

Cavern Lake Provincial Nature Reserve

Management Plan



Ontario

Ministry of
Natural
Resources

Cavern Lake Provincial Nature Reserve Management Plan



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Natural
Resources

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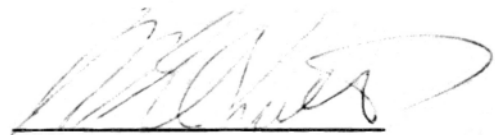
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Approval Statement

Cavern Lake Provincial Nature Reserve encompasses an area dominated by an impressive canyon. A granite cave used by hibernating bats and some unusual flora more common to arctic-alpine habitats are two of the canyon's more notable features.

We are pleased to approve the Cavern Lake Provincial Nature Reserve Management Plan as official policy for the management and development of this park. The plan reflects this Ministry's intent to protect the natural features of Cavern Lake Provincial Nature Reserve while providing research opportunities to the scientific community and educational opportunities to the general public.



G.P. Elliott
Regional Director
North Central Region



N.R. Richards
Director
Parks and Recreational
Areas Branch

APR 15 1985

date

APRIL 2, 1985

date

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1.0 INTRODUCTION

1.1 LOCATION

Cavern Lake Provincial Nature Reserve is located in Thunder Bay District, North Central Region of the Ontario Ministry of Natural Resources (figure 1). It occupies portions of Dorion and Glen Townships, about 12 km (7.4 mi.) WNW of Dorion, Ontario, 19 km (11.8 mi.) due north of Pearl (on the Trans-Canada Highway), and 64 km (39.7 mi.) NE of the city of Thunder Bay. The park area of 189 hectares (467 acres) is defined by straight line boundaries (figure 2). Access from the Trans-Canada Highway (#11-17) is by way of the Ministry of Natural Resources Dorion fish hatchery road and part of the Wolf Lake forest access road. A bush road originally developed to access the Bishop, Dorion and Thunder Bay mining locations, now upgraded to access logging operations south of the park, provides access to the southeastern periphery of the park.

1.2 LEGAL STATUS

Bat Cave Wilderness Area of 71.6 ha (177 acres) was regulated in 1960 under the Wilderness Areas Act (Schedule 34, Regulation 946, The Wilderness Areas Act, Revised Regulations of Ontario, 1980). Under authority of the Provincial Parks Act an additional area of 117.4 ha (290 acres) was added to the northern boundary of the wilderness area in 1975 and the resulting area named Cavern Lake Provincial Nature Reserve (The Revised Statutes of Ontario, 1970, Ontario Regulation 131/75, Schedule 113).

1.3 BRIEF DESCRIPTION

Cavern Lake Provincial Nature Reserve encompasses a representative portion of the diabase-influenced landscape typical of the Thunder Bay-Nipigon area of Ontario. The park is named after the lake which occurs partially within the boundaries and occupies part of the floor of the canyon. The park is noted for a varied cold-climate flora in the steep-walled canyon and a cave used by hibernating bats. Included in this flora are arctic-alpine species such as sandwort, arctic pyrola and alpine bistort. The establishment of the wilderness area was initially intended to stem the decline of the bat population which uses the cave as a hibernaculum each winter. It is one of a few hibernaca in northern Ontario.

2.0 PARK POLICIES

2.1 GOAL


The goal for Cavern Lake Provincial Nature Reserve is to protect for the people of Ontario its significant natural resources for educational and scientific purposes. These natural resources include the unique and fragile arctic-alpine flora, the population of bats which uses the cave as a hibernaculum and swarming site and the geological/geomorphological features which record both the bedrock history and deglaciation history of the park and area.

2.2 OBJECTIVES

Of the four objectives of the provincial park system: protection, recreation, heritage appreciation and tourism Cavern Lake Provincial Nature Reserve will contribute towards achievement of the protection and heritage appreciation objectives.

