit; keep current maximum size limit of 19.7"

* Note: sizes given as weights were converted to inches

Question 19: Which of the following protected slot sizes (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) would you favour most for northern pike?

Table 19: Stakeholder responses to suggested protected slot sizes for northern pike in the Cedar River watershed they would most prefer

Slot size	Response			
	Resident No.	Camp Owner No.	Cottager No.	Visiting angler No.
27.5" to 31.5"	2	5	9	4
27.5" to 35"	8	3	11	8
27.5" to 37.5"	5	7	14	5
other slots (OS)	1	0	1	0
no slot (NS)	0	2	0	1
Other than slot (OTS)	1	7	7	2

Other slot sizes included *:

Residents: slot of 30" to 40"

Cottagers: slot size other than those suggested but was not specified

Other than slot size included *:

Resident: Base slot size on watershed data

Camp owners: keep current maximum size limit of 27.5" (X2); maximum size limit of 32"; base slot size on watershed data; no comment

Cottagers: minimum size limit of 24"; maximum size limit of 32" (X2); no protection for northern pike; don't know (X2); didn't understand question; no reply

Visiting anglers: no opinion; don't fish for

- Note: sizes given as weights were converted to inches.

Question 20: Which of the following protected slot sizes (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) would you favour most for lake trout?

Table 20: Stakeholder responses to suggested protected slot sizes for lake trout in the Cedar River watershed they would most prefer

Slot size	Response			
	Resident	Camp Owner	Cottager	Visiting angler
	No.	No.	No.	No.
21" to 24"	3	6	9	7
22" to 25.6"	12	8	17	7
other slots (OS)	0	0	5	1
no slot (NS)	0	3	3	1
Other than slot (OTS)	2	7	8	4

Other slot sizes included *:

Cottagers: slot size of 20.7" to 25.6" (X2); slot size of 25" to 28"; slot size of 19" to 21"; slot size that would protect breeding size fish

Visiting anglers: slot size of 25.6" to 30"

Other than slot size included *:

Resident: Base slot size on watershed data; no opinion

Camp owners: not applicable (X2); base slot size on watershed data; don't know; no reply

Cottagers: maximum size limit of 40"; don't know; don't fish for; do not keep; didn't understand question (X2); no reply(X3)

Visiting anglers: no opinion; don't fish for; don't know; no reply

*Note: sizes given as weights were converted to inches.

Question 21: Which of the following protected slot sizes (i.e. no fish can be kept within the size limits, and only one can be kept over the maximum slot size) would you favour most for smallmouth bass?

Table 21: Stakeholder responses to suggested protected slot sizes for smallmouth bass in the Cedar River watershed they would most prefer

Slot size	Response			
	Resident No.	Camp Owner No.	Cottager No.	Visiting angler No.
13" to 16"	1	2	5	4
13" to 17.5"	4	6	9	2
14.5" to 18.5"	7	3	13	8
other slots (OS)	2	2	3	0
no slot (NS)	0	6	2	3
Other than slot (OTS)	3	5	10	3

Other slot sizes included *:

Resident: slot size of 16" to 19"; slot size of 15" to 18"

Camp owners: slot size of 15" to 18"; slot size of 14.5" to 17.5"

Cottagers: slot size of 16" to 18"; slot size that would protect breeding size fish

Other than slot size included *:

Resident: Base slot size on watershed data; don't fish for; no reply

Camp owners: all catch and release only; a slot would be of no significance; not applicable; base slot size on watershed data; don't care

Cottagers: maximum size limit of 16"; no protection for small mouth bass; catch and release only; don't know(X2); don't fish for (X2); didn't understand question (X2); no reply

Visiting anglers: catch and release only; no opinion; don't fish for; no protection

*Note: sizes given as weights were converted to inches.

Question 22: For the following species of fish indicate what minimum size you would consider as a trophy fish.

Table 22: Range and average sizes chosen by stakeholders for what they consider to be a minimum trophy size for various species of fish in the Cedar River Watershed*

NORTHERN PIKE				
	Resident Response	Camp Owner Response	Cottager Response	Visiting Angler Response
Range	35" to 46"	27.5" to 42"	35" to 42"	35" to 42"
Average	39.0"	37.4"	38.8"	39.7"
MUSKELLUNGE				
	Resident Response	Camp Owner Response	Cottager Response	Visiting Angler Response
Range	25" to 30"	22" to 28"	25" to 30"	25" to 30"
Average	28.0"	27.0"	28.0"	28.0"
SMALL MOUTH BASS				
	Resident Response	Camp Owner Response	Cottager Response	Visiting Angler Response
Range	18.5" to 26"	17" to 23"	18.5" to 23"	18.5" to 23"
Average	20.4"	19.4"	20.2"	20.7"
LAKE TROUT				
	Resident Response	Camp Owner Response	Cottager Response	Visiting Angler Response
Range	25" to 30"	22" to 28"	25" to 30"	25" to 30"
Average	28.0"	27.0"	28.0"	28.0"

* Note: all sizes given as weights were converted into inches

Question 23: For the following species of fish indicate what size you would consider the ideal eating size for a creel limit.

Table 23a: Ideal eating sizes considered for walleye

Total length	Responses			
	Resident	Camp Owner	Cottager	Visiting angler
	No.	No.	No.	No.
11" up to 14"	0	4	6	4
over 14" up to 16"	10	11	20	8
over 14" up to 18"	0	2	0	0
over 15" up to 17"	1	0	0	0
over 16" up to 18"	5	7	14	6
over 18"	0	0	1	1
no reply	1	0	0	1
don't know	0	0	1	0

Table 23b: Ideal eating sizes considered for northern pike

Total length	Responses			
	Resident	Camp Owner	Cottager	Visiting angler
	No.	No.	No.	No.
14" up to 19"	0	0	2	0
over 19" up to 25"	5	17	18	9
over 23" up to 27.5"	1	0	0	0
over 25" up to 27.5"	10	5	13	6
over 27.5"	0	2	4	2
no reply	0	0	0	1
don't know	0	0	1	0
don't eat	1	0	1	2
other (not specified)	0	0	2	0
N/A	0	0	1	0

Table 23c: Ideal eating sizes considered for smallmouth bass

	Responses			
	Resident	Camp Owner	Cottager	Visiting angler
Total length	No.	No.	No.	No.
9" up to 11"	0	1	2	0
over 11" up to 13"	1	4	6	5
over 13" up to 14.5"	11	12	14	8
over 14.5" up to 16"	3	5	8	3
over 16" up to 17.5"	0	1	1	1
over 17.5"	0	0	0	0
no reply	1	0	1	1
don't know	0	0	1	0
don't eat	1	0	5	1
don't fish for	0	0	2	0
catch & release only	0	0	0	1
other (not specified)	0	1	1	0
N/A	0	0	1	0

Table 23d: Ideal eating sizes considered for lake trout

	Responses			
	Resident	Camp Owner	Cottager	Visiting angler
Total length	No.	No.	No.	No.
18.5" up to 20.5"	7	11	14	4
19.5" to 21"	1	0	0	0
over 20.5" up to 22"	5	4	18	7
over 22.5" up to 24"	3	5	5	3
over 24" up to 25"	0	1	0	0
over 25"	0	0	0	0
no reply	1	1	1	1
don't know	0	0	1	2
don't eat	0	0	2	2
don't fish for	0	0	1	0
catch & release only	0	0	0	1
N/A	0	2	0	0

Question 24: Please indicate which of the following management strategies for small mouth bass in the Cedar River Watershed you support? (More than one choice may be selected)

Table 24: Management strategies for small mouth bass in the Cedar River watershed that stakeholder groups were supportive of in order of most preferred. More than one strategy could be selected.

RESIDENT RESPONSES

STRATEGY	NUMBER RESPONSES	PERCENT RESPONSES
SANCTUARIES IN JUNE	9	53%
ALLOW ONE OVER MAX. SIZE LIMIT	8	47%
PROTECTED SLOT SIZE	5	29%
MAX. SIZE LIMIT	5	29%
SEASON CLOSED IN JUNE	5	29%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	4	24%
CATCH AND RELEASE ONLY IN JUNE	3	17%
NO CHANGE*	2	12%
REDUCE CREEL LIMIT	2	12%
OTHER	1	6%
MIN. SIZE LIMIT	1	6%
NONE CHOSEN	1	6%

*Note: the two respondents who chose "no change" also indicated they would be in favour of other management strategies

CAMP OWNER RESPONSES

STRATEGY	NUMBER RESPONSES	PERCENT RESPONSES
SANCTUARIES IN JUNE	8	33%
MAX. SIZE LIMIT	8	33%
ALLOW ONE OVER MAX. SIZE LIMIT	5	21%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	5	21%
MIN. SIZE LIMIT	5	21%
CATCH AND RELEASE ONLY IN JUNE	4	17%
REDUCE CREEL LIMIT	4	17%
SEASON CLOSED IN JUNE	3	13%
OTHER	3	13%
NO CHANGE*	2	12%
PROTECTED SLOT SIZE	2	8%
NONE CHOSEN	2	8%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

COTTAGER RESPONSES

STRATEGY	NUMBER RESPONSES	PERCENT RESPONSES
SANCTUARIES IN JUNE	16	38%
ALLOW ONE OVER MAX. SIZE LIMIT	13	31%
NO CHANGE*	12	29%
PROTECTED SLOT SIZE	11	26%
CATCH AND RELEASE ONLY IN JUNE	8	19%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	8	19%
OTHER	8	19%
REDUCE CREEL LIMIT	7	17%
MAX. SIZE LIMIT	6	14%
SEASON CLOSED IN JUNE	6	14%
MIN. SIZE LIMIT	4	10%
NONE CHOSEN	1	2%

*Note: two of the respondents who chose "no change" also indicated they would be in favour of other management strategies

VISITING ANGLER RESPONSES

STRATEGY	NUMBER RESPONSES	PERCENT RESPONSES
PROTECTED SLOT SIZE	8	40%
ALLOW ONE OVER MAX. SIZE LIMIT	6	30%
CATCH AND RELEASE ONLY IN JUNE	6	30%
NO CHANGE	5	25%
REDUCE CREEL LIMIT	5	25%
SANCTUARIES IN JUNE	4	20%
MAX. SIZE LIMIT	4	20%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	2	10%
SEASON CLOSED IN JUNE	2	10%
MIN. SIZE LIMIT	1	5%
NONE CHOSEN	0	0%
OTHER	0	0%

Question 25: Please indicate which of the following management strategies for walleye in the Cedar River Watershed you support? (More than one choice may be selected)

Table 25: Management strategies for walleye in the Cedar River watershed that stakeholder groups were supportive of in order of most preferred. More than one strategy could be selected.

RESIDENT RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	13	77%
PROTECTED SLOT SIZE	7	41%
REDUCE CREEL LIMIT	6	35%
PROTECTED SLOT BETWEEN 19.5" AND TROPHY SIZE	6	35%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	5	29%
OTHER	5	29%
MIN. SIZE LIMIT	4	24%
NO CHANGE*	2	12%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	2	12%
NONE CHOSEN	1	6%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

CAMP OWNER RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	16	67%
PROTECTED SLOT SIZE	8	33%
PROTECTED SLOT BETWEEN 19.5" AND TROPHY SIZE	8	33%
OTHER	8	33%
NO CHANGE*	6	25%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	5	21%
REDUCE CREEL LIMIT	5	21%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	5	21%
MIN. SIZE LIMIT	2	8%
NONE CHOSEN	0	0%

*Note: two of the respondents who chose "no change" also indicated they would be in favour of other management strategies

COTTAGER RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	30	71%
PROTECTED SLOT SIZE	19	45%
OTHER	17	41%
MIN. SIZE LIMIT	11	26%
PROTECTED SLOT BETWEEN 19.5" AND TROPHY SIZE	11	26%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	9	21%
REDUCE CREEL LIMIT	8	19%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	6	14%
NO CHANGE*	5	12%
NONE CHOSEN	2	5%

*Note: four of the cottager respondents who chose "no change" also indicated they would be in favour of other management strategies

VISITING ANGLER RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	11	55%
PROTECTED SLOT SIZE	11	55%
REDUCE CREEL LIMIT	5	25%
NO CHANGE	4	20%
MIN. SIZE LIMIT	4	20%
PROTECTED SLOT BETWEEN 19.5" AND TROPHY SIZE	4	20%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	3	15%
OTHER	3	15%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	1	5%
NONE CHOSEN	0	0%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

Question 26: Please indicate which of the following management strategies for northern pike in the Cedar River Watershed you support? (More than one choice may be selected)

Table 26: Management strategies for northern pike in the Cedar River watershed that stakeholder groups were supportive of in order of most preferred. More than one strategy could be selected.

RESIDENT RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	8	47%
PROTECTED SLOT BETWEEN 27.5" AND TROPHY SIZE	8	47%
SEASON SAME AS WALLEYE SEASON	7	41%
MIN. SIZE LIMIT	5	29%
PROTECTED SLOT SIZE	5	29%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	5	29%
REDUCE CREEL LIMIT	4	24%
NO CHANGE*	3	18%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	3	18%
OTHER	3	18%
NONE CHOSEN	0	0%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

CAMP OWNER RESPONSE

STRATEGY	NUMBER	PERCENT
SEASON SAME AS WALLEYE SEASON	10	42%
PROTECTED SLOT BETWEEN 27.5" AND TROPHY SIZE	10	42%
NO CHANGE*	7	29%
PROTECTED SLOT SIZE	7	29%
REDUCE CREEL LIMIT	6	25%
OTHER	6	25%
SANCTUARIES IN MAY	5	21%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	4	17%
MIN. SIZE LIMIT	4	17%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	4	17%
NONE CHOSEN	0	0%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

COTTAGER RESPONSES

STRATEGY	NUMBER	PERCENT
SANCTUARIES IN MAY	13	31%
PROTECTED SLOT SIZE	13	31%
NO CHANGE*	12	29%
PROTECTED SLOT BETWEEN 27.5" AND TROPHY SIZE	11	26%
OTHER	11	26%
MIN. SIZE LIMIT	10	24%
SEASON SAME AS WALLEYE SEASON	9	21%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	9	21%
REDUCE CREEL LIMIT	6	14%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	5	12%
NONE CHOSEN	3	7%

*Note: four of the respondents who chose "no change" also indicated they would be in favour of other management strategies

VISITING ANGLER RESPONSES

STRATEGY	NUMBER	PERCENT
NO CHANGE*	9	45%
SEASON SAME AS WALLEYE SEASON	6	30%
PROTECTED SLOT SIZE	6	30%
SANCTUARIES IN MAY	5	25%
PROTECTED SLOT BETWEEN 27.5" AND TROPHY SIZE	4	20%
MIN. SIZE LIMIT	3	15%
NONE CHOSEN	3	15%
CATCH AND RELEASE ONLY OF FISH OVER MAX. SIZE IN MAY	2	10%
REDUCE CREEL LIMIT	1	5%
OTHER	1	5%
COMBINE CREEL REDUCTIONS WITH SIZE RESTRICTIONS	0	0%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

Question 27: Please indicate which of the following management strategies for musky in the Cedar River Watershed you support? (More than one choice may be selected)

Table 27: Management strategies for muskellunge in the Cedar River watershed that stakeholder groups were supportive of in order of most preferred. More than one strategy could be selected.

