
Proposed Policies:

Coordinated Program Strategy
for the Ministry of Natural Resources
in Southern Ontario

April , 1979



Ministry of
Natural
Resources

Hon. James A. C. Auld
Minister

Dr. J. K. Reynolds
Deputy Minister

Proposed Policies:

Coordinated Program Strategy for the Ministry of Natural Resources in Southern Ontario

April , 1979

Strategic Land Use Planning Program



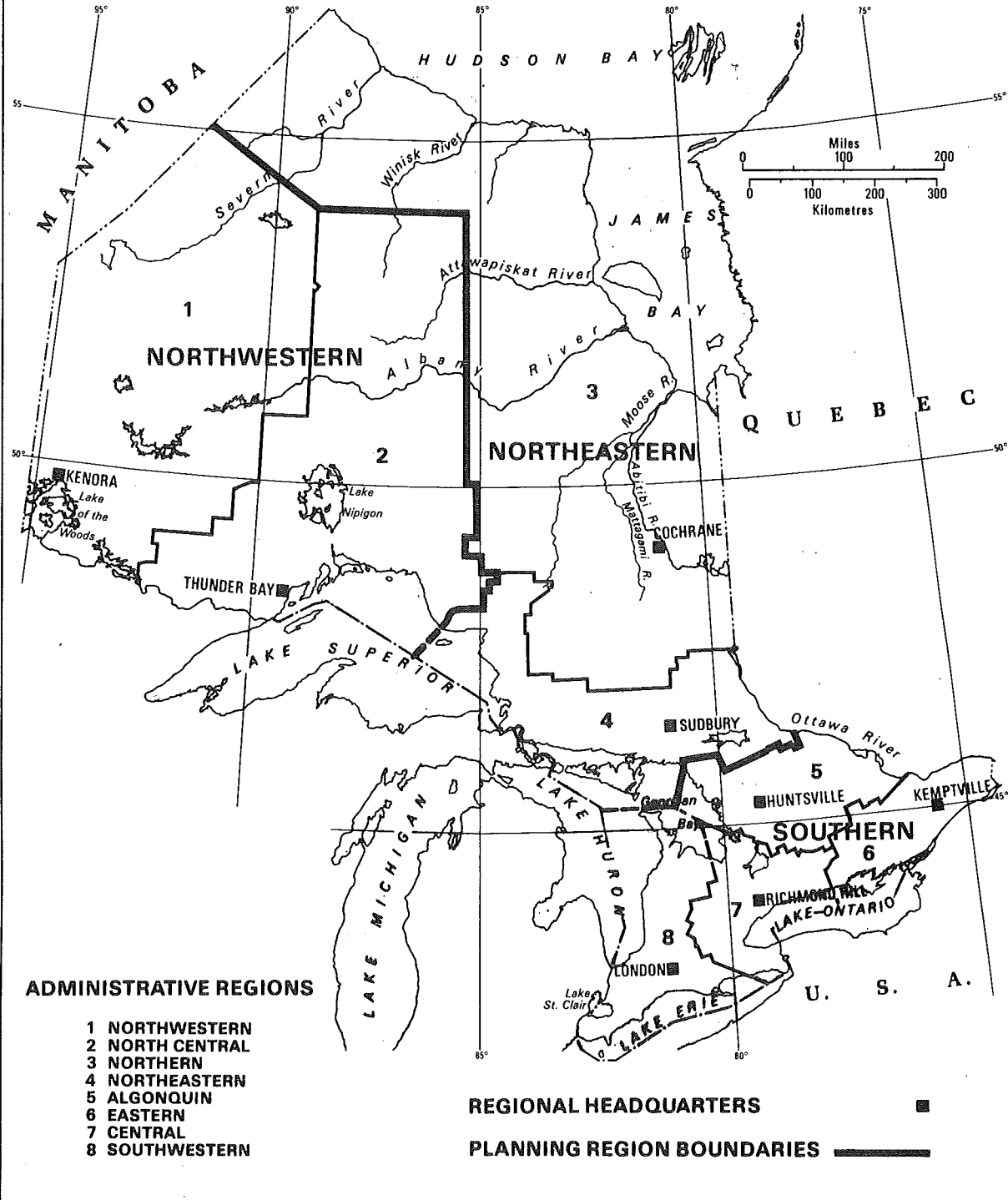
Ontario

Ministry of
Natural
Resources

Hon. James A. C. Auld
Minister

Dr. J. K. Reynolds
Deputy Minister

**MINISTRY OF NATURAL RESOURCES
ADMINISTRATIVE REGIONS
AND
PLANNING REGIONS**



PREFACE

This document represents an effort by the Ministry of Natural Resources to state what it wishes to achieve in southern Ontario. The report also summarizes the data contained in a companion publication, Background Information to the Development of a Coordinated Program Strategy.

The policy statements in this report are proposals only and, as such, provide a basis for discussion both within the government and with the public. After this discussion and additional technical analysis, the policies may well be altered. The result will be a statement of integrated policies, including objectives and targets, for the Ministry in the southern part of the province.

Through the development of this statement, the Ministry will identify how it wishes to use or influence the use of land in southern Ontario. The statement will also provide the framework for coordinating the land-using programs of the Ministry. The Ministry will, as a result, be able to contribute more effectively to municipal official planning.

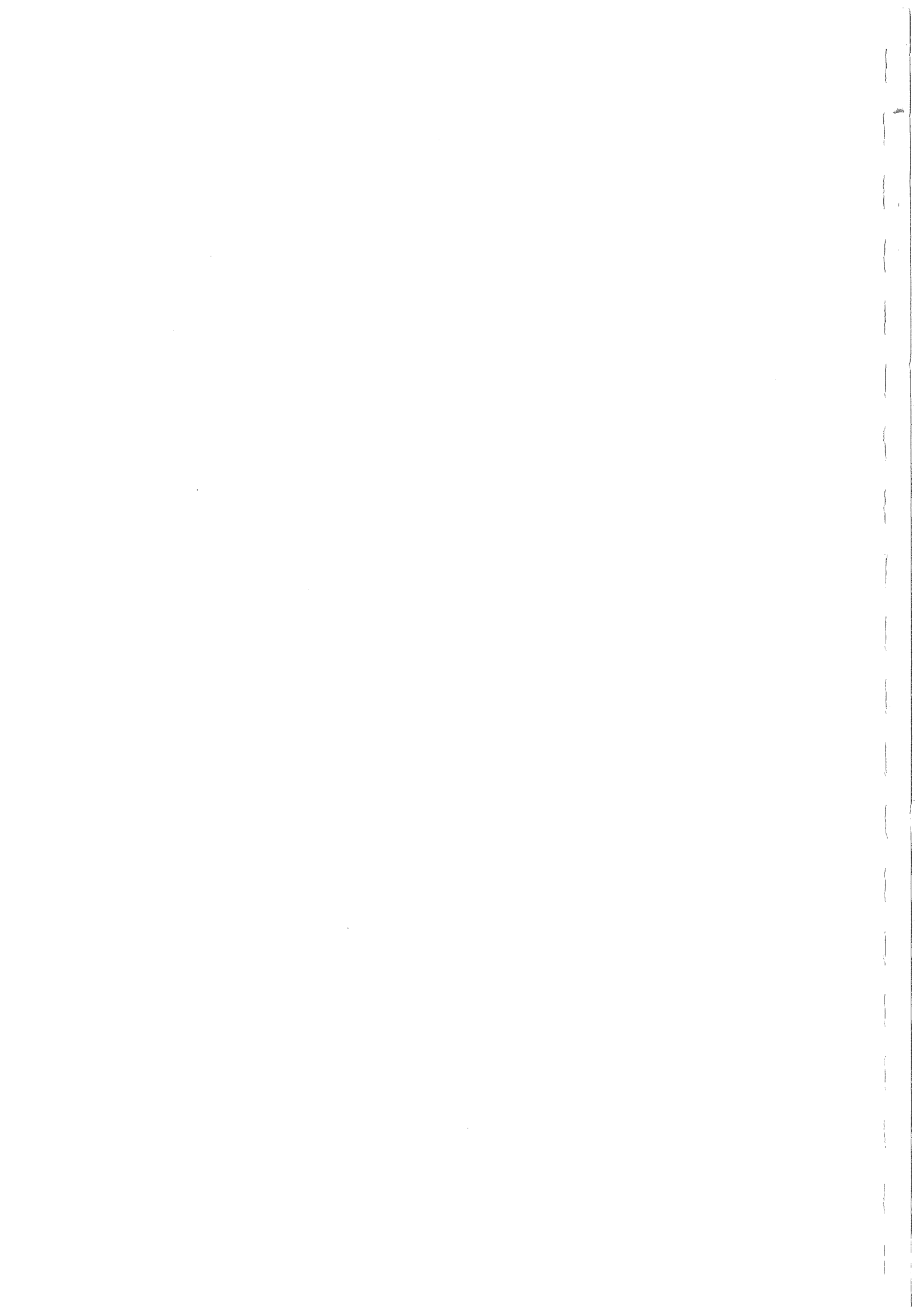


TABLE OF CONTENTS

PREFACE	(i)
TABLES	(iii)
MAPS	(iii)
I. INTRODUCTION	1
II. ROLE OF THE MINISTRY OF NATURAL RESOURCES	3
III. PROPOSED POLICIES FOR A COORDINATED PROGRAM STRATEGY	7
Introduction	7
Forestry Policy	7
Mineral Aggregate Policy	10
Mineral Policy	16
Wildlife Policy	18
Fisheries Policy	22
General Recreation Resources Policy	28
Provincial Parks Policy	31
Land and Water Management Policy	38
GLOSSARY	41
SELECTED REFERENCES	42

