



Office of the Auditor General of Ontario

Value-for-Money Audit:
Conserving the
Niagara Escarpment



November 2022

Niagara Escarpment Commission

Ministry of Natural Resources and Forestry

Conserving the Niagara Escarpment

1.0 Summary

The Niagara Escarpment is one of the most prominent natural features in southern Ontario and widely seen as one of Canada's natural wonders. This ridge extends 725 kilometres through southern Ontario from the Bruce Peninsula to the New York border, where the Niagara River plunges over the Escarpment at Niagara Falls. The Escarpment area includes the largest stretch of continuous forest in southern Ontario and some trees along its cliff face are over 1,500 years old. It is also a source of agricultural land. Because of its ecological significance, it is recognized internationally as a World Biosphere, designated by the United Nations as a place to conserve nature and promote sustainable development.

But the Escarpment's natural environment is under threat. It is located beside the most densely populated part of Ontario, with 31 upper-, lower- and single-tier municipalities along the Escarpment including the cities of Hamilton and Owen Sound. Many First Nations and Métis communities, including the Saugeen Ojibway Nation and the Six Nations of the Grand River, also have traditional and ancestral territories along the Escarpment. Population pressures are mounting, with the number of people living in the Greater Golden Horseshoe expected to grow more than 50% to over 14 million by 2051.

The proximity of so many people results in a high demand for recreation and tourism on the Escarpment, putting pressure on its natural, and in some places delicate, environment. The COVID-19 pandemic underscored the importance of the Niagara Escarpment in providing access to recreational opportunities as visits

to the parks and trails soared, straining resources and infrastructure. The Escarpment's diverse habitats are home to 300 bird species, 53 mammal species, 36 reptile and amphibian species, 90 fish species and 98 butterfly species. There are at least 70 different species at risk—plants and animals whose survival is in jeopardy—that live on the Escarpment. It also has several globally rare types of habitats, as well as eastern North America's oldest forests.

The Ministry of Natural Resources and Forestry (Ministry) is responsible for administering the *Niagara Escarpment Planning and Development Act (Act)*, which was enacted in 1973 “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.” The Act established the Niagara Escarpment Plan (Plan) to guide land-use planning within the Plan Area, and the Niagara Escarpment Commission (Commission) to implement the Plan.

Our audit examined whether the Ministry and the Commission are effectively and efficiently conserving the Niagara Escarpment in order to meet the purpose and objectives of the Act and Plan. As part of our audit, we visited 64 (or 39%) of the 163 sites in the Niagara Escarpment Parks and Open Space System—a provincially co-ordinated network of parks and open spaces for people to enjoy nature on and around the Escarpment. During these site visits, we observed the work of many dedicated people and organizations, contributing to stewardship, recreation, education, and the conservation of the Escarpment. We also found that while the stewardship of the Ministry and the Commission has benefited the Escarpment over the years, those two entities are failing to fully provide the necessary

leadership, resources and actions to maintain the Escarpment and adjacent lands as a continuous natural environment, and to ensure that all development is compatible with that environment. Meaningful conservation actions are necessary, as land-use controls alone will not adequately protect the Escarpment.

Among our principal conclusions, we found that the Commission no longer has a long-term strategic plan to fulfill the legislative mandate to conserve the Escarpment, nor are there sufficient performance measures and targets to evaluate whether the objectives of the Act and Plan are being achieved. The Ministry does not have a plan or program to assist in financing the completion of the Niagara Escarpment Parks and Open Space System and to secure a permanent route for the Bruce Trail, which runs along the length of the Escarpment.

The Ministry provides insufficient financial and staffing resources to the Commission to ensure that the Plan is effectively implemented. There is no environmental monitoring because there are no staff, resources or program to assess the state of the Escarpment. Moreover, reports of possible violations have significantly increased over the last five years, but no charges have been laid under the Act since 2014. Also, the Commission has approved almost all development permit applications in the last five years, while the Ministry has lowered the Plan's protections for endangered species.

The following are our specific findings in more detail:

Niagara Escarpment Plan Weaknesses

- **The Plan does not cover all of the Niagara Escarpment, so not all of it is protected from incompatible development.** The current size of the Plan Area is 195,055 hectares. In 2017, the Commission concluded that 45,677 hectares could be added to the Plan Area to include all of the Escarpment's natural features, but the Ministry decided against those additions due to public opposition against an increased level of government control over land use and municipalities potentially losing out on tax revenue.

- **The Plan allows new and expanded aggregate operations on the Niagara Escarpment despite the environmental impacts, poor inspection rates, poor rehabilitation track record, and no required justification of need for pits and quarries.** Seventeen (or 31%) of the 54 aggregate operations on the Escarpment are licensed for unlimited tonnage—meaning there is no restriction on the amount of material that can be mined each year. The Ministry has only inspected 14 (or 26%) out of 54 of the active extraction sites within the Plan Area in the last five years and two of these sites failed the inspection due to non-compliance with progressive rehabilitation requirements. During the Plan review in 2017, the Commission recommended to the Ministry that new aggregate operations be prohibited within the Plan Area, but the Ministry did not change the Plan.
- **Changes to the Plan in 2017 allow development that harms endangered species' habitats.** The Ministry changed the Plan so that protecting an endangered species' habitat is no longer explicit grounds for the Commission to refuse a development permit application. We looked at a sample of 45 development permit applications submitted in 2020/21 for activities along the entire length of the Escarpment. For these applications, planners identified 27 (or 73%) as potentially having endangered species present. However, none of these cases resulted in the Ministry of the Environment, Conservation and Parks issuing a permit or other type of authorization under the *Endangered Species Act, 2007*.

Niagara Escarpment Plan Effectiveness Not Sufficiently Monitored

- **The Commission and the Ministry do not have sufficient performance measures and targets to evaluate whether the purposes and objectives of the Act and Plan are being achieved.** For example, the coverage of protected areas may be used to measure performance toward achieving conservation outcomes. We found that

only 63% of the globally rare and delicate alvar sites on the Escarpment are protected, and the single 0.6 hectare of globally rare prairie and savannah is unprotected. Additionally, natural areas in the Escarpment's southern portion and its adjacent lands are highly fragmented.

- **There is no longer environmental monitoring because there are no Commission staff, resources or programs to assess the state of the Niagara Escarpment.** The Commission had an environmental monitoring specialist on staff until 2015, but the position was not renewed. Additionally, the 2005 version of the Plan explicitly recognized the importance of consistent, long-term environmental monitoring. But the 2017 version of the Plan provides markedly less direction on the requirements for environmental monitoring and how it should be used.
- **The Commission has not assessed the cumulative effects of the more than 12,000 development permits issued since 1975.** The effect of multiple stressors poses a threat to the environment, yet the Commission considers development permits in isolation. Additionally, the Ministry amended the Plan in 2017 and removed reference to cumulative effects, despite the Commission's recommendation to strengthen those aspects of the Plan.

Insufficient Conservation Efforts

- **The Commission does not have a long-term strategic plan to achieve the legislative mandate to conserve the Niagara Escarpment.** The Commission has not developed a new strategic plan since the 2012–2016 plan expired. Additionally, the Ministry has no strategic direction to guide how it will support Ontario's four biospheres (Niagara Escarpment, Long Point, Georgian Bay and Frontenac Arch). A biosphere is an international designation that recognizes the environmental importance of an area and promotes solutions for the conservation of biodiversity and the sustainable use of resources.
- **Almost all development permit applications have been approved by the Commission in the last five years.** A development permit is an approval issued by the Commission—or in very rare cases, the Minister—to a person, company or organization, and includes conditions that must be met for a particular development to occur. We found that only 19 (or 1.1%) of 1,661 development permits were refused in those years; however, only 125 of these development permit applications were complex applications that required the Commissioners' approval or denial and some of these Commissioner-approved applications went against the Niagara Escarpment Plan. For example, in 2019, Commissioners approved an application for importing 20,000 square metres of fill—materials like earth, sand and gravel—to level a field to establish a vineyard, though the Plan directs that only topsoil can be accepted for this.
- **The Ministry does not have a plan or program to assist in financing the completion of the Niagara Escarpment Parks and Open Space System (Park System) and securing a permanent route for the Bruce Trail.** The Park System is a provincially co-ordinated network of parks and open spaces for people to enjoy nature. In 1985, the Province established a land securement program for the Escarpment and allocated \$2.5 million annually for 10 years to secure additional land. But the program was terminated in 1998 and not replaced. In 2015, the Bruce Trail Conservancy forecast that given the slow rate of land acquisition, it would take until 2055 to permanently secure a route for the Trail. The Province's Niagara Escarpment Plan commits to completing both the Park System and the Bruce Trail.
- **Only 45% of the Park System's sites have approved plans to guide their protection, despite increasing use and threats like invasive species.** These sites are managed by 23 different entities such as the Ministry,

Ontario Parks, conservation authorities and others. Despite the Niagara Escarpment Plan's requirements, we found that only 74 of the Park System's 163 sites have approved management plans. Meanwhile, threats have increased, including a doubling of the number of non-native plants found on the Escarpment in the last 40 years, and the types of invasive species found has climbed more than fourfold to 18.

- **Protected areas cover 16% of the Niagara Escarpment, but there is no target to increase their number to better conserve the natural environment.** We found that there are 215 protected areas covering 31,871 hectares of the Escarpment. However, the Act, Plan, Commission and Ministry do not have a target to increase the number of protected areas on the Escarpment even though they are an effective tool to conserve nature.

Deficiencies in Plan Administration

- **Reports of possible contraventions have climbed 82% over the last five years, but no charges have been laid under the Act since 2014.** We found that there were 156 high-risk incidents, such as the illegal construction of buildings and other structures, in the last five years. However, the Commission requested the Ministry consider laying charges only five times. In four of the five cases, the Ministry did not investigate due to insufficient documentation provided by the Commission.
- **Insufficient public outreach by the Commission to promote the Plan.** Over the last decade, the Commission has stopped delivering interpretive programs to engage the public on the Escarpment's history, importance and biosphere designation. Over the past two years, the Commission did not allocate any budget for public outreach. Prior to that, the Commission consistently spent less each year on education and outreach activities because of reduced annual operating funding from the Ministry.
- **The Commission reviews applications that do not require a development permit, contributing to a backlog of permits to be processed.** Our Office reviewed all development applications from 2016/17 to 2021/22. We found that exemptions—activities that do not require a development permit—accounted for half of the permit applications. As of April 2022, there was a backlog of 737 applications awaiting a decision. From 2016/17 to 2021/22, a development permit application took an average of 216 days to complete from submission to decision date. The processing time for an application is a function of application volume and complexity, and staff shortages.
- **Niagara Escarpment Plan amendments can languish for years.** Five years after the 2017 Plan review, the Ministry had six deferred amendments involving land-use changes, some of which would allow for an increase in urban development, that were still awaiting a decision by Cabinet. The Ministry had promised to make decisions on these Plan amendments by 2019. All six deferred plan amendments were recommended for refusal by the Commission and Ministry staff.
- **The Commission lacks a modern information management system to efficiently and effectively implement the Niagara Escarpment Plan.** The Commission's computer database currently lacks modern search capabilities, does not have the capacity for electronic submissions from the public, is prone to data-entry error, and cannot be used to accurately measure the Commission's performance over time. In 2014, the Commission had internally identified that its computer database was at a high risk for failure. The Commission is working on a new system, but it is not expected to be in place until 2023/24.
- **The Ministry provides insufficient financial and staffing resources to the Commission to ensure the Niagara Escarpment Plan and Act are effectively and efficiently implemented.**

The Commission is solely funded by the Ministry. In 1996, as part of broader cuts across government, the Province reduced the budget and staffing of the Commission by approximately one-third to the levels that generally remain today. The Commission's overall budget was again reduced by the Ministry in 2010/11, 2011/12 and 2012/13, and 2019/20. Between 2017/18 and 2019/20, the Commission maintained an operational deficit and was forced to cut costs by cancelling Commission meetings or delaying IT repairs.

- **The Commission does not charge fees for development applications or other services, although doing so could offset program delivery costs and discourage activities that negatively impact the Niagara Escarpment.** The Commission identified in 2012, 2015 and 2018 that charging fees was needed to offset program delivery costs. In 2019, the Ministry also identified the option to begin charging fees but noted that it would require Cabinet-approved amendments to the Act. It is a standard practice to charge fees for similar types of permits in Ontario. If the Province had amended the Act to allow the Commission to charge fees starting in 2012, millions of dollars in revenue could have been generated to conserve the Niagara Escarpment and recover costs.

Enhancing Processes for Commissioners

- **A lack of timeliness in the appointment process has negatively impacted the functioning of the Commission.** Delays in appointing a new Chair resulted in no Commission meetings being held from early October 2019 until mid-March 2020, when a new Chair was appointed. The April 2020 meeting was cancelled due to the COVID-19 pandemic. Three meetings were also cancelled in 2017 because no Chair was appointed. Further, there is no mechanism to temporarily designate an interim Chair when the Chair is unavailable.

- **Appointments of public-at-large Commissioners do not provide a balanced representation of regions and interests.** Six of the nine current public-at-large members, including the Chair, represent the Niagara region, creating a disproportionate number of Commissioners from one region. The membership also has a narrower variety of perspectives than prior to the turnover that occurred in 2019/20, with more public-at-large members being appointed from industry and fewer with environmental expertise.
- **Orientation and ongoing training for Commissioners needs improvement, including enhanced training for Chairs.** New Commissioners are provided with only a day of training when initially appointed, and then limited ongoing development throughout their tenure. No enhanced orientation training is provided to newly appointed Chairs, which is important given the increased responsibilities and leadership required of the role.
- **Conflict of interest disclosure processes need to be strengthened.** The Commission does not have a conflict of interest policy specific to the role of the Commissioners, nor are Commissioners required to complete an annual Conflict of Interest Declaration Form. Clarity in this area is important, as our interviews with Commissioners found that they had different interpretations of conflict of interest.

Overall Conclusion

The purpose of the *Niagara Escarpment Planning and Development Act* is to maintain the Niagara Escarpment and adjacent lands as a continuous natural environment, and to allow only compatible development. Good stewardship requires constant improvements to best address and adapt to rising pressures on the Escarpment, including from the significant population growth in the region.

While the Escarpment has benefitted from both the Act and the Plan in the almost half-century since its

conservation was enshrined into law, our audit found that both the Ministry's and Commission's systems and processes should be significantly improved. Among other things, we recommend that the Commission develop a long-term strategic plan in collaboration with the Ministry that outlines specific conservation actions that will be undertaken. We also recommend that the Commission develop a performance measurement framework in collaboration with the Ministry that focuses on successful outcomes. Ontarians need to know how effectively the Province is safeguarding the Escarpment's valuable resources and how it plans to protect them in the future.

The Ministry does not have a funding program dedicated to supporting the securement of lands to complete the Niagara Escarpment Parks and Open Space System and a permanent route for the Bruce Trail. It is obvious that the Commission does not have sufficient resources for environmental monitoring to assess the state of the Escarpment. Additionally, the Plan should include greater protections for endangered species' habitat, and prohibit new or expanded aggregate operations on the Escarpment. Further, the Commission requires additional financial and staffing resources to ensure the Plan is effectively and efficiently implemented.

This report contains 23 recommendations, with 46 action items, to address our audit findings.

COMMISSION OVERALL RESPONSE

The Niagara Escarpment Commission (Commission) thanks the Auditor General for this report and its recommendations.

The Commission was created more than 40 years ago to ensure the long-term protection of the ecological and scenic value of the Niagara Escarpment. Population growth and development pressure in the vicinity of the Escarpment have made this an increasingly challenging, but important, task.

The Commission relies on the Ministry of Natural Resources and Forestry (Ministry) and the broader government for the staff and financial resources needed to deliver the Niagara Escarpment

Program effectively. The Commission will continue to collaborate with the Ministry to identify innovative approaches to program delivery, including improvements to regulations and legislation that will contribute to better protection of the Niagara Escarpment.

The Commission will also identify opportunities for program enhancements for which it has direct responsibility, including Commissioner orientation and training.

MINISTRY OVERALL RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) thanks the Auditor General for this report and its recommendations. The Niagara Escarpment Plan (Plan) is Canada's first, large-scale environmental land use plan. The Plan serves as a framework of objectives and policies to strike a balance between development, protection, and the enjoyment of this important landform feature and the resources it supports.

The Niagara Escarpment Plan, Greenbelt Plan, Oak Ridges Moraine Conservation Plan, and the Growth Plan for the Greater Golden Horseshoe work together to accommodate growth, while protecting farmland, water resources, and the natural environment. The Niagara Escarpment Plan forms part of the Greenbelt Plan area, but has an environment-first policy objective that differs from the other plans.

The Ministry works collaboratively with the Niagara Escarpment Commission, partner ministries, municipalities, and conservation authorities to maintain the Niagara Escarpment and land in its vicinity as a continuous natural environment and to ensure compatible development.

The findings of this report acknowledge the significant challenges faced by the Ministry. The Ministry is committed to continue its efforts to provide leadership for the Niagara Escarpment Plan, and will continue to work with the Commission to evaluate and establish the necessary staffing and financial resources to effectively deliver the Niagara Escarpment Program.

2.0 Background

2.1 Overview

The Niagara Escarpment is a prominent forested ridge that extends 725 kilometres northward from Queenston near Niagara Falls to Tobermory at the tip of the Bruce Peninsula. It also extends eastward into New York State, and westward into Michigan, Wisconsin and Illinois, helping shape Lake Ontario, Lake Huron and Lake Michigan.

In Ontario, the Escarpment forms the largest stretch of continuous forest in the south of the province. Formed more than 450 million years ago, this massive formation of fossil-rich sedimentary rock has caves, valleys, cliffs and crevasses that provide a variety of distinct environments for a wide diversity of plants and animals. It has more than 100 sites of geological significance containing prehistoric rocks and fossils, including some that represent the Earth's earliest complex organisms.

The Escarpment is located beside the most densely populated part of Ontario. There are 31 upper-, lower- and single-tier municipalities on the Escarpment, including the cities of Hamilton and Owen Sound. There also are many First Nations and Métis communities, including the Saugeen Ojibway Nation and the Six Nations of the Grand River, which have traditional and ancestral territories on the Escarpment. Some communities close to the Escarpment have experienced very rapid population increases in recent years, such as the Town of Milton which grew by 21% from 2016 to 2021. In 2022, more than 9.2 million people were estimated to live in the Greater Golden Horseshoe, and that number is expected to exceed 14 million by 2051.

The proximity of millions of people to the Escarpment results in a high demand for recreational opportunities and tourism. The Bruce Trail provides public access along the entire length of the Escarpment through a network of 1,376 km of marked footpaths, 70% of which sit on permanently protected lands. There are 163 parks and open spaces that run along the length of the Escarpment, as well as villages, hamlets, vineyards and ski resorts. Dozens of waterfalls,

including Niagara Falls, lie on the Escarpment, as well as the headwaters of five major river systems. Tourism on the Escarpment contributes an estimated \$100 million annually to local economies. For example, in 2019-20, Bruce Peninsula National Park and Fathom Five National Marine Park near Tobermory had more than 762,000 visitors combined.

The Escarpment area is also a significant source of agricultural land that is close to market. The Niagara Peninsula alone produces the largest amount of Ontario's tender fruit, including over 94% of Ontario's grapes. Rural and agricultural communities in the area support thousands of jobs and produce food consumed all over the world, contributing \$1.4 billion to the region's agricultural economy.

2.1.1 Conserving the Niagara Escarpment

Conserving biodiversity, including species at risk, is essential for ecosystems to stay healthy. Natural environments contribute to the estimated \$1.3 billion in ecosystem services that the Niagara Escarpment provides each year to Ontarians, like clean water, pollination and carbon storing. For example, a 2017 report prepared by the Nature Conservancy of Canada (a land conservation charity) and TD Bank Group estimated the annual value of a single hectare of forest on the Bruce Peninsula was \$19,400 because of the environmental benefits it provides to people.