RESIDENT RESPONSES

STRATEGY	NUMBER	PERCENT
NO CHANGE*	6	35%
INCREASE MIN. SIZE	5	29%
OTHER	5	29%
CATCH AND RELEASE ONLY	2	12%
LOWER MIN. SIZE	1	6%
NO SELECTION	1	6%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

CAMP OWNER RESPONSES

STRATEGY	NUMBER	PERCENT
NO CHANGE*	7	29%
INCREASE MIN. SIZE	7	29%
CATCH AND RELEASE ONLY	7	29%
OTHER	3	13%
NO SELECTION	2	8%
LOWER MIN. SIZE	1	4%

*Note: one of the respondents who chose "no change" also indicated they would be in favour of other management strategies

COTTAGER RESPONSES

STRATEGY	NUMBER	PERCENT
NO CHANGE*	15	36%
CATCH AND RELEASE ONLY	11	26%
OTHER	8	19%
NO SELECTION	8	19%
INCREASE MIN. SIZE	3	7%
LOWER MIN. SIZE	2	5%

*Note: two of the respondents who chose "no change" also indicated they would be in favour of other management strategies

VISITING ANGLER RESPONSES

STRATEGY	NUMBER	PERCENT
NO CHANGE*	6	30%
INCREASE MIN. SIZE	6	30%
CATCH AND RELEASE ONLY	5	25%
LOWER MIN. SIZE	2	10%
NO SELECTION	2	10%
OTHER	0	0%

Question 28: How do you perceive the willingness of an angler to return to the area if creel limits were reduced in the Cedar River Watershed, but no changes to limits were made in other areas in Northwestern Ontario?

Table 28: Stakeholders' perceived willingness of anglers to return to the Cedar River Watershed if possession limits were reduced without similar reductions to all Northern Ontario*

Scale	Resident Response		Camp Owner Response		Cottager Response	
	Number		Number		Number	
1	3		4		6	
2	0		0		1	
3	2		1		3	
4	2		1		5	
5	2		2		5	
6	0		3		4	
7	2		1		1	
8	0		5		4	
9	1		4		3	
10	4		1		8	
Sum	17		25		40	

* Percent response was calculated as a percentage of those who answered the question.

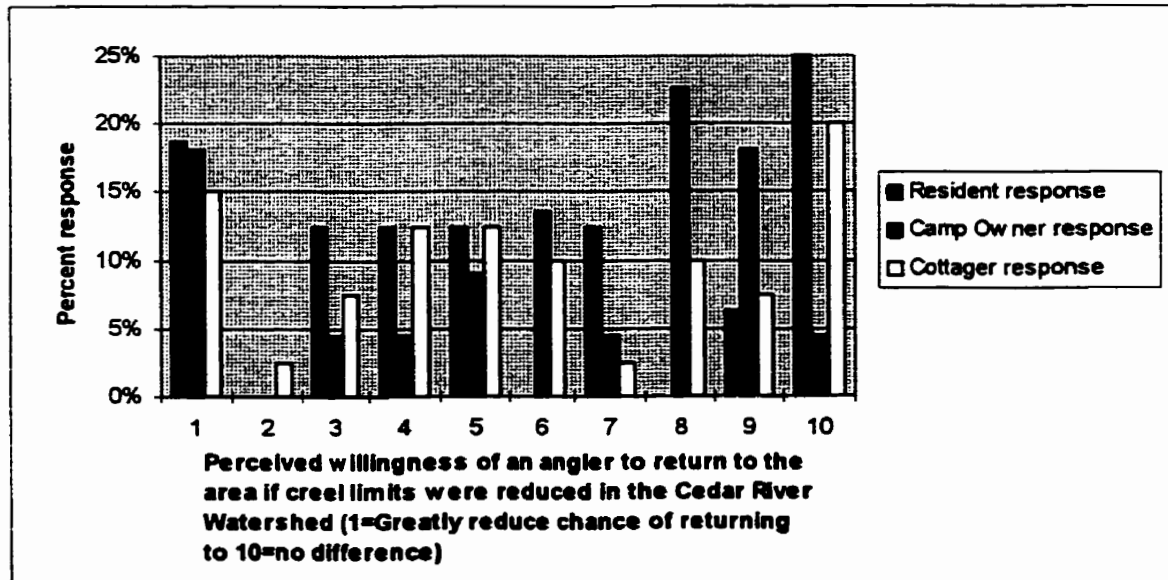


Figure 28: Distribution of responses to whether reduced possession limits would effect the return of anglers to the Cedar River Watershed while no reductions occurred elsewhere in Northern Ontario.

Question 29: How would you rate your willingness to support a reduction in creel limits if the rest of Northwestern Ontario also reduced creel limits equivalent to what is done in the Cedar River Watershed?

Table 29: Stakeholder willingness to support a reduction in possession limits for the Cedar River Watershed if similar reductions occurred in all Northern Ontario*

Scale	Resident Response		Camp Owner Response		Cottager Response	
	Number	Percent	Number	Percent	Number	Percent
1	2	20%	7	100%	14	100%
2	0	0%	1	14%	2	14%
3	1	10%	0	0%	6	43%
4	1	10%	1	14%	5	36%
5	0	0%	2	29%	3	21%
6	0	0%	2	29%	3	21%
7	0	0%	0	0%	1	7%
8	0	0%	1	14%	0	0%
9	2	20%	0	0%	0	0%
10	10	100%	7	100%	7	50%
Sum	10	100%	7	100%	7	100%

* Percent response was calculated as a percentage of those who answered the question.

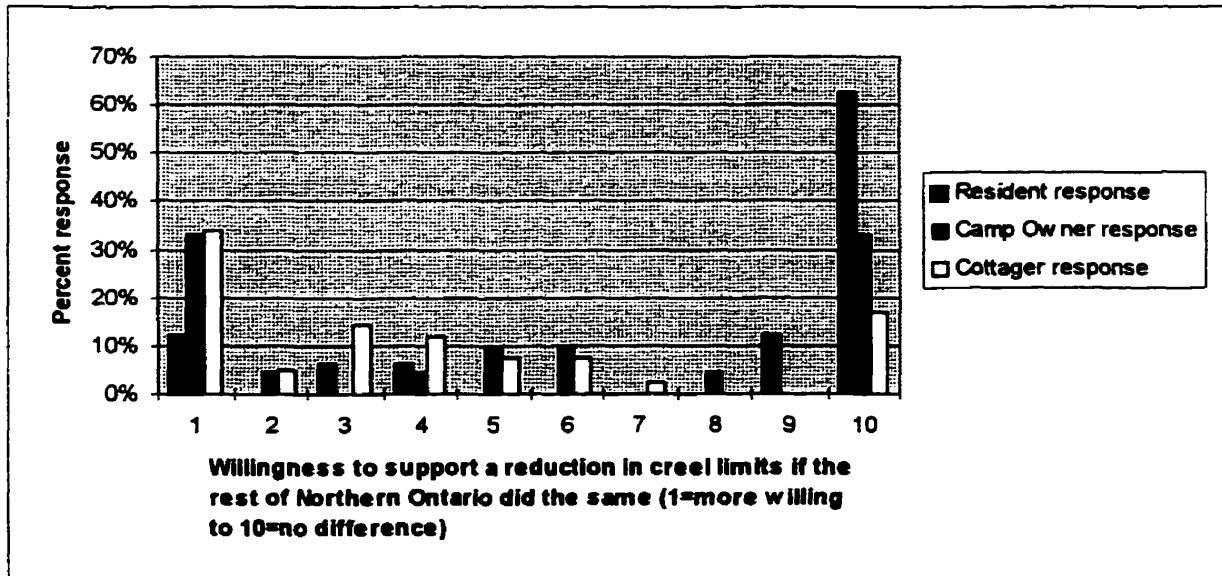


Figure 28: Distribution of responses to willingness to support a reduction in possession limits for the Cedar River Watershed if similar reductions occurred in all Northern Ontario.

Question 30: For the following species of fish please circle the possible creel limit you would be willing to support for all of Northwestern Ontario.

Table 30a: Stakeholder responses to suggested possession limits for walleye for all of Northern Ontario

LIMIT	Resident Response		Camp Owner Response		Cottager Response	
	Number		Number		Number	
6	5		6		15	
5	2		8		9	
4	7		6		14	
3	2		1		4	
2	1		1		0	
OTHER	0		2		0	

Other included:

Camp owners: no reply; not given question

Table 30b: Stakeholder responses to suggested possession limits for northern pike for all of Northern Ontario

LIMIT	Resident Response		Camp Owner Response		Cottager Response	
	Number		Number		Number	
6	4		7		14	
5	2		7		3	
4	5		5		14	
3	2		1		7	
2	4		2		2	
OTHER	0		2		2	

Other included:

Camp owners: no reply; not given question

Cottagers: no reply (2 respondents)

Table 30c: Stakeholder responses to suggested possession limits for smallmouth bass for all of Northern Ontario

LIMIT	Resident Response		Camp Owner Response		Cottager Response	
	Number		Number		Number	
6	4		7		14	
5	3		7		5	
4	6		4		11	
3	2		0		6	
2	2		2		4	
OTHER	0		4		2	

Other included:

Camp owners: no reply; not given question, not applicable, no limit

Cottagers: no reply (2 respondents)

Question 31: Please indicate which of the following possible management strategies for public access points to lakes in the Cedar River Watershed you would support?

Table 31: Stakeholder support of different management strategies regarding public access points in the Cedar River Watershed

Answer selected	Responses		
	Resident No.	Camp Owner No.	Cottager No.
A) Make no changes	5	6	18
B) Introduce stricter regulations for monitoring day trippers and for controlling effects of erosion	5	8	16
C) Close off all public access points	2	2	3
Other	5	8	5

Other included:

Residents: locals are not a problem but tourist resorts are; no more access points; B + close access points on heavy trafficked logging roads for safety reasons; no reply (3 respondents)

Camp owners: B & C - reduce pressure and allow access through tourist resorts who have a financial incentive to protect fishery and also allow for a better idea of what is being taken out of lakes (2 respondents); only allow conservation limits for resort guests from one lake using another lake; limit access points to one on smaller lakes - residents could monitor and enforce regulations; not given question; no reply

Cottagers: enforce limits for day trippers; access points are not a problem; stronger regulations for Americans; improve access points (3 respondents - one respondent also selected B); use moneys obtained from fishing licenses to maintain access points

Question 32: Please indicate which of the following possible management strategies for non resident camping around lakes in the Cedar River Watershed you would support?

Table 32: Stakeholder support for different management strategies regarding non-resident camping in the Cedar River Watershed

Answer selected	Responses					
	Resident		Camp Owner		Cottager	
	No.		No.		No.	
A) Make know changes	2		3		21	
B) Increase distance to 1 km	1		3		3	
C) Increase distance to 2 km	2		1		4	
D) Ban all non resident camping	10		11		11	
Other	2		7		3	

Other included:

Residents: no reply (2 respondents)

Camp owners: D or increase fees to \$25 and decrease limits to 2 fish and none taken home; D and guest of tourist resort can camp one night; follow up regulations with game warden checks for permits; not given question; no reply

Cottagers: no problem; don't know (2 respondents)

Question 33: To what degree would you be willing to be involved in the watershed management planning process?

Table 33: Degree of stakeholder involvement in the watershed managing process

Answer selected	Responses					
	Resident		Camp Owner		Cottager	
	No.		No.		No.	
Highly involved	5		6		10	
Moderately involved	6		9		14	
A little involved	3		6		9	
Not involved	2		1		7	
No Reply	1		2		2	

**APPENDIX IV
SUMMARY OF ANSWERS TO WABAUSKANG FIRST
NATION INTERVIEWS**

Question 1: How many years have you lived in the Cedar River Watershed?**Table W1: Number of years respondents' from Wabauskang First Nation have been living in the Cedar River Watershed**

Number of years	Number of respondents	Percent
1 TO 4	3	21%
5 TO 10	3	21%
11 TO 20	3	21%
> 20 YRS	5	36%

**Question 2: Have your grandparents lived here? yes no
great grandparents? yes no****Table W2: Generations of respondents' from Wabauskang First Nation that have been living in the Cedar River Watershed**

Generations	Number of respondents	Percent
Grandparents	3	21%
Great grand parents	8	57%
Unsure	3	21%

Question 3: How do you fish?**Table W3: Fishing techniques employed by respondents from Wabaskang First Nation and how often they fish this way**

Fishing Technique	Number who fish this way	Percent	
Net*	4	28%	
Rod	12	86%	
How often	Number who fish with net	How often	Number who fish with rod
once/year	0	<once/week	5
twice/year	2	once/week	3
three times/yr	1	twice/week	0
> three times/yr	1	>twice/week	4

* Note: Fishing with net was predominantly for whitefish. Fish caught by net is to be shared with rest of people on reservation.