TABLES

1	Southern Ontario mineral aggregate supply	12
2	Utilization of mineral aggregates and value of construction by type, Ontario, 1971	12
3	Southern Ontario mineral aggregate demand	14
4	Potential fish production in southern Ontario	25

MAPS

Frontispiece Ministry of Natural Resources' administrative regions and planning regions

1	Conservation authorities and administrative regions and districts of the Ministry of Natural Resources	2
---	--	---

I. INTRODUCTION

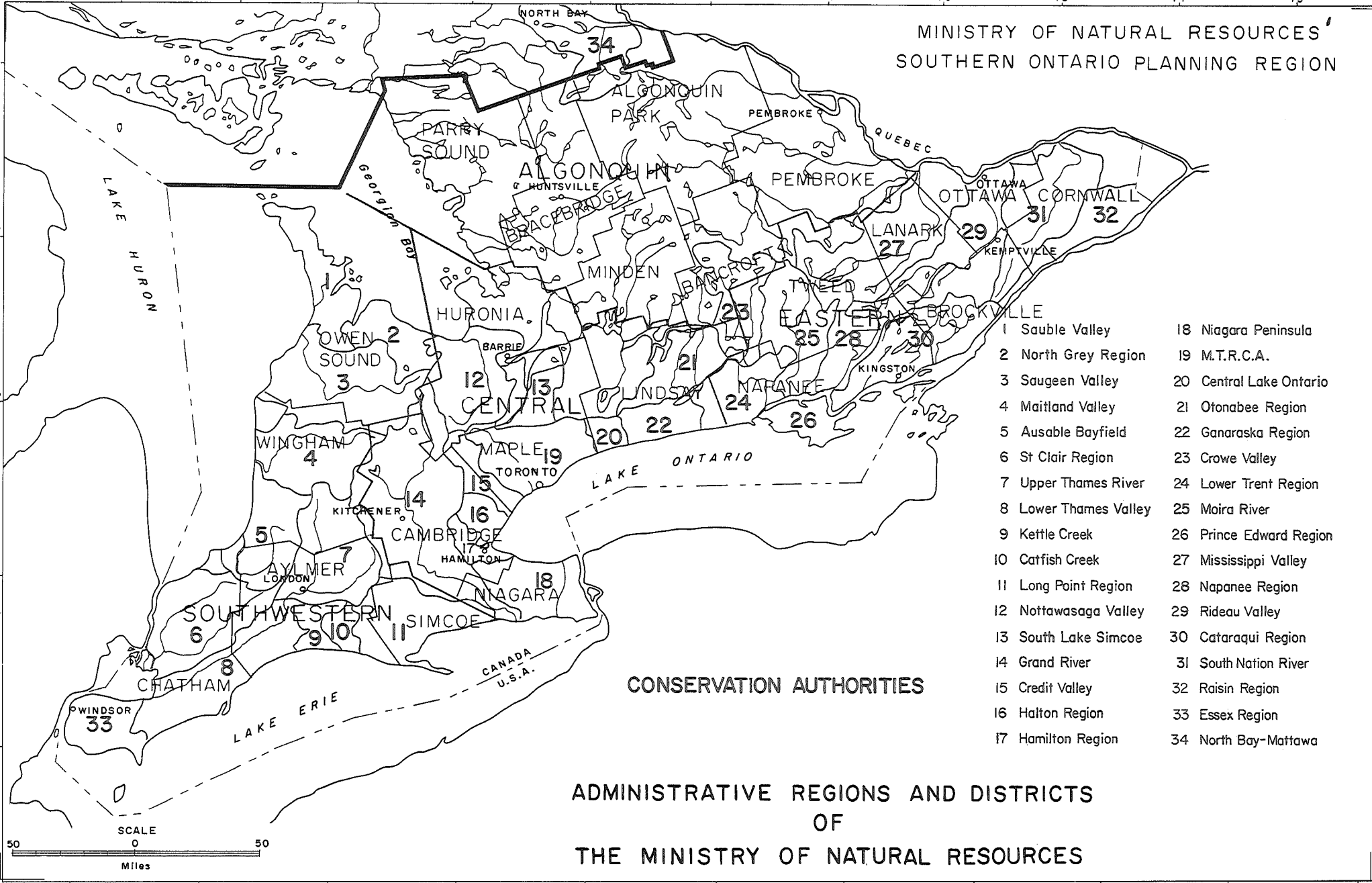
Southern Ontario comprises only 17 percent of the province but provides about 80 percent of all outdoor recreation (including 70 percent of resident angling and hunting); 50 percent of the fur harvest; 75 percent of the mineral aggregate extracted; and 20 percent of the timber harvested. Demand is increasing. A coordinated planning effort and integrated management are necessary to provide optimum benefits from the limited resource base.

In response to this need, an approach called strategic land use planning has been undertaken by the Ministry of Natural Resources. There are three differences between this approach and that formerly used in the Ministry:

- . it is preceded by clear statements of objectives;
- . it proceeds from a provincial to a regional and, finally, to a local level; and
- . it requires some level of public participation during the planning process.

In southern Ontario, this planning program is called the coordinated program strategy. It will identify the area of land and water, both public and private, required to meet the Ministry's proposed objectives between now and the year 2000 to 2025. It will also indicate how Natural Resources wishes to use or influence the use of land. The strategy will provide the basis for coordinating the Ministry's land-using programs and will be a major part of the Ministry's contribution to provincial, regional, and municipal planning. Following the preparation of the coordinated program strategy, more detailed local plans will be prepared for each Ministry district.

MINISTRY OF NATURAL RESOURCES
SOUTHERN ONTARIO PLANNING REGION



CONSERVATION AUTHORITIES

ADMINISTRATIVE REGIONS AND DISTRICTS
OF
THE MINISTRY OF NATURAL RESOURCES

II. ROLE OF THE MINISTRY OF NATURAL RESOURCES

Southern Ontario contains the four southern Administrative Regions of the Ministry of Natural Resources: Algonquin, Central, Eastern, and Southwestern. The four Regions are subdivided into 22 Administrative Districts (Map 1).

The goal¹ of the Ministry is:

- . *to provide opportunities for resource development and outdoor recreation for the continuous economic and social benefit of the people of Ontario and to manage, protect and conserve public lands and waters.*

The Ministry plans to achieve its goal through three programs: resource products, outdoor recreation, and, land and water management.

These programs are concerned with the use of the natural resources of lands, water, trees, fish, wildlife, and minerals for recreation and resource utilization. The Ministry has a major responsibility to:

- . maintain and, where possible, increase the supply of renewable resources;
- . conserve the supply of non-renewable resources; and,
- . use land and water to maximize long-term social and economic benefits while minimizing adverse environmental effects.

The resource products program includes forestry, mineral aggregates, mining, trapping, and commercial fishing. The objective² of this program is:

¹A goal is a general purpose to which the Ministry aspires.

²An objective is a quantifiable and attainable end which the Ministry's efforts are intended to accomplish. A broad objective is an objective which is not easily quantified. When possible, objectives are stated in terms of human impact such as jobs, recreation opportunities or earned income.

ROLE OF THE MINISTRY OF NATURAL RESOURCES

- . *to provide for an optimum continuous contribution to the economy of Ontario by stimulating and regulating the utilization of available supplies of fish, furbearers, minerals, and trees by resource products industries.*

The Ministry is concerned with managing and encouraging the use of natural resources to provide a contribution to the economy of Ontario. This contribution will be in jobs provided and dollars generated by resource products industries.

The Ministry has management programs to ensure the continued availability of both renewable and non-renewable resources. Through regulation, it controls the extraction and use of the resources for the long-term benefit of the people of Ontario.

The outdoor recreation program consists of recreation fishing, wildlife hunting, fish and wildlife viewing, and the provision of recreation in provincial parks and on other public and private land. Its objective is:

- . *to provide from public lands and waters and to encourage on other lands and waters:*
 - . *a wide variety of outdoor recreational opportunities accessible to, and for the continuous benefit of, the people of Ontario;*
 - . *the identification and conservation of unique or representative physical, biological, cultural, and historical features of the province; and,*
 - . *a continuous contribution to the economy of Ontario from tourism and its related industries.*

The objective emphasizes that physical, biological, cultural, and historical resources are important elements in man's environment and that representative and unique components should be protected.