Figure 1

Regional Setting

 Provincial park or nature reserve (NR)

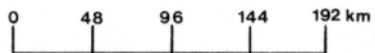





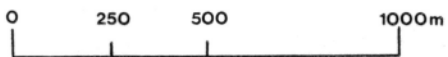
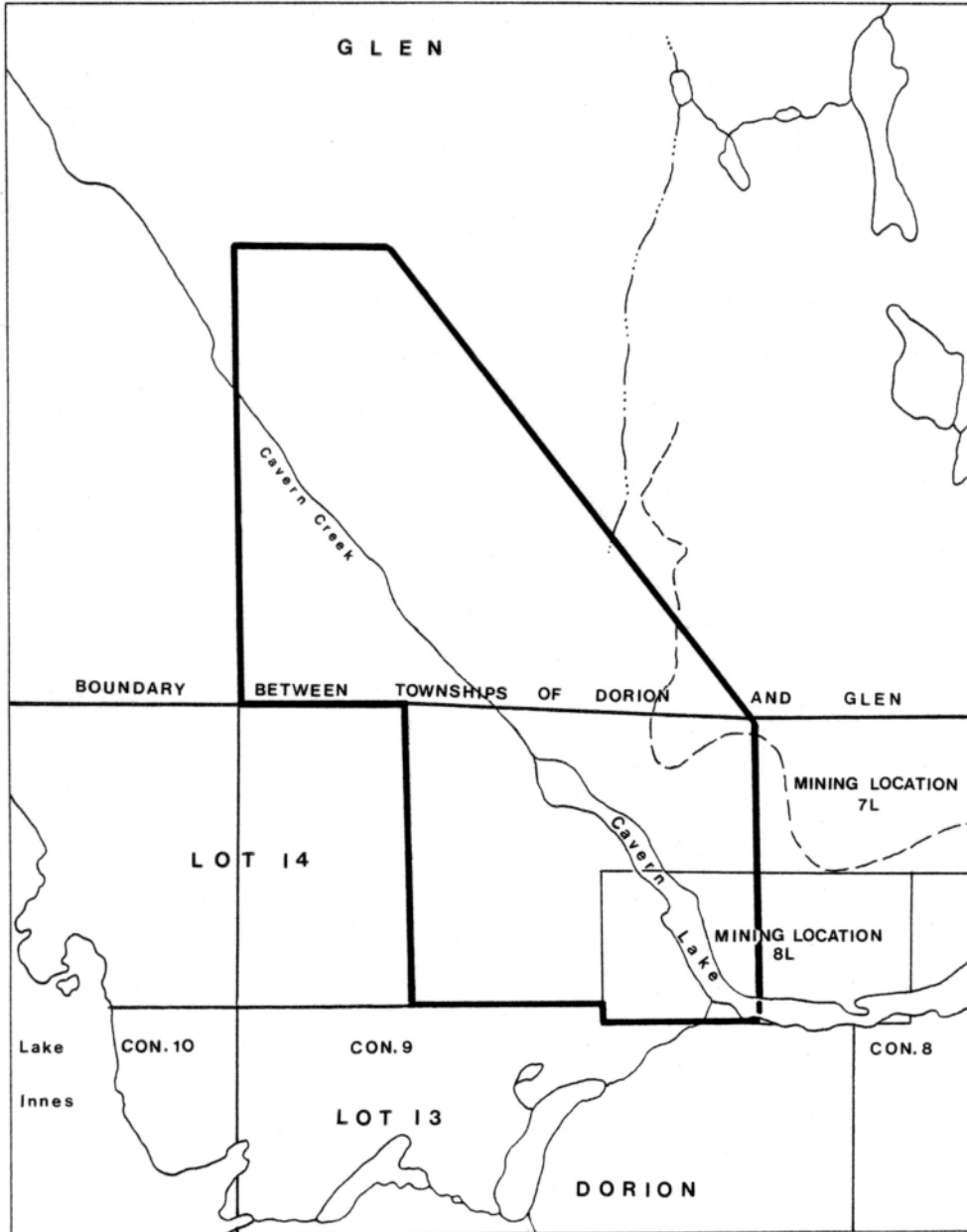


Figure 2

Boundary Map

-  Intermittent stream
-  Abandoned road
-  Park boundary
-  Township boundary
-  Lot and concession boundary
-  Mining location boundary



2.2.1 PROTECTION OBJECTIVE

“To protect provincially significant elements of the natural and cultural landscape of Ontario.”

Cavern Lake has some significant earth and life science features which will be protected through appropriate management. The arctic-alpine flora, the bat hibernaculum, the canyon itself and the granite cave have been identified to date.

2.2.2 HERITAGE APPRECIATION OBJECTIVE

“To provide opportunities for the exploration and appreciation of the outdoor natural and cultural heritage of Ontario.

Cavern Lake will provide a resource base for research; the results of which will be used in interpretive and public education programmes. Direct public access to the park will not be encouraged but the features will be explained “at arm’s length”.