Question 4: Do you think fishing is getting better, worse or about the same?**Table W4a: How respondents from Wabaskang First Nations see the trend in fishing quality**

Quality of fishing	Number of responses	Percent
worse	10	71%
same	2	14%
better	1	7%
other	1	7%

Other included: Better walleye, bass and carp, but worse musky and perch

Table W4b: Comparison of fishing in the past with fishing today as compared by respondents from Wabaskang First Nation (for example if fishing was better in the past then this would be recorded as better)

2 years ago Quality of fishing	Quantity of fish		Size of fish	
	Number of responses	Percent	Number of responses	Percent
worse	3	21%	1	7%
same	3	21%	5	36%
better	5	36%	5	36%
don't know	1	7%	1	7%
unsure	2	14%	2	14%
sum	14		14	

5 years ago Quality of fishing	Quantity of fish		Size of fish	
	Number of responses	Percent	Number of responses	Percent
worse	2	18%	0	0%
same	1	9%	2	18%
better	8	73%	8	73%
don't know	0	0%	0	0%
unsure	0	0%	1	9%
sum	11		11	

10 years ago Quality of fishing	Quantity of fish		Size of fish	
	Number of responses	Percent	Number of responses	Percent
worse	2	20%	0	0%
same	0	0%	1	10%
better	8	80%	8	80%
don't know	0	0%	0	0%
unsure	0	0%	1	10%
sum	10		10	

Note: Percentages were calculated as a percent of those who were in the Cedar River Watershed long enough to determine what fishing was like at the various times above.

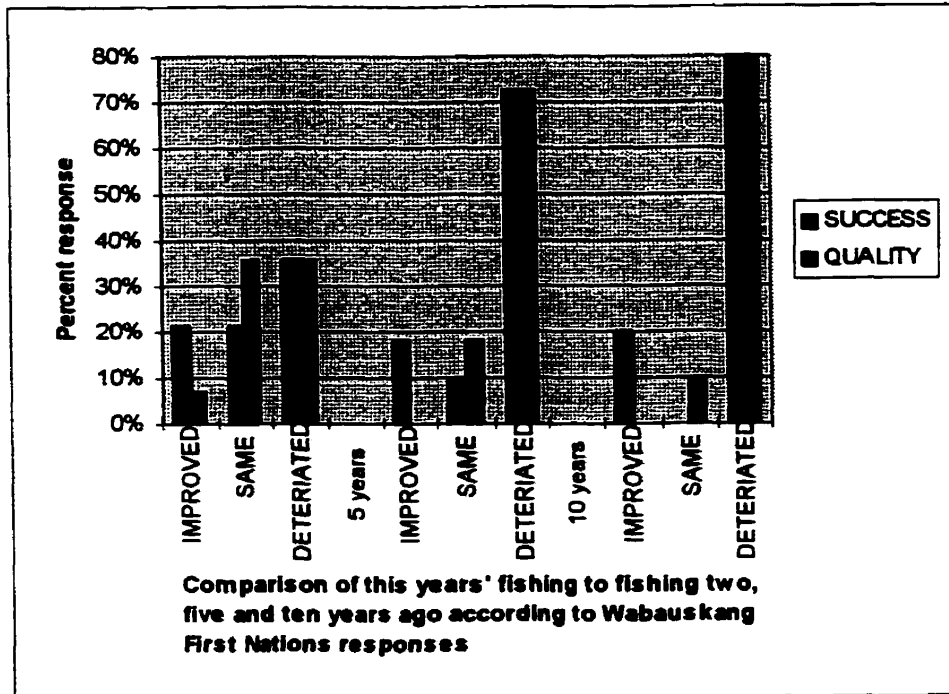


Figure W4: Trend in fishing regarding quantity of fish and size of fish over the last ten years according to Wabauskang First Nation respondents

Question 5: How important is the fishery resource in the Cedar River Watershed to you in the following ways?

Table W5: Importance of the fishery in the Cedar River Watershed in regards to income, diet, enjoyment and tradition according to the respondents from Wabaskang First Nations

Importance of fishery	Income		Diet		Enjoyment		Tradition	
	No. of responses	%	No. of responses	%	No. of responses	%	No. of responses	%
Very important	2	14%	8	57%	6	43%	6	43%
Of middle importance	0	0%	2	14%	5	36%	3	21%
Not important	12	86%	4	29%	3	21%	5	36%

Question 6: If you could go back in time to fish the Cedar River Watershed region, which of the following time periods would you consider to have had the ideal fishing conditions?

Table W 6: Time period when respondents from Wabaskang First Nation considered fishing conditions to be ideal in the Cedar River Watershed

Time Period	Number of responses	Percent
20 to 30 yrs ago	3	21%
10 yrs ago	1	7%
5 yrs ago	1	7%
Present	1	7%
Don't know	3	21%
Other	5	36%

Other included: 30 to 40 years ago; 40 years ago; 1945 before the highway was built; 3 years ago; it's the same

Question 7: Please think about the kind of fishing you would enjoy the most in the Cedar River Watershed area. How important is each of the following to your fishing enjoyment.

Table W7: Importance of various aspects of fishing in the Cedar River Watershed to respondents from Wabaskang First Nations

	Scenery		Catching fish for eating		Fishing for walleye	
Importance	Number of respondents	Percent	Number of respondents	Percent	Number of respondents	Percent
Very important	13	93%	6	43%	12	87%
Not important	1	7%	7	50%	0	0%
Middle importance	0	0%	1	7%	2	14%
	Fishing for yellow perch		Fishing for smallmouth bass		Fishing for northern pike	
Importance	Number of respondents	Percent	Number of respondents	Percent	Number of respondents	Percent
Very important	0	0%	3	21%	4	29%
Not important	9	64%	7	50%	7	50%
Middle importance	3	21%	4	29%	3	21%
	Fishing for muskellunge		Fishing for whitefish		Fishing for lake trout	
Importance	Number of respondents	Percent	Number of respondents	Percent	Number of respondents	Percent
Very important	2	14%	6	43%	4	29%
Not important	8	57%	8	57%	8	57%
Middle importance	4	29%	0	0%	2	14%
	Wilderness type areas		Fishing alone on a fishing spot		Seeing wildlife	
Importance	Number of respondents	Percent	Number of respondents	Percent	Number of respondents	Percent
Very important	11	79%	8	57%	11	79%
Not important	3	21%	6	43%	1	7%
Middle importance	0	0.	0	0%	2	14%

Question 8: Do you think that we need to have regulations for recreational fishing that would protect the brood (spawning) fish stock ?

Table 8W: Need to protect brood stock for various species of fish according to Wabaskang First Nation respondents

Need to protect brood stock	Walleye		Northern pike	
	Number of responses	Percent	Number of responses	Percent
yes	13	93%	11	79%
no	1	7%	3	21%
	Small mouth bass		Lake trout	
	Number of responses	Percent	Number of responses	Percent
yes	13	93%	12	86%
no	1	7%	2	14%
	Muskellunge			
	Number of responses	Percent		
yes	11	79%		
no	2	14%		
unsure	1	7%		

Question 9: a) To protect brood stock do you consider protected slots (e.g. 18-21 inches for walleye) to be effective? b) What about other measures?

- Please refer to note below Table W9e for an explanation of No fishing zones and seasons

Table W9a: Management strategies considered to be effective in protecting walleye brood stock by respondents from Wabaskang First Nation in order of greatest response (more than one strategy could be chosen)

Strategy	Number in favour	Percent
Sanctuaries	12	86%
No fishing zones	9	64%
Reduced possession limits	8	57%
Protected slot	4	29%
Seasons		

Table W9b: Management strategies considered to be effective in protecting smallmouth bass brood stock by respondents from Wabaskang First Nation in order of greatest response (more than one strategy could be chosen)

Strategy	Number in favour	Percent
No fishing zones	10	71%
Reduced possession limits	8	57%
Protected slot	8	57%
Sanctuaries	4	29%
Seasons		

Table W9c: Management strategies considered to be effective in protecting muskellunge brood stock by respondents from Wabaskang First Nation in order of greatest response (more than one strategy could be chosen)

Strategy	Number in favour	Percent
Sanctuaries	9	64%
No fishing zones	7	50%
Protected slot	3	21%
Reduced possession limits	1	7%
Seasons		

Table W9d: Management strategies considered to be effective in protecting northern pike brood stock by respondents from Wabaskang First Nation in order of greatest response (more than one strategy could be chosen)

Strategy	Number in favour	Percent
Sanctuaries	9	64%
No fishing zones	8	57%
Reduced possession limits	7	50%
Protected slot	2	14%
Seasons		

Table W9e: Management strategies considered to be effective in protecting lake trout brood stock by respondents from Wabaskang First Nation in order of greatest response (more than one strategy could be chosen)

Strategy	Number in favour	Percent
Sanctuaries	11	79%
Reduced possession limits	8	57%
No fishing zones	7	50%
Protected slot	4	29%
Seasons		

Note: For all above tables (9Wa to 9We) no fishing zones were considered by respondents to apply to non-aboriginal peoples. Some of the elders like to fish near the reservation which the respondents do not have a problem with. Respondents are concerned with anglers fishing in front of the reservation, at times fishing very close and casting into shore where children play and swim.

When asking people about seasons as a measure to protect fish populations there was confusion as to what was implied. Some respondents thought that seasons referred to the time of year when fish taste best and therefore you would want to catch them. Thus the question about seasons was dropped from the interview. However some people mentioned seasons understanding them to mean times when you were allowed to fish by regulation. Of these respondents the following suggestions were made.

- walleye season should be shortened (X2) - one suggested a season from June to August
- walleye season should be shortened for non-residents (i.e. USA citizens) (X2) - one wanted seasons shortened for residents also.
- northern pike, small mouth bass, musky and lake trout season should be shortened(X2)
- all seasons should stay the same (X2)
- seasons are a good idea

Other strategies to protect the fishery included:

- disallow the use of fish locators because these aid in the depletion of fish resources
- protect walleye 17 inches and under

Question 10: Non resident campers (Americans from the United States) currently have to camp at least ½ km away from the shore of some of the lakes within the watershed. Do you think this distance should apply to the whole watershed?

Number in favour of a distance from shore for non-resident campers of ½ km to be applied to all lakes in the watershed was 10 of 14 respondents, or 71.4%. One respondent wanted the ½ km distance to apply to resident campers as well as non-residents. Another respondent wanted non-resident camping to be banned in the watershed because it is difficult to enforce regulations on campers and one does not know what campers are doing out there. One of the respondents who were in favour of the ½ km distance stated that the reason he was in favour was because non-resident campers are fishing for the mere price of a license. Two respondents were not in favour, and one stated the reason being that some lakes are more isolated than others and thus less to worry about. One respondent stated that she did not know.

Question 11: To what degree would you be willing to be involved in the watershed management planning process?

Table W10: Degree of involvement of Wabaskang First Nation respondents in a Cedar River watershed management planning process

Degree of involvement	Number of responses	Percent
Highly involved	4	29%
moderately involved	3	21%
A little involved	3	21%
Not involved	3	21%

Note: one of the respondents stated that she would be highly involved as long as it is not against the First Nations' political agenda. Another, not included in the above table, stated that he would like to be highly involved amongst his own people.

Age and sex of respondents:

Male = 7 or 50%; Female = 7 or 50%

Ages: range from 18 to 86

Estimated Age	Number of respondents	Percent
under 20	1	7%
20 to 29	3	21%
30-39	2	14%
40-64	6	43%
65 and over	2	14%

**APPENDIX V
OTHER MANAGEMENT STRATEGIES FOR SUSTAINING
THE FISHERY AS SUGGESTED BY STAKEHOLDERS**

Other strategies to enhance the small mouth bass suggested by respondents included:

Residents

- ban fishing for 5 yrs

Camp owners

- keep 3 fish under 18"
- only one over 15" allowed to be kept (X2)
- do study to determine best slot size to protect spawning fish
- base changes according to watershed creel survey and other data

Cottagers

- any thing necessary to preserve and enhance
- barbless hooks for catch and release (X2)
- develop more spawning areas
- 2 protected slots 0 to 3/4 lbs and 1 1/2 to 4 lbs; limit of 4 in between slots.

Visiting Anglers

- catch and release all bass and teach catch and release to anglers
- do not allow hooks with more than one treble hook
- let bass spawn before catching
- make fishermen spread out more rather than fish a school of spawners all in same area
- improve and make for better fishing
- closing bass season for June would hurt resorts; too hard to police sanctuaries
- barbless hooks
- better enforcement of regulations
- education programs
- increase limit to 8
- I catch and release bass

Other strategies to enhance the walleye fishery suggested by respondents included:

Residents

- Smaller limit for non resident tourists staying at resorts
- close spawning areas to all anglers in June until all fish are clear of area
- only keep trophy in round i.e. can't slab out and get another the next day.
- reintroduce limit of 6 of any size
- ban fishing for 5 yrs

Camp owners

- stock lake with walleye
- trophy over max. size must be taken out in round to be mounted (X4)
- barbless hooks
- demonstrate catch and release to anglers and benefits of barbless hooks
- close first narrows on (300 meters each way) Wabaskang till June 15 and introduce a no wake zone in area to protect fry
- make it so that Ord and Thaddeus are conservation zones, meaning that only a conservation limit can be taken

Cottagers

- make Jack fish bay and entire Ord creek a sanctuary till June 1st (X2)
- close Louise rapids sanctuary earlier i.e. March 1st
- sanctuaries closed to may15
- sanctuaries closed for entire months of may and June

- develop more spawning areas and close some bays permanently
- enhance spawning beds public education programs

- close walleye season earlier on April 1st
- don't open walleye season until June 1st
- keep season closed until after spawning

- one trophy only above 24 inches
- 17 inch size limit - i.e. max. size
- no big trophies allowed to be kept

- restrict transport of fish to USA fish kept to be consumed at resort or camp
- lower tourist limits
- barbless hooks (X2)
- increase enforcement
- get rid of one day licenses

Visiting Anglers

- min. size of 14"
- close lake if in real trouble

Other strategies to enhance the northern pike fishery suggested by respondents included:

Residents

- smaller limit for non resident tourists staying at resorts
- close spawning areas to all anglers in June until all fish are clear of area
- only keep trophy in round i.e. can't slab out and get another the next day.
- reintroduce limit of 6 of any size
- ban fishing for 5 yrs

Camp owners

- allow only one fish to be kept
- all trophies over max. size must be kept in round for mounting (X4)
- tag trophies like a moose or bear to eliminate upgrading
- increase the limit on smaller fish

Cottagers

- no fishing until spawning is over
- establish sanctuaries before May
- sanctuary to May 15
- allow only one of 6 lbs or over
- 32 inch max. size
- 2 slot sizes 0 to 2 lbs and 5 to 15 lbs
- barbless hooks (X2)
- increase enforcement
- get rid of one day licenses
- no fish transported to the USA
- lower tourist limits
- anything to enhance fishery
- structure management so walleyes favoured over northern

Visiting Angler

- no fish kept under 26"; trophy 40" and up

Other strategies to enhance the muskellunge fishery suggested by respondents included:

Residents

- musky in Fluke lake are smaller therefore a min size of 15 lbs would be best, where as in other lakes a min size of 50 lbs would be better.
- min size of 48" and only one trophy can be kept
- fishermen may catch one musky per year (to keep) which would not make much of a difference either way
- do not try to introduce musky to Wabaskang Lake
- ban fishing for 5 yrs

Camp owners

- focus on improving various fishery populations on a 3-5 yr plan
- one fish only over 54"
- reduce limit to one

Cottagers

- catch and release except one trophy can be kept (X2)
- one trophy 25 lbs or over only all else released
- only one trophy kept that has to be over 48 inches
- musky tag for trophy fish to be kept at extra cost
- limit of one only
- lower tourist limits
- anything to enhance fishery
- stock Wabaskang with musky
- barbless hooks

**APPENDIX VI
NOFC RECOMMENDATIONS FOR FISH REGULATIONS**

NORTHWEST REGION MNR, OFAH, and NOTO: RECOMMENDATIONS FOR FISH REGULATIONS



NEWS RELEASE

NORTHWESTERN ONTARIO FISHERIES COMMITTEE

**Public invited to comment on Proposed Improvements
to Sport Fishing in Northwestern Ontario**

The Northwest Region Fisheries Committee today invited the public to inspect proposed changes designed to improve the long-term health of fisheries in northwestern Ontario. The committee will accept comments until November 6, 1998.