The objective of the land and water management program is:

- . to administer, protect and conserve public lands and waters and to ensure, with other agencies, through participation in planning and control, coordinated uses of all lands and waters.*

The Ministry has a dual role in land management. The first is a custodial role to protect the capability and quality of public land and water which comprises 45 percent of the area of southern Ontario; to plan and control its uses; to dispose of it prudently; and, to acquire areas required to provide for the Ministry's programs. The second role is to ensure a harmonious pattern of uses.

The Ministry of Natural Resources is one of several government ministries which, along with other interprovincial and international agencies, have legislated responsibility to maintain an acceptable environmental quality in the interests of public health and general well-being. Within its responsibility for the management of the natural resources in southern Ontario, the Ministry will inevitably overlap with other environment or resource-based agencies. Planning and coordination is required to integrate the specific activities and programs of the various agencies involved.

Conservation Authorities

Conservation authorities are autonomous corporate organizations established under the provisions of The Conservation Authorities Act to further the conservation, restoration, development, and management of natural resources.

A variety of resource management activities are carried out including flood damage reduction, water conservation, flood plain regulation, channelization, diversions, source area protection, and construction and operation of dams and reservoirs for purposes such as flood control and water supply or stream flow augmentation. Their

ROLE OF THE MINISTRY OF NATURAL RESOURCES

activities may also encompass the management of valley and reservoir lands, including the provision of outdoor recreation experiences such as bathing, boating, angling, hunting, and wildlife viewing.

The 34 authorities established in southern Ontario (Map 1), covering 90 percent of the land south of the Precambrian Shield, contribute significantly to the achievement of Ministry objectives. Approximately 55 to 60 percent of their capital budget (45 to 50 percent of the total budget) is provided by the province of Ontario through the Ministry of Natural Resources. The remainder is contributed by the member municipalities of each authority.

Parks Commissions

Parks Commissions are independent agencies reporting to the government through the Minister of Natural Resources. Each commission is governed by a separate Act and directed by a Board of Commissioners. The three parks commissions, the St. Lawrence, the Niagara, and the St. Clair, each contribute to the achievement of the recreation, protection, heritage appreciation, and tourism objective of the provincial parks system.

III. PROPOSED POLICIES FOR A COORDINATED PROGRAM STRATEGY

Introduction

This chapter outlines proposed policies¹ for the activities carried out by the Ministry. Each of these activities contributes to the achievement of one or more of the resource products, outdoor recreation, and land and water management program objectives outlined previously.

Each section of this chapter states the objectives for an activity; discusses resource potentials and present use; identifies issues which must be resolved; indicates the targets which the Ministry wishes to achieve; and suggests the means by which this might be done.

Forestry Policy

The forestry objective is to provide for an optimum contribution to the economy by forest-based industries consistent with sound environmental practices; and to provide for other uses of the forest.

Discussion

Southern Ontario supports a wide range of coniferous and deciduous tree species reflecting variations in soil and climate. Species vary from valuable black walnut, oak, maple, yellow birch, and white and red pine to less valuable poplar, white birch, and white cedar.

The major concentration of forest cover is on the Precambrian Shield where, in general, sites are poorer. The better sites on the Shield occur in and around Algonquin Park where there is also a high potential for recreation. Elsewhere in southern Ontario, areas with the highest timber production capability are generally used for agriculture. Forest cover in these areas is usually confined to farm woodlots, river valleys, and wetlands. Nonetheless, because of their ability to produce high-quality hardwoods these areas are important to timber production in southern Ontario.

¹Policy includes objectives and targets to be achieved and the means of achieving them. Policy, simply stated, is a course of action which has been adopted and is pursued.

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- FORESTRY POLICY

The total area of productive forest land in southern Ontario is about 13 million acres (5.3 million hectares). Of this, only 9 million acres (3.6 million hectares) are estimated to be available for timber production of which 64 percent is private land. The average allowable cut of 33 cubic feet per acre ($2.3 \text{ m}^3/\text{ha}$) would produce an annual cut of 300 million cubic feet (8.49 million m^3). Much of this cut would consist of low-quality wood-fibre for which markets must be developed.

The forest industry in southern Ontario is estimated to provide 47,000 jobs in directly related, and 131,000 jobs in indirectly related industry. This represents 60 percent of primary and secondary forest industry employment in Ontario, and about 6 percent of total manufacturing employment in southern Ontario.

There is, at present, some 500 primary and 900 secondary wood-using industries in southern Ontario. It is estimated that this industry uses 131 million cubic feet (3.71 million m^3) of wood annually. Of this, 85 million cubic feet (2.4 million m^3) are produced in southern Ontario. Total southern Ontario production is 94 million cubic feet (2.66 million m^3), but, of this, 9 million cubic feet ($.25 \text{ million m}^3$) are exported. Southern Ontario industry thus has a deficit of some 46 million cubic feet (1.3 million m^3) of wood which is obtained from northern Ontario or from outside the province.

By the year 2025, Ontario industry is expected to require 1,200 million cubic feet ($33.97 \text{ million m}^3$) of wood fibre per year. Of this, southern Ontario should produce nearly 250 million cubic feet (7 million m^3).

Southern Ontario industry requires, to a large extent, high-quality hardwoods which do not grow in northern Ontario. Because of the cost to our economy and potential supply deficits in the United States, Ontario must become increasingly reliant on Ontario-grown timber.

However, a major utilization problem still exists in hardwood stands, particularly on the Precambrian Shield. Most stands are cut under

either a selection system¹ or a shelterwood system². To ensure natural regeneration in both these systems, it is necessary to remove not only the saw and veneer logs, but also the low-grade material to give proper spacing to the remaining trees and to create openings. Markets must be developed for low-grade material to provide for continued production of high quality hardwoods.

There is also a problem created by the practice of removing only the high-quality conifers in mixed stands. The birch and poplar left standing prevent the regeneration to more desirable conifers.

Private land forests in southern Ontario, from which the majority of the timber target must be met, are also in an unproductive condition in terms of quality, stand density, and species composition. Improvements in these conditions are complicated by the large number of individual owners, the frequent change in ownership, and the small size of holdings.

Taking all of these factors and current funding into consideration,

the target³ for wood production in southern Ontario is to produce an annual continuous supply of 210 million cubic feet (5.95 million cubic metres) of industrial fibre by the year 2020⁴.

¹The selection system consists of removing trees as individuals or small groups at short intervals. Openings created by cutting fill either by crown expansion of existing trees, by regeneration, or by both. This system perpetuates an uneven-aged forest with trees of different ages and sizes growing singly or in small groups.

²The shelterwood system consists of removing the mature stand in one or two cuts to obtain regeneration under the protection of the residual stand. This cutting system and associated treatments create or perpetuate an uneven-aged forest.

³A target is a quantified end to be achieved or completed by a specific date.

⁴The target of 210 million cubic feet (5.95 million cubic metres) of industrial fibre represents the southern Ontario share of a provincially funded target of 910 million cubic feet (25.76 million cubic metres) by the year 2020.

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- FORESTRY POLICY

The target will be achieved by:

- a. promoting the use of timber on managed public lands and regulating cutting to improve productivity;
- b. encouraging the use of the forest on private land and encouraging management which results in optimum productivity;
- c. encouraging the development of new markets and an increase in the existing markets for low-quality tolerant hardwoods;
- d. increasing forest management efforts related to site preparation for regeneration, reforestation, stand tending, and marketing;
- e. maintaining or increasing the area of forested land in southern Ontario, in particular, maintaining forest production on existing woodlots in agricultural areas;
- f. introducing rapid growing and short rotation species such as hybrid poplar on appropriate sites;
- g. providing sound forestry information and assistance to land owners and to forest operators; and,
- h. convincing municipalities and the public-at-large that sound forest management ensures a healthy forest environment.

Mineral Aggregate Policy¹

The objective for mineral aggregate production is to meet demand with minimal disturbance to the environment.

¹Excludes metallic and non-metallic minerals and mineral fuels which are included in a separate policy statement on page 16.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

Discussion

Sand and gravel are found in southern Ontario in kame, moraine, and outwash formations and, to a lesser extent, in eskers and beach deposits. The Central Region contains major areas of high potential including the Oak Ridges Moraine, the Caledon Hills and the spillways of Waterloo and Wellington Counties. The Southwestern Region has more extensive surficial deposits than the Central Region. The Eastern Region has locally significant surficial deposits. Gravel resources are limited in the Algonquin Region.

The total potential supply of aggregate in southern Ontario, excluding the Algonquin Region, has been estimated at 22.3 billion tons (20.2 billion tonnes) of sand and gravel and 317 billion tons (287.6 billion tonnes) of stone (Table 1). Owing to restrictive zoning policies, regulations and other land uses, the potentially available supply may be as low as 8.6 billion tons (7.8 billion tonnes) of sand and gravel and 28.1 billion tons (25.4 billion tonnes) of stone.