The diverse habitats of the Escarpment make it home to 300 bird species, 53 mammal species, 36 reptile and amphibian species, 90 fish species, and 98 butterfly species. Almost 1,200 types of plants are found in its different ecosystems, ranging from shorelines on Georgian Bay to prominent cliff faces. There are at least 70 different types of species at risk—plants and animals whose survival is in jeopardy—that live on the Escarpment. It also has several globally rare habitat types, as well as eastern North America's oldest forests.

For years, scientists and world leaders have called for urgent action to address the global loss of nature—the plants, animals, and natural areas that form the basis of life around the planet. In 2021, the World Bank estimated that without concerted conservation

action, the loss of biodiversity and its ecosystem services could have multi-trillion-dollar impacts on the global economy. The World Economic Forum ranks biodiversity loss as one of the top three most severe risks globally over the next decade. In 2022, experts writing in the journal *Science* concluded that land conversion is one of the biggest threats to nature in the modern world.

The Escarpment has faced many pressures since colonization, such as land clearing for agriculture and development. Public concern for the Escarpment grew in the 1960s as development pressures increased, especially from pits and quarries with visible impacts on the landscape. To better protect this unique and ecologically important geographic feature, the Province passed the *Niagara Escarpment Planning and Development Act* in 1973. In 1990, the Escarpment was internationally

recognized as a World Biosphere by the United Nations because of its globally significant natural and cultural features. (See **Section 2.3.2.**)

The conservation of the Escarpment is a shared responsibility. As a World Biosphere, it is part of an international network of sites where people live and work in a region recognized for efforts to promote solutions for the conservation of biodiversity and the sustainable use of resources. **Figure 1** summarizes the roles and responsibilities of various key players. Additionally, see **Appendix 1** for relevant international agreements that pertain to the conservation of the Escarpment. The conservation efforts, however, have had mixed results. In 2022, a report by the non-profit Greenbelt Foundation found that intense growth pressures have increased over time in areas like the Escarpment. These pressures can result in the loss of

Figure 1: Key Stakeholders in the Niagara Escarpment Program

Prepared by the Office of the Auditor General of Ontario



natural areas and productive farmland, but land-use plans—like the Niagara Escarpment Plan—can be an important tool to manage growth. See **Appendix 2** for a chronology of key events affecting the Escarpment. See **Appendix 3** for a glossary of terms.

2.2 Legislation and Accountability Relationships

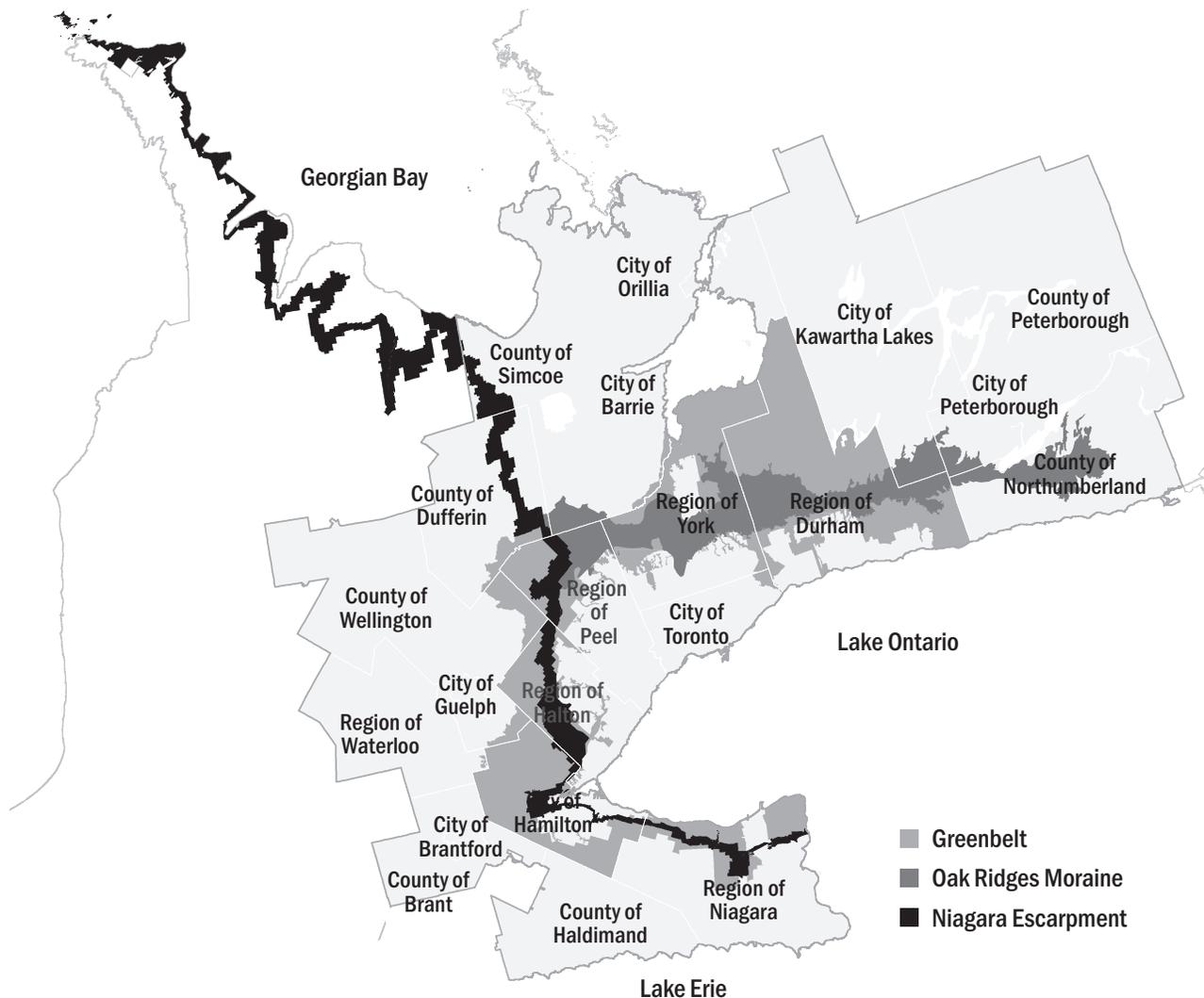
The purpose of the *Niagara Escarpment Planning and Development Act* is “to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible

with that natural environment.” Development includes any change in the use of land, buildings or structures. The Act established the Niagara Escarpment Plan to guide land-use planning within the Plan Area (see **Figure 2** for a map of the Niagara Escarpment and other land-use plan areas) and established the Niagara Escarpment Commission to implement the Plan. The Act directs that the objectives of the Plan are to:

- protect unique ecologic and historic areas;
- maintain and enhance the quality and character of natural streams and water supplies;
- provide adequate opportunities for outdoor recreation;

Figure 2: Map of the Niagara Escarpment and Other Land-Use Plans

Source: Ministry of Municipal Affairs and Housing



- maintain and enhance the open landscape character of the Escarpment;
- ensure that all new development is compatible with the purpose of the Plan;
- provide for adequate public access to the Escarpment; and
- support municipalities in planning.

There are three regulations under the Act:

- Regulation 826 establishes the parts of the Plan Area that are included in the Area of Development Control, where a development permit issued by the Commission is required for certain types of development.
- Regulation 828 exempts certain development classes from requiring a development permit issued under the Act. Examples of allowable exemptions include roof-mounted solar panels and sewage system maintenance.
- Ontario Regulation 235/10 specifies additional lands subject to the Act, such as lands in the Municipality of Grey Highlands and the City of Burlington.

Other provincial laws that provide direction for managing development and conservation on the Escarpment are listed in **Appendix 4**. For example, the *Greenbelt Act, 2005* establishes the Greenbelt Plan, which works to conserve farmland, natural resources, watersheds, cultural heritage and recreation within its boundary. The Greenbelt Plan overlays areas encompassed by the Niagara Escarpment Plan and works in conjunction with the Growth Plan for the Greater Golden Horseshoe, which directs where urban growth is to occur on the lands beyond the Escarpment. While the Greenbelt Plan includes the Escarpment within its boundary, it defers to the authority of the Niagara Escarpment Plan in these areas. The Niagara Escarpment Plan Area made up 23% of the Greenbelt at the time of our audit. In November 2022, after our audit was complete, the Province proposed amending the Greenbelt Plan and the area it applies to, but these potential changes do not alter the Niagara Escarpment Plan or its Plan Area.

Indigenous peoples have their own laws and governance systems. There are 10 First Nations and Métis

communities that have Treaties with the Crown that overlap with the Escarpment Plan Area. Additionally, other Indigenous peoples have traditional and ancestral territories on the Escarpment, including constitutional rights to be consulted. The Memorandum of Understanding between the Minister and the Commission mandates that the Commission has a duty to engage, consult and co-operate with Indigenous peoples and groups across the Plan Area.

2.2.1 Ministry of Natural Resources and Forestry

The Ministry of Natural Resources and Forestry assumed responsibility for administering the Act in 1997. The Act was previously the responsibility of the Ministry of Intergovernmental Affairs, followed by the Ministry of Municipal Affairs and Housing, and then the Ministry of the Environment.

The mandate of the Ministry of Natural Resources and Forestry is to protect and sustainably manage Ontario's diverse natural resources to support economic prosperity, environmental sustainability, and quality of life for the people of Ontario. Over time, the Ministry's Natural Heritage Section allocated up to five to six staff for the Niagara Escarpment program, as well as other support staff, based on changing priorities such as the scheduled Plan reviews. Additionally, a 2015 protocol between the Ministry and the Commission directs the Ministry's Enforcement Branch to devote the time of up to one conservation officer and a part-time prosecutor to enforce the Act. See **Figure 3** for a description of the roles of the Ministry and the Commission.

The Ministry is required to review the Commission's mandate at least once every seven years based on the Treasury Board and Management Board of Cabinet's Agencies and Appointments Directive. In 2018, the Institute on Governance completed a mandate review of the Commission for the Ministry. The review found that the Commission had enduring value as an organization and recommended areas of improvement that the Ministry and the Commission should implement (see **Appendix 5**).

Figure 3: Roles of the Niagara Escarpment Commission and the Ministry of Natural Resources and Forestry

Prepared by the Office of the Auditor General of Ontario

	Niagara Escarpment Commission	Ministry of Natural Resources and Forestry
Commissioners	Staff provide administrative support to Commissioners	The Minister makes recommendations on Commissioner appointments to the Lieutenant Governor in Council
Development Permits	Makes decisions on development permit applications	The Minister makes the final decision on development permit appeals when the Commission's decision is not confirmed by the Hearing Officer
Amendments to the Niagara Escarpment Plan	<ul style="list-style-type: none"> Receives, reviews, circulates and consults the public on plan amendment applications as well as makes recommendations to the Minister Makes recommendations during the 10-year review of the Plan 	<ul style="list-style-type: none"> Makes final decisions on plan amendments During the 10-year Plan review, the Ministry consults with the public, stakeholders, and Indigenous communities, and makes final decisions subject to Cabinet approval
Changes to the Act and its regulations	Recommends regulatory and legislative changes to the Ministry	Makes regulatory and legislative changes, subject to Cabinet approval when necessary
Niagara Escarpment Parks and Open Space System	Endorses management plans prepared by the Park System's entities	<ul style="list-style-type: none"> Co-ordinator of the Park System Approves management plans prepared by Park System entities Develops and amends the Park System's planning manual
Commission's Operations	Prepares budget, annual report and business plan	<ul style="list-style-type: none"> The Ministry approves budget and staffing levels, and the Minister approves the annual report and business plan Prepares Treasury Board requests for additional funding to cover budget shortfalls
Enforcement	<ul style="list-style-type: none"> Responsible for day-to-day operations of the compliance program Responsible for Part I offences¹ and issuing tickets for contravening the Act 	Responsible for Part III offences ² and prosecutions under the Act

1. Part I offences are minor offences where the defendant must pay a fine to a maximum of \$1,000.

2. Part III offences are serious offences that require the matter to be brought to a court for a resolution.

2.2.2 The Niagara Escarpment Plan

The Niagara Escarpment Plan was first approved in 1985—12 years after the Act was passed—and it serves as the environmental land-use plan for the Escarpment. The Plan is Canada's first land-use plan that has environmental protection as its primary objective. See **Figure 4** for a description of how the Plan divides the Escarpment into seven land-use designations. In general, the level of protection from development decreases the farther the land is from the

Escarpment's cliff face. At the time of our audit, the Plan covered 195,055 hectares.

The Plan establishes a framework that seeks to sustainably manage compatible development, protection and public enjoyment of the Escarpment. Under the *Niagara Escarpment Planning and Development Act*, the Minister of Natural Resources and Forestry is to cause a review of the Plan at the same time the scheduled review of the Greenbelt Plan is carried out under the *Greenbelt Act, 2005*, which is to be every 10 years.

Figure 4: Land-Use Designations in the Niagara Escarpment Plan, Examples of Permitted Development, and Percentage of Plan Area

Prepared by the Office of the Auditor General of Ontario

Land Use Designation	Examples of Permitted Development within Each Land Use Designation	Percentage of Plan Area (as of 2022)
Escarpment Natural Area: areas that contain habitat, water resources, and support ecosystem services	Single dwellings, forest, wildlife and fisheries management, and accessory uses (e.g., garage, swimming pool)	38%
Escarpment Protection Area: areas that have visually prominent characteristics and environmental significance	Agricultural uses, single dwellings, forest, wildlife and fisheries management, and accessory uses (e.g., garage, swimming pool)	33%
Escarpment Rural Area: areas that are part of the Escarpment corridor and provide a buffer area between ecologically sensitive lands	Agricultural uses, single dwellings, accessory uses (e.g., garage, swimming pool), and new pits and quarries (up to 20,000 tonnes annually)	23%
Escarpment Recreation Area: recreational development areas along the Escarpment	Agricultural uses, single dwellings, ski centres, golf activities, and trail activities	3%
Urban Area: areas with a lot of urban growth	Urban Areas are subject to municipal zoning bylaws that are not in conflict with the Niagara Escarpment Plan	2%
Mineral Resource Extraction Area: areas where mineral aggregate operations are permitted	Agricultural uses, pit and quarry operations, pit and quarry accessory uses	1%
Minor Urban Centre: areas that contain rural villages, settlements and hamlets	Some minor Urban Centres are subject to municipal zoning bylaws that are not in conflict with the Niagara Escarpment Plan	*

* Minor Urban Centres are included in the calculations for Escarpment Natural Areas, Escarpment Protection Areas, and Escarpment Rural Areas

During this review, the Minister is to consult with the Commission, any ministry with an interest in the Plan, the council of each municipality included in the Plan Area, and any other interested public bodies, ensuring the public is given an opportunity to participate in the review.

After completion of the review, the Minister may propose amendments to the Plan, which must be consistent with and promote the objectives of the Plan. The Province revised the Niagara Escarpment Plan in 1994, 2005 and 2017. The next scheduled review of the Niagara Escarpment Plan is in 2027. The current Plan

focuses on three main areas for the conservation of the Escarpment: land-use planning policies; development criteria to protect Escarpment resources; and the parks and open spaces system.

2.2.3 Niagara Escarpment Commission

The Niagara Escarpment Commission is a non-board governed provincial regulatory agency established in 1973 under the Act to implement the Plan. Its goals are to develop, interpret and apply policies that maintain and enhance the vitality of the Escarpment's

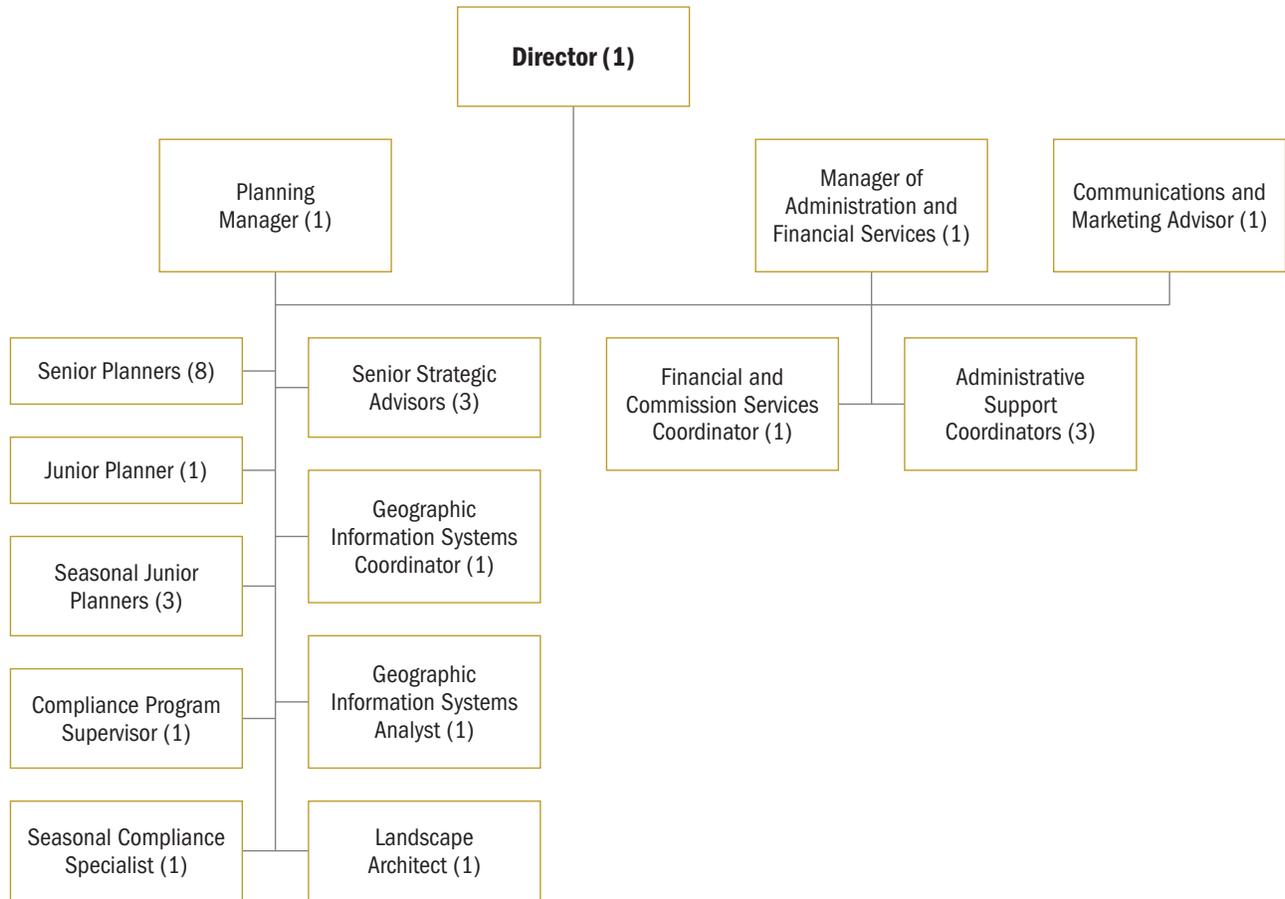
unique environmental and landscape features. This regulatory agency reports to the Minister of Natural Resources and Forestry—it is solely funded by the Ministry, and the Minister approves its budget and staffing levels. See **Figure 5** for the Commission’s

organizational chart, and **Figure 6** for the Commission’s budget for the last five years.