Members of the public may obtain information packages outlining the proposed changes through local representatives of the Ontario Federation of Anglers and Hunters (OFAH) or Northern Ontario Tourist Outfitters Association (NOTO) or from any MNR District office in northwestern Ontario. Following the consultation period, the regional committee will review public input and use it as it develops its final recommendations for the Minister.

The proposed changes would simplify and modernize fishing regulations affecting eight fisheries management divisions in Northwestern Ontario, covering most of the area west of Manitouwadge to the Manitoba border and south to the U.S. border.

"We have crafted a package of proposed changes that will ensure that our grandchildren can enjoy the same high quality of fisheries we currently enjoy," said Gary Beardsley, a NOTO member on the committee.

Members of NOTO and the OFAH worked together on the committee and developed a set of principles for evaluating changes. These principles included maximizing the opportunity for people to fish, and limiting the harvest of key breeding size fish.

"Reaching an acceptable compromise is always difficult," said Neil Wiens, Second Vice-President of the OFAH and a committee member. "Everyone on the committee had the best interest of the resource at heart and that made consensus achievable. We look forward to hearing the views of the public."

The committee's recommendations would provide a broad framework for fisheries regulations in the affected divisions in Northwestern Ontario. They would not necessarily replace special management regulations for specific lakes.

"In developing these proposed regulations, the OFAH and NOTO have demonstrated a level of cooperation and commitment to fisheries conservation that is unprecedented," said MNR Regional Director Mike Willick, who originally invited members to work with Ministry staff. "I look forward to seeing the committee's final recommendations."

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Background

Northwest Region (NWR) is fortunate to have such a large fisheries resource base, approximately 75,000 lakes larger than 10 hectares. The extent of this fishery makes it impractical to manage on a lake by lake basis everywhere. MNR continues to focus on the larger significant fisheries and problem lakes but needs to be proactive and effect positive change for the rest of the resource.

Recognizing that NWR has some of the best quality fisheries in Ontario and some of the best fishing opportunities in North America, MNR staff, anglers and the tourism industry want to keep it that way. As a result, some members of the Ontario Federation of Anglers and Hunters (OFAH), Northern Ontario Tourism Organization (NOTO), and Ministry of Natural Resources staff originally met September 16 and 17, 1997 to develop recommendations that would contribute to achieving a sustainable, high quality fishery in Northwestern Ontario by simplifying and modernizing the current fishing regulations.

The objectives are to:

- conserve and sustain the fisheries resource;
- develop a high quality and diverse fishery;
- enhance recreation and angling opportunities while reducing the impact on fish populations:
and
- maintain and promote tourism.

Expectations-Benefits

These tactics will contribute to reduced harvest, improved conservation of the resource, and improved social and economic benefits. On a lake by lake basis, benefits will vary from positive to neutral depending on status of the resource. Additional strategies may be required to meet management objectives for specific fisheries which require more restrictive measures than are being recommended by these region-wide regulations. It is expected that anglers and the tourism industry will also respond by promoting live release. Collectively, higher quality fisheries will develop and additional recreational benefits will be provided from the resource base.

In summary then, these recommendations will contribute toward conservation while at the same time, providing ample opportunities to eat fish.

The various options discussed were measured against a number of basic principles or standards. Only those recommendations where agreement was reached are brought forward. These principles were:

- simplify and standardize the current regulations:
- modernize regulations to reflect current technologies, fishing pressures, angler ethics and expectations:
- protect breeding stocks:
- protect fish stocks during periods of high vulnerability:
- provide reasonable daily catch and possession limits:
- if uncertain of impact, the risk must favour conservation:
- provide for high quality/trophy opportunities: and
- meet objectives.

Public Consultation

Since November of 1997, there has been extensive communication among the members of the OFAH and NOTO organizations about the original series of recommendations to improve fisheries regulations. As well, there has been extensive consultation with the angling public in Northwestern Ontario, through public meetings and through personal written responses to Ministry offices.

The committee reviewed the results from close to 800 individual responses to the regulations proposed last fall, including a number of submissions from organizations, municipal groups, associations, and interest groups.

This review demonstrated public support for the regulation proposals. Sixty-one percent provided either wholehearted agreement or acceptance with qualifications. A number of prominent stakeholder organizations, such as the Lake of the Woods Property Owners' Association, lake advisory committee and municipal groups supported the recommendations. Of those anglers expressing concern for the regulation changes, most were influenced by public comments about the levels of non-resident harvest.

On May 9 and 10, 1998, the committee members met in Dryden to review the public response and to fine-tune the original proposals. What follows is the result of consensus achieved at this meeting, and subsequent agreement, to revise recommendations to improve fishing regulations in Northwestern Ontario.

Recommendations:

General:

1. Existing lake specific regulations and sanctuaries currently in place: That those fisheries that have active advisory committees or have implemented lake specific size and catch limits, season strategies and other special regulations will be asked to evaluate if the following recommendations would meet their objectives. They will be encouraged to adopt the new region-wide regulations where these measures could be expected to enhance the conservation and to improve the quality of the fishery, based on lake specific information. The recommended (new) catch limits however, will be the standard for the Region:
2. That the joint MNR, OFAH, NOTO committee develop and implement an effective and timely communication plan to inform and gain compliance of anglers fishing in Northwestern Ontario:
3. That the recommendations should be implemented for 1999:
4. That the recommendations for inland waters be reviewed with respect to Lake Superior, Division 23:
5. That the implementation of the recommendations will be accompanied by an education initiative aimed at improving methods of live release. The success of many of these recommendations can be further enhanced with the proper care and handling of breeding stock and trophy sized specimens:
6. That this joint MNR, OFAH and NOTO Committee continue to simplify fishing regulations by examining reduction of fishing divisions and types of fishing licenses.

(The agenda for the next meeting this fall will deal with developing options for licence and fee proposals. The guiding principles for such discussions were established at the May meeting).

Species: Walleye/Sauger. In Combination

Divisions: 20, 21, 22, 22a, 24, 31, 32, 33 (30 - Seasons & Limits Only)

Recommendations:

- Open season 3rd Saturday in May to April 14 (same as now):
- Closed season April 15 to 3rd Friday in May (same as now).; and
- NEW: A catch and possession limit of 4 of which one can be greater than 46 cm (18 inches).

Rationale:

Walleye is the most sought after sport fish in Northwestern Ontario. Both the tourism industry and resident anglers are concerned with maintaining and improving walleye stocks and are recommending a reduced catch and possession limit. The recommendations provide an important contribution to maintaining populations and enhancing quality. The effectiveness of this approach will depend on anglers practicing the best catch-and-release methods and including the number of fish eaten in a day as part of the daily limit which is currently the law. More restrictive lake or zone specific regulations may be necessary to meet management objectives to improve quality or rehabilitate populations, as determined by local stakeholder committees.

Existing seasons would be maintained with a catch and possession limit of 4 fish with one greater than 46 cm. A 46 cm limit was agreed to because it will be more beneficial than the existing 50 cm regulation in terms of protecting breeding size fish while still allowing anglers the opportunity to harvest a trophy walleye.

Some public comment suggested that extended closures of walleye season occur before and after the spring spawning period. Other comments requested that no brood stock be retained during this extended period. The committee felt that with a reduced limit from six to four and possession of only one walleye greater than 46 cm, brood stock protection would be greatly improved over what now exists without reducing angling opportunities or adding to the complexity of the regulations for this popular species.

See also general recommendation 1 on previous page which explain how current individual lake regulations will be dealt with.

Species: Northern Pike

Divisions: 20, 21, 22, 24, 30, 31, 32, 33

(Division 34 - Lake Nipigon and Division 22a will be asked to conform if fisheries management objectives can be attained with this proposal)

Recommendations:

- Season open year round, except December 24 (same as now); and
- NEW: A daily catch and possession limit of 4 of which none can be between 70 and 90 cm (27.5 and 35.4 inches) and one can be greater than 90 cm.

Rationale:

Northern pike are a highly valued sport fish by both resident and non-resident anglers. However, until now there has been no protection of breeding size fish. Many anglers attribute the noticeable decline in the number of larger, quality size northern pike to this lack of protection.

Lowering the limit and requiring the release of large spawners affords better protection for the key breeding stock, while maintaining year-round angling seasons. Restricting the harvest of pike between 70 and 90 cm provides mature fish with increased spawning opportunities before they are harvested, while the one over 90 cm regulation allows anglers the opportunity to catch a trophy.

Some anglers were concerned about the original recommendation that pike over 90 cm be transported in the round; others supported the release of mature fish during the spawning season. This proposal simplifies the original recommendation, while providing additional and significant protection to northern pike stocks than what currently exists.

Species: Smallmouth Bass/Largemouth Bass. In Combination

Divisions: 20, 21, 22, 22a, 24, 30, 31, 32, 33, 34

Recommendations:

- **NEW: Open season December 1 to June 30 with daily catch and possession limit of 2 largemouth or smallmouth bass, in any combination, less than 35.0 cm (13.75 inches); and**
- **NEW: Open season July 1 to November 30 with daily catch and possession limit of 4 (in any combination).**

Rationale:

Smallmouth bass now rival walleye as one of the most sought after species in some portions of the Northwest Region. Recognizing this increasing demand and value, and the fact that bass are at the northern edge of their range, it is time to protect bass when they are particularly vulnerable to angling. These vulnerable periods include the spawning period when male bass are guarding the nest and young and the late fall and winter months when bass are known to congregate in large numbers in limited areas of lakes.

While public consultation showed support for a closed and/or catch-and-release only season during the winter and spring, there were a number of angler and tourism concerns the committee wanted to address. There are a number of lakes where a smallmouth bass harvest is being encouraged to:

1. reduce pressure on other species, particularly walleye;
2. manage for quality fishing in waters where stunting can occur; and
3. to provide a shore lunch opportunity for fisheries which have no walleye or pike, such as muskellunge-bass lakes or when walleye season is closed.

In order to maintain angling opportunities, allow for shore lunches and provide protection to bass when they are most vulnerable, a reduced harvest of smaller fish during this period is being recommended.

Species: Lake Trout

Divisions: 20, 21, 22, 22a, 24, 30, 31, 32, 33

(Division 34 - Lake Nipigon will be asked to conform if fisheries management objectives can be attained with this proposal)

Recommendations:

- No changes to seasons:
- NEW: Daily catch and possession limit of 2; and
- NEW: During the month of September only 1 may be longer than 56 cm (22 inches).

Rationale:

Lake trout are a species particularly vulnerable to over exploitation due to the fact they are slow growing, late maturing, produce low numbers of eggs and live in low productivity, deep, cold lakes.

In order to maintain and enhance spawning stocks while providing long term angling opportunities and benefits to anglers, the catch and possession limit is proposed to be standardized at two fish of any size Region wide.

The only exception to this regulation is during the month of September when lake trout move shallow and congregate around spawning shoals. At this vulnerable period of the year, it is proposed that of the two lake limit, only one of the fish can be greater than 56 cm (22 inches). This recognizes the importance of maintaining angling opportunities and providing a reasonable number of fish for consumption, while at the same time, protecting valuable broodstock.

The changes to the original proposal simplify the regulations while responding to public concerns for survival of released lake trout, particularly during winter months.

Species: Muskellunge

Divisions: 20, 21, 22, 22a, 24, 31, 32, 33, 34

(Except 30 - Lac Seul; Catch-and-Release Only)

Recommendations:

The Committee has agreed that there should be no change in the status quo until the results of a provincial review of muskellunge regulations is completed. However, with the aid of public comment, which supported the Committee's recommendation, the Committee is recommending to the provincial review group that the minimum length for all high-quality muskellunge waters in Northwestern Ontario be established at approximately 137 cm (54 inches).

Discussion/Rationale:

Muskellunge are a highly valued sport fish in Northwest Region. Northwestern Ontario has the potential to maintain and even enhance its world-class muskie reputation. A world record is possible from a number of waters. The committee believes that an open season from June 21 (3rd Saturday) to November 30 with daily catch and possession limit of one fish greater than 137 cm (54 inches) would contribute greatly to this high quality management objective.

Species: Yellow Perch

Divisions: 20, 21, 22, 22a, 24, 30, 31, 32, 33, 34

Recommendations:

- Season open all year (same as now): and
- NEW: Daily catch and possession limit of 50.

Rationale:

Introducing a limit of 50, recognizes the value of perch for sport and as forage for other game fish. At the same time it provides a generous number of fish for consumption and assists in distributing the catch among more anglers.

The change from 25 as recommended in the original proposal to 50 considers the potential economic impact to the tourism industry on some fisheries, a concern raised during public consultation. The committee agreed that more conservative limits could be considered for specific fisheries to meet management objectives.

Species: Black Crappie

Divisions: 20, 21, 22, 22a, 24, 30, 31, 32, 33, 34

Recommendations:

- Season open all year (same as now): and
- NEW: Daily catch and possession limit of 15.

Rationale:

Introducing a limit of 15, recognizes the value of crappies for sport fishing. At the same time it provides a generous number of fish for consumption and assists in distributing the catch among more anglers.