The importance of mineral aggregate in Ontario is demonstrated through its use by the construction industry (Table 2). The value of construction by type in 1971 was approximately 5.6 billion dollars which represents about 15 percent of the Gross Provincial Product.

It is difficult to predict the long-term demand for mineral aggregates. Not only is demand a function of geography, changing economic conditions, and major construction projects in the region, but, in addition, demand patterns can be altered by changes in the economics of transportation, by economies of scale, or by changes in technology.

The maximum anticipated annual demand for aggregates in the year 2000 is approximately 200 million tons (181.4 million tonnes) of sand and gravel and 75 million tons (68.0 million tonnes) of crushed stone. This is about a 100 percent increase in the use of

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

Table 1: Southern Ontario mineral aggregate supply¹
millions of tons
(millions of tonnes)

Administrative Region	Total Potential supply			Potentially Available Supply			
	Sand & Gravel	Stone	Total	% av.	Sand & Gravel	Stone	Total
Central ² Region	9,200 (8,350)	62,100 (56,340)	71,300 (64,680)	4	2,000 (1,810)	1,100 (1,000)	3,100 (2,810)
Eastern Region	1,800 (1,630)	164,200 (148,960)	166,000 (150,590)	14	600 (540)	23,000 (20,870)	23,600 ³ (21,410)
Southwestern ² Region	11,300 (10,250)	90,700 (82,280)	102,000 (92,530)	10	6,000 (5,440)	4,000 (3,630)	10,000 (9,070)
Total Southern Ontario	22,300 (20,230)	317,000 (287,580)	339,000 (307,530)		8,600 (7,800)	28,100 (25,490)	36,700 (33,290)

¹Algonquin Region supply has not been the subject of intensive study since resources are generally neither extensive nor of provincial significance.

²Excludes recent estimates in Simcoe County and Minto Township.

³Detailed studies suggest ultimate downward revision of these figures.

Table 2: Utilization of mineral aggregates by the construction industry, Ontario, 1971

	Tons (Tonnes) of Aggregate per \$1,000 of Construction			Value of Construction by Type (\$ Millions)
	Sand & Gravel	Crushed Stone	Total	
Residential Building	2.74 (2.49)	1.62 (1.47)	4.36 (3.96)	2,023.25
Non-Residential Building	8.84 (8.02)	3.03 (2.75)	11.87 (10.77)	1,726.59
Non-Road Engineering	10.05 (9.12)	5.42 (4.92)	15.47 (14.03)	1,343.94
Road Engineering	94.42 (85.66)	28.43 (25.79)	122.85 (111.45)	503.14
Total, All Construction	116.05 (105.29)	38.50 (34.93)	154.55 (140.21)	5,596.92

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

these materials. The maximum cumulative total demand for aggregate is anticipated to be approximately 5.3 billion tons (4.8 billion tonnes) by the year 2000 and 17.7 billion tons (16.0 billion tonnes) by the year 2025.

Actual cumulative demand to the year 2025 is expected to be about 25 percent less than indicated above because of a declining per capita consumption of mineral aggregates in recent years, the potential for technological substitution, declining highway construction, and an increasing tendency toward slower growth in major Ontario municipalities (Table 3).

Although supplies of aggregate appear satisfactory to meet demand in southern Ontario for the foreseeable future, local shortages are likely to occur. In the central portion of southern Ontario, it is estimated that available sand and gravel reserves may be depleted by the year 2005 and crushed stone reserves by the year 2025.

In order to ensure adequate supply to meet future demands, it is essential that the Ministry work closely with municipalities in the identification, management, and reservation of aggregate resources and in predicting probable future needs. The Ministry and municipalities must also work together to ensure that sufficient areas for aggregate production are identified and protected in official plans and that adequate policies are developed to allow achievement of targets. Furthermore, industry must work closely with provincial and municipal governments to reduce the conflicts and minimize the adverse impacts of aggregate extraction.

Based on an average of the two demand projections and a recognition of the need to minimize disturbances to the environment, the mineral aggregate production target is:

- to ensure that demand for mineral aggregates can be met within southern Ontario to the year 2025, specifically to ensure that a total cumulative supply*

Table 3: Southern Ontario mineral aggregate demand

Administrative Region	Millions of tons of sand, gravel & stone (millions of tonnes)					
	Actual Demand	% of Total southern Ontario	Projected Cumulative ¹ Demand to		Projected Cumulative ¹ Reduced by 25%	
			2000	2025	2000	2025
Algonquin	7 (6.35)	6	275 (249.47)	941 (853.66)	206 (186.88)	706 (640.47)
Central	72 (65.32)	63	3,426 (3,108.01)	11,525 (10,455.30)	2,570 (2,331.46)	8,644 (7,841.70)
Eastern	15 (13.61)	13	716 (649.54)	2,407 (2,183.59)	537 (487.16)	1,805 (1,637.47)
Southwestern	20 (18.14)	18	932 (845.50)	2,826 (2,563.70)	699 (634.12)	2,120 (1,923.23)
Total Southern Ontario	114 (103.42)	100	5,349 (4,852.53)	17,699 (16,056.25)	4,012 (3,639.62)	13,275 (12,042.81)

¹ Cumulative demand starts January 1, 1974.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

Discussion

Sand and gravel are found in southern Ontario in kame, moraine, and outwash formations and, to a lesser extent, in eskers and beach deposits. The Central Region contains major areas of high potential including the Oak Ridges Moraine, the Caledon Hills and the spillways of Waterloo and Wellington Counties. The Southwestern Region has more extensive surficial deposits than the Central Region. The Eastern Region has locally significant surficial deposits. Gravel resources are limited in the Algonquin Region.

The total potential supply of aggregate in southern Ontario, excluding the Algonquin Region, has been estimated at 22.3 billion tons (20.2 billion tonnes) of sand and gravel and 317 billion tons (287.6 billion tonnes) of stone (Table 1). Owing to restrictive zoning policies, regulations and other land uses, the potentially available supply may be as low as 8.6 billion tons (7.8 billion tonnes) of sand and gravel and 28.1 billion tons (25.4 billion tonnes) of stone.

The importance of mineral aggregate in Ontario is demonstrated through its use by the construction industry (Table 2). The value of construction by type in 1971 was approximately 5.6 billion dollars which represents about 15 percent of the Gross Provincial Product.

It is difficult to predict the long-term demand for mineral aggregates. Not only is demand a function of geography, changing economic conditions, and major construction projects in the region, but, in addition, demand patterns can be altered by changes in the economics of transportation, by economies of scale, or by changes in technology.

The maximum anticipated annual demand for aggregates in the year 2000 is approximately 200 million tons (181.4 million tonnes) of sand and gravel and 75 million tons (68.0 million tonnes) of crushed stone. This is about a 100 percent increase in the use of

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

Table 1: Southern Ontario mineral aggregate supply¹
millions of tons
(millions of tonnes)

Administrative Region	Total Potential supply			Potentially Available Supply			
	Sand & Gravel	Stone	Total	% av.	Sand & Gravel	Stone	Total
Central ² Region	9,200 (8,350)	62,100 (56,340)	71,300 (64,680)	4	2,000 (1,810)	1,100 (1,000)	3,100 (2,810)
Eastern Region	1,800 (1,630)	164,200 (148,960)	166,000 (150,590)	14	600 (540)	23,000 (20,870)	23,600 ³ (21,410)
Southwestern ² Region	11,300 (10,250)	90,700 (82,280)	102,000 (92,530)	10	6,000 (5,440)	4,000 (3,630)	10,000 (9,070)
Total Southern Ontario	22,300 (20,230)	317,000 (287,580)	339,000 (307,530)		8,600 (7,800)	28,100 (25,490)	36,700 (33,290)

¹Algonquin Region supply has not been the subject of intensive study since resources are generally neither extensive nor of provincial significance.

²Excludes recent estimates in Simcoe County and Minto Township.

³Detailed studies suggest ultimate downward revision of these figures.

Table 2: Utilization of mineral aggregates by the construction industry, Ontario, 1971

	Tons (Tonnes) of Aggregate per \$1,000 of Construction			Value of Construction by Type (\$ Millions)
	Sand & Gravel	Crushed Stone	Total	
Residential Building	2.74 (2.49)	1.62 (1.47)	4.36 (3.96)	2,023.25
Non-Residential Building	8.84 (8.02)	3.03 (2.75)	11.87 (10.77)	1,726.59
Non-Road Engineering	10.05 (9.12)	5.42 (4.92)	15.47 (14.03)	1,343.94
Road Engineering	94.42 (85.66)	28.43 (25.79)	122.85 (111.45)	503.14
Total, All Construction	116.05 (105.29)	38.50 (34.93)	154.55 (140.21)	5,596.92

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

*of 15 billion tons of sand, gravel, and stone
is available; and,*

- . to encourage rehabilitation of all lands used
for the extraction of aggregates.*

This will be accomplished by:

- a. working with municipalities to identify, manage, conserve¹, and provide guidelines for the use of aggregates;
- b. identifying probable future demands for aggregates and encouraging municipalities to identify and protect sufficient aggregate resources to meet local needs and a fair and appropriate share of provincial demand having due regard to municipal concerns and issues;
- c. ensuring that municipalities in the preparation of official plans and zoning bylaws designate sufficient areas to meet current market demands and protect sufficient mineral aggregate resources to ensure that material is available to meet probable future demand;
- d. encouraging planned mineral extraction with concurrent rehabilitation; and,
- e. conducting studies related to: quantity and quality of resources presently available; development and utilization of alternative supplies and resources; and, development of new technology and

¹Conservation means "wise use" including not only the protection of resources from incompatible activities, but also preventing use of high-quality resources where lower quality materials would be appropriate.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- MINERAL AGGREGATE POLICY

conversion to less disruptive means of transportation and to longer distance hauling where feasible.

