

# Protecting the Niagara Escarpment

*A first-of-its kind environmental land use plan strives to protect the natural and cultural attributes of one of Canada's unique regions*

By George McKibbin, Cecil Louis, and Frank Shaw

**A**PPROVAL of the Niagara Escarpment Plan by the Government of Ontario in June 1985 culminated a difficult and exciting 12-year planning effort. The plan is the first large-scale environmental land use plan of its kind formulated under specific provincial planning legislation. In Canada only the resource management plan for the eastern slopes of the Rocky Mountains in Alberta and the Meewasin environmental planning effort in Saskatchewan are comparable. From a North American perspective, the Niagara Escarpment Plan is comparable with the Lake Tahoe Region Plan in California and Nevada.

## Majestic cliffs

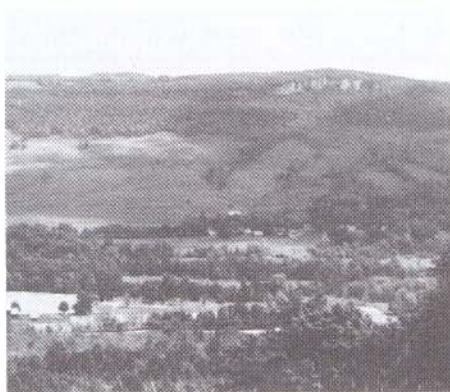
The Niagara Escarpment is the outer rim of an ancient lake bed geologically known as the Michigan Basin. The escarpment is partially exposed as a bedrock formation, eroded by glaciers and water. It stretches 450 miles (725 kilometers) across southern Ontario from Queenston near Niagara Falls to Tobermory on the Bruce Peninsula. The sedimentary lake bed rises in elevation from the southwest (central Michigan) to the northeast and exhibits a limestone cap rock that is more erosion-resistant than underlying layers. This results in majestic rock cliffs from which the escarpment gets its name.

Eight different geological and geomorphological formations characterize the lake bed rim. These surface formations include picturesque bluffs, deep valleys, scenic waterfalls, and rugged hills.

Escarpment landforms have had a pro-

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*George McKibbin is a senior planner with the Niagara Escarpment Commission, Cecil Louis is the manager of the commission's Plan Administration Section, and Frank Shaw is the commission's director, 232 Guelph Street, Georgetown, Ontario L7G 4B1.*



found influence on Southern Ontario's natural and cultural history. Because of the topographic relief, various microclimates harbor plant communities associated with both colder and warmer climates. These climatic influences moderate growing conditions on adjoining lands to the extent that fruit production is possible. Many of the most productive trout streams in southern Ontario originate on the escarpment. Wildlife habitats long removed from adjacent lands are found within the escarpment corridor. Pre-historic and historic settlement has clustered in the area, leaving many archeological and cultural artifacts.

## A plan history

In Canada the provinces are responsible for land use planning. Cities, counties, and regions have no legal jurisdiction to act except when powers are delegated to them by the provincial government. Municipal governments make land use decisions, but these decisions are subordinate to the jurisdiction and decisions of the province.

Competing land use demands in densely populated southern Ontario, coupled with a growing awareness of the province's diminishing natural environment, helped spark widespread concern about the future

of the Niagara Escarpment.

The Report of the Select Committee on Conservation Authorities was the first official report to highlight provincial interest in the escarpment. That report recommended long-range policies and a development plan for its protection.

The Ontario government responded to the public concern about land use in the escarpment area in 1967 when it commissioned a study by Len Gertler, a well known planner and professor at the University of Waterloo. Professor Gertler concluded that the provincial government should initiate protection of the Niagara Escarpment through a provincial plan providing for land acquisition, park development, and land use regulation.

The 17-member Niagara Escarpment Commission, which produced the draft plan, was established under the Niagara Escarpment Planning and Development Act. That act set forth a purpose and seven objectives. The legislation also provided a legal framework for plan preparation, amendment, review, administration, financial assistance, and a development permit system.

The act's purpose (section 2) "is to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with that natural environment."