Extension of Inland Border Water Regulations

Recommendations:

- **Extension of current regulations now in effect in the Fort Frances - Atikokan area, where anglers who are non-resident of Canada, either day-use fishing or camping on Crown land must practice catch and release fishing only and no fish may be kept for a shorelunch. To retain legal limits of fish non-resident anglers must be property owners (or immediate relatives), be accommodated within a provincial park, or contract for services through the tourism industry.**
- **Extension of these regulations to the 51st parallel of latitude and then east to the boundary of Fisheries Divisions #20 and #33 excluding Lake Superior.**

Rationale:

The most often raised concern by resident anglers during the public consultation process was the nature and extent of non-resident harvest. This concern was most notable in areas of the region where local fisheries are heavily stressed.

To address conservation concerns and to demonstrate that the Committee has heard the public opinions which have been expressed, expansion of the inland border waters regulation is being recommended as an addition to the original package.

Substantially expanding these regulations North and East will reduce fishing pressure at popular and accessible fishing areas and conserve fish by reducing angler harvest. Non-resident (of Canada) anglers who do not own property or contract the services of the tourism industry will be able to continue to enjoy fishing in this area, but they must practice catch and release

This recommendation is a positive response to the matter of high harvest of fish by non-resident anglers.

Non-Resident Crown Land Camping

Recommendations:

- **No change in fees for Crown land camping (same as now):**
- **NEW: See Extension of Inland Border Water Regulations:**
- **NEW: North of the 51st parallel of latitude, non-resident Crown land campers be allowed only conservation limits of fish, with no fish exceeding the species specific maximum size; and**
- **NEW: That revenues generated from the sale of Crown land camping permits be returned within the Fish and Wildlife Special Purpose Account and used for fisheries management.**

Rationale:

A considerable amount of concern was generated from areas of the Northwest regarding the increase in fees for Crown land camping and its affect on community economics. In view of this, the current recommendation is to retain the existing fee structure but allow non-resident Crown land campers in the area north of the 51st parallel of latitude to catch and retain limits of fish allowed under conservation licenses but none over the species specific maximum size.

These proposals respond to public comment while achieving fisheries conservation objectives by allowing Crown land campers to retain reduced limits of fish (i.e., 6 to 2 for walleye, bass and northern pike) north of the 51st parallel, and catch and release fishing only in the area defined for extension of the inland border water regulations.

**APPENDIX VII
ANSWERS TO QUESTIONS 34 TO 39 OF QUESTIONNAIRES
AND INTERVIEWS**

Question 34. What would you expect to gain by being involved in developing a watershed management plan?

Residents:

- A greater say as to how the plan is developed as well as being more informed as to change
- Making sure that walleyes don't disappear from the watershed. Make sure that isolated areas stay intact and strict laws on garbage and litter be enforced.
- Use the clout of representation to see that certain management plans people prefer come to pass. Cottagers have been underrepresented.
- Better fishing in future and prevent clear cutting.
- A better fishery for future generations.
- More quality fishing.
- Better fishing with a better quality of fish.
- Personal input into MNR programs affecting our environment
- Have a say in keeping area clean.
- Have more of a say as to what is going on. Know that my concerns and issues are being addressed
- Keep the fisheries going.
- A respect of people for the environment
- Consistency in planning all Northwestern Ontario fishing and hunting strategies

Camp owners:

- Let's not beat around the bush. Money. I want business to remain as well as have a great place to come fishing for the rest of my days.
- Become a better camp owner
- More control of access into lakes and fish stocking where needed to protect tourism industry

- I would expect to have a workable regional plan that will provide adequate fishing and recreational opportunities now and into the future.
- Gain a better fishery
- Improved fishing
- Better fishing and Input into the laws which affect our business
- A better fishery for everyone and more valuable business for myself
- No closure to Ord and Jackfish creeks
- Our type of tourist camp is very unique in the fact that we operate almost 100% with boat caches. Our needs vary greatly from tourist camps located on larger lakes. No one but someone in our position could know or understand our problems or needs. Consequently we would need hands on representation.
- Create a better fishery with more awareness.
- Understanding of lake. Take pressure off lake. Improve fishing for the long term
- Not sure
- Become familiar with the area. Preserve the environment maintaining or making hunting and fishing even better.
- By having input into resource management can ensure that resources are protected and sustained
- Since 1977 we have enjoyed and prospered in a moderate fashion as a result of using the resource. I would like to see it continue for future generations. It's pay back time.
- Knowledge of what is going on.

Cottagers:

- Knowledge of what is being done in my area
- The future of fishing for my children would be preserved.
- Preserve the wilderness and quality of fishing for generations to come

- **Fishing that is good 50 years or more down the road. Know what is happening in the area**
- **Helping to maintain a pristine landscape capable of supporting the resources required to maintain an adequate supply of fish and native animals.**
- **Having an input into the future of the fisheries in the area**
- **A working plan to preserve fish/land for my great grand children. Joy that they may experience just some of what I did before the forest and fish were about wiped out.**
- **Better quality of fishing**
- **Better environment around lakes**
- **Better fishing**
- **The satisfaction of knowing that I may be a contributor rather than a complainer**
- **Protection of the locale residents who pay taxes on every dollar they earn but elect to live in this under serviced portion of the province to be able to enjoy its beauty and natural resources**
- **Education, Pay back the areas been great for me, A walleye dinner somewhere down the road**
- **A say in what is being developed**
- **The assurance that I did as much as I could to preserve the total majesty of NW Ontario for myself my wife and my children and grandchildren**
- **A more enjoyable outdoor experience by preserving the natural beauty of the area**
- **The preservation or that that I have been privileged to love and enjoy for in excess of 40 years**
- **To ensure the walleye population for years to come**
- **Increase fishing pleasure for my grand children Greater satisfaction in knowing that our resource (fish) would be more sustainable**
- **Increased knowledge of environmental changes and degree of damage caused by forestry**

- **Better all around fishing (number and size of fish). Better enforcement of present fishing regulations. Keeping the land and waters in the watershed area clean and pristine**
- **More regulations**
- **A voice in proposed changes based on experience that affect the lake I own property on**
- **Better quality fishing in the future**
- **Better fishing and preservation of wildlife and habitat**
- **Better fishing resource**
- **Help to preserve maintain and enhance the environment**
- **To protect and increase the quality of fishing**
- **The knowledge that I helped preserve for my children and others that are to come the beauty, the pristine nature of that that I have been privileged to enjoy for many years. Any management plan has to include the education and enlightenment of those who use the watershed**
- **Add to the planning from my past experience on this watershed**

Wabauskang First Nation

- **more fish**
- **Residents and non-residents be happy with the outcome**
- **more experience on the lake**
- **Promote tourism. A better healthier environment. More spawning fish.**
- **Better environment less garbage more fish and cleaner water**
- **People being more respectful of animals, land, reservation area, and hunting and fishing practices**
- **No body fishing and hunting on reserve land or areas close to the reserve. No people hunting after dark.**
- **Preserve the e environment and fisheries**
- **More education about my surroundings. Accomplishment for contributing to the cause and the future.**

Question 35: How would you envision the condition of the ideal watershed for now and into the future?

Cottagers

- Maintain good fishing; water conditions are important - clean etc.; keep wildlife, water, fishery, road conditions in good shape by regulating amount of traffic in area. Forest needs to be maintained on the same level it is now.
- I would hope that with the sacrifices we make today the conditions of the watershed be preserved or even better than they are today.
- Would like to see more restructuring so you could catch a “nice mess of fish” to eat.
- I think that the fishing is fairly good. It could be as good in the future if carefully managed
- To regain and maintain the forest and lakes as they existed 30 years ago.
- Preserving the fisheries that we have.
- Plenty of fish, trees and wildlife which are getting scarcer.
- For conditions to improve by establishing better management of watershed.
- I admittedly am not well enough informed to make a reasonable estimate or plan.
- All users treated equally; all users pay per volume of resource removed; all moneys collected put directly back to ensure future viability; constant monitoring; commercial users penalized when guests not in compliance.
- Green, clean and with a normal, healthy fish population.
- As it is now: clean and clear. Personally I would like to see fewer tourist camps, but where would all the tourists go? Accessible to all who want to use it. I wouldn't want to see public access closed nor resident camping restricted.
- A watershed assisted by man, that retains its beauty, remoteness, and allure - without the empty, rusting cans, beer bottles, etc. that man leaves behind. Preserve the total majesty of NW Ontario for myself, my wife and children and hopefully grandchildren.
- Clean shorelines, enjoyable fishing experience, wildlife viewing. Preservation of the natural beauty of the area.

- In good condition what can one say?
- Ensure walleye population for years to come.
- Neat and clean, unspoiled, with moderately good fishing.
- Less forestry more wilderness.
- I would like to see the water quality stay the same and slow down or actually restrict any further development in the area.
- No increase in numbers of people fishing.
- Maintain great fishing. Maintain a degree of privacy on the lakes.
- Pristine wilderness with low impact from development. More catch and release fishing.
- Better fishing; Preservation of wilderness and habitat
- Good diversity of forest and wildlife. Adequate fish for food and catch and release.
- Being able to go out and catch enough nice sized fish for a meal and release smaller ones unharmed.
- Preserve the beauty, the pristine nature of that beauty that I have been privileged to enjoy for my children and grandchildren for many years.
- Continued good fishing for generations; numerous fish to catch and still have the ability to eat a few fish.
- There will never be the ideal watershed with the cutting of 600 acres of forest a day by the pulp and paper mills leaving widespread deserts of rock and soil.

Camp owners

- Fisheries do not deplete any more, and maybe improve while still maintaining tourism as well as resident recreation levels.
- Our watershed is in above average shape in my opinion. However I would like it to be known in 5 to 10 years for its “fly in quality” fishing in a drive to area. I firmly believe this is a realistic goal for us.

- **Maintain what we have and try to improve.**
- **Would like input into future laws and changes effecting cliff lake and tourism in general.**
- **Not let the resources of the area decline any further if not even improve in the future.**
- **I would be the only person on the lake and it would have lots of fish.**
- **Being able to catch lots of eating size fish (especially walleye) with a chance to catch and release a trophy walleye, pike, and trout. Maintaining and managing a productive undeveloped clear quiet wilderness lake.**
- **If we continue the way we are now going, we will create the best drive in fishery in NW Ontario. My goal is to be there by 2005. It can be done.**
- **To maintain at least part of our remoteness for tourism value. To more closely monitor the use of our resources so that every one can derive some benefit and not just one specific group or industry. To some degree regulate the number of users (non-residents) of our fish and wildlife, because we are starting to lose quality.**
- **Better fishing.**
- **A wilderness not interfered with by logging; preservation of wilderness around lakes; sustainable fishery for future generations**
- **Preserving the environment maintaining or even making hunting and fishing etc. better.**
- **People could come to fish in a wilderness setting to enjoy wildlife, scenery and fishing. Want people to be able to eat fish if they want or take fish home.**
- **Since 1977 we have enjoyed and prospered in a moderate fashion, as a result of using the resource. I would like to see it continue for future generations.**
- **One with trees around our lakes and highways. Be able to catch all the fish people want to eat and have fishing that you can catch till your arm falls off.**

Residents

- **Maintain fishery as is.**
- **Be able to have shore lunch in an area free of beer cans and other litter. Leave it as close to its natural state as possible.**

- **Protect wilderness character and protect the assurance of being able to catch walleye, bass and northern.**
- **Better fishing in the future and also keep wood cutters from clear cutting.**
- **I would like my sons, grandchildren and future generations to experience fishing as I used to years ago.**
- **That at least anglers living in the watershed area could have some quality fishing without going elsewhere to fish.**
- **I would like to see fishermen enjoying the fishing spots without high power boats racing by. I also would enjoy the peace and quiet of the lakes without the noise of some type of water vehicles.**
- **Would like to see future generations enjoy the same or possibly improved environmental conditions as we do.**
- **Try not to build up watershed any more. Try to push other activities such as family outings wildlife viewing photography etc. not just fishing.**
- **I would like to keep the fisheries going.**
- **Improve conditions**
- **Respect for the environment**

Wabauskang First Nation

- **Lots of good eating fish now and for future generations.**
- **Clean no garbage, cigarette butts, gas leaks. More fish.**
- **Respect areas and restrict tourists from certain places important to First Nations (e.g. grave sites).**
- **Cleaner environment; more fish; residents and non-residents happy with outcome.**
- **Cleaner environment**
- **Stocking lakes.**
- **Better environment i.e. less garbage, more fish, cleaner water.**

- People more respectful of animals, land, reserve area and hunting fishing practices. More and bigger fish.
- People respecting reserve areas i.e. nobody fishing or hunting on reserve land or areas too close to the reserve for safety reasons.
- More fish.
- Likes watershed the way it is. Should just leave it.

Question 36: Goals are defined as the specific outcomes needed to reach the vision of the ideal watershed conditions now and into the future as answered above. What are some of the goals that you consider to be necessary in order to achieve the vision of the watershed you stated above?

Note: Some people answered this question by giving objectives i.e. specific requirements to achieve goals. Objectives were changed to goals as much as possible where interpretable using reasons given for choosing management strategies in questions 24 to 27. For example establish sanctuaries would be interpreted as protect brood stock.