Mineral Policy¹

The mineral resource development objective is:

- to provide for a strengthening of the economic contribution of minerals to provincial development.*

Discussion

In southern Ontario, the Precambrian Shield contains areas of high potential for the occurrence of metallic, non-metallic, and industrial minerals.

The metallic minerals produced in large quantity are uranium, iron, calcium, and magnesium. Since 1970, non-metallic production has remained stable. All of Ontario's current production of mineral fuels comes from southwestern Ontario. In 1977, over 630,000 barrels of crude oil (0.4 percent of provincial requirements) and 8.3 million cubic feet (235 million m³) of natural gas (1.6 percent of needs) were produced from 1,130 wells. In addition, substantial amounts of cement are manufactured.

Next to aggregates, industrial minerals such as salt, nepheline syenite, gypsum, and talc are the most important group in southern Ontario.

The value of mineral production in southern Ontario in the period 1969 to 1973 averaged about 150 million dollars annually (about 10 percent of the provincial total). This figure excludes the value added by extraction of aggregates and of uranium.

¹Mineral policy includes metallic and non-metallic minerals and fuels but excludes mineral aggregates which are included in a separate policy statement on page 10.

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- MINERAL POLICY

In the future, demands for many minerals are expected to increase. Changing commodity values, technology, and markets may alter the relative importance of various minerals. Thus, the demand for a specific mineral may change rapidly.

The mining industry requires a satisfactory rate of return on investment and a satisfactory rate of discovery to replace deposits of a non-renewable resource. Problems faced by the mining industry in southern Ontario include removal of lands from staking and/or mineral exploration before their potential has been adequately assessed; the difficulty of obtaining exploration and/or mineral rights on private land; increased costs in planning and operations to meet environmental standards; and, lack of completeness and continuity of data that impedes exploration.

Specific mining production targets cannot be established because of difficulties in predicting market trends and assessing potential. The objectives of encouraging economically feasible mining development will be achieved by:

- a. encouraging mineral exploration by:
 - . ensuring that lands are not withdrawn from staking until the mineral potential has been assessed,
 - . ensuring that withdrawal of lands having high or moderate mineral potential as defined by the Ontario Geological Survey is minimized,
 - . promoting the orderly identification, definition, and development of mineral deposits, and,
 - . delineating favourable geological areas and expanding the geoscience data base through the collection, storage, and dissemination of information;
- b. maximizing production by:
 - . encouraging municipalities to allow mineral extraction and to prescribe measures through input to official plans and

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- MINERAL POLICY

- zoning regulations to avoid wasteful use, and,
- . encouraging industry to bring new deposits into production as soon as economic conditions permit;
- c. encouraging further domestic processing of ore; and,
- d. encouraging exploration for and development of energy sources in southern Ontario.

Wildlife Policy

The objective for wildlife management in southern Ontario is to provide optimum social and economic benefits consistent with the maintenance of healthy wildlife populations.

The fur objective is to provide the maximum sustainable yield of fur-bearers.

The wildlife recreation objectives are:

- . *to provide opportunities sufficient to maintain the present rate of participation in and quality of hunting by residents;*
- . *to maintain the contribution to the economy of hunting by non-residents;*
- . *to provide opportunities for increased appreciation of wildlife and its environment; and,*
- . *to identify and protect rare and endangered species of wildlife and their habitat.*

Discussion

Southern Ontario supports a wide variety of wildlife species which are important both for recreation and commercial use. Wildlife habitat on the Precambrian Shield in southern Ontario, however, is not in an optimum condition for many of the more important species. The

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- WILDLIFE POLICY

areas cut or burned during the early to mid-nineteen hundreds are no longer prime habitat and have not been replaced by more recently disturbed areas. As a result, populations of many wildlife species, most notably deer, have decreased significantly.

South of the Precambrian Shield, the suitability of habitat is closely related to intensity of agriculture and development. Where the intensity of agricultural use is low, habitat remains good and large populations of wildlife are supported in areas with high agricultural capability. However, increasing intensification of agriculture including changes to extensive monoculture, increasing mechanization and removal of fencerows, woodlots, and wetlands and increasing development have resulted in significant reductions in wildlife habitat and wildlife of almost all species.

Wildlife populations have also been adversely affected by insecticides and other chemicals. In addition, the protection of rare and endangered species is difficult because of the need to justify the protection of the habitat of those species relative to economic development, resource production, and provision of outdoor recreation.

Fur Production

The primary furbearers in the most southern portion of Ontario are muskrat, fox, and raccoon. Beaver assumes major importance in terms of both dollar value and number of pelts in central and northern areas.

The value of the fur crop in 1973-74 was approximately 5.6 million dollars and represented about 50 percent of the provincial total of 10.8 million dollars. Of the 275 fur dealers and tanners in the province, 132 are located within southern Ontario. Many of these are manufacturers of finished products.

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- WILDLIFE POLICY

Throughout the northern part of southern Ontario, with minor exceptions, beaver populations are considerably higher than the carrying capacity of the range. A decline in beaver populations is probable because of habitat deterioration and overpopulation. In the central and southeastern areas, beaver populations are reaching nuisance proportions. The harvest of 594,000 pelts for all furbearers in 1977 was considerably below the allowable harvest of 840,000 pelts.

Problems to be overcome in increasing fur harvest to the level of sustained yield include anti-trapping sentiment; reluctance of landowners to allow trapping on their property; and, too much trapping in some localities and too little in others.

Wildlife Recreation

Wildlife is an important source of outdoor recreation in southern Ontario. About 850,000 people, 14 percent of the population, annually participate specifically in viewing or photographing wild animals. Some 680,000 people, 9.4 percent of the population, hunt.

Southern Ontario provides about 72 percent of all hunting in Ontario; some 60 percent of this occurs on private lands. Hunters spend about 30.0 million dollars annually on this recreational activity.

The rate of participation in both wildlife viewing and small game hunting has remained fairly constant in recent years and is expected to remain so. Participation in big game hunting is increasing, particularly moose hunting. Based on anticipated increases in population in southern Ontario, an up to 40 percent increase in total demand is anticipated by the year 2000.

However, although local game populations on the Precambrian Shield can be increased through intensive wildlife management efforts, such as the deer range management program, major increases in population can only occur through another major disturbance of the forest. Wildlife programs are therefore largely dependent on the intensity and type of future forest management efforts and upon the achievement of forest management objectives.

PROPOSED POLICIES FOR A COORDINATED
PROGRAM STRATEGY -- WILDLIFE POLICY

South of the Precambrian Shield, the continued provision of wildlife recreation will depend on extension programs designed to maintain and improve habitat and to encourage the provision of public recreation on private land; and, to a lesser extent, on the provision of opportunities in designated wildlife management units or public lands.

Based on the above:

The target for fur production in southern Ontario is to increase harvest by 40 percent to an average of 840,000 pelts by the year 2000.

The target for wildlife recreation in southern Ontario is:

- . to provide by the year 2000, 4.8 million opportunities of hunting recreation per annum, comprising 510,000 opportunities of big game hunting and 4.29 million opportunities of small game hunting¹; and,*
- . to provide by the year 2000, 2.6 million opportunities for wildlife viewing in provincial areas².*

These targets will be achieved by:

- a. ensuring the production and management of wildlife habitat on public land and encouraging production and management of habitat on private land, in particular by:

¹The target assumes that the present role of hunting success will be maintained.

²The target assumes a 10 percent increase in the rate of participation in viewing wildlife in provincial areas (provincial parks, wildlife management areas and crown land).

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- WILDLIFE POLICY

- . preserving high quality wetlands;
 - . protecting and maintaining deer yards; and,
 - . encouraging the preservation of suitable wildlife habitat in close proximity to and integrated with urban and rural development;
- b. developing mechanisms for effective public involvement in wildlife management decisions;
- c. encouraging and providing access to a variety of wildlife-oriented recreational opportunities on public and private land. Within the urban complex, this will be ensured by encouraging the establishment of wildlife areas which provide educational and non-consumptive wildlife recreation opportunities. In rural areas, this will be accomplished through extension programs to encourage management of, and to increase or maintain access to, private lands, and, on public lands, through the acquisition of critical areas;
- d. protecting production areas and habitat of rare or endangered species from destruction or disturbance; and,
- e. encouraging the provision of wildlife hunting and viewing opportunities by private game farms, and other facilities.