The Commission is composed of 17 appointed members (Commissioners), one of whom is the Chair, and 24 staff, including a Director. The Director

Figure 5: Niagara Escarpment Commission Staff Organizational Chart

Source of data: Niagara Escarpment Commission



Note: There are a total of 24 full-time-equivalent staff and four seasonal positions. The staffing varies over time due to vacancies.

Figure 6: Niagara Escarpment Commission’s Budget, 2016/17 to 2020/21 (\$)

Source of data: Niagara Escarpment Commission

Category	2016/17	2017/18	2018/19	2019/20	2020/21
Salaries and Wages (including Benefits)	2,011,461	2,089,188	2,300,783	2,474,434	2,111,167
Other Direct Operating Expenses*	388,119	388,111	353,556	212,711	273,549
Niagara Escarpment Commission Total	2,399,580	2,477,299	2,654,339	2,687,145	2,384,716**

* Includes costs for transportation, communication, supplies for equipment, and services.

** The Commission also received a Treasury Board Order for \$196,300 in 2020/21.

is responsible for the day-to-day operations of the Commission.

Commission staff responsibilities include reviewing and determining whether development permit and exemption applications are in alignment with the Plan, as well as administrative roles in Plan amendments. The Director, supported by staff, makes decisions on most development applications. Commissioners make decisions on complex applications that either require an interpretation of the Plan, or that do not align with the Plan and may need to be denied.

The Commissioners are appointed by the Lieutenant Governor in Council. Nine members, including the Chair, represent the public-at-large. The remaining eight members are municipal representatives who must be council members or employees of a municipality within the Plan Area. Under the Agencies and Appointments Directive, the Commissioners serve as regulators and make independent decisions related to the Act and Plan, but do not form a governing board. The Commissioners met on average seven times per year between 2017 and 2021 to make decisions on development permit applications. Commissioners are remunerated with a per diem rate for preparation and attendance at meetings, as well as reimbursed for approved out-of-pocket expenses.

A Memorandum of Understanding, signed by the Minister and the Chair, establishes the accountability relationships, clarifies roles and responsibilities, as well as specifies operational, administrative, financial and staffing arrangements. The Memorandum recognizes the independence of the Commission in making regulatory decisions, but directs that the Commission must comply with the Act and make decisions that do not conflict with the Niagara Escarpment Plan.

The Chair is accountable, through the Minister, to the Legislative Assembly in exercising the Commission's mandate. The Memorandum of Understanding further clarifies that the Chair is accountable to the Minister for the agency's performance in fulfilling its mandate, and for carrying out assigned roles and responsibilities. The Memorandum also specifies the roles and responsibilities of both the Director and the Deputy Minister.

2.3 Efforts to Protect and Promote the Niagara Escarpment

2.3.1 Niagara Escarpment Parks and Open Space System

The Plan establishes the Niagara Escarpment Parks and Open Space System (Park System) as a provincially co-ordinated network of parks and open spaces. At the time of our audit, the Park System was composed of 163 parks and open spaces that cover 44,017 hectares (or 23%) of the Plan area, many of which are linked by the Bruce Trail.

These lands are managed by 23 different entities, such as the Ministry, Ontario Parks (a branch of the Ministry of the Environment, Conservation and Parks), seven different conservation authorities, Parks Canada (a federal agency), the Bruce Trail Conservancy, municipalities, and others. These entities participate in the Niagara Escarpment Parks and Open Space System Council. Among other things, the Council provides a forum for park managers to share resources, identify best practices and to provide advice to the Ministry and the Commission. The Plan recognizes that the strength and public image of the system is dependent upon the co-operation of these entities in complying with and implementing the Plan.

There are nine Nodal Parks—the Park System's flagship sites—to promote the Escarpment's diverse environments for public benefit and to provide destination starting points for visitors. Some of the Park System's lands meet national criteria and are reported as protected areas, which recognizes that they meet modern standards to conserve nature.

2.3.2 Niagara Escarpment Biosphere

The Niagara Escarpment was designated as a World Biosphere in 1990 by the United Nations' Man and the Biosphere Programme. Biospheres are intended to be learning places for sustainable development in which 1) biodiversity and cultural diversity is conserved; 2) economic development that is socio-culturally and environmentally sustainable is promoted; and 3)

support for research, monitoring, education and training is provided.

There are currently 738 biospheres designated worldwide, 19 of which are in Canada (see **Appendix 6**). In addition to the Escarpment, Ontario has biospheres at Long Point on the north shore of Lake Erie, Thousand Islands-Frontenac Arch north of Kingston, and the eastern coast of Georgian Bay, stretching from the Severn River to the French River. The application process to be designated a biosphere is rigorous and takes about eight years to complete. After designation, the United Nations conducts periodic reviews of each biosphere about every 10 years. These reviews are opportunities to evaluate actions undertaken and results achieved, examine management and implementation, and identify areas for improvement. The Niagara Escarpment Biosphere underwent reviews in 2002 and 2012, and will have its next review in 2024.

The decision to designate the Niagara Escarpment as a World Biosphere was influenced by the Niagara Escarpment Plan, which seeks to balance preservation, conservation and sustainable development—a goal upheld by biospheres worldwide. The Plan was recognized as being especially well suited for the biosphere designation because there is a core area of protected lands at and near the Escarpment cliff face (also called the brow), and a series of land-use designations with decreasing levels of protection further back (see **Figure 4**). The Ministry does not have programs, provide any dedicated support, or have any strategic direction for the other three biospheres in Ontario.

An objective of the Plan for the Park System is to show leadership in supporting and promoting the principles of the Niagara Escarpment Biosphere. Maintaining the World Biosphere designation is an important source of international recognition, and failure to maintain it poses a significant reputational risk. For example, in 2010, Mount Arrowsmith Biosphere in British Columbia almost lost its World Biosphere designation after a periodic review cited concerns over a lack of sound governance. Significant public outcry can occur when a site risks losing its international status.

From its designation in 1990 until 2019, the Commission was the lead convener (or manager) for the Niagara Escarpment Biosphere. Biosphere conveners are responsible to develop, implement, manage and coordinate initiatives between the various stakeholders.

A Transitional Leadership Committee, composed of stakeholders and funded by charitable organizations, was established in 2019 to guide the development of a new governance model to act as the convener for the biosphere, instead of the Commission. The United Nations' 2012 review of the biosphere found that the public, not the government, should have a greater role in overseeing the Niagara Escarpment Biosphere. Work then began on developing stakeholder outreach tools, researching funding avenues, and exploring how to engage meaningfully with Indigenous communities and have Indigenous co-management of the biosphere transition. In March 2022, the Niagara Escarpment Biosphere Network was incorporated and work was underway to maintain the Escarpment's international biosphere designation.

3.0 Audit Objective and Scope

Our audit objective was to assess whether the Niagara Escarpment Commission (Commission) and the Ministry of Natural Resources and Forestry (Ministry) have effective systems and processes in place to:

- maintain the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, in order to meet the purpose and objectives of the *Niagara Escarpment Planning and Development Act* and the Niagara Escarpment Plan;
- ensure only such development on the Escarpment as is compatible with that natural environment, in order to meet the purpose and objectives of the Act and the Plan; and
- measure and publicly report on progress toward maintaining the Escarpment, ensuring only compatible development, and meeting the objectives of the Plan.

In planning for our work, we identified the audit criteria (see **Appendix 7**) we would use to address our audit objective. These criteria were established based on a review of applicable legislation, policies and procedures, internal and external studies, and best and leading practices. Senior management of both the Commission and Ministry reviewed and agreed with the suitability of our objectives and associated criteria.

We conducted our audit between January 2022 and July 2022. We obtained written representation from both the Commission and Ministry management that, effective November 22, 2022, they had provided us with all the information they were aware of that could significantly affect the findings or the conclusion of this report.

Our audit work was conducted at the Commission's office in Georgetown and the Ministry's office in Toronto. We also visited 64 (or 39%) of the 163 sites in the Niagara Escarpment Parks and Open Space System to observe their contributions to the conservation of the Escarpment. Due to the COVID-19 pandemic, some of our work was conducted remotely. We engaged the Commission, Ministry and other stakeholders through video-conferencing, phone calls and emails. We interviewed senior management and staff, and reviewed relevant data and documents from both the Commission and the Ministry.

We interviewed current and former Commissioners, as well as staff at the Bruce Trail Conservancy, the Niagara Escarpment Biosphere Network, the Niagara Escarpment Foundation, the Greenbelt Foundation, and other conservation entities. To identify best and leading practices, we reviewed scientific literature and international standards on nature conservation. We also interviewed academic experts in environmental land-use planning and biological sciences.

We conducted our work and reported on the results of our examination in accordance with the applicable Canadian Standards on Assurance Engagements—Direct Engagements issued by the Auditing and Assurance Standards Board of the Chartered Professional Accountants of Canada. These standards involved conducting the tests and other procedures

that we consider necessary to obtain a reasonable level of assurance.

The Office of the Auditor General of Ontario applies the Canadian Standard on Quality Control and, as a result, maintains a comprehensive quality control system that includes documented policies and procedures with respect to compliance with rules of professional conduct, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Professional Conduct of the Chartered Professional Accountants of Ontario, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

4.0 Detailed Audit Observations

4.1 Weaknesses in the Niagara Escarpment Plan

4.1.1 The Niagara Escarpment Plan Does Not Cover All of the Escarpment, Leaving Areas Unprotected from Incompatible Development

The Act directs that the Niagara Escarpment and land in its vicinity are to be maintained as a continuous natural environment. However, the Niagara Escarpment Plan Area does not cover the entire Escarpment. Currently, some of the geographic features of the Escarpment are outside of the Plan Area and are only subject to planning by local municipalities. It is a best practice for environmental land-use plans to be based on natural and geographic features.

Some of the readily identifiable cliff and rock areas of the Escarpment are not included in the Plan Area. For example, 15,623 hectares of the Escarpment's cliff face are not included in the Plan Area, including areas near Collingwood. Additionally, there are 144 km of Escarpment toe (the lowest point on the Escarpment slope) and outlier (part of the Escarpment that has been separated from the main Escarpment by erosion) that are not included in the Plan Area. These lands

were not included when the Plan was approved in 1985.

In 1977, the Commission released a preliminary proposal for the Plan Area, which was criticized for being too large. A revised 1979 proposal reduced the Plan Area by 62%. In 1985, the first version of the Plan was approved with an area of 184,000 hectares.

Since 1985, the Plan Area has been enlarged by 6% through minor amendments and boundary additions, expanding the Plan Area to its current size of 195,055 hectares. For example, in 2005, the Ministry added lands near Burlington increasing the Plan Area by 725 hectares. In 2013, the Ministry added 400 hectares of land in the City of Hamilton to the Plan Area, but this land was not brought into the Area of Development Control—the area that the Commission regulates—until 2021 due to delays in updating the regulation.

During the 2017 Plan review, the Commission assessed 84,114 hectares of land for inclusion in the Plan Area based on ecological and geologic criteria. The Commission concluded that 45,677 hectares of land could be added to the Plan Area, which would have increased the Plan Area by 23%, but the Commission ultimately did not recommend the addition of new lands. The Ministry's internal documents showed that it decided against these additions due to public opposition to increased government control over land use and to municipalities potentially losing out on tax revenue.

Additionally, the Plan Area—the area covered by the Plan objectives—and the Area of Development Control are not aligned. For example, Dufferin County has lands in the Area of Development Control that are not in the Plan Area, which means that the policies of the Plan do not apply but the Commission must still issue development permits. Similarly, there are areas in the Plan Area that are not in the Area of Development Control. In these areas, Commission staff must still be involved as a commenting agency even though the Commission is not responsible for issuing a development permit. In total, there are 456 hectares of land that are in the Area of Development Control but not in the Plan Area, and 3,074 hectares of land that are in the Plan Area but not in the Area of Development

Control. The Commission has identified that aligning the Plan Area and the Area of Development Control would reduce confusion and simplify the development permit application process.

RECOMMENDATION 1

So that the Niagara Escarpment and land in its vicinity are maintained as a continuous natural environment, as mandated by the *Niagara Escarpment Planning and Development Act*, we recommend that the Ministry of Natural Resources and Forestry, in preparation for the next review of the Niagara Escarpment Plan, work with the Niagara Escarpment Commission to assess:

- the completeness of the Plan Area in including the entire Niagara Escarpment and sufficient adjacent lands, including natural heritage features; and
- opportunities to align the Area of Development Control and the Plan Area.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) agrees that the objective of the Plan and the *Niagara Escarpment Planning and Development Act* is to maintain the Niagara Escarpment and land in its vicinity as a continuous natural environment.

As mentioned in the Auditor General's report, in 2016 the Niagara Escarpment Commission (Commission) assessed over 80,000 hectares (ha) and proposed over 45,000 ha of additions for inclusion to the Niagara Escarpment Plan (Plan) Area, based on a set of ecological criteria related to the purpose and objectives of the Plan.

As land-use designations were not applied to the proposed additions, additional consultation would be required if the Province decides to proceed with any or all the Plan additions.

During the next scheduled review of the Plan in 2027, the Ministry will review the Plan Area, considering the Commission's previous assessment that more than 45,000 ha could be potentially added.

4.1.2 The Plan Allows New and Expanded Aggregate Operations on the Niagara Escarpment Despite the Environmental Impacts of Pits and Quarries

Concern about the impact of aggregate operations—pits and quarries that mine sand, gravel or bedrock—was a driving reason why the Province enacted the *Niagara Escarpment Planning and Development Act* in 1973. Yet the Plan continues to allow this type of development to occur. During the 2017 Plan review, the Commission recommended to the Ministry that new aggregate operations be prohibited within the Plan Area. The Commission raised concerns about potential negative impacts of extracting aggregates below the water table and the long-term effects on the ecosystems of the Niagara Escarpment. The Ministry did not make this change to the Plan. Instead, it updated the Plan to align it with the broader planning rules for other parts of southern Ontario. Both the Plan and the Provincial Policy Statement now direct that the demonstration of need for mineral aggregate resources, including any type of supply and demand analysis, is not required.

Aggregates are materials that are extracted from pits and quarries in accordance with the *Aggregate Resources Act* and are used for building roads or making products like cement. The Ministry has licensed more than 6,000 pits and quarries across Ontario, and 54 are located within the Plan Area. The *Niagara Escarpment Planning and Development Act* allows pits and quarries on lands that are designated as Mineral Resource Extraction Areas, which account for 1% of the total Plan Area (see **Figure 4**). Though there are thousands of aggregate sites across Ontario, the Escarpment's proximity to areas of high aggregate demand, like the Greater Toronto Area, can cause increased pressure for aggregate extraction there.

The establishment of new or expanded pits and quarries on the Escarpment presents challenges for maintaining the Escarpment's natural environment and visual character. Aggregate operations generate significant public outcry as found in our review of media coverage, public comments posted on Ontario's

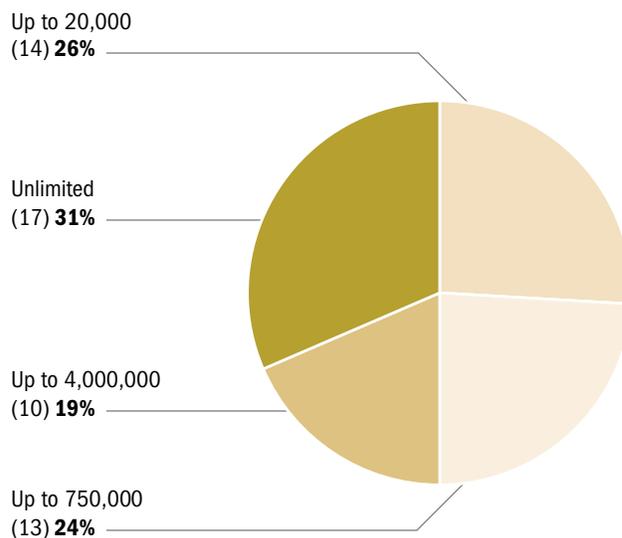
Environmental Registry, and our observations of signs of protest posted on private properties near some Park System sites. For example, we visited several Park System sites, such as Forks of the Credit Provincial Park near Erin and the Esquesing Tract near Milton, and observed ongoing management challenges and impacts posed by neighbouring aggregate operations.

Figure 7 shows that 17 of the 54 (or 31%) aggregate operations on the Escarpment are licensed for unlimited tonnage—meaning there is no restriction on the amount of material that can be mined each year. Out of the 17 sites licensed for unlimited tonnage, 12 (or 71%) of them extract materials below the water table. Extraction that occurs below the water table can reduce water levels, may require perpetual water management, and can permanently alter surrounding ecosystems. Conditions in aggregate licences attempt to address such environmental impacts.

Pits and quarries generally have a long operational lifetime—some quarries on the Escarpment have been in operation for over 100 years—which suggests that the quarries licensed for unlimited tonnage will be able to provide a steady supply of aggregate resources well into the future. Due to the negative environmental

Figure 7: Number of Licensed Aggregate Sites within the Niagara Escarpment Plan Area by Annual Maximum Tonnage, 2022

Prepared by the Office of the Auditor General of Ontario



effects of pits and quarries, as well as the lack of information about Ontario’s true demand for aggregates, many municipalities—including Milton, Halton Hills and Peel Region, which are within the Plan Area—have called for a temporary province-wide moratorium on all new aggregate licences, approvals and amendments. The municipalities called for this moratorium in 2022 and want to keep it in place until there has been a comprehensive review of aggregate needs and uses in Ontario. However, the Province has not initiated or committed to such a review.

The Plan states that an objective of the Mineral Resource Extraction Area is to minimize the impact of pits and quarries on the Escarpment environment. To achieve this, the Plan directs that pits and quarries must have a rehabilitation plan and companies implement that plan after extraction ends. We reviewed the rehabilitation plans for all licensed sites within the Plan Area and found that all 54 licensed sites have a rehabilitation plan that outlines steps for site restoration.

In sites where extraction had ceased, only five out of 26 (or 19%) sites had a rehabilitation plan that could still be accessed. The Ministry could not provide our Office with a list of all rehabilitation plans for unlicensed sites as the Ministry destroys records 10 years after an aggregate license has been surrendered, according to their record-retention schedule.

In the last five years, the Ministry has only inspected 14 out of 54 (or 26%) of the active extraction sites within the Plan Area. Inspections are important to maintain the environmental standards set out in the *Aggregate Resources Act*, as well as the objectives of the Act and the Plan. Out of these 14 site inspections, two sites failed due to non-compliance with progressive rehabilitation requirements. Additionally, every licensed pit in Ontario is required to submit a Compliance Assessment Report once a year to ensure that pits and quarries are complying with the *Aggregate Resources Act*, the regulations, their site plan, and licence conditions. However, the Ministry was unable to provide us with 10 of the 54 Compliance Assessment Reports that were required to be submitted for 2021.

Some pits and quarries can be approved even when the Commission opposes them due to their environmental impacts and inconsistencies with the Plan. In a 2014 hearing decision, an application for a quarry expansion was approved against the recommendation of the Commission. The Commission had concluded the application was inconsistent with the Plan due to potential impacts on water quality, harm to endangered species and their habitats, and had inadequate justification. A former Environmental Commissioner of Ontario and a former provincial Minister of the Environment both testified at the hearing against the approval of the quarry, citing environmental harm to the Escarpment.

RECOMMENDATION 2

To maintain the natural environment of the Niagara Escarpment and meet the purpose of the *Niagara Escarpment Planning and Development Act*, we recommend that the Ministry of Natural Resources and Forestry, in preparation for the next scheduled review of the Plan, assess the environmental impacts of aggregate extraction on the Niagara Escarpment, gathering the necessary information needed to conduct such an assessment and considering the Commission’s recommendation to prohibit all new and expanded aggregate operations on the Escarpment.