In 1976 two advisory committees were established to assist the commission. One represented public-interest groups, such as the aggregate producers and environmental groups, while the other spoke for counties and regions. A draft plan was released for municipal and public comment in 1977. Within the next year the plan received considerable negative response, indicating that major changes were needed. Public and

municipal comments contributed to various changes in the first draft. Then in 1979 a revamped plan for the Niagara Escarpment was released for comment and mandatory public hearings. Plan hearings began in 1980 and continued for more than two years. The three-member hearing panel heard more than 700 submissions in that time.

In Canada planning policy and land use disputes are heard before administrative tribunals, not courts of law. Generally, the courts do not review decisions by administrative tribunals unless a judicial review is requested for an alleged error in law. Some of the 700 submissions at the Niagara Escarpment Plan hearings were made by lawyers. But the majority were made by citizens in a procedure established by the hearing panel to encourage broad public participation.

Following receipt of the hearing officers' report, the commission made its final recommendations on the plan in June 1983. By July 1984 the minister responsible for the commission made his recommendations to the Cabinet (the executive branch of the provincial government). Any party not satisfied with the minister's report could appeal to the cabinet. Another 350 submissions were made, after which the cabinet concluded the process by releasing the approved Niagara Escarpment Plan in June 1985.

### **Solution to conflict**

Preparation of the Niagara Escarpment Plan proved to be a controversial, difficult, lengthy, and expensive experience. Why then was the plan undertaken? There are several reasons.

In the late 1960s and early 1970s, land use conflicts emerged along the Niagara Escarpment between the extraction of aggregate resources and rural residential and



recreational uses. Some provincial action was necessary to license aggregate extraction.

In addition, several conservation authorities and the Ontario Ministry of Natural Resources had purchased parklands along the escarpment offering picnicking, hiking, skiing, and other recreational activities. But no integrating theme for park development and management was established to provide an escarpment orientation. An overall plan was thus needed for this integration.

Much private and public land was connected by the Bruce Trail. This hiking trail, developed by a private nonprofit agency (The Bruce Trail Association), is similar to

the Appalachian Trail. Trail users became strong advocates of further escarpment protection through provincial action.

Efforts during this same period by the International Biological Program and various naturalist groups also attracted attention to the Niagara Escarpment as a unique botanical and biological resource. To date, 91 provincially significant life and earth science areas have been identified and recognized on the escarpment. This represents one of the highest concentrations of sites in the province. Many groups associated with these and related objectives began to see preparation and implementation of an escarpment plan as an extension

of their environmental agenda.

The escarpment extends through 45 local municipalities within eight counties and regions. To protect this unique resource, a provincial plan was required to coordinate local land use planning.

The Gertler Report, prepared in the late 1960s, proved to be a thoughtful effort and inspirational blueprint for the plan. At the same time, there was substantial public emphasis on provincial government planning. That support has waned in recent years. But the Niagara Escarpment planning effort remains a strong provincial commitment, reinvigorated by the formal existence of an approved plan and by renewed interest in environmental protection.

### Three components

The Niagara Escarpment Plan has three components: land use policies, development criteria, and the Niagara Escarpment parks system.