Fisheries Policy

The objective for fisheries management in southern Ontario is to provide optimum recreation and economic benefits consistent with the maintenance of healthy fish communities.

The objective for commercial fishing is to maintain a viable industry in southern Ontario.

The objective for sport fishing is to meet demand within the limits of a wisely managed and rehabilitated resource.

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- FISHERIES POLICY

Discussion

Growth of the population and the economy in southern Ontario have been attended by a loss of fish stocks. Fish communities have been affected by pollution, overfishing, habitat destruction, parasites, and invasion or introduction of pest species. Of particular concern are stream channelization and drainage projects, which, along with impoundments of natural waters, urban development, recreational development, the filling and dredging of offshore areas, and a variety of other factors have resulted in degradation of water quality and loss of habitat.

Many of these issues have been raised in a federal-provincial project called Strategic Planning for Ontario Fisheries. The project emphasized that improved quality of habitat is essential if fish harvests are to be maintained or increased.

The yield of fish which can be harvested from the Great Lakes in southern Ontario is estimated to be 44.1 million pounds (20.00 million kilograms) per year. The yield of inland waters is estimated at 14.3 million pounds (6.49 million kilograms) of fish annually (Table 4). These rates represent estimates of total fish yield and are based on the assumption that present rehabilitation efforts will be successful.

A formal allocation of fish resources between the commercial and sport fisheries has still to be achieved in Ontario even though this paper proposes a division. Considerable attention is being devoted to this question in the Strategic Plan for Ontario Fisheries. Such a division must include, as a first priority, the maintenance of sufficient stocks for healthy and balanced fish populations. As well, should a conflict develop between a sport and commercial fishery, the sport fishery will be given preference.

Commercial Fishing

Commercial fishing includes food fish and bait fish operations. The

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- FISHERIES POLICY

latter harvests 70 to 90 million bait fish annually with a value approaching \$2.0 million. Reported commercial catches of food fish for the period 1967 to 1973 averaged 41.3 million pounds annually (18.74 million kilograms). In 1976 the value of the catch was \$9.3 million. Commercial fishing operations employed 1,397 people both full and part-time.

Ninety-nine percent of food fish is caught in the Great Lakes with about 85 percent from Lake Erie. Three species, yellow perch, smelt, and white bass comprise over 90 percent of the value of landings taken from Lake Erie. The perch harvest has recently been restricted to prevent over-exploitation and to ensure the long-term viability of the food fish industry. If the perch fishery in Lake Erie collapses, only smelt and white bass could be harvested in sufficient quantity to support this industry.

In developing the commercial fishing target it is assumed, based on fish species, geographical limitations, and angler preferences, that about 25 percent of the total yield of the Great Lakes in southern Ontario will be used by sport fishermen. Ontario's share of the total fish yield of the Great Lakes is based on the proportion of Great Lakes waters in southern Ontario, except for Lake Erie where the proportion of historical yield is considered to represent the Ontario share (Table 4).

The almost inevitable increase in price for many species and increased processing of whole fish in Ontario could result in increases in jobs in secondary industry. These increases would be greatest outside of southwestern Ontario since sophisticated processing facilities are already located in the southwest.

For commercial fishing to continue, the public must recognize not only the economic and social value of the activity but also its importance for complementing sports fishing by balancing the stocks of fish species.

TABLE 4: Potential fish production in southern Ontario

		Size of waterbody Millions of acres (Millions of hectares)		Current harvest Millions of pounds (Millions of kilograms) per year			Biologically allowable five year yield Millions of pounds (Millions of kilograms) per year	
		Entire lake	Cndn. portion	Entire lake ¹	Recent total past yield (Cndn. waters)	Recent commercial past yield (Cndn. waters)	Cndn. share based on area	Cndn. share based on current harvest
Huron		14.6 (5.91)	7.4 (2.99)	8.1 (3.67)	4.4 (2.00)	3.0 (1.36)	7.9 (3.58)	--
St. Clair		0.3 (0.12)	0.2 (0.08)	--	1.5 (0.68)	0.9 (0.41)	1.3 (0.59)	--
Erie		6.3 (2.55)	3.1 (1.25)	51.7 (23.45)	37.1 (16.83)	35.0 (15.88)	--	31.3 (14.20)
Ontario		4.8 (1.94)	2.6 (1.05)	2.3 (1.04)	2.6 (1.18)	2.4 (1.09)	3.6 (1.63)	--
Subtotal		26.0 (10.52)	13.3 (5.38)	62.1 (28.17)	45.6 (20.68)	41.3 (18.74)	44.1 (20.00)	
Inland waters	Simcoe	N/A	1.5 (0.61)	N/A	0.4 (0.18)	0.01 (0.004)	0.4 (0.18)	--
	Southern agricultural waters (includes Great Lakes connecting waters)				10.1 (4.58)	N/A	11.3 (5.13)	--
	Northern Inland waters				2.6	N/A	2.6 ² (1.18)	--
Total		N/A	14.8 (5.99)	N/A	58.7 (20.91)	41.3 (18.74)	58.4 (26.49)	

¹This is based on a five year's information from the United States and, therefore, is not directly comparable with the ten year Canadian averages.

²These figures are estimates which will be refined. Ontario Fish Yield Estimates, OMNR 1978 draft report.

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- FISHERIES POLICY

Sport fishing

Public surveys conducted in 1973 indicated that an estimated 38 percent or 3 million of the province's 8 million people went fishing at least once during the year. Lack of nearby opportunities and poor quality, crowded facilities were the most serious constraints to participation. About one-third of sport fishing efforts in the province are related to trout (all species); one-third to yellow pickerel (walleye) and bass; and, the remaining third to other species including pike, maskinonge, catfish, sunfish, rock bass, and smelt. There is little quantitative information available for fish-watchers, scuba divers, and other users of the fisheries resource. However, over 120,000 people visit the 14 fish culture stations annually and one provincial fishway on the Saugeen River attracts more than 20,000 sightseers each year.

In southern Ontario, there were an estimated 25.6 million occasions of participation in angling in 1975. Estimated harvest by sport fishermen in southern Ontario in the same year was between 15 and 20 million pounds (6.7 to 9.1 million kilograms). Total direct expenditures by anglers on their sport in southern Ontario were estimated at about 335 million dollars for 1975 of which about 80 million dollars were spent by non-residents of the province. If the per capita rate of participation in fishing remains constant, total fishing pressure by the year 2000 can be expected to exceed 35 million occasions annually.

This in all probability means that in southern Ontario, in spite of resource rehabilitation and increased fish production in some areas, the supply of angling opportunities will not satisfy current expectations and reduced fishing success will have to be accepted. To reduce pressure on over-exploited communities, and to redistribute fishing pressure in accordance with supply, additional restrictions on fishing may be necessary.

Consideration may also have to be given to more "put-and-take" fisheries. It may be that a substantial portion of the southern Ontario recreational fishery demand can be met through the provision of such opportunities. This has been done successfully in the United States.

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- FISHERIES POLICY

Based on the above:

- . *the target for commercial fishing in southern Ontario is to provide for an annual average harvest of approximately 44.1 million pounds (20.00 million kilograms) by the year 2000; and,*
- . *the target for sport fishing is to maintain the present diversity of fishing recreation and to provide by the year 2000, 28.6 million recreation opportunities annually based on a harvest of 14.3 million pounds (6.49 million kilograms).*

These targets will be achieved by:

- a. managing the fishery more effectively including:
 - . preventing overfishing;
 - . rehabilitating degraded aquatic communities;
 - . consistently and fairly enforcing all management rulings;
 - . allocating fish resources firstly to maintain healthy and balanced fish populations, then among competing users particularly between the sport and the commercial fishery to provide the optimum mix of benefits; and,
 - . ensuring, insofar as possible and practical, that environmental quality criteria essential to the health of the aquatic communities are being met;
- b. expanding our knowledge for more effective future management by:
 - . establishing assessment units on representative lakes;
 - . investigating the life histories of components of the aquatic community, the mechanisms which determine fisheries productivity, and the economics of sport and commercial fisheries;

PROPOSED POLICIES FOR COORDINATED
PROGRAM STRATEGY -- FISHERIES POLICY

- c. creating an aware public including developing mechanisms for positive and effective public involvement in fisheries management decisions;
- d. adopting the "user pays" principle in line with the value of the fisheries resource and the true cost of effective management;
- e. improving access to recreational fishing waters;
- f. encouraging the provision of "put-and-take" fishing opportunities by both public and private sectors;
- g. encouraging the acceptability of viable commercial fishing operations in certain areas;
- h. encouraging the development of markets for under-utilized fish species; and,
- i. developing technological improvements in commercial fishing.

General Recreation Resources Policy

The following section refers to those recreation activities oriented to resources other than fish and wildlife.