Residents

- Restrict logging and access. No new expansions of tourist resorts
- Protect breeding stock of walleye and bass
- Reduce clear cutting
- Restore fish populations
- Protect brood stock, reduce harvest of some species
- Protect brood stock, limit boat size and types of boats
- tightly controlled logging, increase fish population, better distribution of adult moose tags with priority given to locales, better enforcement of environmental violation, protect brood stock and habitat, education programs
- lodges must not promote fishing as main pass time
- protect brood stock, control development such as logging so not to harm environment
- Ban non-resident camping, cleaner camp sites
- sustainable fish harvests, protect brood stock

Camp owners

- Protect spawning fish
- protect and improve spawning areas
- manage resources properly, protect resources by what ever means necessary, research and monitoring programs

- stop clear cutting, selective harvest of timber, stiffer camping regulations, stricter enforcement, education of locals and non-residents
- fishing awareness, make sure every one is aware of new regulations
- cut back the size of clear cuts, no cutting to our highways, enhance spawning areas, restrict access to lakes by non-residents of Ontario other than those that are staying on the lake. Let outfitters who have BMA's regulate all non-resident hunting in its boundaries so we can bring back some quality hunting instead of the free for all we now experience
- reduce overall harvest, educate users, protect brood stock
- reduce harvest, protect brood stock
- reduce harvest, educate users
- reduce pressure by promoting other recreational options other than just fishing for guests,
- increase walleye stocks
- protect brood stock
- regulations that maintain and preserve area but do not scare tourists off, enforcement

Cottagers

- education of fishermen
- enforcement, education, intelligent management
- reduced harvest, protect smaller fish and give them a chance to grow, promote catch and release, protect brood stock
- reduce harvest of fish, fight tree pests
- protect brood stock
- promote catch and release, no more access points
- decrease pressure
- no further development, enforce fishing regulations,
- bigger size fish, less pressure in areas heavily fished
- preserve water quality
- enforcement and protect brood stock
- Good circumstances for reproduction, suitable habitat, and food for fish.
- reduce pressure,
- strict enforcement of regulations
- more enforcement
- reduce harvest and pressure
- cleaner water, reduce harvest, protect brood stock, better enforcement
- better control of forestry around watershed
- stop cutting trees, reduce harvest and pressure
- decrease harvest of non-residents
- clean water and beaches, abundant wildlife
- reduce fishing pressure, monitor ice fishing,
- reduce pressure, protect brood stock
- protect brood stock, reduce harvest

- find a balance between economic advantage of having many camps and fishermen in the area and conserving the resources that are in the cedar river watershed, regulations to maintain a steady fishery

Wabauskang First Nation

- Tell people, educate them and make them aware
- inform tourists of regulations and reservation areas
- reduce pressure
- more enforcement, limit speed of boats in narrows
- increase fish population
- increase fish population, funding for lake projects, education of people
- more strict rules on littering and fishing and better enforcement
- reduce non-resident harvest and pressure by reducing time on lake
- protect spawning fish, maintain water quality, protect habitat

Question 37: What type of conservation initiatives/programs are you currently involved in or would like to see started in the Cedar River watershed?

Residents

- limit on various kinds of fish
- I release big fish to return as spawners, would like a study done on Cliff lake as to why hardly any walleye and most that are there are large
- Like to see locale volunteers aid in controlling the fishery
- Like to see some of the smaller lakes that have only small northern pike made more productive instead of only having small northerns
- Spawning ground improvement by putting down rubble, particularly Ord creek
- I practice a three walleye limit, catch and release pike clean up shore lines and access points

Camp owners

- We strongly support catch and release. I give a free fishing trip to one of our guests that participate in our catch and release program every year. Make guests aware that we support catch and release and would like all camps to do the same. Would like to see more promotion and support from MNR and Canadian government to promote catch and release.
- active in Cedar Lake conservation group. Would like to see spawning ground enhancement for the "Pipe" on Cedar Lake.
- Have a catch and release program
- Promote and sell more conservation licenses
- Promote conservation licenses by offering them free with a vacation package

- Promote catch and release, fish barbless and encourage our guests to do so also
- Promote catch and release by requiring our guests to release ^ lb + walleye, 10Lb + northern, 10lb+ trout and have a draw of those who released big fish to give away a free trip to our camp every year.
- Give away catch and release pins to guests that release big fish. Talk to our guests and educate them on the importance of large fish for reproduction. We help with cobble stone projects to enhance spawning habitat. We take samples for the MNR and help with tagging programs. We administer creel surveys.
- Giving outfitters control of all non-resident hunting in their BMA's would certainly be a step toward conservation. Banning non-residents from being able to put boats in any lake at will. Stop protecting beaver and/or get trappers to take them out so that important spawning streams are not clogged and silted from dams.
- Catch and release
- encourage catch and release, push conservation licenses
- promote catch and release. Only allow a trophy mount of fish over maximum size at our camp. Would like to see education programs in schools for younger children on protecting fish. Guides and camp owners need to be aware of conservation and educate fishermen.
- Have slot sizes that guests are required to release fish when staying at our camp to protect the small lake we are located on.
- Catch and release program at our camp now where guests get a pin or hat for releasing big fish. Would like to see a catch and release program put on together by all camps on the lake. Would like to see lake policies for each lake agreed upon and enforced for guests by all camp owners.
- We police our guests very closely. Compared to 20 years ago today's guest is not interested in taking home limits of fish, They just want lots of action and some fish to eat.
- Work with watershed program now. More information to give out to people to show what we have done and why.

Cottagers

- We keep fewer fish. Like to see spawning area improved in Jackfish bay.
- Catch and release. Only take what I can eat
- Recycle and only catch enough fish to eat.
- Would like to see more people in control of lakes.
- Catch and release 90% of fish and keep a few to eat.
- None due to MNR does not recognize non-minority groups or non-profit groups. I would be involved when they initiate their under advertised council.
- Would like to see more spawning beds identified and protected
- Involved in teaching my own family and would like to see more promotion of education to public.
- Catch and release

- Would like to see more involvement of residents and cottagers in management decisions.
- I teach my family and friends conservation
- More spawning ground identified and protected

Visiting Anglers

- Would like to see regulations made easier to understand. Am careful not to harm environment.
- Would like to see beaver dams removed between cliff and Mystery lakes and make the Mystery creek a sanctuary during spawning season.
- Should consider removal of any beaver dams blocking the flow between Cliff and Mystery Lake and make Mystery a sanctuary during spawn.
- Would like to see education programs and better enforcement
- Catch and release 95%
- I would like to see a 5.00 license fee added to licenses to be used only for restocking the lake where the money was collected.
- Reduce time fishing

Question 38: Do you have information or knowledge about the watershed that you feel would be helpful in planning a watershed management program? If so please list.

Residents

- Yes knowledge going back 20 years. Fishing decline in number and size. It's not like it used to be. Changes need to be made to stop decline and improve fishing quality and quantity.
- I have lived and fished in this area for over 30 years and have a good knowledge of the lakes in the Cedar River Watershed.
- Fish eating birds should be culled.
- Perhaps clearing Mystery Creek of Beaver dams would allow better walleye spawning.

Camp owners

- Get government involved in a little more with fishery so as to support projects that are being done and want do further.
- Lake levels should be kept as high as possible to help walleye spawning in Cliff lake, and beaver dams should be removed from Mystery creek to allow walleye to spawn.
- The knowledge I have of these lake can not be described on paper.
- I would be willing share knowledge and teach younger children of the values and ethics of conservation of fisheries.

- I have live in this watershed for many years. My knowledge is that the lakes are deteriorating due to many big boat units that are hurting the vegetation. Need a program to look at these areas, have them marked so that vegetation can come back.
- Yes!
- Yes! 20 years of past experience owning a tourist camp and 10 additional years visiting the area before that.
- We need information about tagging, rubble spawning improvement methods and their effectiveness. We need data to determine which interventions (i.e. management strategies) will be most effective. It is hard to make group decisions based on government feelings and only business concerns

Cottagers

- Spawning area between 1st and 2nd lakes on Wabaskang (i.e. 1st narrows) should be protected.
- I have noticed that waters with walleye sanctuaries are still getting fished heavily, and giving up huge numbers of adult fish in unprotected areas. Maybe back up opening day of fishing by two weeks to protect these fish.
- Years of use and observation. Personal commitment as a property owner to future generations.
- Don't listen to the resort owners. They are in it for the short haul and only have money on their minds. Perrault Lake has been hurt and must be saved!!

Wabaskang First Nation

- Yes! Turtle lake should be protected as it is a good spawning area for walleye. Ord lake important to walleye - lots of spawning areas. Knowledge of lake trout spawning grounds and other species spawning.
- Yes.
- Yes. Knowledge of spawning grounds, swimming patterns and historical sites
- Need to get rid of suckers. Can use a trap net so walleye can be released. Have to watch nets closely. Knowledge of swimming patterns of fish and historical sites.
- I have lots of experience and know experience from others.

Visiting Anglers

- On Cliff lake fallen trees, especially red pine and cedar supply good habitat for walleye and bass for about 3-4 years. Trees could be dropped in about 100 to 300 yards apart in water deep enough so that the tops of the trees would be in 15 feet to 20 feet deep water.

Question 39: What other issues of concern regarding the sustainability of the Cedar River Watershed, in addition to the fisheries issue, would you like to see addressed by the proposed community - based watershed management plan?

Residents

- Stop logging around my trap line boundaries on Anishinabi Lake. No trees standing means no protection for my moose and fur bearing animals etc. Grassy Narrows First Nation should be gives first priority in forestry management planning: e.g. tree planting, silviculture etc.
- Better allocation of moose tags i.e. residents should be guaranteed so many of those moose tags allotted. It seems unfair that hunting clubs in Southern Ontario can flood the draw (i.e. 100's of members. Stop clear cutting to highways. It looks awful. Better enforcement of regulations, more C.O.'s are needed. There used to be one in every town but now there are a few who have to cover very large areas.
- I do not like that they are spraying "Vision" chemicals to kill all broad leaf trees. This is affecting fish and wildlife.
- Adult moose tag distribution program needs to give priority to local families. Present program not fair to residents. Tighter control of logging.
- I would like to have a local committee made up to control timber cutting within the watershed as to distance from water ways. I would like also to see power given to the local resident instead of priority given to the camp owners.
- more access points to some of the lakes which would distribute the anglers through out the whole area not just confined to lakes that are easily accessible.
- Maintenance of existing public landings.
- Clear cutting is an issue with me.
- Stop clear cutting up to the highway.
- Stop camp owners from being allowed to send their people to other lakes once their lakes have declined in fishing.
- Need more conservation officers as have to much land mass to cover now with few they have. Non-resident grouse hunters are shooting on private roads and lawns even when pets are in line of fire. This must be stopped.

Camp owners

- Canoers and campers are the new tourists and are becoming the preferred vacation for many professionals. Our wilderness has no protection in place for these users.
- Logging, moose management and Bear management. Meeting should be facilitated for better discussions and run by a neutral person instead of MNR or tourist operator. It is unclear what the distribution of power is when setting agendas and making decisions. We need to agree upon a decision making process for the group.
- The way logging is done is a major concern. Spraying should be banned. It would not be needed if they replanted right after harvest. Strip harvest to give the animals a place to live. No harvest near the high way or within 750 metres of any lake.

- The unmanaged proliferation of grouse hunters have taken the quality of hunting and trashed it. Those of us who are paying to have BMA's can't even utilize them because of the unchecked influx from resorts other than their own hunters over running the area.
- Tree harvesting
- Ban all camping to help the environment and the cleanliness of the area.
- Road crossings and landings are causing sedimentation of creeks and bays that may be important for spawning. Clear cutting around lakes ruins the wilderness experience. People hunting for grouse are driving through the creek north of Moose Lake and causing sedimentation. Grouse hunters are interrupting bear hunting in BMA's
- Logging
- Lake levels effect on spawning. Access points. Monitor forestry activities. More input into the start up of other tourist outfits and effects on lake sustainability.
- Timber management

Cottagers

- Water purity which is closely aligned with the fisheries issue. I would not want to see the purity of the water become a problem in the future. All other issues basically hinge upon 2 main factors water and the forest.
- Keep shore lunch spots clean
- Pollution of the water, the quality of the water has decreased over the years. Septic systems have to be looked at as a possible problem in the area.
- Moose population seems to be deteriorating. Also concerned about he selection of tags for moose.
- Protect wildlife by limiting hunting for bear and moose. Provide easy access to garbage disposal sites. Limit cutting of timber located adjacent to streams
- Wildlife has no cover or habitat left. Less lynx and ruffed grouse.
- Control of cutting of timber in watershed area
- Location and viability of any additional user groups. Lack of removal of coarse fish. Lack of control over harvesting of wild rice. Concerned with present commercial users planting species of fish in adjacent small lakes with no controls or repercussions. Rumors of Ghost lake off of Aerobus having bass introduced.
- There is much over aged forest being artificially preserved near residential areas. Forest fires are beneficial in regeneration but are obviously not a preferred solution here. Consequently the area is choking itself with rotting, falling and bud worm decimated timber. How can we safely deal with this?
- cleaning up of trash that is left by shore lunchers. Control of spruce bud worm.
- Reduce hunting pressure from lake side (moose hunting)
- Clear cutting of areas near scenic highways and or lakes and rivers.

- Limit new cabin development on currently accessible lakes. Open more remote lakes for development. This would take the pressure off of major lakes listed for this watershed especially Wabaskang with its increasing population.
- Water purity and quality
- Use of Sea-doo should be prohibited as they cause waves that bang up boats, make a lot of noise and make swimming unsafe.
- Control pollution and erosion

Wabaskang First Nation

- Forestry management issues such as buffer zones, roads, bridges, over cutting, protected zones from cutting, animal and bird issues.
- Wild rice seed should be supplied by MNR and we could spread it out. Will increase duck population too. Duck hunters zip along in boats and shoot ducks in residential areas. Ducks raised for two years by reserve have been shot by Americans right off dock. Should have hunting zones. Historical sites should be respected (i.e. old trails and portages used by ancestors should be treasured.
- First Nations should regain trap lines. Garbage in shore lunch areas. Carelessness causing fires.
- Tourist camps should not be able to make claims on lakes to set up more camps. Should be more involved in when and where new camps are set up.
- Wild rice by Florence creek have tourists hunting there while people picking rice should be off limits to hunters. No spring hunting for bear because they have young then. Might shoot one but 3 or 4 may die because they are cubs who's mother has been shot.
- Careless hunters almost got shot by duck hunters while picking wild rice. Should have areas that don't allow hunting to protect rice pickers. Also have issue with non-aboriginals hunting down reservation road. People in boats hunting moose shoot them and then just take antlers. Leave moose carcass in water which poisons water. Several people were admitted to hospital after being poisoned.
- Loons and black ducks (Commerants) are eating minnows and lowering survival of fish. They are protected but are now a large population. Sucker population is significantly increased and killing off other fish populations. Garbage in bush shore lunch etc. More responsibility on camp owners to pick up garbage customers leave behind.
- No bear hunting in spring because mothers with cubs
- No drinking in boats should be enforced better. Too many accidents.
- Bear hunters take skin and leave carcasses
- no hunting near reservation land
- Guides for moose hunting are a good idea. Should have more guides for fishing also so people can learn respect for fishery and environment.
- Money from licenses should be used to pay for damages to environment and fishery from camps boats etc.