MINISTRY RESPONSE

The Ministry considered the Niagara Escarpment Commission’s recommendation to restrict new mineral aggregate extraction within the Niagara Escarpment Plan (Plan) area. It was determined that such a restriction would not be in keeping with the objectives of the Co-ordinated Land Use Planning Review, and it would not support provincial interests.

The Plan continues to provide for aggregate extraction in limited areas of the Escarpment where it can be demonstrated that extraction can be compatible with the Escarpment environment and rehabilitation measures are in place to ensure long-term impacts are mitigated.

The 2017 Plan adopted new concepts such as the requirement for Agricultural Impacts Assessments in certain circumstances, and restrictions on mineral aggregate operations in significant woodlands in alignment with the Provincial Policy Statement.

The next opportunity to revisit the Commission's recommendation to prohibit all new and expanded aggregate operations on the Escarpment is during the next scheduled review of the Plan in 2027. The Ministry will revisit the Commission's recommendation at that time.

4.1.3 Changes in 2017 to the Niagara Escarpment Plan Allow Development That Harms Endangered Species' Habitat

In 2017, the Ministry changed the Niagara Escarpment Plan to align it with changes made in 2007 to Ontario's endangered species legislation. The *Endangered Species Act*, which was passed in 1971, previously prohibited harm to endangered species and the destruction or damage of their habitat under any circumstance. However, in 2007 this legislation was replaced with the *Endangered Species Act, 2007*, which allows for harm to endangered species and their habitat, often with conditions. As a result of the changes made in 2017 to the Plan, development is now allowed on lands with endangered species and their habitat, subject to the *Endangered Species Act, 2007*, which is administered by the Ministry of the Environment, Conservation and Parks (Environment Ministry). Up until 2017, the Plan did not allow new development in endangered species' habitat.

Endangered species are plants, animals, fish or other forms of life that live in the wild, but are facing imminent extinction or being lost from Ontario. At the time of our audit, there were at least 70 species at risk on the Escarpment including 33 endangered, 19 threatened, and 18 species of special concern. Species at risk on the Escarpment include the wood turtle, nine-spotted lady beetle, and eastern flowering dogwood. Though the Commission and Ministry did not have this information readily available, they were

able to compile information on species at risk on the Escarpment at our request. Province-wide, the number of species at risk has risen by 22% in the last decade to 258 species.

As a result of the Ministry's changes to the Plan in 2017, endangered species' habitat is no longer explicit grounds for the Commission to refuse a development permit application. Previously, the presence of endangered species resulted in either the Commission denying the permit application or the application being withdrawn. For example, in 2013 Bell Mobility proposed to build a telecommunications tower on endangered Jefferson salamander habitat, but the Commission disagreed and it was not built in that location. Additionally, in 2012 the Commission denied an application for a single dwelling in the Region of Halton due to the presence of Jefferson salamander habitat on the property. Some species at risk, like Jefferson salamander, have significant portions of their province-wide habitat on or adjacent to the Escarpment.

We tested a sample of 45 development permit applications submitted in 2020/21 for activities along the length of the Escarpment. We found that 37 (or 82%) had species at risk occurrences, which are based on government records that a species at risk was recorded in a general area at a particular point in time. Out of those 37 development applications, 27 (or 73%) had potential for the presence of at least one species classified as endangered in the area.

Records of species at risk at a site can prompt the Commission to conduct further work to determine whether the property is considered habitat for the species or whether the species is present. Commission staff then determine whether a permit application should be circulated to the Environment Ministry based on the amount of potential species at risk habitat present, if the occurrence species is still thought to be in the area, if it may be a provincially or locally significant population, and whether the proposed development has the potential to impact species at risk or their habitat. We found that, of the 37 permit applications for sites that had records of species at risk, the Commission did not circulate 24 (or 65%) of them

to the Environment Ministry. At the time of our audit, there was no staff position for a biologist or ecologist at the Commission to provide expertise or investigate occurrences further.

Of the 13 (or 35%) of the 37 applications that were flagged to the Environment Ministry, the Commission received four responses stating that there were no species at risk concerns, five applications where the Ministry provided no comments, two requesting that additional species surveys be conducted by the applicant, one stating that fencing must be put up to protect the affected species, and one stating that it is the responsibility of the applicant to determine whether an approval is required.

In five of the 37 applications, the Commission required the applicant to have an environmental impact assessment conducted to determine the potential impact on species at risk. In one of the five assessments, there was an eastern meadowlark, which is a species at risk, confirmed at the site. In two other assessments, species at risk were expected to occur on site due to the presence of habitat regulated under the *Endangered Species Act, 2007*. However, this did not result in the Environment Ministry issuing a permit or other type of authorization under the *Endangered Species Act, 2007*.

In 2021, our Office completed a value-for-money audit on *Protecting and Recovering Species at Risk*. We found that the Environment Ministry's systems and processes for approvals facilitate and enable harm to species at risk and their habitats. We found that the Environment Ministry had never denied issuing an approval to harm species at risk and that little enforcement of the *Endangered Species Act, 2007* occurs.

RECOMMENDATION 3

To effectively implement and improve the efficiency of the Niagara Escarpment Plan (Plan) to maintain the natural environment, we recommend that the Ministry of Natural Resources and Forestry, during the next scheduled review of the Plan, consult the Ministry of the Environment, Conservation and Parks and those with relevant expertise in species at risk to assess the sufficiency of the Plan and its measures at protecting endangered species and

their habitat on the Escarpment, including the need to explicitly enable the Niagara Escarpment Commission to deny development permit applications that harm endangered species or their habitat, or to impose conditions when warranted.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) agrees that the objective of the Plan and the *Niagara Escarpment Planning and Development Act* is to maintain the Niagara Escarpment and land in its vicinity as a continuous natural environment.

In 2017, the Niagara Escarpment Plan's (Plan's) natural heritage policies were updated and refined to recognize key natural heritage features, acknowledge requirements for endangered and threatened species in alignment with the *Endangered Species Act, 2007*, and provide for improved consistencies between definitions and policy approaches in the Provincial Policy Statement and the other land-use plans.

The next opportunity to review the policies for development affecting natural heritage, including habitat of endangered species and threatened species, is at the next scheduled review of the Plan in 2027. At that time, the Ministry will review the sufficiency of measures to protect endangered species and their habitat on the Escarpment, and take corrective action as necessary. At that time, the Ministry will review the policies to ensure continued policy alignment between the Plan and the *Endangered Species Act, 2007*.

4.2 Lack of Tools to Measure Effectiveness of Escarpment Plan

4.2.1 Performance Measures Are Insufficient to Evaluate Conservation Efforts

The purpose of the *Niagara Escarpment Planning and Development Act* is to maintain the Niagara Escarpment and adjacent lands as a continuous natural environment, and to allow only compatible development. However, the Commission and the Ministry do not

have sufficient performance measures and targets to evaluate whether the purposes and objectives of the Act and Plan are being achieved in order to inform future actions. Accordingly, almost 50 years after it was passed by the Legislative Assembly of Ontario, the public is unable to know whether the Niagara Escarpment is being effectively and efficiently conserved as a continuous natural environment as mandated by the Act.

The Treasury Board Secretariat establishes policies and standards for organizational practices across government. The Secretariat has provided guidance to ministries emphasizing the importance of developing key performance indicators and targets to track performance, report on progress and drive continuous improvement. Performance measures are important to drive meaningful progress on outcomes, not simply on operational outputs.

The Plan directs that performance indicators will be developed, and performance monitoring will be undertaken, as follows:

- The Province will develop a set of performance indicators to measure the implementation of the Plan, and will monitor and report on them.
- The Commission will monitor and report on the Plan.
- The Province may require the Commission to provide information to demonstrate progress made toward the implementation of the Plan.
- The Commission shall consider performance indicators and monitoring information in the day-to-day implementation of this Plan.

The lack of sufficient performance measurement is a risk. It creates the inability to identify, analyze and communicate the environmental benefits of the Niagara Escarpment Plan. Additionally, insufficient performance measures are a missed opportunity to increase public support, knowledge and appreciation of the Escarpment.

Performance measures enable informed corrective actions to be taken. For example, we found that the Ontario Biodiversity Council uses some indicators that may be applied to the Escarpment:

- **Extent and protection of rare ecosystems**—At the time of our audit, we found that only 63% of the 75.7 hectares of 23 globally rare alvar sites on the Escarpment were protected, and the single 0.6 hectare area of globally rare prairie and savannah was unprotected.
- **Connectivity of ecosystems**—In 2015 and 2020, the Ontario Biodiversity Council reported that natural areas in the southern portion of the Escarpment and its adjacent lands were highly fragmented and not well connected, raising concern about the maintenance of the continuous natural environment as directed by the purpose of the Act.
- **Extent of protected-areas coverage**—At the time of our audit, we found that protected areas covered 16.3% of the Plan’s area. See **Section 4.3.5** for a discussion on the lack of a target for protected areas coverage, which is an internationally accepted measure of how effectively nature is being conserved in a region.
- **Private landowner enrolment in conservation programs**—The Ministry administers the Conservation Land Tax Incentive Program that enables private landowners to receive a 100% property tax exemption for conserving eligible natural heritage features such as the habitats of endangered species or provincially significant wetlands. The Ministry does not publicly report on participation levels in this program on the Escarpment. At the time of our audit, we found that there were 2,740 properties covering 24,665.5 hectares on the Escarpment enrolled in this program, after increasing by 298 properties in the past five years. The 2012 periodic review of the Biosphere recommended that such programs be used as performance indicators of sustainability.

4.2.1.1 The Commission’s Performance Measures Are Inadequate

The Commission has 21 performance measures in its 2021–2024 business plan and reports on them in its annual report. These performance measures are

operational in nature. However, few of the performance measures have quantifiable targets to track progress over time, and some of the measures that have targets are not tracked. For example, the Commission has a target to respond to compliance issues within 48 hours, but its 2020-21 annual report does not contain measures that report on response times.

The Commission stated that it will undertake work in 2021/22 to develop more quantifiable targets to optimize service delivery, but that its outdated database and lack of an online platform for electronic applications were barriers (see **Section 4.4.5**). The Commission's 2012–2016 strategic plan also had committed to produce “State of the Escarpment” reports on selected monitoring work and indicators to provide recommendations for future action (see **Section 4.2.1**). At the time of our audit, no such reports were publicly available on the Commission's website.

In its 2018 review of the Commission, the Institute on Governance concluded the Commission should improve its performance measurement in order to evaluate outcomes that lead to the successful implementation of the Niagara Escarpment Plan's goals. For example, the Institute concluded that a field-based environmental monitoring program could measure outcomes using indicators such as tracking tree coverage, and the number of native and invasive species (see **Section 4.2.2**).

4.2.1.2 The Province's Performance Measures Are Insufficient

In 2015, the Ministry of Municipal Affairs and Housing released a report with a partial set of performance indicators for the Greenbelt Plan, including indicators for the Niagara Escarpment Plan. This report found that the rate of houses being built outside of settlement areas had tripled over time and less growth proportionally was being concentrated in settlement areas. In other words, development was occurring over a larger area over time, rather than being concentrated in select areas.

The report found that wetlands covered 9% and woodlands covered 49% of the Escarpment, and that measuring changes over time would allow for an

evaluation of the Plan's effectiveness. We note that Environment and Climate Change Canada recommends having at least 50% forest cover in a region in order to have a low-risk approach to supporting the habitat of most species. Likewise, it recommends having 10% of each major watershed or 40% of the historical watershed wetland coverage protected and restored.

The Ministry of Municipal Affairs and Housing committed in the 2015 report to future performance indicator reporting for the Greenbelt Plan on aggregates, infrastructure, rural communities, agricultural economy, tourism, recreation and cultural heritage. However, no subsequent reports have been publicly released.

Ministry of Natural Resources and Forestry staff identified in their 2022 internal work plan the need to develop performance indicators for the Niagara Escarpment program, but this work was delayed due to other priorities and staffing capacity.

Our Office reported on Setting Indicators and Targets, and Monitoring Ontario's Environment in 2020 and found that the Ministry had not set public targets to meet provincial objectives to protect and maintain the Escarpment. At the time of our current audit, the Ministry does not have any key performance measures to assess its own responsibilities, administration of the Act to evaluate the effectiveness of the Escarpment program as a whole, or to oversee the operations of the Commission in meeting its legislated responsibilities. Without robust performance measures, the Ministry is unable to gauge progress toward its key program initiative in its 2020/21 published plan and annual report to conserve the Niagara Escarpment as an important feature, and the social and economic benefits it provides.

RECOMMENDATION 4

To measure the effectiveness of conserving the Niagara Escarpment, we recommend that the Niagara Escarpment Commission, adhering to guidance from the Treasury Board Secretariat:

- develop a performance measurement framework in collaboration with the Ministry of

Natural Resources and Forestry that focuses on successful outcomes in achieving the purposes of the Niagara Escarpment Plan and the *Niagara Escarpment Planning and Development Act*;

- include the performance measurement framework within the long-term strategy described in **Recommendation 7**; and
- publicly report on actual results against these performance measures every five years as part of a State of the Niagara Escarpment report.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) acknowledges that performance measurement is an effective and appropriate evaluation tool. The Commission recognizes that environmental monitoring and cumulative impacts would benefit in being integrated into a performance plan framework.

Because others, such as the Ministry of Municipal Affairs and Housing and the Ministry of Natural Resources and Forestry, also have responsibility in the area of developing performance indicators for the Niagara Escarpment Plan, with government direction, the Commission will collaborate with and support, as needed, other government partners in developing, implementing and reporting on a performance measurement framework.

4.2.2 No Environmental Monitoring to Assess the State of the Escarpment Due to Lack of Dedicated Staff, Resources or Program

At the time of our audit, the Commission had no staff, resources or program dedicated to on-the-ground scientific monitoring of the Niagara Escarpment's environment. The Niagara Escarpment Plan directs that its effectiveness be monitored and reported on. The Plan also directs that one of the objectives of the Park System is to show leadership in supporting the biosphere designation through environmental monitoring, which is required to meet additional Park System

objectives—namely, to protect and enhance the natural environment of the Escarpment and to provide a common understanding and appreciation of its value.

The 2005 version of the Plan explicitly recognized the importance of consistent, long-term environmental monitoring to evaluate and refine management, planning policies and practices. Previously, environmental monitoring information was used in the day-to-day implementation of the Plan, and monitoring results and analyses were shared on the Commission's website and through conferences, presentations and regular publications. In contrast, the 2017 version of the Plan provides markedly less direction on the requirements for environmental monitoring and how the data will be used.

At the time of our audit, responsibility for leading an environmental monitoring program was unclear. The 2020 Memorandum of Understanding between the Ministry and the Commission directs that the Commission lead environmental monitoring in co-operation with the Ministry and other partners. However, the Plan states that the Province, in consultation with the Commission, municipalities other public bodies and stakeholders, will develop a set of performance indicators to measure the implementation of the policies in this Plan, and that the Province will monitor and report on the effectiveness of the policies in this Plan.

The Commission had an environmental monitoring specialist on staff from 1997 to 2015, assisted by a summer student. During this time, for example, the Commission co-ordinated environmental monitoring in five forest plots in partnership with the University of Waterloo; was involved with projects to assess changes to trees and other plant species in biosphere forests; and evaluated the effectiveness of Plan policies in protecting provincially significant Life Science Areas of Natural and Scientific Interest, which are areas where biodiversity is representative of the natural region.

When the monitoring specialist position was eliminated in 2015, another Commission staff person co-ordinated the forest plot monitoring project in addition to their regular duties. In 2020, the monitoring partnership with the University of Waterloo was

terminated and at the time of our audit the Commission had not yet identified how it will monitor these sites in the future.

The Ministry has a science and research program that leads and co-ordinates applied research, including developing and implementing provincial resource inventories and monitoring programs. Different program areas within the Ministry and across government may request that staff in this program area undertake scientific research work. However, at the time of our audit, neither the Commission nor the Ministry's Natural Heritage Branch, which is responsible for the Niagara Escarpment program, had made any research requests.

In 2020, our Office conducted an audit entitled *Setting Indicators and Targets, and Monitoring Ontario's Environment*. Our Office found that the previous monitoring program for the Escarpment lacked performance measures, a data management plan and had no program evaluation. The Commission has not released regular reports on the state of the Escarpment despite the 2005 update to the Niagara Escarpment Plan stating that the results of an environmental monitoring program would be provided through the Commission's website, regular reports, conferences, presentations and publications. Additionally, the two reports the Commission had prepared on the condition of the Escarpment in 2008 and 2011 are not available on the Commission's website.

RECOMMENDATION 5

To assess the effectiveness of the Niagara Escarpment Plan, and to promote a greater understanding of the Niagara Escarpment, we recommend that the Niagara Escarpment Commission in co-operation with the Ministry of Natural Resources and Forestry (Ministry):

- develop an environmental monitoring program, including leveraging existing Ministry datasets and resources, to effectively and regularly assess the state of the Escarpment and the effectiveness of Plan policies;

- provide sufficient staffing and resources for the monitoring program; and
- publicly and regularly report on the Commission's website the results of environmental monitoring.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) acknowledges environmental monitoring as an important assessment tool. Monitoring the Escarpment environment is a significant undertaking given the size of its geography, diversity of features and landscapes and the number of partners and agencies that have a mandate or interest in the environment of the Escarpment.

Proceeding with this recommendation requires additional provincial funding (e.g., financial and staffing resources) and collaboration with other partners with responsibility for environmental monitoring (e.g., the Ministry of Natural Resources and Forestry).

4.2.3 The Commission Has Not Assessed the Cumulative Effects of Development Permits Issued Since 1975

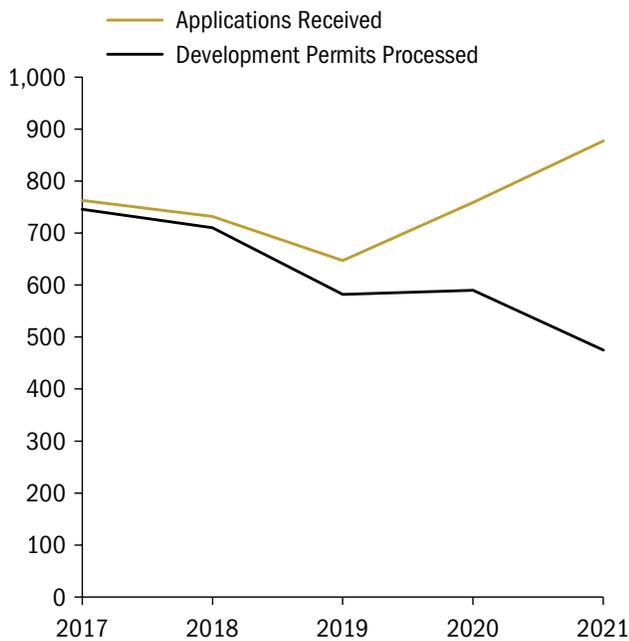
Since 1975, there have been 12,294 development permits issued by the Commission. See **Figure 8** for the number of annual development permit applications since 2017. Yet, the Commission has not assessed the total impact of all development permits, nor development requiring an exemption, over time.

The cumulative effects of multiple stressors—particularly those involving large developments—pose a threat to the environment. For example, the approval of a single new dwelling on the Escarpment may potentially have a low impact, but the sum total of such permits may result in significant impacts over time.

The 2005 version of the Plan recognized cumulative effects and the incremental impacts of development in conjunction with other actions over time. For example, it recognized that the cumulative impacts of

Figure 8: Development Permit Applications Received and Processed by the Commission, 2017 to 2021

Source of data: Niagara Escarpment Commission



development must not have serious detrimental effects on the Escarpment's environment, including water quality, vegetation, soil, wildlife and landscape.