The objectives for these other recreation activities are:

- . to provide and to encourage the provision of a wide variety of day-use and extended-use recreation experiences;*
- . to identify, select, and protect significant natural and cultural resources; and,*
- . to provide an economic contribution through tourism.*

PROPOSED POLICIES FOR COORDINATED PROGRAM
STRATEGY -- GENERAL RECREATION RESOURCES POLICY

Discussion

Southern Ontario provides about 80 percent of the outdoor recreation which occurs in Ontario. This includes about 90 percent of all home-based recreation and 65 percent of all non-home-based recreation. Total recreation use in southern Ontario for the activities of boating, picnicking, camping, swimming, and hiking was about 210 million occasions in 1975.

A very large amount of this recreation occurs in other than formally designated provincial park and recreation areas; for example, conservation authority lands, municipal and commercial parks and facilities, county and agreement forests, private land, and undesignated crown land and waters.

Over two-thirds of the campsite capacity in southern Ontario is provided by private commercial interests. Approximately 60 percent of the bathing opportunities are supplied by municipal, regional (largely conservation authorities), and private commercial facilities. Municipalities and conservation authorities through their participation in the agreement forest program also provide potential opportunities for a variety of recreation activities which include snowshoeing, hiking, horseback riding, and snowmobiling.

Cottaging is a traditional recreational activity carried out on private lands. It is estimated that southern Ontario has over 60 percent of all the cottages in the province, providing about 47.2 million occasions annually.

The nearly 4 million acres (1.7 million hectares) of crown land in southern Ontario (exclusive of provincial parks) also provide a very valuable base for outdoor recreation activity.

Trail activities provide recreational opportunities for a growing number of enthusiasts. In 1977 there were 536 clubs and/or associations known to be active in southern Ontario. A winter trails assistance program entered its fifth year of operation in the fiscal year 1978-79.

PROPOSED POLICIES FOR COORDINATED PROGRAM
STRATEGY -- GENERAL RECREATION RESOURCES POLICY

Further policy direction is expected to be developed from recommendations of the Ontario Trails Council.

Targets have not been established for these other recreation activities. The objectives will be achieved in provincial parks and on Crown land as well as through the contribution of conservation authorities, other agencies and the private sector. More specifically, the objective will be accomplished by:

- a. identifying Ministry targets for the other recreation activities considering total opportunities to be provided by the Ministry, other agencies, and the private sector;
- b. cooperating with and providing assistance to conservation authorities to acquire, plan, and develop recreation areas;
- c. providing assistance to municipalities and private organizations for the development of recreation areas and facilities;
- d. developing provincial parks;
- e. participating in the development of a comprehensive outdoor recreation policy that integrates all program elements of all agencies;
- f. identifying areas of valued biological, geological and cultural systems or features;
- g. participating in efforts to improve the coordination of various funding schemes and agencies offering recreation assistance to municipalities;
- h. reviewing and updating legislation with respect to landowner liability and also to permit judicious zoning of public land;

PROPOSED POLICIES FOR COORDINATED PROGRAM
STRATEGY -- GENERAL RECREATION RESOURCES POLICY

- i. reviewing the role of public lands to provide a variety of recreation benefits including cottaging¹;
- j. protecting and managing reserves to maintain those qualities that make them attractive to recreation users;
- k. developing access points to facilitate use of public lands and waters;
- l. designating and managing canoe routes through public and private lands; and,
- m. encouraging the development of a comprehensive trails network on public and private lands.

Provincial Parks Policy

The objectives of the provincial parks system are:

to protect provincially significant elements of the natural and cultural landscape of Ontario, specifically,

- . to protect a system of earth science features representative of Ontario's earth science history and diversity,*
- . to protect a system of life science features representative of Ontario's life science history and diversity, and,*
- . to protect a system of landscape-related historical resources representative of Ontario's human history;*

¹A Crown land recreation policy is presently being developed by the Ministry. Included will be references to cottaging.

PROPOSED POLICIES FOR A COORDINATED PROGRAM:
STRATEGY -- PROVINCIAL PARKS POLICY

to provide provincial park outdoor recreation opportunities ranging from high intensity day-use to low intensity wilderness experiences, specifically,

- . to ensure adequate day-use opportunities in provincial parks close to the province's population centres,*
- . to ensure adequate car-camping in provincial parks in those areas of the province which currently have inadequate opportunities, and,*
- . to ensure adequate interior camping opportunities within the provincial park system;*

to provide opportunities for exploration and appreciation of the outdoor, natural, and cultural heritage of Ontario, specifically,

- . to ensure adequate opportunities for unstructured individual exploration and appreciation of the outdoor, natural, and cultural heritage of Ontario, and,*
- . to ensure adequate opportunities for exploration and appreciation of the outdoor natural and cultural heritage of Ontario through the provision of a wide variety of interpretive and educational programs; and,*

to provide Ontario's residents and out-of-province visitors with opportunities to discover and experience the distinctive regions of the province, specifically,

- . to ensure an adequate level of day-use and short term camping opportunities within provincial parks for Ontario's travellers, and,*

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- PROVINCIAL PARKS POLICY

- to ensure an adequate level of destination camping opportunities for Ontario residents and visitors.*

Discussion

It is planned that the provincial park system be permanent, distinctive, representative, varied, and accessible. It will function as a system complementary to the private sector and other agencies. Parks are classified and zoned. There are six classes of parks: wilderness, nature reserves, historical, natural environment, waterway, and recreation.

There are 72 provincial parks in southern Ontario totalling 2.01 million acres (0.8 million hectares). Algonquin Provincial Park accounts for over 90 percent of this total. In addition there are 130,000 acres (52,000 hectares) in provincial park reserves in southern Ontario. Presently, provincial parks and reserves comprise about 4 percent of the area of southern Ontario.

There are 44 recreation parks totalling 17,779 acres (7,196 hectares), 20 are natural environment parks with 1,990,884 acres (805,591 hectares); 7 nature reserves comprising 1,059 acres (429 hectares); and, 1 historical park of 3,842 acres (1,555 hectares).

Total visitation to provincial parks in southern Ontario in the 1977 operating season was 8.4 million occasions. The greatest use occurred in the Central Region where 16 parks received close to 2.6 million visits.

The visitor services program provides for improved communication, outdoor education, interpretation, and development of recreation skills. Interpretive contacts have increased steadily from 376,000 in 1960 to 1.9 million in 1977.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- PROVINCIAL PARKS POLICY

The preliminary recreation and tourism targets which are being considered allow for a modest increase in supply of provincial park opportunities in southern Ontario to accommodate anticipated population growth and tourism demands. Projections of future needs have considered not only the magnitude of population changes but also the changing age structure of the population and its relationship to participation in recreational activities.

Provincial parks in southern Ontario will also protect representative and unique elements of the natural and cultural landscape. In association with this objective, provincial parks will provide opportunities for exploration and appreciation of these natural and cultural landscape elements.

To fulfill the protection objective, additional parks may have to be considered in southern Ontario. The exact number and size of sites which may be required to achieve the protection objective has not been finally determined. Although the number of individual features to be represented is quite high, the area required to contain them may be relatively small. Efforts are underway to assess the extent to which representation can be achieved within existing park reserves or on other public lands.

While additional parks may be established to meet targets and future needs, certain existing parks that have limited benefits or serve primarily as car campgrounds may transfer to another jurisdiction or the private sector.

Expansion or changes proposed to the provincial parks system in southern Ontario will take into account the contributions of other public agencies and the private sector in providing outdoor recreation opportunities and in protecting natural and cultural features. Proposed changes will relate directly to the distinctive nature of provincial parks and will be complementary to, rather than competitive with, the private sector, and other agencies.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- PROVINCIAL PARKS POLICY

Although the objectives of the provincial parks system have received Cabinet approval, program components and targets for southern Ontario have not been formally established. The targets proposed below are for assessment and testing purposes only and have been developed on the premise that the provincial parks system will normally provide basic facilities in relatively undeveloped settings and will provide day-use and highly developed camping facilities only where it is consistent with the protection or representation of provincially significant features or where other agencies or individuals are unable or unwilling to provide adequate recreation benefits.

The targets for the provincial parks system in southern Ontario are:

protection

- . to protect a system of provincially significant representative and special earth science features through representation of each unit of southern Ontario's earth science history;*
- . to protect a system of provincially significant life science features through representation of each vegetative site type in each of the site regions in southern Ontario;*
- . to protect a system of provincially significant landscape-related prehistorical and historical resources through representation of each theme segment of southern Ontario's history;*

recreation

- . to provide to the southern Ontario population an accessible basic supply of swimming and picnicking opportunities in provincial parks, comprising 1.44 opportunities per person per year (the 1976 mean supply per person in southern Ontario);*

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- PROVINCIAL PARKS POLICY

- . to provide to the southern Ontario population an accessible, basic supply of car camping opportunities in provincial parks, comprising 0.41 camper days per person per year (the 1976 mean supply per person in southern Ontario);
- . to provide a basic supply of interior camping opportunities in provincial parks in southern Ontario which maintains the current (1976) accessibility of the southern Ontario population to interior camping opportunities in provincial parks;

heritage appreciation

- . to maximize opportunities for unstructured individual exploration and appreciation of the outdoor natural and cultural heritage of southern Ontario;
- . to maximize opportunities for exploration and appreciation of the outdoor natural and cultural heritage of southern Ontario through the provision of a wide variety of interpretive and educational programs; and,

tourism

- . to provide a basic supply of camping and day-use opportunities for tourists in provincial parks in southern Ontario, allowing for a growth rate equal to the population growth rate for major tourism market areas.