2.3 CLASSIFICATION

The nature reserve classification is designed to protect those unique and representative biophysical features in Ontario worthy of protection for their natural values. Parks classified as nature reserves will be designated where representation of significant earth and life science features does not occur in the other classes of provincial parks and where the incorporation of isolated or specialized environments is necessary.

Cavern Lake Provincial Nature Reserve is classified as a nature reserve under the Ontario Ministry of Natural Resources Provincial Parks Policy of 1978. As such it will be managed in a manner guided by the Ontario Provincial Parks Planning and Management Policies.

The ecological fragility of the previously described features requires the formalized protection offered by a nature reserve class park.

2.4 ZONING

There will be only one zone –a nature reserve zone –designated in the park as no recreation or tourism facilities will be developed and direct public access will be discouraged.

3.0 RESOURCE MANAGEMENT

As a nature reserve class park Cavern Lake will be allowed to remain in as natural condition as possible. Any management within the park will be to protect or maintain those values for which the park was initially set aside or to protect values immediately adjoining the park which might be threatened by some natural process within the park (e.g. wildfire, insect infestation). Resource extraction is generally not permitted in the nature reserve class of park nor are many forms of recreation.

3.1 VEGETATION

While active management of the fragile arctic-alpine flora is not required the entrance to the park from the north end of the canyon will be posted with a sign prohibiting unauthorized entry at this point. Despite the infrequent visitation that the area receives, the vegetation is sensitive to foot traffic as evidenced by a distinguishable trail.

3.2 FISH AND WILDLIFE

Fishing will be allowed to continue on the portion of Cavern Lake within the park. Park values are not threatened by this activity, and it is unreasonable to limit fishing to that portion of the lake outside the park boundaries. For fishing access motorboats and snowmachines will be allowed on the portion of the lake within the park.

Hunting will not be allowed in the park.

There is a population of bats, which uses the cave in the park during the swarming period from July to September and again during hibernation from October to April. During these times, but especially during hibernation, the bats are sensitive to any disturbance within the cave. The installation of a permanent grillwork across the cave entrance has been suggested for reasons of public safety and would prove useful in limiting access (although the impact of disrupting the site is unknown) and will be considered when funding becomes available. In the meantime signs posted near and at the entrance to the cave will prohibit all unauthorized entrance to the cave. Authorization for access will be obtained from the District Manager.

3.3 MINING AND MINERAL AGGREGATES

The geological/geomorphological components of the park are durable features, which are under no real threat of being altered. Mineral exploration is presently excluded from Cavern Lake Provincial Nature Reserve and will not be considered as a future activity. Mineral extraction or the exploitation of any surficial (aggregate) materials is not and will not be permitted. The cave will be allowed to evolve naturally.

4.0 CLIENT SERVICES MANAGEMENT

4.1 VISITOR SERVICES

The major objective of the park is that of protection. Thus, visitor services contacts will be limited to off-site contacts through the Provincial Parks Nature Reserves brochure, contact with visitor services programmes in other parks in the district and through contact with the district office.

Visitation to Cavern Lake will not be encouraged. Rather, visitors will be directed to Ouimet Canyon where an interpretive display already describes some similar features.

Requests to access the park will be evaluated as to intent. Since interpretive or educational contacts are to be handled off-site the value of a site visit above and beyond off-site interpretive resources will have to be shown. The availability of a ministry staff member to accompany and monitor the visit will also have to be considered.

As part of the visitor services programme being developed in Ouimet Canyon, Sibley, and Kakabeka Falls Provincial Parks, the following information should be presented as it applies to nature reserve parks in general and Cavern Lake in particular:

- the philosophy and objectives of the provincial nature reserve system;
- the management and operating policies and decisions as they relate to the provincial nature reserves;
- the significance and extent of bat populations in Ontario, and the role played by Cavern Lake Provincial Nature Reserve in the population dynamics of bats of North Central Region;

- the need for protection of the bat habitat and population, and how this may be achieved;
- the significance of the flora found in the steep-walled canyon northwest of Cavern Lake and how this assemblage relates to those at Ouimet Canyon and other north shore localities;
- the need to protect and preserve the significant flora and protect the integrity of the geological features.