However, the Ministry amended the Plan in 2017 and removed reference to cumulative effects, despite the Commission's recommendation to strengthen those aspects of the Plan. For example, the Commission recommended strengthening the definition of negative impacts by recognizing the degradation to the Escarpment's open landscape character due to single, multiple or successive developments. Instead, the Ministry updated some parts of the Plan to further align it with the broader planning rules for other regions in southern Ontario.

RECOMMENDATION 6

To minimize the impact of development on the natural environment, we recommend that the Niagara Escarpment Commission:

- evaluate the cumulative effects of development permit approvals on the Niagara Escarpment's natural environment and factor that into the permit approval process;

- publicly report on this information; and
- take corrective actions to ensure that only compatible development is allowed on the Niagara Escarpment.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) notes that the Niagara Escarpment Plan (Plan) states that the Escarpment environment shall be protected, restored and where possible enhanced for the long term, having regard to single, multiple or successive development that have occurred or are likely to occur. Proceeding with this recommendation requires collaboration with other ministries and additional provincial funding (e.g., financial and staffing resources). The Commission will work with the Ministry of Natural Resources and Forestry to review the policies for development control at the next scheduled review of the Plan in 2027.

4.3 Insufficient Effort to Conserve the Escarpment

4.3.1 No Long-Term Strategic Plan to Conserve the Niagara Escarpment

The Niagara Escarpment Commission does not have a long-term strategic plan to achieve the legislative mandate to conserve the Niagara Escarpment. The Commission had a strategic plan for 2012–2016, but did not develop a new one after it expired. In 2018, an employee engagement survey found that 78% of Commission staff believed that the Commission was not on the right track for the future.

Strategic direction serves as a road map to guide effective decision-making. It should describe the organizational values, identify priority program areas to leverage the best possible use of resources, show how collaboration will occur with other parties, and detail the tactics that staff will use to effectively and efficiently achieve successful outcomes.

The Commission's 2012–2016 strategic plan recognized that the Act and the Plan were increasingly relevant in Ontario's growing urban environment. It

contained 10 goals and 40 action items to preserve, protect and promote the Escarpment, and uphold the World Biosphere designation. At the time of our audit, many of the action items were unfulfilled, including:

- streamlining decision-making by exploring opportunities to use new technology;
- filling Commission vacancies in a timely way; and
- publishing state of the Escarpment reports based on monitoring.

The 2012–2016 strategic plan was developed in consultations between Commission and Ministry staff, as well as a subcommittee of Commissioners. Additionally, stakeholders were given the opportunity to offer input. In 2012, the then-Minister approved this strategic plan, noting that it provided valuable guidance to the Commission to help it fulfill its challenging task of maintaining the integrity of the Niagara Escarpment and its surrounding lands as a continuous natural environment.

In its 2018 review of the Commission, the Institute on Governance concluded that the Commission should develop a standalone strategic plan to ensure planning and reporting activities maintain a focus on the medium- to long-term perspective. The Institute noted that there was support for a central role for Commission staff in developing a strategy in consultation with the Ministry.

The Ministry itself does not have a specific strategic plan for the Escarpment, but it does have a strategic plan for the Ministry as a whole with five broad goals for 2020–2025. The Ministry’s published plan and annual report for 2020/21 states that a key program initiative is to work with the Commission to implement the *Niagara Escarpment Planning and Development Act* and the Niagara Escarpment Plan to conserve this important feature and the social and economic benefits it provides, but it gives no details.

Additionally, the Ministry has no strategic direction or policies on how it will support Ontario’s four Biosphere Regions (Niagara Escarpment, Long Point, Georgian Bay and Frontenac Arch). In contrast, it is a best practice for a provincial or territorial government to actively support biospheres. For example, the Government of the Northwest Territories was actively

involved in the designation of the Tsá Tué biosphere in 2016 and collaborates in its ongoing management of 9,331,300 hectares.

RECOMMENDATION 7

To guide decisions to effectively, efficiently and accountably achieve successful outcomes in conserving the Niagara Escarpment, we recommend that the Niagara Escarpment Commission:

- develop a long-term strategic plan in collaboration with the Ministry of Natural Resources and Forestry that outlines specific actions, with associated timelines, that will be undertaken in association with its partners;
- implement the strategy; and
- publicly report annually on the progress toward achieving the strategy’s objectives.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) acknowledges the importance of long-term strategic direction. The Niagara Escarpment currently has a five-year business plan and annual reports. Over the next two years, the Commission will review its business plan to determine any opportunities for enhancements as related to identifying longer-term outcomes. If opportunities for enhancements are identified, the Commission will report on those through its public annual reports.

RECOMMENDATION 8

To better conserve nature, promote sustainable development, and maintain United Nations biosphere designations, we recommend that the Ministry of Natural Resources and Forestry develop and implement strategic direction and policies to support Ontario’s other three Biosphere Regions (Long Point, Georgian Bay and Frontenac Arch).

MINISTRY RESPONSE

The Ministry has shown leadership in supporting and promoting the principles of the Niagara Escarpment’s UNESCO World Biosphere designation by

developing Biosphere guidance in the 2021 Niagara Escarpment Parks and Open Space System Planning Manual. The guidance directs that a park or open space will include policies that recognize the Biosphere designation (e.g., biodiversity conservation through establishing and expanding conserved and protected areas, protection of species and habitats, and conservation of biodiversity and natural heritage features through park zoning). As United Nations' biospheres are international designations, they receive support and direction from the federal government. The Ministry will continue to work collaboratively with the federal government as it is the lead for biosphere reserves.

4.3.2 The Commission Has Approved 98.9% of Development Permit Applications in the Last Five Years

Our Office reviewed all development permit applications made to the Commission from 2016/17 to 2021/22. We found that only 19 (all on complex applications) of 1,661 (or 1.1 %) of the applications were refused by the Commission in the last five years.

A development permit is an approval issued by the Commission—or in very rare cases, the Minister—to a person, company or organization, and includes conditions that must be met for development to proceed. A development permit is required for any type of development activity within the Area of Development Control—the area regulated by the Commission—unless it is exempted in Regulation 828.

Overall, we found that the Commission approved 1,642 (or 99%) of 1,661 development applications in the past five years. In addition, the Commission also provided confirmation that 1,687 other applications that it received over the same period did not require a development permit.

Complex applications that require an interpretation of the Plan, or that do not align with the Plan and may need to be denied, can only be made by the Commissioners. From 2016/17 to 2021/22, there were 125 (or 7.5% of 1,661) complex applications that required

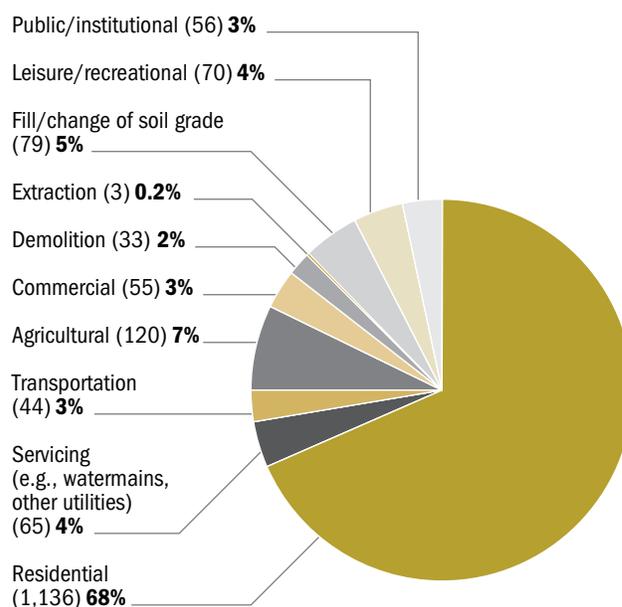
interpretation of the Plan and a decision made by the Commissioners. The Commissioners only refused to issue a permit in 19 (or 15%) of 125 cases.

Commissioners have made decisions contrary to the Niagara Escarpment Plan. For example, in 2019, Commissioners approved an application for importing 20,000 square metres of fill—materials like earth, sand and gravel—to level a field to establish a vineyard, although the Plan directs that topsoil is the only material allowed to be added into crop or pasture land. Furthermore, the Ministry of Agriculture, Food, and Rural Affairs raised concerns that importing this much fill for the establishment of a vineyard was not a common practice used by farmers. In 2021, the Commissioners also approved an application for the development of a pick-your-own lavender farm in the Escarpment Protection Area, despite it not being an allowable type of development there as per the Plan.

We reviewed all development permits that were issued from 2016/17 to 2021/22. We found that 1,136 (or 69%) development permits were issued for residential development, such as building garages and home additions. See **Figure 9** for the types of development

Figure 9: Types of Activities in Development Permit Applications Received by the Niagara Escarpment Commission, 2016/17 to 2021/22

Prepared by the Office of the Auditor General of Ontario

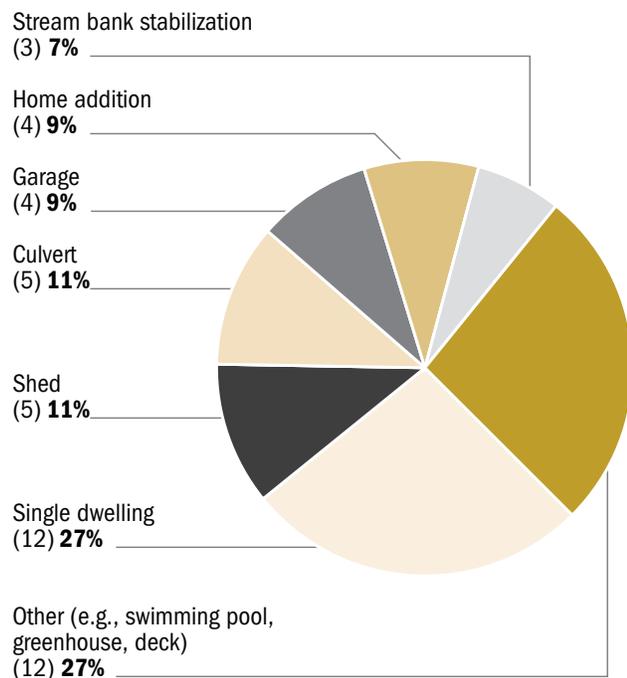


permit activities from 2016/17 to 2021/22. **Figure 10** shows the types of development activities in a sample of 45 development permit applications submitted in 2020/21. We found that the highest number of applications were specifically for the construction of single dwellings (27%).

Development permit approvals, their conditions, or refusals can be appealed and heard by the Ontario Land Tribunal. An appeal is a process where a person, company or organization can dispute the approval, refusal, or conditions of a development permit issued by the Commission. If the Hearing Officer—the person appointed to make recommendations on development permit appeals—disagrees with the Commission’s original decision, then the Minister makes the final decision on the application. From 2016/17 to 2021/22, the Minister ultimately decided on two (or 2.2%) of the 92 appeals submitted to the Commission. Concerns about the environment or permit conditions were cited in 52 (or 57%) of these appeals. Environmental concerns included potential impacts on nearby water

Figure 10: Types of Activities in a Sample of 45 Development Permit Applications Received by the Niagara Escarpment Commission, 2020/21

Prepared by the Office of the Auditor General of Ontario



resources, wildlife and natural features, as well as odour impacts from the proposed development activity.

RECOMMENDATION 9

So that the natural environment is effectively conserved and only compatible development is allowed on the Niagara Escarpment, consistent with the purpose of the *Niagara Escarpment Planning and Development Act*, we recommend that the Niagara Escarpment Commission:

- evaluate the permitted uses under the Niagara Escarpment Plan so that the criteria for what is considered compatible development is strengthened, providing the Commission greater means to deny permits when appropriate; and
- work with the Ministry of Natural Resources and Forestry during the next Plan review to update the types of, and criteria for, compatible development.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) agrees that the objective of the Plan and the *Niagara Escarpment Planning and Development Act* is to ensure that all new development is compatible with the purpose of the Plan. With government direction and support, the Commission will work with the Ministry of Natural Resources and Forestry during the next scheduled review of the Plan in 2027 to evaluate the permitted uses under the various Niagara Escarpment Plan (Plan) designations.

4.3.3 The Ministry Has No Plan to Assist in Financing the Completion of the Park System and Securing a Permanent Route for the Bruce Trail

The Niagara Escarpment Plan directs the creation and completion of a public system of major parks and open spaces through land acquisition—the legal transfer of land through donation or purchase for the purpose of permanent preservation. To this end, the Niagara Escarpment Parks and Open Space System

(Park System) aims to protect significant Escarpment features and provide the public with opportunities for compatible recreation. As part of our audit, we visited 64 Park System sites and observed the positive contributions that they make to maintaining the Niagara Escarpment and its adjacent lands. Additionally, the Plan directs that a permanent route for the Bruce Trail along the Escarpment be secured. However, we found that the Ministry does not have a plan or program to assist in financing the acquisition of lands for the Park System sites, to expand its own properties, or to secure a permanent route for the Bruce Trail. For example, we observed some Park System sites that were isolated and small and could be better connected through the Bruce Trail to maintain a continuous natural environment.

A 1968 report commissioned by the then-Premier of Ontario identified land acquisition as an important preservation tool for the Niagara Escarpment. The report was done in response to growing public concern about the future of the Escarpment in the face of increasing pressure from urban development and quarries. The report determined that significant natural features added to the Park System would need to be purchased, because land-use controls alone would not adequately protect the Escarpment. Though land acquisition has the benefit of protecting land from development, the cost of purchasing land can be very expensive.

In 1985, the Province established the Niagara Escarpment Land Acquisition and Stewardship Program for land acquisition on the Escarpment, which included accepting donations. The Province allocated \$2.5 million per year to this fund for 10 years from 1985 to 1994, for a total of \$25 million. Of this, \$20 million was used for land acquisition and \$5 million was used for stewardship and educational projects. In 1998, this stewardship program was terminated after a change in government, leaving no dedicated land acquisition fund for the Escarpment. In 2010, the Province then ended province-wide conservation funding for land securement. In 2020, the Province created a new land acquisition fund of \$20 million over four years, which helped the Nature Conservancy of Canada

acquire lands to protect the Saugeen Bruce Peninsula Natural Area on the Escarpment. Because of increasing land prices along the Escarpment, additions are becoming smaller and more infrequent. In 2015, the Bruce Trail Conservancy forecast that, given the slow rate of land acquisition, it would take until 2055 to permanently secure a route for the Bruce Trail.

At the time of our audit, the Niagara Escarpment Parks and Open Space System Council has a confidential draft Land Securement Strategy (Strategy) to advise the Ministry, as well as municipal, provincial and federal governments, of lands on the Escarpment that should be prioritized for acquisition to complete the Park System. The Council developed the Strategy in 2018 in response to the growing pressures on the parks and natural spaces that result from being located in one of the fastest growing regions in North America.

The Bruce Trail Conservancy, which is focused on securing land for the optimum route for the Bruce Trail, is the most active land securement organization within the Plan Area. This charity has been involved in preserving 7,644 hectares of land since it incorporated in 1963. The Bruce Trail's optimum route was identified with assistance from the Ministry in the 1980s. By spring 2022, 70% of the optimum route had been protected. In 2021-22, the Conservancy spent \$12.3 million to acquire 14 properties covering 420 hectares of land along the Escarpment—only 0.3% of its overall budget came from government grants. In 2022, the federal government committed to renewed federal funding of \$11 million annually for five years to support the Trans-Canada Trail, the longest recreational, multi-use trail network in the world.

The Conservancy has identified several opportunities that would allow it to protect land in the Plan Area more quickly and with reduced cost, but this would require assistance from the Commission. For example, the Conservancy has requested that the Commission identify thresholds to determine when a proposal for conservation purposes requires a full development permit process versus when a faster review would be adequate. The Conservancy also has identified that delays in receiving comments from other commenting

agencies have raised the Conservancy's administrative and property management costs, decreasing its ability to acquire additional lands.

RECOMMENDATION 10

To meet the Niagara Escarpment Plan objectives of completing the Niagara Escarpment Parks and Open Spaces System and securing a permanent route for the Bruce Trail, we recommend that the Ministry of Natural Resources and Forestry, in collaboration with the Niagara Escarpment Commission:

- demonstrate a commitment for the completion of the Park System and the securement of a permanent route for the Bruce Trail by using both goals as key indicators in the performance measurement framework described in **Recommendation 4**;
- establish a funding program dedicated to securing lands to complete the Park System and a permanent route for the Bruce Trail; and
- work with the Bruce Trail Conservancy to realize efficiencies that would expedite the process, and decrease the expense, of securing a permanent route for the Bruce Trail.

MINISTRY RESPONSE

In 2022, the Ministry of the Environment, Conservation and Parks created a new land acquisition fund of \$20 million over four years, which helped the Nature Conservancy of Canada acquire lands to protect the Saugeen Bruce Peninsula Natural Area on the Escarpment.

Targeted provincial program funding (e.g., Niagara Escarpment Parks and Open Space System Land Securement Program) requires government direction and support. The Ministry will support the Niagara Escarpment Commission (Commission), the implementing agency of the Niagara Escarpment Plan, in working with the Bruce Trail Conservancy to review the Commission's development permit process for conservation land applications.

4.3.4 Less than Half of the Park System's Sites Have Approved Management Plans Despite a Rising Number of Visitors and Threats Like Invasive Species

The Niagara Escarpment Plan establishes the Niagara Escarpment Parks and Open Space System (Park System) as a provincially co-ordinated network of parks and open spaces. At the time of our audit, the Park System was composed of 163 parks and open spaces that cover 44,017 hectares (or 23%) of the Plan area. These lands are managed by 23 different entities, such as the Ministry, Ontario Parks, seven different conservation authorities, Parks Canada, the Bruce Trail Conservancy, and municipalities. These entities participate in a Park System Council to collaborate and share information.

We visited 64 of the Park System's sites as part of our audit. We observed that these sites individually and collectively make a meaningful contribution to conserving the Escarpment. Additionally, we observed that these sites provide a range of benefits to the public, from places to access the outdoors to areas protecting drinking water supplies.

Since 1985, the Plan has directed that each site within the Park System have a management plan. Management plans are an accountable way to identify and address priorities for a park or open space to guide its protection and management over the long-term. The management planning process is also a way to engage Indigenous communities, the public, and stakeholders in how the Escarpment should best be conserved. Management plans must be endorsed by the Commission and then approved by the Ministry, except for sites owned or managed by the Bruce Trail Conservancy, Ontario Parks or a federal agency like Parks Canada. Additionally, the Ministry developed a planning manual, which provides minimum standards and best practices for management plans, including direction to address pressures that impact different sites.

Despite the Plan's requirements, we found that only 74 (or 45%) of the Park System's 163 sites have approved management plans. Among the 88 sites in the Park System managed by conservation authorities,

only 41 (or 47%) had approved management plans. For example, Grey Sauble Conservation Authority has 28 of its properties in the Park System, but 20 (or 71%) did not have management plans at the time of our audit. Additionally, Queenston Heights (Brock's Monument) is one of the nine Nodal Parks—the Park System's flagship sites—but the Niagara Parks Commission has yet to develop a management plan.

The Ministry manages 14 Park System sites. These sites have planning direction that was finalized in 1983, pre-dating the Plan, but they were not later endorsed by the Commission. Additionally, only one (or 7%) of the 14 sites' current planning direction refers to the Niagara Escarpment and being subject to the Plan—despite the Ministry being the co-ordinator for the Park System and having a leadership role in developing the planning guidance for the entire system. The Ministry has no work plans or inspection plans for these sites as this work is only carried out on a case-by-case basis. Ministry staff have also not attended some sites at all for any purpose, such as the Laird Property (37-hectare nature reserve site) and Fairmount (26-hectare Escarpment access site), in the last five years.