The objectives and targets are long term ends to be achieved over the next twenty years. The targets will be achieved through:

- a. the Ontario provincial park classification and zoning system. The protection targets may be met through representation provided in wilderness, natural environment, nature reserve, and historical zones. The recreation targets may be met through natural environment, wilderness, and development zones. The tourism and heritage

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- PROVINCIAL PARKS POLICY

appreciation targets may be achieved through all park classes and zones;

- b. assessing the overall recreation supply in Ontario so decisions may be made concerning the best balance between provincial development and those of the private sector. Future provincial parks will complement the private sector regarding the quality and variety of service by offering basic facilities that are in keeping with a natural setting;
- c. reviewing the extent to which objectives can be achieved through private sector and municipal development and encouraging the achievement of the objectives through these other agencies;
- d. examining all provincially-controlled lands to determine the extent to which the targets can be represented on these lands, and identifying lands surplus to parks needs;
- e. reviewing and adjusting the current classification, design and number of existing provincial parks;
- f. determining where those targets not represented on provincially-controlled lands can be represented; and,
- g. developing provincially-controlled lands and acquiring or easing and developing additional lands to fully achieve the targets.

Land and Water Management Policy

The objective for land and water management is:

- . *to manage public land and water and to encourage the management of private lands and waters in an integrated and comprehensive manner in order to achieve Ministry objectives.*

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- LAND AND WATER MANAGEMENT POLICY

Discussion

The Ministry has a major responsibility to maintain and increase the supply of renewable resources and to use and manage the land, water, and mineral resources so as to minimize adverse environmental effects while maximizing long term social, economic, and environmental benefits.

The Ministry is also concerned with human health and welfare as it relates to the natural environment. Development may increase the risk of loss of life, property damage, and environmental degradation when encroachment occurs upon lands in which the natural processes of flooding, erosion, and soil instability are active. The Ministry, in conjunction with conservation authorities, has a major responsibility to minimize loss of life and property damage related to development in such hazardous areas.

As a custodian of public lands and waters, the Ministry has a direct management responsibility for about 45 percent of the total area of southern Ontario. The Ministry also deals with conflicts involving land ownership and rights in land including such things as unauthorized use of Crown land and Indian land claims. It is also responsible for ensuring that a side range of benefits are derived from southern Ontario's natural resources. A major portion of these objectives are achieved by the use of private lands. Therefore, the Ministry must enlist the cooperation of municipalities and individual landowners to achieve significant portions of its objectives.

As indicated in the introduction, a new approach, strategic land use planning, has been adopted by the Ministry in response to the growing need for coordination of all land and water uses. Preparation of a coordinated program strategy for the Ministry in southern Ontario and of local plans is a major part of the Ministry's land and water management program. These plans will identify, at a provincial, regional and local level, the land and water required to meet the Ministry's objectives.

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- LAND AND WATER MANAGEMENT POLICY

To a very large degree then, the successful achievement of Ministry objectives will depend upon the Ministry's ability to clearly identify those objectives and to clearly identify the implications of various land use decisions by municipalities and other government agencies on the Ministry's continued ability to provide benefits from the natural resources of southern Ontario.

Specific targets have not yet been developed for the land and water management program.

The objective will be accomplished in southern Ontario by:

- a. the preparation of the southern Ontario coordinated program strategy which states in general terms how the Ministry wishes to use or encourage the use of land and water and which provides an overall framework for all land-based programs of the Ministry;
- b. the preparation of more detailed local Ministry land use plans which translate the policies for southern Ontario contained in the coordinated program strategy into meaningful policies, objectives and targets at a local level and which identify more specifically how the Ministry wishes to use or influence the use of land and water;
- c. continued liaison with other provincial, federal, and municipal agencies and with the private sector to ensure that the policies, programs, and actions of those groups or individuals and the Ministry are supportive and complementary. More specifically, the Ministry will make input to, and conduct review of, specific development plans, municipal official plans, and other plans and programs;
- d. providing guidelines for and making input to comprehensive watershed plans of conservation authorities;

PROPOSED POLICIES FOR A COORDINATED PROGRAM
STRATEGY -- LAND AND WATER MANAGEMENT POLICY

- e. managing, regulating and/or making input to the management or regulation of the hydrological components of watersheds including ground water recharge and source areas, valley lands, and waterfront areas; regulating or making input to the regulation of land and water uses;
- f. ensuring the Crown land and water is administered and managed consistent with the achievement of Ministry objectives; and,
- g. protecting public rights to the use of Crown land and water through appropriate legislation, regulations, and enforcement.

GLOSSARY

- Goal - A goal is a general purpose to which the Ministry aspires.
- Objective - An objective is a quantifiable and attainable end which the Ministry's efforts are intended to accomplish. A broad objective is an objective which is not easily quantified. When possible, objectives are stated in terms of human impact such as jobs, recreation opportunities or earned income.
- Target - A target is a quantified end to be achieved or completed by a specific date. When possible, targets are stated in terms of human impact such as jobs, recreation opportunities or income earned.
- Policy - Policy includes objectives and targets to be achieved and the means of achieving them. Policy, simply stated, is a course of action which has been adopted and is pursued.
- Public Land - Public land includes any land owned or administered by a public body or agency. It includes federal, provincial and municipally-owned lands and lands held by agencies such as park commissions and conservation authorities.
- Crown Land - Crown land includes all land held by the province, both land which has never been sold and land which has been reacquired.
- Occasion - An occasion is a measure of recreational use. It is used to describe the number of times a recreation resource or facility is used by individuals in a given time period. An occasion is considered not to exceed one day in duration.¹
- Opportunity - An opportunity is a measure of recreation supply. It is used to describe the number of times a resource or facility can be used (occasions of use) in a given time period. An opportunity is considered not to be greater than one day.

¹ The term occasion is used in place of "user-day", a term which was formerly used as a measure of both supply and use.



SELECTED REFERENCES

- Great Lakes Fisheries Commission, 1970. Supplement to Technical Report No. 3, Fish Production in the Great Lakes 1961 to 1968.
- Ontario Department of Lands and Forests, 1959. A Ready Reference to the Description of the Land of Ontario and Its Productivity, Preliminary Report.
- Ontario Department of Lands and Forests, 1969. The Ontario Forest Industry, Hedlin Menzies and Associates Limited.
- Ontario Department of Lands and Forests and Ministry of Natural Resources, (reports for 1966 to 1976). Ontario Commercial Fish Industry Statistics.
- Ontario Ministry of Natural Resources, 1972. A Guide to the Organization and Management System.
- Ontario Ministry of Natural Resources, 1973. Primary Wood Using Industries in Ontario.
- Ontario Ministry of Natural Resources, 1974. Mineral Aggregate Study, Central Ontario Planning Region, Proctor and Redfern Limited.
- Ontario Ministry of Natural Resources, 1975. Ontario Angling Facts and Figures.
- Ontario Ministry of Natural Resources, 1976. Forest Production Policy Options for Ontario (Revised, February 1976).
- Ontario Ministry of Natural Resources, 1976. Mineral Aggregate Studies and Geological Inventory, Eastern Ontario Region, Proctor and Redfern Limited.
- Ontario Ministry of Natural Resources, 1976. Mineral Aggregate Studies and Geological Inventory, Southwestern Ontario Region. Proctor and Redfern Limited.
- Ontario Ministry of Natural Resources, 1976. Ontario Provincial Parks Statistics.
- Ontario Ministry of Natural Resources, 1977. A Policy for Mineral Aggregate Resource Management Ontario, A Report of the Mineral Aggregate Working Party.
- Ontario Ministry of Natural Resources, 1977. Crown Land Recreation Study, Phase II, Future Trends and Management Options (Final draft, October 1978), Hough Stansbury and Associates Limited.
- Ontario Ministry of Natural Resources, 1978. Ontario Fish Yield Estimates (draft).
- Ontario Ministry of Natural Resources, 1979. Ontario Provincial Parks, Planning and Management Policies.

SELECTED REFERENCES

- Ontario Ministry of Natural Resources and Canada Department of Energy, Mines, and Resources, 1973. Mineral Policy Objectives for Canada, A Statement by Federal and Provincial Ministers Responsible for Mineral Policy.
- Ontario Ministry of Natural Resources and Economics Canada, 1976. Strategic Planning for Ontario Fisheries, Fourth Report.
- Tourism and Outdoor Recreation Planning Study, 1974. Ontario Recreation Survey, Progress Report No. 2.