- No wake zone by reservation boats go too fast.
- Dusk hunters shooting too close to reservation
- Excessive logging - no buffer zones being left. Blow down areas should be cut first because of danger of creating forest fires.
- Messy shoreline areas
- Tourists are not respecting reservation areas (careless hunting practices)
- Fish remains left at shore lunch areas cause a mess and stink. Maybe make a compost to keep guts in one area away from eating area
- Wild rice keep from depletion
- No hunting at least 10 km away from community
- Non-residents should have to buy blue berries and restrict picking
- Americans fish too close to the reserve
- Logging, blueberry picking and camps are on treaty land. Should get a percentage of what is taken.
- Cut down moose hunting season
- Too many loons are eating fish therefore should stock lake with minnows
- Nice to have tourists around but they are invading space by cruising around blue berry patches in 4X4's and cleaning out patches. Take away profits that could be made from picking blue berries.
- Should be no fishing at night just like hunting.
- Concerned that no fish will be left for residents. Don't fish much but fish are an important resource.
- Careless hunters shoot moose and leave it. This is very wasteful.
- Ducks shot are then thrown away after hunters take only a small piece to eat.
- Fish are wasted when not released properly. Found 14 dead walleye floating in one spot.
- Wild rice should be protected as it is important to income and food.
- Trapping lines are being taken away from the native people.
- Spraying is affecting blueberries and blueberries are being over picked by tourists. Blue berries are important to native income.
- People leave garbage around shore lunch areas showing disrespect for the shore lunch spots on Wabaskang.

Additional Comments

Resident

- Keep watershed as is and reduce creel limits for non-residents.
- Charge a tax towards the non resident fishermen at resorts along the lines of a stumpage fee as in the logging industry and put money back into the fishery.
- Make tourist resorts put back something into the watershed fishery.

- Like to see Perrault Falls and Ear Falls outfitters association split into two groups.
- Increase the clout of non-outfitters as a as a secondary organization that has a say.
- Have the outfitters and cottagers of each lake have a pre-meeting before “grand meeting” so that they can be prepared to represent themselves at the meeting.
- Because of clear cutting our natural beauty is being harmed. Many people are concerned about this.
- Minimum size must be introduced if people keep small fish they will destroy fishery.
- Reintroduce lake trout limit of six

Camp owners

- Curb any future cottage development until the resource can support more.
- Break up beaver dams in Mystery Creek and other inflows so that water flows and decreases chance of stagnant water and water quality problems such as beaver fever and other protozoa's
- more input from others when opening up new tourist resorts - more consideration for the impacts this may have on lake before giving license for tourist resorts.
- Have only on access point per lake - locals using lake should be made aware of any policies that might exist on the lake.
- I think that all the goals of the Cedar River Watershed management plan should be province wide.
- stop clear cutting
- Concerned about loss of vegetation on Wabaskang lake at 2nd narrows. Should put markers up so that boat travel is restricted to a smaller area and therefore will harm less vegetation.
- Do not close Ord or Jack fish creek a sanctuaries.
- Motor size limit of 20 H.P.
- No additional cottages or camps allowed
- Promote the recreational options other than just fishing.
- Walleye stocking program needed to protect industry
- Deteriorating scenery caused by spruce bud worm.
- Must maintain a healthy harvest level of fish not stop harvesting all together.

Cottage Owners

- Local residents abuse fishing laws more than non-residents do. We come to Ontario for good fishing enjoyment
- Maximum size does not seem to make improvements to fishing walleye or northern. More needs to be done.
- Before reducing possession limits consider expanding the resource availability by making access to smaller remote lakes easier
- Limit development, both private and commercial on the major lake in the watershed

- Too much traffic on major lakes and too many cabins distract from the get away from it all relaxation
- Other walleye management plans that may prove helpful are available in Little Bay de Noc in Michigan and Lake Winnebago in Wisconsin.
- Should consider enhancing fishery through stocking and spawning bed enhancement not by making up a bunch of “crazy rules” limits should not change. It’s hardly worth going fishing now as it is.
- no export of fish all consumed in Canada
- less tourist pressure will give fish a chance to come back
- A healthy bug life is the basis for a healthy fish life. Study should be done on aquatic bug life in watershed.
- Use of barbless hooks in May would save a lot of fish.
- Artificial bait only in certain areas at certain times may be helpful in maintaining fish populations.
- Camp owners should reward guests for catch and release
- Set limits and dates to not over stress the fish population
- There appears to be a bias in the questionnaire towards the interests of tourist outfitters and does not represent the interests of the citizens of Ontario very well
- Need to have the results from creel surveys and other studies on the watershed before decisions can be made regarding the fishery
- It is my belief that the resources belong to the people of Ontario and no barriers should be elected to diminish the enjoyment of the resources by the citizens of this province.
- Non residents of Ontario, let alone Canada, should not be active members of any board or council that will influence decisions that are being made about our natural resources, regardless of whether they have short term financial investment in properties or business
- Bass and perch are the tourist operators selling feature after over fishing the trout, walleye and northern pike to pay the overhead on operations that they purchased for too high a price, knowing full well that they can allow their guests to pull as many fish from the lake as possible with no additional cost to them.
- Catch and release kills fish unnecessarily
- Are you protecting tourist operators or Ontario’s fishing?
- The Cedar River watershed has too many northern in relation to walleye and walleye are a food source for northern.
- Future creel census may indicate need for change but not now.
- Provincial MNR personnel may need to be elected rather than appointed before we see any significant changes that will actually protect and enhance our resources.
- We have been coming up to the Cedar River Watershed for thirty years and have witnessed the fishing, wildlife and forest being wiped out. I hope there is something left besides water and rock for my grandchildren to inherit.
- Decease limits for non residents

- I have enjoyed visits to my cabin in the watershed for over thirty years and have noticed a dramatic increase in fishing pressure over the last five years and consequently the number of fish have declined.
- Stock Aerobus with walleye to improve overall fishing.

Visiting Anglers

- I have fished the Cedar River for many years and find it the most beautiful place I have ever seen. Because access is not easy it is not crowded.
- I think one of the worst laws ever for regulating fishing is to have them culled upon catching like in Lac Seul. It is difficult for a father or husband to beat a fish to death in front of his children or wife. People who want to keep larger fish can easily cut the air bag and let the fish sink to the bottom defeating the purpose of the rule to prevent sorting. Dead fish spoil faster and can make people sick or dead.
- Make good laws that will work and that people can understand to protect Canada and the wildlife and clean out doors.
- I have fished Cliff lake since 1980 and have seen the size of lake trout decline. Also Cliff lake had many more walleye of all age classes back in the 1980's but now there seem to be only larger walleye left. Muskies appear to be the same.
- Consider dropping trees into lake edge for small fish habitat. The dead trees on shoreline would make excellent fish shelters for small mouth walleye, northern and musky, especially along deeper shorelines.
- Some type of managed restocking program is needed.
- I am strictly against the law about killing fish on Lac Seul when caught. If the same law would start in this watershed I would not return. I have talked to several other people and they feel the same way.
- I suggest that after your creel data is collected at the end of the year this be consolidated and a new questionnaire be distributed.

Wabaskang First Nations

- The Canadian dollar is down so low that Americans can come here for almost free and therefore many more are arriving here. Can cut back on tourists coming here by increasing the amounts that they have to pay. At border charge more for fishing and moose hunting licenses.
- Fishing is doing well.
- Watershed is perfect now the way it is.
- "Musky Grab Hook" should be outlawed. It is harmful to fish when released.
- Should be a limit on perch.
- Increase cost of fishing and hunting licenses at the border because Canadian dollar is low.
- Increase hunting of predators such as cougar, wolves and foxes because they are eating deer and beaver. More cougars are being sighted every year and can pose a

threat to people. Realize they are protected but maybe should allow them to be hunted if a threat to people.

- **Loggers should burn areas after clear cutting. Burn when there is a little snow on the ground so fires burn slowly and easier to control. Burned areas are cleaner, more natural and allow for increased blueberry patches in the future.**
- **Tourist are picking all of our blueberries**
- **People fishing by net will ruin the fishery.**
- **Canadian dollar is down by so much that it allows more American fishermen to come here more often**
- **Should be no bear hunting in the spring because mothers with cubs get killed. Should only hunt bear in fall when cubs have a chance to grow up and be able to survive with out mother better.**
- **Should only be allowed to take a bear of certain height (i.e. 30 inches) chances better that no cub with her.**
- **Fish carcasses should not be left around the lake. Fishermen should not be allowed to fillet on lake unless they take the fish remains with them to garbage dump instead of making the lake look like a dump.**
- **I think that the fish limit should be reduced in some areas where populations are low and that some lakes should practice catch and release only until fish can repopulate more effectively. Especially some smaller lakes because of their small size are being over fished.**