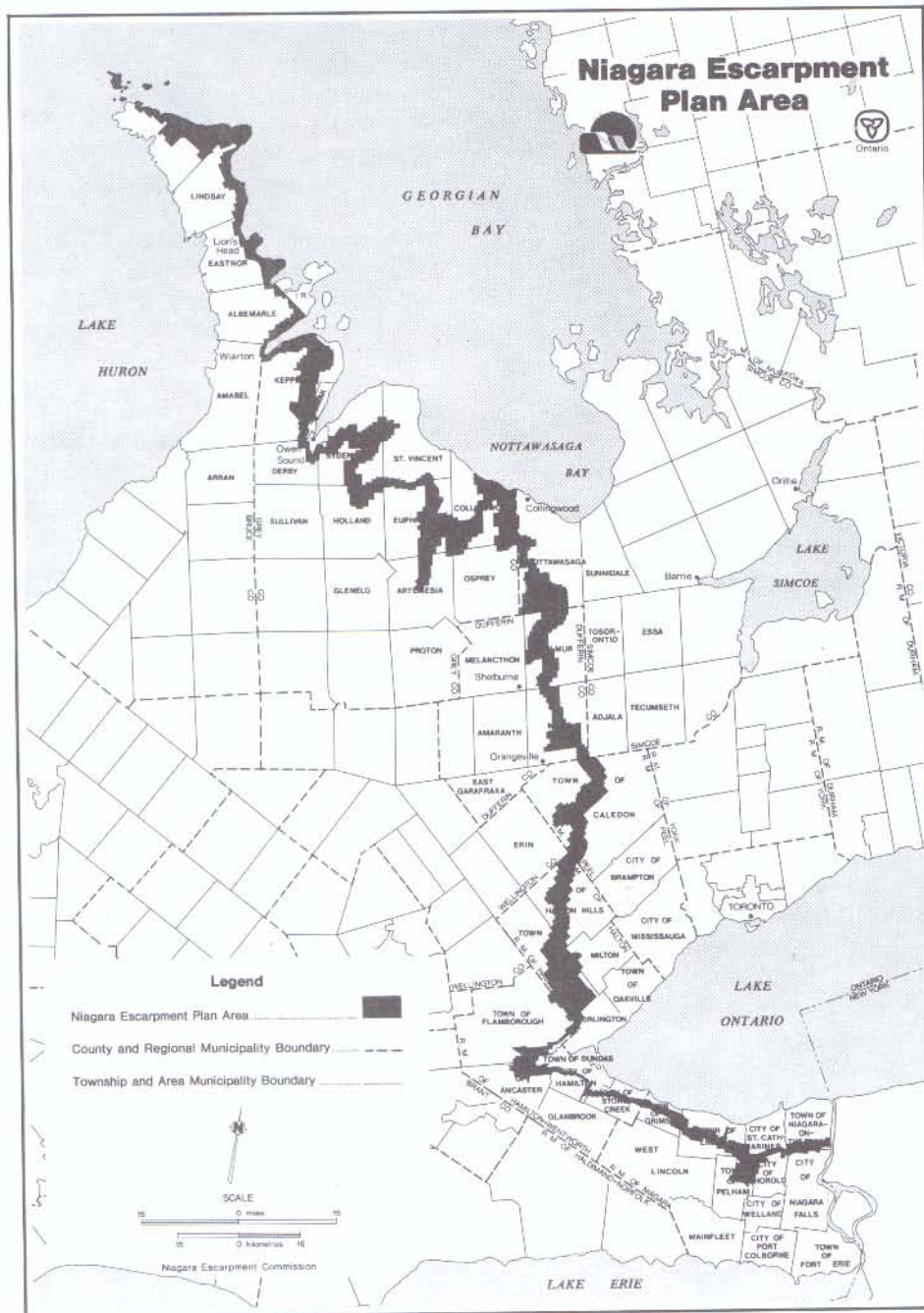
The land use policies establish criteria, objectives, and permitted uses for various land use designations. Three major designations cover about 90 percent of the plan area. Each of these designations, in turn, covers about 30 percent of the escarpment.

The land use designations in the plan are arranged on a continuum between disturbed and undisturbed landscapes. The most undisturbed designation is the escarpment natural area. This is the most restrictive designation in terms of permitted land uses. Conversely, the escarpment rural area designation encompasses the most disturbed landscape units. A wider range of land uses, including rural residential plans of subdivisions, are permitted therein.

Between the two extremes is the escarpment protection area designation. This designation includes escarpment slopes and valleys where some disturbance has already occurred.

The escarpment recreation, urban, minor urban, and mineral resource extraction designations make up the remaining 10 percent of the plan and reflect existing or approved development areas.

In delineating the three major designations, the commission went through an iterative procedure of mapping escarpment designations by degree of disturbance in the landscape unit. It then assigned various goals, objectives, permitted uses, and lot creation policies. The mapped units include undisturbed escarpment slopes; disturbed escarpment slopes; regionally significant, environmentally sensitive areas; and others. Throughout the Niagara Escarpment Plan hearings and public consultation process, the designations and their related land



use policies were not seriously questioned.