The Ministry has provided no capital funding in support of infrastructure that is needed at sites, such as for visitor management, since 2007. The Ministry states that dedicated capital funding is typically not provided for visitor infrastructure on Crown lands as they are “unmaintained” sites. However, the lack of sufficient management can affect not only the Ministry's sites, but can also impact adjacent properties. For example, in 2021, the Bruce Trail Conservancy—at its own expense—installed fencing at the Ministry's Pine River Fishing Area and hired off-duty police to address vehicles and all-terrain vehicles that were causing damage to their adjacent property (Pine River Nature Reserve). As part of our audit, we visited Pine River Fishing Area and observed that the new fencing had subsequently been cut and later repaired.

Similarly, Ontario Parks does have plans for each of its 15 provincial parks in the Park System, but they are on average 25 years old. Ten of these provincial parks (or 67%) have been identified by Ontario Parks as needing replacement plans. Two additional provincial parks (Cabot Head Provincial Park and Little

Cove Provincial Park) are intended to be transferred to Parks Canada to become part of Bruce Peninsula National Park. In our 2020 audit on *Conserving the Natural Environment with Protected Areas*, we found that Ontario Parks did not collect sufficient information about species at risk, invasive species and the impact of activities like hunting, fishing, and trapping that may harm native species in provincial parks and conservation reserves. As part of our audit, we visited Boyne Valley Provincial Park and observed some trails in poor condition, such as at water-crossings of creeks. In contrast, we visited numerous conservation authority properties where small wooden pedestrian bridges had been built for trail users to cross creeks to limit environmental damage.

Parks and open spaces face increasing pressures and threats that should be addressed in up-to-date management plans to best protect their natural values. The growing population in the province, exacerbated by the COVID-19 pandemic, dramatically increased park visits in the last several years. For example, Credit Valley Conservation (a conservation authority), which has six sites in the Park System, reported an increase of 170% in the number of visitors at all its properties from 2019 to 2021. Some provincial parks in the Park System also have experienced a surge in popularity, such as Mono Cliffs Provincial Park, which from 2020 to 2021 saw the number of visitors increase 55% to 104,519. The park has been relying on a management plan from 1998 that did not anticipate pressures such as large volumes of visitors and high demand for parking.

The pressures have taken a toll on the environment. From 1979 to 2012, the number of non-native plants found on the Escarpment more than doubled, the types of invasive species increased more than fourfold to 18, and aggressive invasive species were found at 56 of 88 (or 64%) sampling plots. Similarly, other threats have caused the number of species at risk to increase, necessitating up-to-date management plans to provide protective measures like signage for environmentally sensitive areas. For example, we observed that conservation authority properties we visited consistently had signage informing the public of when restoration projects were underway.

The 2021 Terms of Reference for the Park System's Council, composed of the 23 entities with sites, directs it to provide the Ministry with an annual report describing the activities and achievements during the past year. The Council will also develop a bi-annual work plan that will set its goals, objectives and strategic directions. In turn, the Ministry's continued financial support will be based on the annual report of objectives met and activities completed. However, no annual report was prepared in the last five years as the Council members were variously pre-occupied with managing large increases in visitors at their sites, challenges of dealing with the pandemic, the temporary lack of a Chair, and focusing their efforts on the 2017 Plan review. In 2021/22, the Ministry provided \$253 to support the work of the Council by paying for meeting expenses.

The cost of developing a plan varies depending on a site's size, pressures, threats, and location. These expected costs have been identified as a barrier to the development of management plans, especially for some smaller and more rural conservation authorities. Without a plan, sites are more likely to be managed in an ad hoc manner.

RECOMMENDATION 11

To effectively conserve the Niagara Escarpment's natural environment and meet the requirements of the Niagara Escarpment Plan, we recommend that the Ministry of Natural Resources and Forestry:

- develop management plans for its sites in the Niagara Escarpment Parks and Open Space System that reflect the minimum standards and best practices in its planning manual; and
- provide needs-based financial assistance to other entities to develop management plans for their sites in the Park System.

MINISTRY RESPONSE

The 2021 Niagara Escarpment Parks and Open Space System Planning Manual provides guidance and a consistent approach for the development, implementation, and maintenance of management

plans. With government direction and support, the Ministry of Natural Resources and Forestry will develop management plans for its sites in the Niagara Escarpment Parks and Open Space System, reflecting the minimum standards and best practices in the planning manual. Government direction is required for targeted provincial program funding (e.g., capital funding for entity management plan development, and Ministry program and operational funding for staff to undertake management plan development and implementation).

4.3.5 No Target to Expand Protected Areas to Better Conserve the Environment

The Act, Plan, Commission, and the Natural Resources Ministry do not have a target for protected areas coverage on the Niagara Escarpment. The Commission and the Ministry also do not publicly report on the current extent of protected areas on the Escarpment.

Protected areas are places where nature is allowed to function relatively unaffected by human activities—where the living and non-living components exist in their natural environment, and ecological processes can occur with little or no intervention by people. Protected areas, like national and provincial parks, are an effective tool to conserve nature and the benefits it provides us. For example, as part of our audit, we visited Bruce Peninsula National Park and observed extensive stewardship, outreach, and opportunities for appropriate recreation all contributing to the conservation of the Escarpment.

National criteria have been established to assist jurisdictions in screening lands in order to report them as protected areas or as having other area-based conservation measures. Areas that do not meet the criteria may contribute to conservation efforts generally, but are not reported. For example, the Niagara Escarpment as a whole or its individual zones provide many conservation benefits, but do not meet the criteria to be considered a protected area.

The coverage of protected areas is used as an indicator to assess the state of the environment in an area,

as well as to drive continuous improvement and action in conserving nature. Additionally, protected areas are often managed to provide public access for people to enjoy nature and allow appropriate site-specific types of recreation like hiking.

At the time of our audit, we found that there were 215 protected areas covering 31,871 hectares (or 16%) of the Escarpment. See **Figure 11** for the protected areas on the Niagara Escarpment by landowner and total area. Bruce Peninsula National Park, Fathom Five National Marine Park, and 17 provincial parks account for 81% of lands covered by protected areas within the Niagara Escarpment Plan's area. Sixteen of these 19 national and provincial parks were established in the 1980s, the most recent being Nottawasaga Lookout Provincial Park in 1994.

In a 2020 article in the journal *Science Advances*, experts concluded that protected coverage in the world would have to increase to 50% to slow or halt the loss of biodiversity. Additionally, it is a best practice for legislation to reflect government commitments to conserve nature made in international agreements. Canada's current national commitment is to protect 30% of lands and oceans by 2030. It also is a best

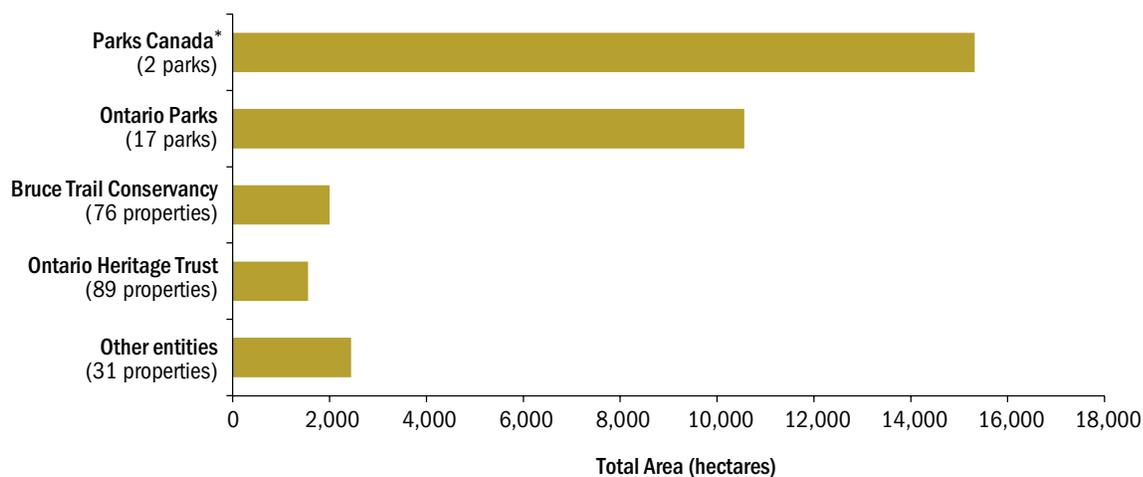
practice for legislation and land-use plans to include protected-area targets.

While the Plan provides direction for the Niagara Escarpment Parks and Open Space System, only some of its 163 sites are currently reported as protected areas by the provincial and federal governments. For example, only three of nine Nodal Parks—select places to promote the Escarpment's diverse environments for public benefit—are reported as protected areas. See **Figure 12** for a list of Nodal Parks and the status of each site as a protected area. Additionally, the Ministry's 14 properties that it manages cover 4,788 hectares within the Park System, but none are reported as protected areas.

Some entities with sites in the Park System are evaluating whether their lands qualify and can be reported as protected areas. However, neither the Ministry nor the Commission provide funding to help Park System entities with this process. Our Office's 2020 value-for-money audit *Conserving the Natural Environment with Protected Areas* found that the lack of funding to assist external parties in gathering the necessary information for their submissions to screen (and ultimately report) their sites as protected areas

Figure 11: Protected Areas within the Niagara Escarpment Plan Area by Landowner and Total Area, 2022

Prepared by the Office of the Auditor General of Ontario



* Parks Canada data only includes the portion of Bruce Peninsula National Park within the Niagara Escarpment Plan Area.

Figure 12: Nodal Parks in the Niagara Escarpment Parks and Open Space System, 2022

Sources of data: Niagara Escarpment Plan and the Canadian Protected and Conserved Areas Database

Nodal Park	Classification	Management Entity	Hectares within the Niagara Escarpment Plan Area	Reported as a Protected Area to the Canadian Protected and Conserved Areas Database
Bruce Peninsula National Park	National Park	Parks Canada	9,915	Yes
Inglis Falls Conservation Area	Natural Environment	Grey Sauble Conservation Authority	211	No
Mono Cliffs Provincial Park	Natural Environment	Ontario Parks	732	Yes
Terra Cotta Conservation Area	Natural Environment	Credit Valley Conservation and the Ontario Heritage Trust	159	No
Crawford Lake Conservation Area	Natural Environment	Halton Region Conservation Authority	223	No
Cootes Paradise Sanctuary	Natural Environment	Royal Botanical Gardens	557	Yes
Dundas Valley Conservation Area	Natural Environment	Hamilton Conservation Authority and the Ontario Heritage Trust	1,259	No
Ball's Falls Conservation Area	Historical	Niagara Peninsula Conservation Authority and the Ontario Heritage Trust	126	No
Queenston Heights (Brock's Monument)	Historical	Niagara Parks Commission	103	n/a*

* Queenston Heights (Brock's Monument) is a national historic site. It is not managed primarily for the purpose of conserving nature and would likely not constitute a protected area.

was a barrier. Our Office also found that an effective network of protected areas is necessary to slow or stop the loss of biodiversity—particularly critical in southern Ontario—so that Ontarians can more fully realize the benefits that nature provides, including recreational opportunities.

RECOMMENDATION 12

To help drive continuous improvement and achieve the purpose of the *Niagara Escarpment Planning and Development Act* to conserve the natural

environment, we recommend that the Niagara Escarpment Commission:

- develop in collaboration with the Ministry of Natural Resources and Forestry, the Niagara Escarpment Parks and Open Space System Council, and other partners, a long-term area-based target for expanding the number and size of protected areas on the Niagara Escarpment; and
- include the protected-areas target in the performance measurement framework described in **Recommendation 4**.

COMMISSION RESPONSE

The Niagara Escarpment Parks and Open Space System (NEPOSS) is a provincially co-ordinated system that secures and protects significant Escarpment features and scenic landscapes and provides the public with opportunities for compatible recreation in a manner that satisfies the broad park and open space objectives set out in the Niagara Escarpment Plan. Because the development of protected-areas targets for the Escarpment is not solely within the Niagara Escarpment Commission's responsibility, the Commission will, with government direction, collaborate with the Ministry of the Environment, Conservation and Parks and other partners to develop a protected-areas target for the Escarpment.

4.4 Deficiencies in the Plan's Administration

4.4.1 No Charges Have Been Laid Under the Act Since 2014, Yet Reports of Potential Violations Have Increased by 82% over the Last Five Years

The Act prohibits any development activity in the Area of Development Control unless a permit is obtained

from the Commission or the activity is exempt. The Act allows for fines of up to \$25,000 for a person and \$50,000 for a corporation for a first offence. Subsequent convictions allow for a fine up to \$10,000 for each day the contravention has continued after the person was first convicted, and \$25,000 for corporations. The Commission and the Ministry may also issue demolition or restoration orders, as well as stop work orders. Failure to comply with an order may result in the Ministry undertaking the demolition or restoration of a development and recovering any associated costs from the responsible party. See **Figure 13** for warnings, orders and charges from 2017/18 to 2021/22. The Ministry last laid a charge under the Act in 2014, which resulted in a \$2,000 fine for a corporation undertaking development without a permit.

Compliance is a shared responsibility between the Commission and the Natural Resources Ministry based on the 2015 Inspections, Investigation and Enforcement Protocol (Protocol). The Commission is responsible for the daily operation of the compliance program and the Ministry becomes involved when more serious offences may have potentially occurred. Commission enforcement staff may issue tickets with a set fine of \$365, whereas the Ministry's conservation officers can lay charges under the Act that could result in a fine up to the maximum allowable penalty.

Figure 13: Warnings, Orders, Tickets and Charges under the *Niagara Escarpment Planning and Development Act*, 2017/18 to 2021/22

Source of data: Niagara Escarpment Commission and the Ministry of Natural Resources and Forestry

	2017/18	2018/19	2019/20	2020/21	2021/22
Warnings (#)	9	23	15	27	11
Demolition or Restoration Orders (#)	0	1	2	3	1
Stop Work Orders (#)	0	0	1	0	2
Tickets issued by Commission staff, Part I Offences (\$365 set fine) (#)	7	5	7	3	2
Total fines, Part I Offences (\$)	2,555	1,825	2,555	1,095	730
Charges laid by the Ministry of Natural Resources and Forestry, Part III Offences (Maximum penalty of \$25,000 for individuals/\$50,000 for corporations) (#)	0	0	0	0	0
Total fines, Part III Offences (\$)	0	0	0	0	0

The Protocol prescribes the roles and responsibilities for staff, and establishes mechanisms for the shared administration and oversight of the compliance program. In their 2022 work plan, Ministry staff noted the Commission had requested that the Protocol be reviewed, but they saw little need to do so and ranked it a low priority.

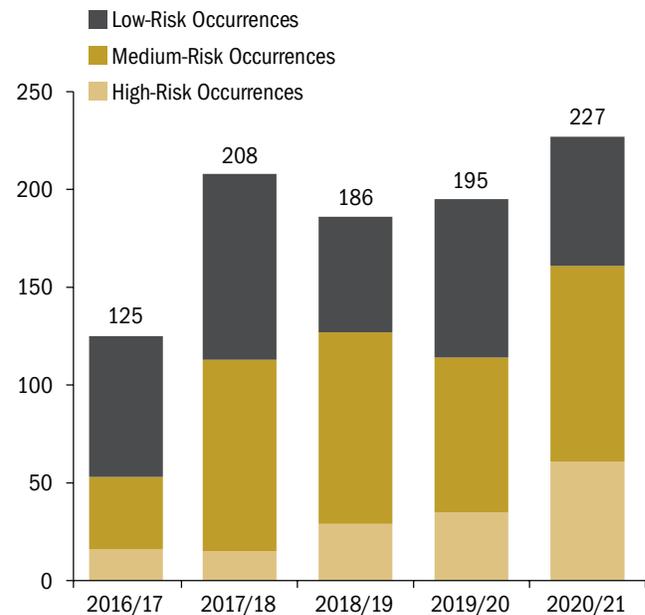
The number of potential violations of the Act recorded by the Commission have increased 82% to 227 2016/17 to 2020/21. The Commission assesses occurrences as low, medium or high risk. Tickets may be the appropriate enforcement mechanism for low- or medium-risk occurrences, whereas charges or orders may be appropriate for high-risk occurrences. See **Figure 14** for the number of potential violations and the level of risk.

The most significant increases in occurrences in the last five years were in the most heavily populated regions of the Escarpment: Niagara, Halton and Peel. The Commission attributes this increase to the COVID-19 pandemic, when more people stayed home and worked on their properties, and were able to witness and report possible infractions. In 2021, high-risk occurrences included potential violations regarding construction of buildings and other structures (10%), tree cutting (26%), and site alteration and the importation of fill (61%). In July 2022, the Town of Caledon's council voted unanimously to ask the Ministry for enhanced enforcement tools for lands that fall within the Plan Area. The Town of Caledon is experiencing an increased number of complaints about properties within the Plan Area, and is frustrated with its lack of authority to protect the environment and the Commission's limited enforcement capacity.

Commission staff almost always pursue voluntary compliance when working with a landowner. There were 156 high-risk occurrences in the last five years, but the Commission made only five requests (or 3% of occurrences) for the Ministry's assistance in investigating and possibly prosecuting an incident. In four of the five cases, the Ministry did not proceed with laying charges due to Commission staff providing insufficient documentation, failing to follow up with Ministry staff, or because of the need for further compliance

Figure 14: Number of Potential Violations and Level of Risk, 2016/17 to 2020/21

Prepared by the Office of the Auditor General of Ontario



monitoring. In the fifth case, the Ministry's investigation was focused on potential non-compliance with an order previously issued. In 2022, Commission staff reported a need for more efficient co-ordination with the Ministry when there is a repeat offender or significant environmental damage that warrants a substantial fine.

At the time of our audit, the Commission had one full-time staff member for enforcement, who started in their position in November 2021, and is assisted by two part-time staff. Commission enforcement staff are responsible for compliance issues covering the entire Plan area from Tobermory south to the Niagara River. The Protocol directs that the Ministry allocate the equivalent of at most one conservation officer and a part-time prosecutor for enforcement of the Act.

The Commission is meant to take a risk-based approach to compliance using an informed judgment matrix—a decision-making tool used to classify the severity of an incident and then decide on a response. This approach prescribes responses of increasing severity, ranging from education and voluntary compliance to inspection, investigation, enforcement and prosecution. However, the Commission does not have detailed

guidance on what constitutes a particular level of risk and each incident is decided case-by-case based on experience and precedent. An example of a low-risk violation could be the illegal construction of a fence or a shed, whereas a high-risk violation could be illegal construction at a gravel pit that damages key natural heritage features.

Several requirements of the 2015 Protocol have not been met. The Protocol requires the Commission and Ministry staff responsible for enforcement of the Act to meet at least annually to ensure efficient and effective processes are in place—but the last meeting was in January 2017. The Protocol also directs a committee composed of the Commission’s Director and the applicable Ministry directors to meet as necessary to discuss enforcement-program design and oversight, but no formal meetings have occurred. Additionally, the Protocol calls for the Commission to prepare an annual compliance operation plan, but no reports were prepared in the five years up to February 2022. Likewise, the Protocol directs the Ministry to prepare a report annually on its enforcement activities under the Act, but no reports have been prepared since 2015.

The Commission reduced inspections with the onset of the COVID-19 pandemic and provincial stay-at-home orders in 2020. In 2020/21, 30% of incidents triggered an inspection compared to an average of 71% in the preceding four years. The Commission suspended its proactive compliance-monitoring program of permit holders due to the pandemic, but in 2019-20 Commission staff found during inspections of development permit-holders that 7 of 22 (or 32%) were non-compliant with the approved conditions.