4.2 RESEARCH

Scientific research will continue to be the major on-site activity at the park. It will be conducted in accordance with the provincial park policy on research and will be first screened and then monitored for any negative impact that such activity might have on the park's features. Researchers will submit a written proposal fully describing the purpose and methodology of the study, and how the new knowledge will help advance the state of the science involved. All collecting, be it bats or flora, will be strictly controlled. Researchers may be directed to the collections of floral and faunal materials housed at Lakehead University, the Royal Ontario Museum and the National Museum of Canada. Accurate and extensive documentation of sample locations and specimens will be submitted to the M.N.R. by all researchers. A copy of all results e.g. lab tests, reports, etceteras, which result from the research will be submitted to the Ontario Ministry of Natural Resources District Office, Thunder Bay.

Under consideration in other nature reserves is the requirement that a M.N.R. employee be on hand during the field stages of research in provincial parks in order to monitor the impact of such research. This requirement may be considered for Cavern Lake Provincial Nature Reserve.

Research directed at providing information for the management of the bat cave will be encouraged.

Research to monitor visitor use levels and their impacts will be carried out to determine the need for a designated trail system to protect the fragile vegetation.

An annual census of the bat population during the hibernating season conducted by Ministry staff will be considered in order to establish a minimum base of data to determine population trends. The census will be performed so as to cause minimal disturbance to the bats. The census may also involve knowledgeable individuals who are not directly employed by the Ministry. The censusing activities will be curtailed if it is indicated they are having an adverse effect on the bat population.

5.0 DEVELOPMENT

The purpose of this section of the management plan is to establish the basic framework for the development of on-site and related off-site systems and facilities. The geological features of the park, in particular the cave, do not require special management for their protection and will be allowed to evolve naturally. A low-key approach to management, designed to enhance the interpretive, educational, and scientific uses of the park, will be adopted. The similarity between Cavern Lake and Ouimet Canyon has been previously noted. Interpretation of the features at Cavern Lake Provincial Nature Reserve will take place at Ouimet Canyon, where public interpretive displays are in place.

All existing roads and trails in the park will be allowed to deteriorate to a natural condition. The forest access road to the east end of Cavern Lake will remain passable until the present operation ceases. The portion of the road to the old Dorion Mine site will probably remain passable as long as there remains a knowledge of the mine site and an interest in mineral collecting from the waste dump (the pile of waste rock removed during the mining process). Fishermen accessing Cavern Lake and naturalists

visiting the park will also help keep the road passable. The other trails will remain passable and visible given the present rate of use. The use of signage will provide the major deterrent to unauthorized access.

The bat cave is readily accessible by a path from the old Dorion Mine site. The large cave opening allows for deep penetration of the cave and its several chambers. It is obvious from the fresh ceiling exposures and the block debris on the cave floor that the cave produces considerable rock fall at irregular intervals. This rock fall and the unstable ceiling pose a safety threat to visitors. It has been suggested that the cave entrance be closed off with permanent structures (iron grillwork, mesh fencing) that would still allow bats access to the cave. Such structures will be considered when sufficient funds become available. In the interim prominent signage at the cave entrance will be the deterrent to entrance to the cave.

The park area will be conspicuously signed at strategic entry points (figure 2) so as to inform visitors that they are entering a protected area. It is suggested that these signs indicate only the name of the park that it is illegal to remove or damage any natural features within the park, and that the district office be contacted for further information. Recommended locations for these signs include: on the Dorion Mine road at the park boundary; both approaches to the bat cave (from above and below); on Cavern Lake at the park boundary (to inform boaters from the Cavern Lake access point); at the northwest end of Cavern Lake (to inform people entering the canyon on foot) and at the northwest end of the canyon at the park boundary (to inform people approaching from the north).

6.0 IMPLEMENTATION STRATEGY

The following items are listed in decreasing order of priority.

The park will be managed by the superintendent of Sibley Park, as has been the case in the past.

Park signs including warning signs will be erected as outlined in the development section of this report. General information regarding the role of nature reserves in the parks system and their value in protecting natural resources will be distributed to the local naturalist group, school boards, university, college and any other potential user group that might not be fully aware of the intended protective role of nature reserve class parks. Site specific information regarding Cavern Lake Provincial Nature Reserve will only be available on application to the district office.

Sport fishing on Cavern Lake will be allowed to continue. Similarly, fish stocking of the lake will also continue.

Park maintenance will be minimal. Researchers and other park visitors will be expected to leave no trace of their visits to the park.

7.0 PUBLIC PARTICIPATION

The preliminary Management Plan for Cavern Lake Provincial Nature Reserve was available for review to the general public, the academic community, special interest groups and others between February 6, 1985 and March 8, 1985. No major concerns or suggested revisions were identified during this review period.

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