In construction, the Niagara Escarpment Plan designations are similar to those of the Lake Tahoe Region Plan. The exception is that there are fewer basic designations in the escarpment plan, three instead of seven, and the basis for each landscape unit is not restricted to geologic considerations.

The development criteria deal with environmental matters not restricted to landscape units. These include soil erosion, forestry, wildlife, water, and heritage resources. The criteria establish site and design performance standards for development proposals.

Performance standard ordinances are not new. For example, the Medford Township Plan in New Jersey was conceived as a series of ordinances dealing with individual environmental concerns. Whether a use is permitted depends upon how that use satisfies the scientific tests for all the ordinances. The Tahoe region plan also incorporates a series of ordinances dealing with such matters as tree preservation and maintenance of natural drainage conditions.

The principal difference in the escarpment plan is that these ordinances are all rolled into one approval. The implementation tool established in the Niagara Escarpment Planning and Development Act is a development permit system. This results in a single development permit being issued when the land use policies and development criteria are satisfactorily met.

Application of a development permit system is unique in Ontario, but such a system has been used in other provinces. Although some initial apprehension occurred when first instituted in 1975, the system has gained more general acceptance after 12 years of practice.

The Niagara Escarpment Parks System provides a framework for establishing and coordinating 105 existing and proposed parks within a unified system. It is organized and managed cooperatively by seven conservation authorities, the Ministry of Natural Resources, and other municipal and government agencies with parkland along the escarpment.

One distinguishing feature within this system is the identification of 10 nodal parks strategically located at intervals along the escarpment. The parks are and will be principal staging points and interpretation centers for segments of the escarpment. They will also serve as starting points from which to explore other parks and tourist facilities in the vicinity, either by car or the Bruce Trail.

Each park in the system has been assigned to one of six classifications based on its predominant characteristics: nature reserve,



**Hikers on the Niagara Escarpment along the Georgian Bay shoreline (top). Winter trail activity (right).**

natural environment, recreation, historical, escarpment access, and resource management area. The classification and development policies are intended to serve as a guide to management and use.

The Bruce Trail, an essential component of the system, links parks and natural areas. The Bruce Trail Association continues to be the lead agency in organizing and maintaining the trail. Securing a permanent route for the trail is an important plan priority. Where necessary, the government will support right-of-way purchases.

### **The real test**

Implementation will be the real test of whether policies in the Niagara Escarpment Plan remain viable. The Ministry of Municipal Affairs has assumed responsibility for the Niagara Escarpment Commission and coordination of the plan implementation program. The Honorable Bernard Grandmaite, minister of municipal affairs, announced on April 3, 1986, that plan policies were being implemented. Included in the implementation process were meetings involving the ministry and regional municipalities to discuss ways of bringing municipal land use plans into conformity with the escarpment plan.

Within the plan area, three tiers of official plans govern land use. Local township and municipal plans deal with land use and community concerns. County and regional plans deal with more varied interests, including the coordination of land use and servicing matters in constituent municipalities.



The Niagara Escarpment Planning and Development Act requires that local, county, or regional plans conform with the approved escarpment plan.

The conformity exercise is proving to be a challenging and interesting exercise. Often, plans prepared and approved by different levels of government for the same geographic area conflict. For example, some environmental provisions of the Medford plan conflict with the environmental policies of the New Jersey Pinelands Plan, an area within which Medford is located. Similarly, within the escarpment area, numerous policy discrepancies exist between the provincial escarpment plan and the plans of local and regional governments. While the act gives the minister power to modify local plans, the current approach relies heavily on consultation and discussion to ensure a local commitment to the plan and to escarpment protection.

The Ministry of Natural Resources has assumed responsibility for coordinating the consolidation and development of the Niagara Escarpment Parks System. That responsibility will ensure that park development plans, prepared by conservation authorities and the ministry, do not conflict with the escarpment plan. To achieve this, the ministry will prepare a manual for park standards and guidelines and coordinate a visual identity and marketing program for the system. Overall, escarpment park planning concerns will be governed by the ministry in consultation with the many parks system agencies.