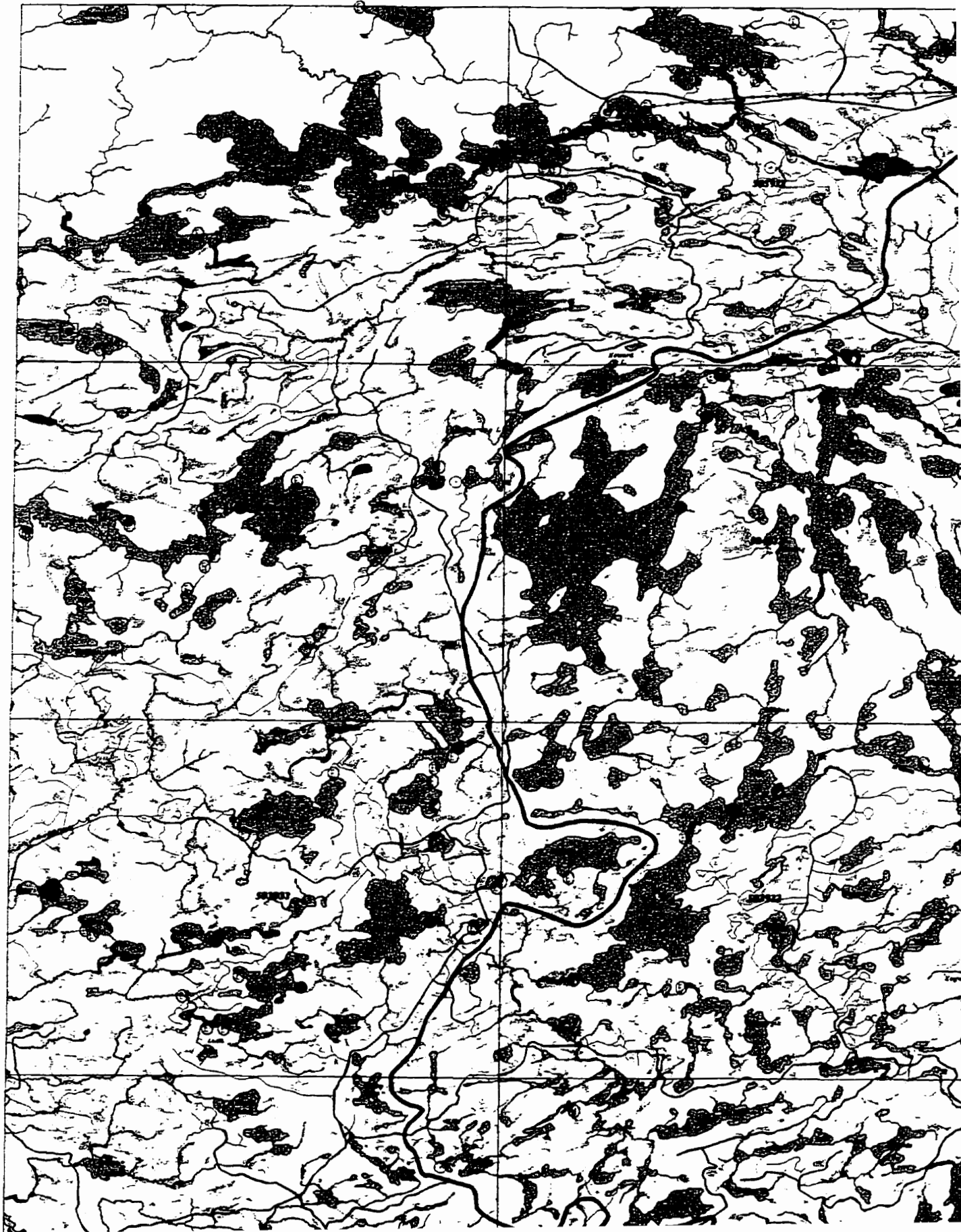
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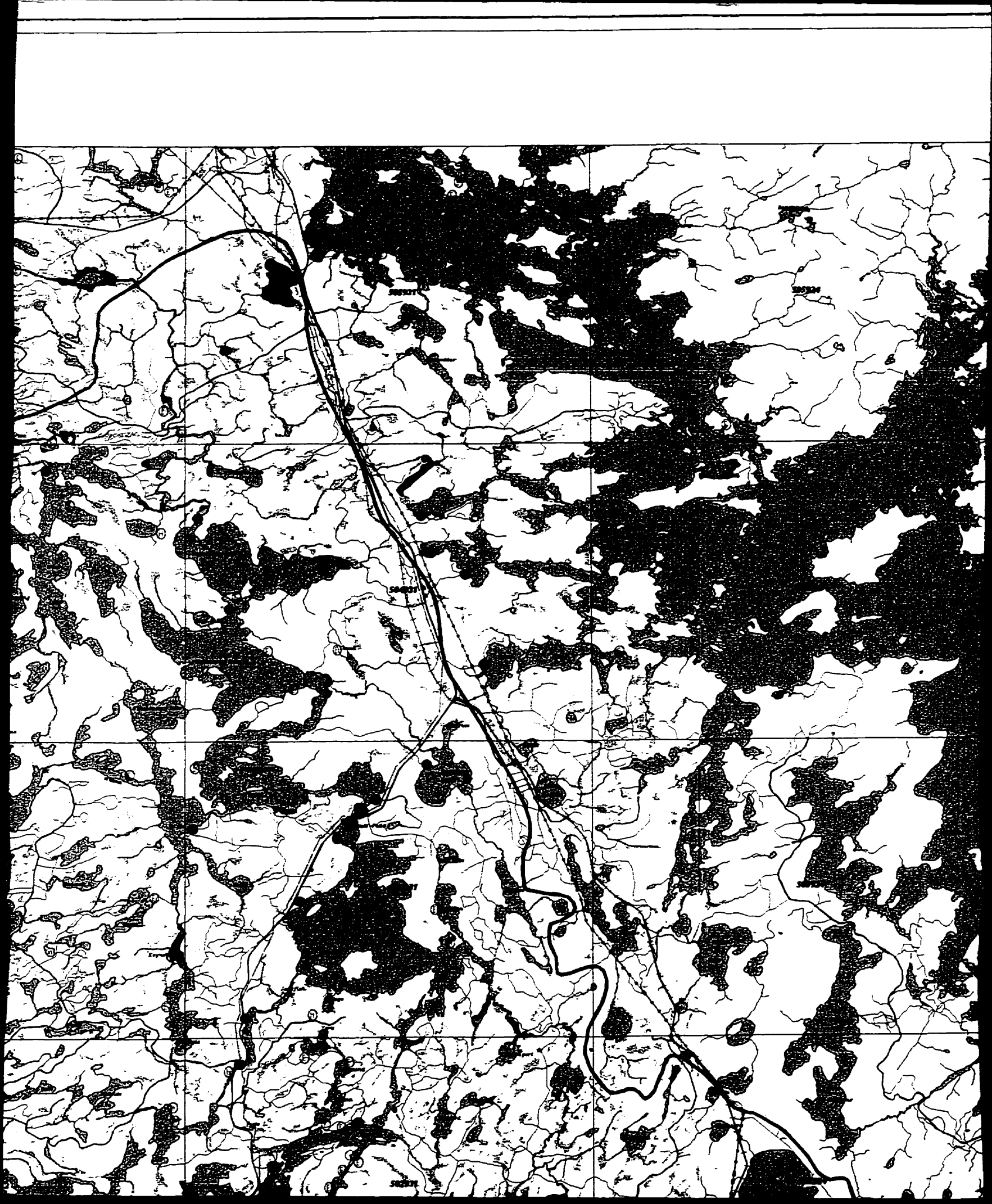
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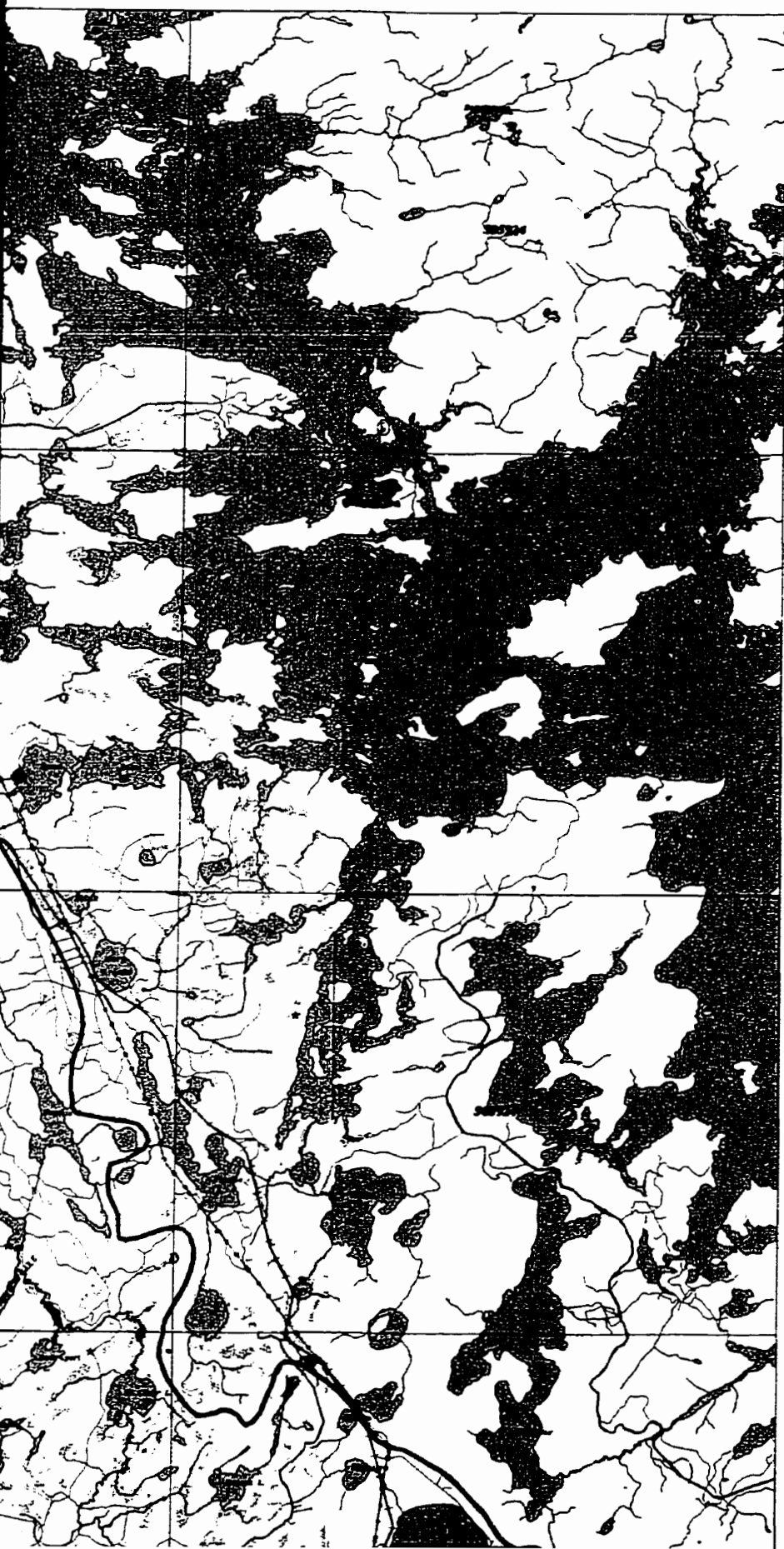
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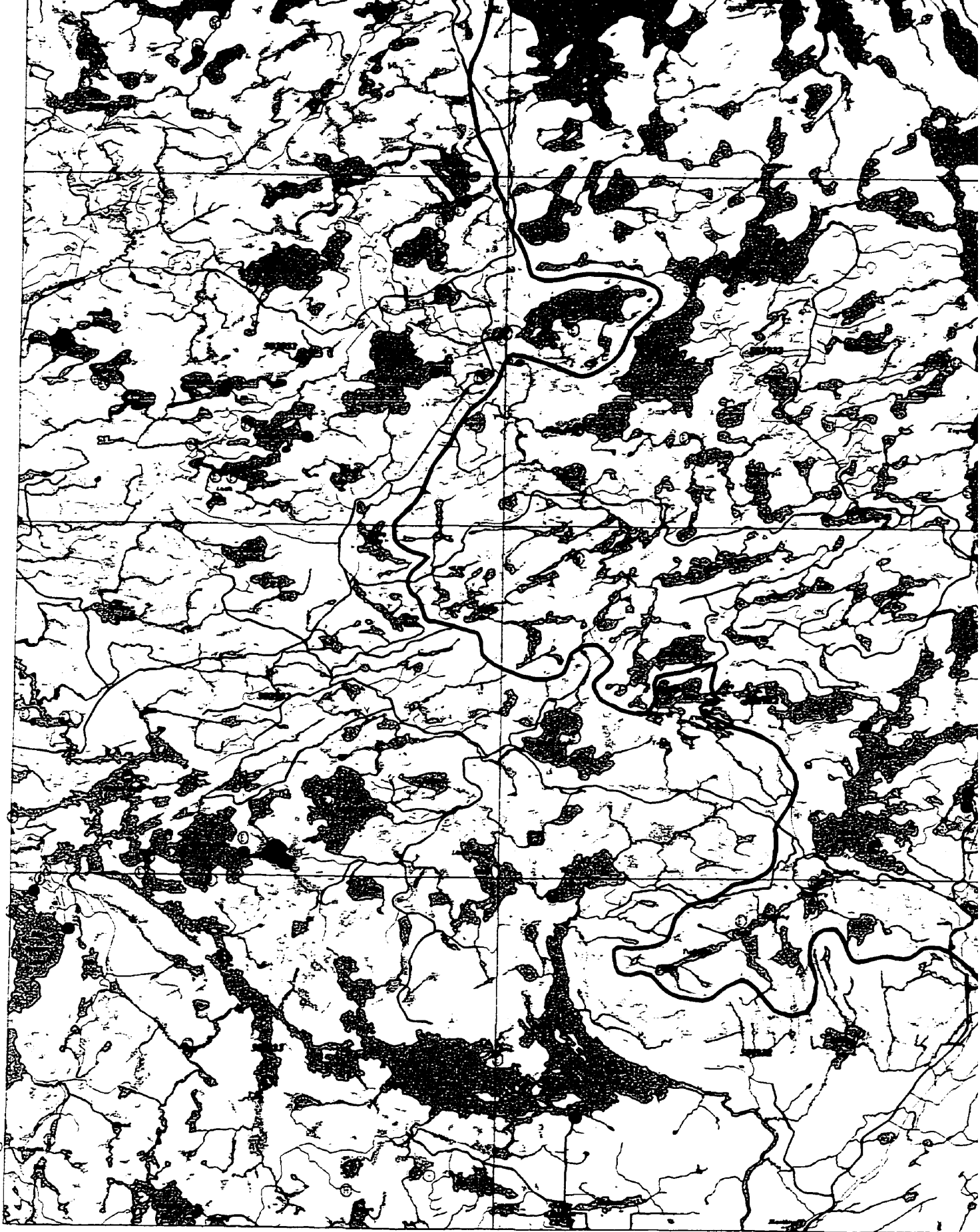


**Ministry of
Natural
Resources**

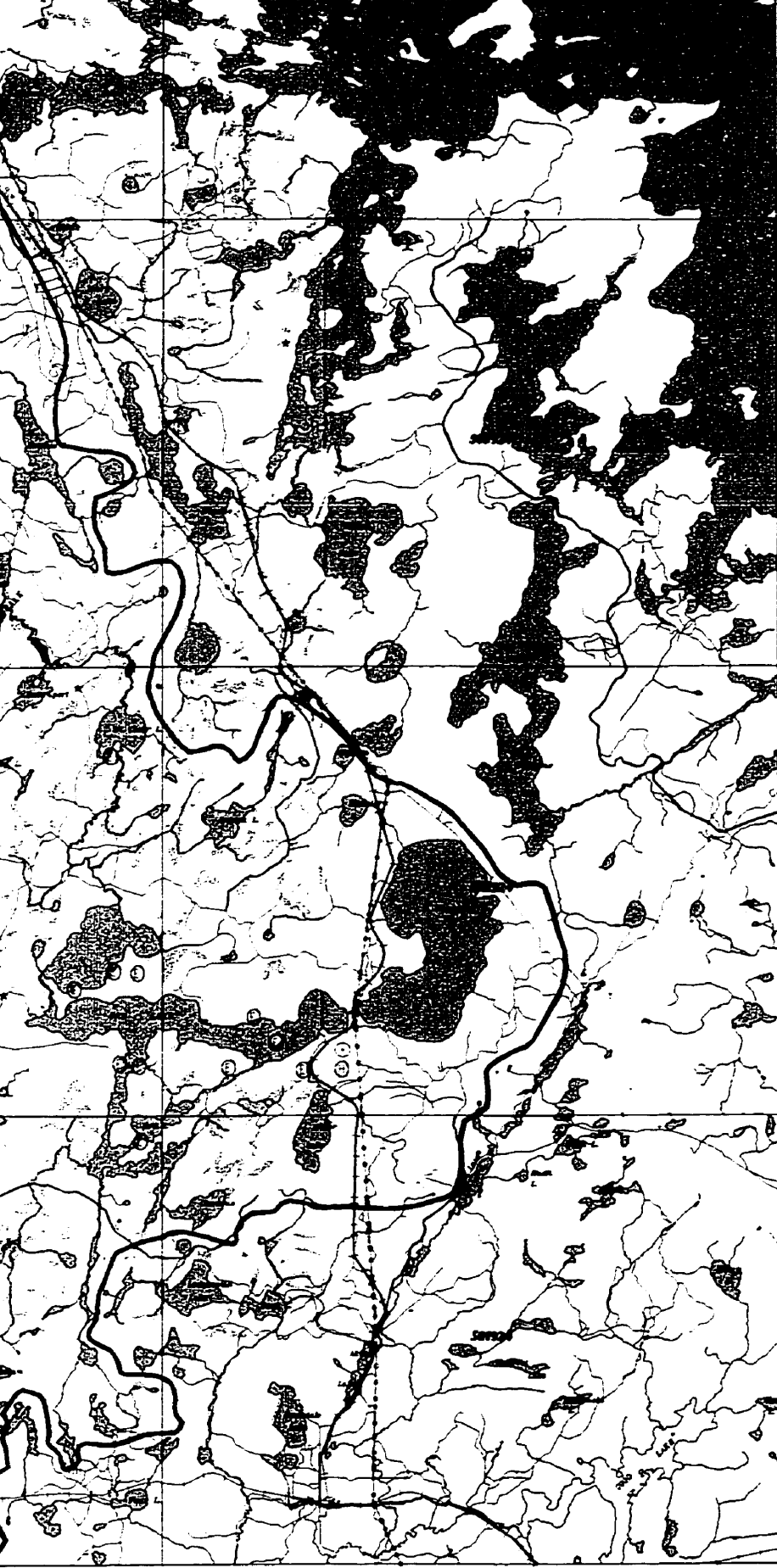
Ontario

**MAP OF CEDAR RIVER
WATERSHED**

- Highways and Main Roads
- Trail
- Stream
- Hydro Line
- Railroad
- Pipeline
- Stand Boundary
- Cedar River Water Shed
- Lake
- Non-Productive
- Patent Land
- Exclusion
- Aquatic Feeding Area
- Spawning Area
- Wild Rice Area
- Osprey Nest
- ⊙ Eagle Nest
- ⊙ Heron Rookery
- Remote Cottage
- ◆ Tern Nest
- Commercial Resort







- Highways and Main Roads
- Trail
- Stream
- Hydro Line
- Railroad
- Pipeline
- State Boundary
- Cedar River Water Shed
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- Patent Land
- Exclusion
- Aquatic Feeding Area
- Spawning Area
- Wild Rice Area
- ⊙ Osprey Nest
- ⊕ Eagle Nest
- ⊖ Heron Rookery
- ⊠ Remote Cottage
- ◆ Tern Nest
- Commercial Resort
- Outpost Camp
- ★ Trappers Cabin
- ▲ Archaeological Site

Scale 1:200,000

AREA = 1200 sq km

April 18, 1998

77