In 2022, Commission staff recommended legislative changes to improve inspection and enforcement powers. Likewise, in 2011 an Ontario Internal Audit recommended that the Ministry work with the Commission to review inspector powers under the Act. For example, the Act provides very limited grounds for inspectors to enter properties. That stipulation frequently leads to either no action being taken to prevent

or reduce environmental damage, or significant delays in taking enforcement action. The staff report notes that it has been 16 years since any changes have been made to the enforcement powers of the Commission, and that it is experiencing an increase in the number of non-compliance occurrences, as well as an increase in the degree of risk associated with these occurrences. Ministry staff identified legislative reform in their 2022 workplan, but noted it was delayed because of other priorities and staffing capacity.

RECOMMENDATION 13

So that only development compatible with the natural environment occurs, as directed by the *Niagara Escarpment Planning and Development Act*, we recommend that the Niagara Escarpment Commission work with the Ministry of Natural Resources and Forestry (Ministry) to:

- fully implement the 2015 Inspections, Investigation and Enforcement Protocol, including conducting all required meetings between Commission and Ministry staff to collaborate on enforcement issues; and
- develop procedures and protocols to better address occurrences of non-compliance, including how staff gather information, how high-risk occurrences should be dealt with, and how information is exchanged with the Ministry.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) will work with the Ministry of Natural Resources and Forestry (Ministry) to immediately implement the 2015 Inspections, Investigation and Enforcement Protocol, including conducting all meetings. Within the next two years, the Commission, with the support of the Ministry, will develop procedures and protocols leveraging existing information and tools of the Ministry to effectively address occurrences of non-compliance with the *Niagara Escarpment Planning and Development Act*.

4.4.2 Insufficient Public Outreach and Education to Promote the Niagara Escarpment Plan

The Commission is mandated to promote the objectives of the Plan and the Act through public relations, publications, marketing and stakeholder consultation. Additionally, it is mandated to engage, consult and cooperate with Indigenous peoples and groups across the Plan Area. In 2022, a report by the Greenbelt Foundation found that strong public awareness and support are important because environmental land-use plans are often vulnerable to development and political pressures. However, the Commission does not have enough staff or resources to meet its outreach mandate.

The Commission currently employs a single staff member dedicated to communications and public outreach, and relies on the participation of additional staff who have a full complement of other duties (see **Section 4.4.6**) to implement outreach activities. Over the past two years, the Commission did not budget anything for public outreach because of the COVID-19 pandemic. Prior to that, the Commission's 2019/20 annual report notes that it consistently spent less on education and outreach activities because of reduced annual operating funding from the Ministry.

Over the last decade, the Commission has stopped delivering its public lecture series and interpretive programs to engage the public on the Escarpment's history, importance and biosphere designation. It also no longer gives out its Niagara Escarpment Achievement Award to recognize individuals or groups for outstanding initiatives such as conservation, enhancement and land stewardship. The Commission's 2019/20 annual report notes that, to mitigate a budget deficit, the Commission reduced spending on activities such as education and outreach.

The only funds currently dedicated to outreach are in legacy accounts held by the Ontario Heritage Trust on behalf of the Commission. In 2021, these accounts held a total of \$13,997 for outreach. The Commission does not expect to receive additional funds from the Trust once these legacy funds have been spent. In contrast to the level of funding for outreach at the time of our audit, the Province provided \$500,000 of dedicated annual funding for public education and other

stewardship activities related to the Niagara Escarpment between 1985 and 1995.

Recent outreach efforts have been focused on the Commission's role as a regulator as opposed to more broadly informing the public about the value of conserving the Escarpment as directed by the Act and the Plan Area. Informing stakeholders on land-use policies and navigating the development application process accounted for 37 (or 80%) of the 46 public education and outreach events held by the Commission between 2018 and 2021. Though the positive impact of these sessions has been recognized by the Chair and Commission, Commissioners have repeatedly recognized and encouraged additional outreach to educate private landowners on the value of the Plan and to promote protection of the Escarpment. Furthermore, internal Commission analysis identified that savings would result from improved outreach activities—specifically by reducing the large number of inquiries currently fielded by Commission staff.

In its 2018 review of the Commission, the Institute on Governance found that the outreach conducted by the Commission failed to adequately improve awareness of the Plan and the Commission's mandate among the general public, and that there was a need to better communicate with the public directly impacted by the development permit process. The Institute also found that, in light of the recent changes to the Plan and policies, it was important to set clear expectations for stakeholders, and recommended that the Commission enhance its public outreach efforts.

The Commission has drafted a four-page communications strategy for 2022/23. The goals of this strategy include outreach activities to help clients understand the development permit process, raise the public profile of the Escarpment and the Commission, and implement the duty to consult with Indigenous communities in the Plan Area. Though the strategy does not include a budget, it does identify the monies in the above-mentioned legacy Trust accounts.

The Commission changed its website in 2021, migrating it onto a government-managed server. The Commission states that it undertook this project to reduce costs, improve user experience, and increase

the public's ability to access information. As part of this website migration, the Commission removed all information related to the Escarpment's ecology, geology, monitoring programs, the biosphere and public education. Further, though the Commission's website has an open data web page to promote transparency and public access to information, 13 of 19 listed datasets were inaccessible at the time of our audit. Commission staff submitted these datasets to the government's Ontario Data Catalogue website, but they had yet to be approved for public access. The inaccessible datasets include information on the Escarpment's geological features, nature preserve properties, and the historical evaluation of lands to add to the Plan Area.

RECOMMENDATION 14

So that Ontarians are effectively informed about the Niagara Escarpment in a way that contributes to the effective and efficient implementation of the Niagara Escarpment Plan, we recommend that the Niagara Escarpment Commission, in collaboration with the Ministry of Natural Resources and Forestry:

- assess the resources needed to expand the Commission's public outreach and education program, including improving the information shared with the public on its website; and
- allocate such resources for the Commission to implement a renewed public outreach and education program.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) acknowledges the importance of public education and outreach, including that its website is up-to-date, accessible and meets clients' needs. The Commission will review its current public education and outreach, and develop a workplan toward improvements and timelines for outcomes. Where needed, the Commission will request provincial funding (e.g., financial and staffing resources) to implement this workplan.

4.4.3 The Commission Reviews Applications That Do Not Require Development Permits, Contributing to a Backlog That Slows the Whole Process

Our Office reviewed all development applications between 2016/17 to 2021/22. We found that exemptions—development activities that do not require a development permit—accounted for half of the 3,348 development permit applications. In other words, a large volume of Commission staff's work involved processing permit applications for activities that did not need one.

There is no requirement for applicants to apply for an exemption. The Commission chooses to process and screen these applications to reduce later potential non-compliance issues and to ensure all development is compatible with the Plan. However, we found that the Commission's website lacked sufficient information for the public to know whether a development activity is exempt or how to interpret the required conditions in the exemption regulation. We note that, prior to issuing a building permit, municipalities often request written confirmation from the Commission that a proposed development is exempt.

In 2015, Commission staff identified that automating the exemption process would reduce the number of development permit applications received, thereby reducing the number of applications processed by staff. For this to occur, the Commission would first need significant upgrades to its current information system and website (see **Section 4.4.5**).

An applicant looking to see whether they need a development permit would ideally be able to go onto the Commission's website and be prompted to fill out an online screening form. The applicant would be walked through a decision tree that would determine if the applicant was exempt or if the application warranted further analysis. In both cases, a planner would be electronically notified to either complete the exemption or to begin the development permit process.

As of April 2022, there was a backlog of 737 applications in which no decision has been reached. In three

of the past seven years, the number of development permit applications received has exceeded the number of applications processed. We reviewed all development permits issued between 2016/17 to 2021/22 and found that a development permit application took an average of 216 days to complete from the time it was submitted to the decision date. As part of the permit process, the Commission staff must wait for agencies to comment on the application, for documents to be uploaded by the applicant, and for the 14-day appeal period.

Development activities that are eligible for exemption include, but are not limited to, constructing or installing sewers, pipes or cables, and drilling wells to supply water. In 2018, Ministry staff identified 36 additional items that could be clarified or added to the exemption regulation to decrease the number of development permits processed by Commission staff. For example, an applicant is currently allowed 72 square metres (m²) of accessory structures like garages or decks on their property. This value is cumulative, so if a property owner wanted to build a garage under the threshold but then later wanted to build a deck that put them over the total 72 m², they would have to apply for a development permit instead of an exemption, adding months to the building timeline.

Despite the need to update the exemption regulation, the Commission is reliant on the Ministry to finalize any regulatory changes. The exemption regulation was last updated in 2012. In 2022, Ministry staff internally identified the need to update the exemption regulation. However, due to other priorities and a lack of staffing capacity, this has been delayed with no given timeline for completion.

Moreover, there are also exemptions that are currently allowed that could be reviewed to ensure that the exemptions are upholding the objectives of the Act and the Plan. For example, tennis courts are exempt from requiring a development permit and are not assessed for environmental impacts despite drainage and grading considerations that may impact natural heritage features.

RECOMMENDATION 15

So that only compatible development occurs on the Niagara Escarpment, as required by the *Niagara Escarpment Planning and Development Act*, and so that the Commission is effectively and efficiently implementing the Niagara Escarpment Plan, we recommend that the Ministry of Natural Resources, and Forestry, in collaboration with the Niagara Escarpment Commission, review and update Regulation 828 (Development within the Development Control Area) to modernize which activities are exempted from requiring a development permit.

MINISTRY RESPONSE

The Ministry agrees with the Auditor General's recommendation and will work with the Niagara Escarpment Commission to review Regulation 828 and modernize which activities are exempted from requiring a development permit.

4.4.4 Niagara Escarpment Plan Amendments Can Languish for Years

A plan amendment is a policy or land-use designation change to the Niagara Escarpment Plan that is initiated by the Commission or the Minister on behalf of a person, company or public body requesting the amendment. A plan amendment differs from a development permit in that it proposes a land use that is not permitted under the Plan, and must contain a justification for the proposed changes.

Urban amendments—land-use designation changes that result in the expansion of urban areas and uses—may only be considered during a scheduled Plan review. Applicants for urban amendments often want to make the land-use designation less restrictive to increase development opportunities. During the last Plan review in 2017, the Ministry deferred 12 plan amendments to allow for additional information and increased consultation.

In 2019, the Ministry brought the 12 proposed amendments before Cabinet, which then approved four of them—two amendments were also withdrawn by the applicants during this time. During the 2017 review, applicants were informed of a two-year timeline for the Ministry to decide on their amendments.

At the time of our audit, five years after the 2017 review, the Ministry had six deferred Plan amendments that were still awaiting a decision. All six plan amendments included proposals to re-designate lands from a more protective designation—like Escarpment Protection Area—to an urban area designation to allow for increased development. Ministry staff have attempted to bring these deferred Plan amendments before Cabinet three times since 2019, but Cabinet has not considered them. However, at the time of our audit, no decisions had been made by Cabinet on the six outstanding amendments. All six deferred plan amendments were recommended for refusal by the Commission and Ministry staff.

Plan amendments are often used to allow for increased development, provided that it is consistent with the Act and the Plan. However, the process for plan amendments is lengthy, even for non-contentious amendments, causing delays on development decisions. We examined all 35 decided Plan amendment applications from 2006 to 2021, excluding those that were withdrawn or that only dealt with policy changes. We found that the average time between the end of the public comment period for the proposed Plan amendment and the date of the actual decision was 717 days—just under two years. For example, relatedly, it took the Ministry eight years to regulate 400 hectares in the City of Hamilton as an Area of Development Control, despite both the City and the Commission being in support.

RECOMMENDATION 16

So that the Niagara Escarpment Plan is efficiently implemented and decisions on Plan amendments are made in a reasonable time, we recommend that the Ministry of Natural Resources and Forestry

work with Cabinet to make final decisions on the six outstanding urban amendments.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) agrees with ensuring that the Niagara Escarpment Plan (Plan) is implemented efficiently and that decisions on Plan amendments are made in a reasonable time. The Ministry will seek government direction on all outstanding Plan amendments.

4.4.5 The Commission Lacks a Modern Information Management System to Efficiently Implement the Niagara Escarpment Plan

The Commission's existing information system was developed in the early 2000s, and does not meet the needs of Commission staff or align with e-government initiatives. The information system is used daily by Commission staff for activities such as permitting and enforcement. However, it lacks modern search capabilities, does not have the capacity for electronic submissions by the public, is prone to data-entry error, and cannot be used to accurately measure the Commission's performance over time. The Commission's 2012–2016 strategic plan recognized the need to streamline decision-making by exploring opportunities to use new technology.

Answering public inquiries on permit application timelines, and processing exempted applications, make up a substantial part of the staff's workload. Having an information system that is capable of doing some of these tasks automatically would increase efficiencies, reduce staff workload, and provide the public with a streamlined application process.

In 2021, an employee engagement survey found that only 29% of Commission staff had a high degree of confidence that they were provided the technology, equipment and other tools needed to do their jobs well. As early as 2014, the Commission internally identified its computer database was at a high risk for failure,

and submitted a proposal to the Ministry for a database upgrade as early as 2017.

In 2019/20, the Commission began working with the Ministry to replace the existing database with a modern information system. The first phase of the project was completed in 2019/20 and examined existing applications used by the Province that could be customized for the Commission's purposes. Phase two was underway at the time of our audit, aiming to replace the existing database and achieve digital application and file management. The Commission has secured \$825,000 in each of the 2022/23 and 2023/24 fiscal years for this project, and has an expected completion timeline of 2023/24.

Additionally, in April 2022 the Commission received \$90,000 from the Recovery and Renewal Secretariat to digitize paper records for files related to development permit applications, plan amendments and compliance. Commission staff identified these records as a high priority as the Commission's paper filing system was a fire risk due to the lack of a sprinkler system in the Commission's office space. Moreover, the staff are unable to access these files remotely, which was made more problematic during the COVID-19 pandemic.

RECOMMENDATION 17

So that staff are more able to effectively and efficiently operate and implement the Niagara Escarpment Plan, we recommend that the Niagara Escarpment Commission complete the design and implementation of a modern information management system.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) is committed to the modernization of an information management system. The Commission was successful in gaining funding from 2022–2024 to undertake this important work toward a digital solution. A discovery phase to determine the needs of client and staff was completed in March 2022. Work is continuing in 2022/23 with a goal for the development of a new system by March 2024.

4.4.6 The Ministry Provides Insufficient Financial and Staffing Resources to Ensure the Niagara Escarpment Plan and Act are Efficiently Implemented

The Niagara Escarpment Commission employed 24 full-time employees (FTEs) and four seasonal positions at the time of our audit. The Commission had a budget of \$2,384,716 in 2020/21. See **Figure 5** for the Commission's organization chart and **Figure 6** for the Commission's budget in the last five years. The Commission's budget and staffing levels are approved by the Ministry.

In 1996, the Province significantly reduced the funding and staffing of the Commission by approximately a third. The Ministry made further cuts to the budget in 2010/11, 2011/12 and 2012/13, and then again in 2019/20. In recent years, the Commission has struggled to maintain its full staffing complement within its allocated budget. For example, prior to the 2017/18 fiscal year, the Commission was operating at 20 FTEs—four FTEs below its full staffing complement—due to an insufficient budget allocation.

In 2017/18, the Commission requested permission from the Ministry to hire up to its full staffing complement of 24. While the Ministry approved this request, it meant that the Commission started its fiscal year with a deficit of \$220,000. Between 2017/18 and 2019/20, the Commission maintained an operational deficit and found cost savings by cancelling Commission meetings or delaying IT repairs to reduce spending. Additionally, the Ministry does not factor salary and wage increases for inflation into the annual budget allocation. This means that the Commission is forced to cut costs on customer services to maintain its staffing levels. For example, over the last three years, the Commission has reduced spending on training, meetings and outreach to mitigate its ongoing budget deficit.

The Commission has reported that it continually faces challenges maintaining current levels of productivity and customer service given the budget allocation set by the Ministry. What's more, the Ministry has continued to cap the Commission's staffing levels at 24 FTEs despite the increase in the number of

development permit applications (see **Figure 8**). With the COVID-19 pandemic increasing development pressure in southern Ontario, this raises concerns about the Commission's future ability to process applications in a timely and effective manner.

The Commission projects in its 2020/21 annual report that it will have no deficit in the next three fiscal years, as long as the current allocation remains the same. However, internal forecasting shows a projected deficit starting in 2022/23 even if the current budget allocation is maintained. Additionally, for the past three fiscal years, the Ministry has had to file for a Treasury Board Order to provide extra funds to the Commission. This raises concerns about the effectiveness of its operations and funding model, as well as its commitment to, and ability to deliver on, its monitoring and education obligations.

At the time of our audit, there were no positions at the Commission to meet its need for environmental experts such as biologists, ecologists or geologists. This gap exists despite the Plan's objectives directing the protection of unique ecologic areas, the maintenance and enhancement of water supplies, and the necessity of maintaining an open landscape character on the Escarpment through the preservation of natural scenery. For example, see **Section 4.2.2** for a discussion about the lack of a monitoring program due, in part, to the Commission not employing an ecological monitoring specialist since 2015. Likewise, see **Section 4.4.2** for a discussion of the Commission's public outreach and education program, which has only a single dedicated staff member.

The Commission has experienced high staff turnover in recent years. For example, there have been eight different Directors in charge of the operations of the Commission since 2011. Additionally, during the course of our audit, seven different staff resigned from the Commission and two other staff left on secondment.

Of the seven planners at the Commission as of July 2022, all had less than two years' work experience at the Commission due to high rates of turnover.

Planning is regulated as a profession in Ontario in order to uphold standards and best practices, but the Commission's planners are not required to hold this designation. None of these planners hold a Registered Professional Planner designation or were working toward one as of July 2022.

Moreover, compliance cases are often handled based on experience in the position, yet the single full-time enforcement staff member began their job in November 2021 and subsequently resigned during the course of our audit (see **Section 4.4.1**).

The Ministry has reduced its own internal support for programs over time. For example, see **Section 4.3.3** for a discussion of the lack of a Ministry program to provide financial support to partners to secure lands for the Park System sites or to secure a permanent route for the Bruce Trail. Additionally, since 2007 the Ministry has not provided any capital funding for projects at its own Park System sites. (see **Section 4.3.4**).

RECOMMENDATION 18

So that the purposes of the *Niagara Escarpment Planning and Development Act* (Act) and the Niagara Escarpment Plan (Plan) are upheld, we recommend that the Ministry of Natural Resources and Forestry:

- evaluate the financial and staffing resources needed to effectively and efficiently implement the Act and Plan, in collaboration with the Niagara Escarpment Commission and conservation partners;
- take corrective action by allocating sufficient financial and staffing resources.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) acknowledges the importance of sufficient resources to implement the *Niagara Escarpment Planning and Development Act* (Act) and the Niagara Escarpment Plan (Plan). The Ministry will evaluate the necessary resources to effectively implement the Act and the Plan and, where required, will take corrective action.

4.4.7 Charging Fees for Development Applications and Other Services Could Help Finance Program Delivery and Discourage Activities That Negatively Impact the Niagara Escarpment

The Niagara Escarpment Commission currently does not charge fees for development permit applications, plan amendment applications, appeals or other services to recover program costs. In 2012, 2015, and 2018, the Commission concluded that charging fees was needed to offset program delivery costs. In 2019, as part of a broader review of agencies by the Province, the Ministry also identified the option for the Commission to be able to charge fees and noted that it would require a legislative amendment. Ministry staff sought various legislative amendments to modernize the Act five times since 2016, but Cabinet has not provided the necessary approval.