Over the past 20 years, 83,000 acres (33,600 hectares) of land have been purchased by government agencies for park and resource management purposes. Further acquisition is proposed by the escarpment plan to consolidate existing parks. The properties will be purchased at appraised market values from willing sellers when the land becomes available on the open market over a 10-year period. Expropriation is not proposed as a means of land acquisition.

The government has budgeted \$25 million over the next 10 years for such land purchases. However, only limited resources now exist to develop and manage public holdings. Some escarpment parks are developed and used heavily, while other areas receive little or no management and use. Wise management will be important for long-term protection.

Coordination of the parks system remains an exciting and sometimes thorny challenge. While public concern for the escarpment was a driving force behind the acquisition of much of this land, the conservation authorities and ministry program groups that administer the land can have different

aims and objectives. The visual identity program and the Bruce Trail focus will help provide an overall escarpment orientation. In addition, a parks manual, together with sensitive coordination by the Ministry of Natural Resources, will help ensure that parks system objectives are achieved.

A major concern of the Niagara Escarpment Commission has been the purchase of the Georgian Bay Islands and part of the northern mainland of the Bruce Peninsula for public open space. While this land is in highly developed southern Ontario, its remoteness, undeveloped state, unusual natural habitat, and beauty represents a remarkable land resource. The commission invited the Canadian government to develop the area as a national park. After several years of discussion between the federal and provincial governments, along with public consultation and planning, such an agreement in principle has been achieved. Not only is this important for escarpment preservation, it also represents a remarkable federal and provincial government achievement. Ontario has few national parks.

The Bruce Trail continues to be an important link between public and private land. It also provides continuity and coherence to the escarpment's public image. The Ministry of Natural Resources assists this voluntary association in acquiring key connecting links where necessary. Many prime sections of the Bruce Trail are routed through ministry and conservation authority lands. Where possible, trail facilities and access are integrated into existing and future park development plans.

Initial ratepayer opposition to escarpment plan preparation focused on closure of the trail. The opposition encouraged landowners to deny trail access. This resulted in many routings far from the preferred route. Even though a more widely accepted, approved plan and funding for public acquisition of trail rights-of-way

have reduced tensions, difficulties remain in securing a continuous trail route.

The Ontario Heritage Foundation of the Ministry of Citizenship and Culture is responsible for escarpment heritage protection and land stewardship. The heritage protection component involves administering funds for land acquisition and interpretive measures (such as an audio-visual presentations and displays).

Private land stewardship involves contacting landowners with significant escarpment cultural and biophysical resources. The cooperation of these landowners to protect and manage these resources will be encouraged by various means, including management agreements, landowner recognition, and conservation easements. Landowners also are asked to contact the foundation if they want to sell their properties or make a donation to the province. Good management awards are one of several new initiatives in promoting private land stewardship throughout Ontario.

The Niagara Escarpment Commission also has significant implementation responsibilities. These include promoting plan objectives, reviewing plan amendments, commenting on development proposals with regard to plan conformity, and intervening at hearings if plan policies are threatened. The Niagara Escarpment Commission will also continue its development control system until further delegation to counties and regions is considered.

Any change in land use must first receive a development permit from the commission. A concern is the approval of conflicting developments, a difficulty that has emerged with the Lake Tahoe Region Plan as well. To deal with this issue, the minister of municipal affairs has appealed decisions approving development proposals that appear to conflict with the plan. He also has charged the implementing agencies with promoting plan objectives and cautioned against excessive flexibility in plan interpretation. While all land use plans face this difficulty, environmental land use plans, like the Niagara Escarpment Plan, seem particularly vulnerable.

### Gift to last

Many environmental land use planning efforts began in North America in the late 1960s and early 1970s. All have proved to be difficult undertakings, and implementation will be equally challenging. Niagara Escarpment Plan experiences will prove valuable indeed to the province in the future management of this rich and varied natural environment pledged to the people of Ontario as a "gift to last." □