Fees are a standard expectation and business practice for services delivered by a public agency. Additionally, it is best practice to charge fees to serve as a disincentive for activities that harm the environment. In 2012, the Commission on the Reform of Ontario's Public Services recommended full cost recovery and user-pay models for environmental programs and services. Charging fees would also be consistent with the direction taken by other provincial ministries and government agencies as most local and regional municipalities and conservation authorities have established fees relating to permit applications and plan amendments. Municipalities and agencies also have the ability to charge a fee for reviewing an application where they are only a commenting agency and not the approval authority, as is the case with the Commission's function and mandate. For example, British Columbia's Agricultural Land Commission, which works to preserve agricultural land, charges a \$1,500 fee to applicants for development permits.

In 2012, Commission staff conducted an analysis for a proposed fee structure based on comparable fee structures at 33 different agencies, conservation authorities and municipalities within the Plan area. Based on comparable rates, Commission staff recommended fees of \$200–\$300 for minor permit applications,

\$2,000–\$6,000 for major permit applications, \$7,000–\$10,000 for Plan amendment applications, and other fees such as \$70,000 or full cost recovery for applications for new pits and quarries. Had these fees been in place, the Commission estimated that it could have generated revenue of more than \$440,000 in 2010/11 and \$312,100 in 2011/12.

The volume of development applications has increased since 2012. For example, the number of development permit applications increased 32% to 757 from 2011/12 to 2020/21. Accordingly, if the Province had amended the Act to allow the Commission to charge fees starting in 2012, potentially millions in revenue could have been generated to pay for conservation efforts and recover costs.

RECOMMENDATION 19

To improve the sufficiency of financial resources available for actions to conserve the Niagara Escarpment, we recommend that the Ministry of Natural Resources and Forestry take the steps necessary to have the *Niagara Escarpment Planning and Development Act* amended to enable the Niagara Escarpment Commission to charge fees.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) acknowledges the importance of sufficient resources to implement the *Niagara Escarpment Planning and Development Act* and the Niagara Escarpment Plan (Plan). The Ministry will require government direction with respect to pursuing service cost recovery and instituting fees for development permits, Plan amendments, appeals and other services provided by the Niagara Escarpment Commission.

RECOMMENDATION 20

To improve the sufficiency of financial resources available for actions to conserve the Niagara Escarpment, we recommend that the Niagara Escarpment Commission:

- develop a fee schedule for development permit applications, plan amendment applications, appeals and other services to recover program costs; and
- implement the fee schedule once enabled to do so.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) will develop a draft fee schedule within the next two years. The Commission will then seek government direction to enable and approve the fee schedule.

4.5 Opportunities to Enhance Commission Oversight, Transparency, and Representation

4.5.1 Lack of Timeliness in Appointment Process Has Negatively Impacted Functioning of Commission, Resulting in Cancelled Meetings and Delayed Decisions

Although a full complement of Commissioners had been appointed at the time of our audit, we found that the Commission had a number of vacancies from 2017 to 2021. The lack of timeliness in filling the vacancies negatively impacted the functioning and decision-making of the Commission. Quorum for the Commission is defined as nine members, including the Chair, and must be met in order for formal business to be conducted at meetings.

Each of the eight upper and single-tier municipalities identifies and submits ranked lists of candidates for municipal members to be reviewed by the Chair and Ministry program staff, who then identify their support of submitted names and put that forward to the Minister. Public-at-large members may be identified through several sources, including applications to Ontario's Public Appointments Management Secretariat website.

Until 2019, public-at-large candidates were screened and ranked by Ministry program staff using standard criteria, including knowledge of the Plan Area, commitment to the Commission mandate,

relevant background and experience, and community involvement. This process was changed in 2019, so that program staff no longer screen and rank all candidates. Ultimately, the Minister is responsible for making recommendations on appointments and reappointments to the Lieutenant Governor in Council.

Delays in appointing a new Chair resulted in no Commission meetings being held from early October 2019 until mid-March 2020, when a new Chair was appointed. The April 2020 meeting was cancelled due to the COVID-19 pandemic. This also occurred in 2017, when three meetings were cancelled because no Chair was appointed. To ensure that the Commission could continue to function until a new Chair was appointed, Ministry staff recommended that the Minister temporarily reappoint the former Chair, but this was not done.

The Act does not provide for a Vice Chair position on the Commission. Our review of the Commission's Guidelines for Procedures at Meetings further noted that there is no mechanism to temporarily designate an interim Chair if the Chair is unable to fulfil their responsibilities for any reason. Additionally, delays in re-appointing some Commissioners in 2019 meant that they could not attend meetings for almost four months. Furthermore, the May 2017 meeting was cancelled because there were too few Commissioners appointed to meet quorum.

Our review noted that the terms of municipal representatives on the Commission all expire at the same time as their appointments are aligned with the municipal election cycle. Moreover, several of the public-at-large appointments have the same term ending date. Since 2017, there have been gaps ranging from three to 10 months each time the municipal representative for a given region has changed. The Agencies and Appointments Directive advises that appointment terms for members should be staggered where possible to maintain continuity and experience on provincial agencies, commissions and advisory bodies.

As also noted in our Office's 2016 report on the provincial public appointment process, "it is considered best practice (in Ontario and other jurisdictions) that, where possible, terms of appointments do not all end in the same year."

We further noted that delays in appointments have resulted in an imbalance in the composition of the Commission. From 2017 to 2021, there were seven months when there were at least twice as many municipal than public-at-large members on the Commission. During 2017, there was a two-month period when there was only a single public-at-large Commissioner. Similar concerns with timely appointments to the Commission were raised in the Institute on Governance's 2018 review (see **Appendix 5**), which noted that the lack of balance between municipal and public-at-large representatives created unexpected dynamics in terms of debate at meetings.

4.5.2 Appointments of Public-at-Large Commissioners Do Not Provide a Balanced Representation of Regions and Interests

Maintaining representation that brings a diverse mix of experience, perspectives and professional backgrounds to the Commission's decision-making is an important leading practice that can enhance the deliberations and quality of decisions made in order to better achieve the Commission's mandate. Under the Memorandum of Understanding, the Chair is responsible for working with the Ministry to oversee the recruitment of Commission members, and providing recommendations to the Minister on appointments and reappointments, as applicable, that respect and promote the principles of equity, diversity, quality, merit and regional representation.

However, at the time of our audit, six of the nine current public-at-large members, including the Chair, represented the Niagara region, creating a disproportionate number of Commissioners from one region, rather than a more broadly distributed membership across the Plan Area's eight geographical regions. Also, the membership had a narrower variety of perspectives than previously, with more public-at-large members from industry and few with environmental expertise. Additionally, only four of the 17 Commissioners were women (see **Appendix 8**).

Since its establishment in 1973, there has also been a lack of meaningful Indigenous representation on the

Commission, with only a single individual appointed for a three-year period (2004–2007). Many First Nations and Métis communities have traditional and ancestral territories on the Escarpment, and the lack of Indigenous representation contrasts with the Province's commitment to reconciliation with Indigenous peoples through initiatives including the *Political Accord with the Chiefs of Ontario*. This lack of Indigenous representation also contrasts with the Commission's business plans which, since 2016, have explicitly recognized the need for meaningful Indigenous consultation and participation in land-use planning and development in the Plan Area.

RECOMMENDATION 21

To support the Niagara Escarpment Commission in operating with a full and diverse complement of Commissioners to conduct meetings and consistently achieve quorum, we recommend that the Minister of Natural Resources and Forestry:

- appoint Commissioners on a timely basis, with staggered terms, where possible, to provide for an orderly transition of appointees; and
- appoint a balanced composition on the Commission that better reflects a diverse mix of perspectives, professional backgrounds, geographical regions and gender.

MINISTRY RESPONSE

The Ministry of Natural Resources and Forestry (Ministry) acknowledges the importance of timely appointments and a diverse complement of members on the Niagara Escarpment Commission (Commission). Ministry staff advise the Minister on upcoming appointment vacancies.

Municipal member appointments expire two months after municipal elections to ensure that the Commission continues to provide direction and make decisions until new municipal members are appointed post-election.

The Commission includes municipal elected councillors and members of the public at large. Various factors are considered when evaluating

candidates from the public at large including relevant knowledge and expertise, community involvement and governance experience. The Ministry will strive to ensure that there is a quorum of Commissioners, that Commissioners are appointed on a timely basis, and that the Commission reflects a diverse complement of appointees.

4.5.3 Orientation and Ongoing Training for Commissioners Requires Improvement, Including Enhanced Training for Chairs

The 17 Commissioners hold meetings to consider and make decisions on complex development permit applications that require interpretation of the Plan, or that do not align with the Plan and may need to be denied. From 2017–2021, the number of regular Commission meetings during which permitting decisions were made ranged from six to nine per year. Commissioners made decisions on 125 complex applications during this time (see **Section 4.3.2**). Despite the important decision-making role and responsibilities of the Commissioners, we found the process for orientation of new members was limited.

Under the Memorandum of Understanding, the Chair is responsible for ensuring that an appropriate framework is in place for Commission appointees to receive adequate orientation and training with respect to the business and operations of the Commission and their particular responsibilities. Newly appointed Commissioners are sent an information package from the Director that includes a copy of the Act and an orientation binder. This binder includes information on Commission meetings and members, the development permit application system, compliance program and amendments process, and the Commission’s annual report and business plan. A training presentation is later provided to new Commissioners and the Chair by the Director, including a presentation by the legal counsel for the Ministry. No specific training about the Commission’s decision-making processes or other formal orientation program is provided.

During our interviews, current and former Commissioners identified gaps in the orientation process and made a number of suggestions for improvement. Providing a more comprehensive orientation program that specifies Commissioner responsibilities and the decision-making process would better enable new Commissioners to fully contribute as quickly as possible.

Our review also found that little ongoing training and development was provided to Commissioners. In 2020, a session was held for members on Indigenous engagement, after it was requested by a Commissioner. As noted in **Appendix 5**, the Institute on Governance’s 2018 review also recommended that Commissioner orientation and ongoing education be improved. Training and development throughout a Commissioner’s tenure are important, as even experienced members benefit from continual upgrading. This could include training in relevant emerging issues and topics such as regulatory practices and decision making, ethics, conflict of interest and risk management. External opportunities for training could also be explored, such as conferences and custom training provided by the Society of Ontario Adjudicators and Regulators.

Further, we found that the Chair receives similar orientation training to new Commissioners but with a few additional items highlighted relevant to the role of Chair. However, enhanced orientation training for Chairs is important given the increased leadership and meeting facilitation responsibilities required of the role. The Chair is responsible for the conduct of Commission meetings, which follow Bourinot’s Rules of Order, requiring the Chair to acknowledge and give the floor to each speaker, be neutral in all discussions, and not vote except in the case of a tie. In addition, the Chair is delegated key responsibilities in the Memorandum of Understanding, such as evaluating the performance of the Commission and consulting with the Deputy Minister in the evaluation of the Director’s performance.

RECOMMENDATION 22

To strengthen the orientation processes for new Commissioners, and the ongoing training and development for existing Commissioners, we recommend that the Niagara Escarpment Commission (Commission):

- provide a comprehensive orientation program for newly appointed members that includes training on the Commission’s decision-making processes;
- provide opportunities for the ongoing training and development of Commissioners over a specified time frame; and
- provide enhanced orientation training for Chairs with respect to the increased responsibilities and requirements of the role.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) recognizes the importance of onboarding of new Commissioners, as well as continued training and education of Commissioners. Within one year, the Commission will review the existing onboarding package and make any necessary changes to ensure that the necessary information and tools are provided to support Commissioners. The Commission will also undertake an annual exercise to determine training needs and, in collaboration with the Chair and Commissioners, identify an annual training plan.

4.5.4 Conflict-of-Interest and Expense-Disclosure Processes Need to Be Strengthened

The Memorandum of Understanding specifies the need for the Commission’s regulatory decisions to be made, and be seen by the public to be made, independently and impartially. The Memorandum designates the Chair as the Ethics Executive for the Commission. This role is responsible for promoting ethical conduct and “ensuring that appointees to the agency are informed of the ethical rules to which they are subject, including the rules on conflict of interest, political activity

and protected disclosure of wrongdoing that apply to the agency.”

During our audit, we were informed that a Commissioner had simultaneously attended virtual Commission and municipal meetings at the same time in 2021 and 2022. The Commissioner claimed per diems from the Commission for three of these meetings, while also claiming per diems from the municipality. At the time of our audit, the Director was in the process of attempting to recover these monies. As Ethics Executive, the Chair has a role in discussing the matter with the Commissioner, and taking actions to ensure all Commissioners are provided training regarding their ethical duties, the code of conduct and conflict-of-interest rules. The Chair has a duty to advise the Minister and discuss any concerns about any contentious matters.

The Commission does not have a conflict-of-interest policy specific to the role of the Commissioners. The orientation binder only provides an information sheet related to conflicts of interest for current and former public servants of the Ministry, based on the *Public Service of Ontario Act, 2006*. This legislation lacks sufficient guidance and processes for the regulatory decision-making role of the Commissioners. We noted that the Act allows for public bodies to create their own more specific conflict-of-interest policies, with the approval of the Integrity Commissioner of Ontario, but the Commission has not done so.

Our interviews with Commissioners noted different interpretations and definitions of conflict of interest for Commissioners. For example, some Commissioners held different opinions on whether conflicts should be declared in instances when a member or their immediate family did not stand to benefit monetarily from an outcome of a decision, and some disagreed on whether or not it was necessary for a municipal member to declare a conflict of interest in situations where their municipality would be positively or negatively affected by a decision. As regulatory decision makers, Commissioners must act, and must be perceived to act, in a manner that does not result in any conflict-of-interest situations. Having a more specific conflict-of-interest

policy in place would clarify what constitutes a conflict of interest and assist the Commissioners in avoiding situations in which there is, or may appear to be, a conflict of interest that could be seen to interfere with their ability to fulfill their role and make decisions in an impartial manner.

Further, we found Commissioners are not required to complete an annual Conflict of Interest Declaration Form, which is a recognized good practice for managing conflicts of interest. Such declaration forms should require members to list all professional and community involvements as well as identify any potential conflicts that may exist. The Chair should then review the completed form and record any mitigating actions that will be taken. If any changes occur during the year, the member must update the form within the year.

For Commission meetings, it is the practice of the Chair to call for conflicts of interest at the beginning of the meeting, and our review of meeting minutes noted some instances of Commissioners self-identifying conflicts. However, we found that some meeting minutes did not document the resolution of identified conflicts, or whether the member with the conflict of interest recused their self from the meeting when the item arose. Minutes should document when a member with a conflict of interest is recused from the discussion and when they return to the meeting.

Regardless of whether appointed as a municipal or public-at-large representative, all Commissioners have a fiduciary duty to serve the best interests of the Commission in fulfilling its mandate. All members bring their previous experience, current involvements, and personal or professional connections to their role, which may result in a conflict of interest arising during their tenure on the Commission. This should be discussed in an open and transparent manner so that mitigating actions can be taken to protect the integrity of the Commission's decision-making. Even if it is only the perception of, or potential for, a conflict of interest, the Chair has the responsibility for ensuring issues are handled appropriately and in a manner that demonstrates the Commission's due diligence. As the Ethics

Executive, the Chair should also ensure training is provided to all members in recognizing and managing conflicts of interest specific to the Commission.

The Memorandum of Understanding also requires the Commission, through the Chair, to ensure that the expense information for appointees is posted on the Commission's or Ministry's website. However, at the time of our audit we found that this information, as well as other datasets submitted by Commission staff to the government's Ontario Data Catalogue, have not been approved for public access and have not been disclosed (see **Section 4.4.2**). Subsequently, in June 2022, the Commission posted on its website the Commissioners' expenses for the first quarter of 2022/23. In 2021 and into 2022, Commissioners' expenses were \$0 due to the lack of transportation, accommodation and meal costs during the COVID-19 pandemic.

RECOMMENDATION 23

To strengthen its conflict-of-interest policies and processes, and its expense-disclosure processes, we recommend that the Niagara Escarpment Commission:

- establish a conflict-of-interest policy for Commissioners;
- require all members to complete an annual Conflict of Interest Declaration Form that is reviewed by the Chair; and
- ensure that Commissioners' expense information is disclosed on the Commission website.

COMMISSION RESPONSE

The Niagara Escarpment Commission (Commission) recognizes the importance of ensuring Commissioners are aware of their statutory responsibilities and obligations, including conflicts of interest. The Commission will establish a conflict-of-interest policy for Commissioners, require all members to complete an annual Conflict of Interest Declaration Form, and disclose the Commissioners' expense information on the Commission's website.

Appendix 1: Relevant International Agreements

Prepared by the Office of the Auditor General of Ontario

United Nations Man and the Biosphere (MAB) Programme, 1971

The United Nations MAB Programme was launched in 1971 to improve the relationship between people and the environment. Sites designated as biospheres are places where people and organizations have made a commitment to balance the conservation of cultural and biological diversity and economic development, and are meant to provide examples to inspire people globally.

National governments nominate sites for biosphere designation, and the application process takes about eight years to complete. After designation, 10-year reviews are conducted to assess the functioning and management of each biosphere, and to identify any issues with implementation.

While the biosphere designation is awarded by an international body, biospheres remain under local jurisdiction. Local authorities for a designated biosphere are responsible for ensuring that the management of the biosphere is consistent with specific conservation and development objectives. This may necessitate co-operation between national, provincial and municipal governments depending on a biosphere's location and management needs.

United Nations Convention on Biological Diversity, 1992

This international agreement, which aims to slow or halt the loss of biodiversity, was ratified by Canada in 1993. In 2010, Canada and the other parties to the Convention—now 196 countries—met in Nagoya, Japan, and agreed to a new 10-year Strategic Plan for Biodiversity that established 20 targets. Biospheres contribute to biodiversity conservation by offering varying levels of protection—the cornerstone of biodiversity protection—to natural areas.

United Nations 2030 Agenda for Sustainable Development, 2015

A 15-year plan that aims to end poverty, protect the planet, and improve the lives and prospects of people everywhere. The agenda includes goals for water and land-based ecosystems, sustainable communities, economic growth and climate. In 2019, world leaders called for a “Decade of Action” to ensure that the sustainable development goals are achieved by the 2030 target date. Biospheres contribute to the achievement of the United Nations Sustainable Development Goals by undertaking actions and by providing examples of how sustainable development practices can be employed elsewhere.

United Nations Declaration on the Rights of Indigenous Peoples, 2007

The Declaration affirms the rights of Indigenous peoples to live in dignity, to maintain and strengthen their own institutions, cultures and traditions, and to pursue self-determined development. Biospheres uphold the Declaration on the Rights of Indigenous Peoples by effectively consulting with and building partnerships with Indigenous peoples. Canadian biospheres have committed to incorporate significant Indigenous representation in governance and management. Additionally, reconciliation is one of the four themes addressed by Canada's biospheres.

Appendix 2: Key Events Affecting the Niagara Escarpment

Prepared by the Office of the Auditor General of Ontario

Date	Jurisdiction	Description of Event
1950s	Ontario	Conservationists recognize the importance of the Niagara Escarpment as a refuge and natural corridor for wildlife.
1962	Ontario	An aggregate company mines the Escarpment near Milton, with the aggregate extraction visible from Highway 401. The public uproar over this development helps prompt the Province to look for ways to protect the Escarpment.
1968	Ontario	The Premier commissions an expert taskforce and a report on the protection of the Escarpment is released.
1971	International	The United Nations Educational, Scientific and Cultural Organization (UNESCO) launches the Man and the Biosphere Programme. The program promotes sustainable use and conservation of biological diversity with the aim of improving the relationship between people and the environment.
1973	Ontario	The Province enacts the <i>Niagara Escarpment Planning and Development Act</i> and the Niagara Escarpment Commission is formed.
1975	Ontario	The Niagara Escarpment Commission starts to issue development permits in the Area of Development Control.
1985	Ontario	The Province approves the Niagara Escarpment Plan.
1990	International	Niagara Escarpment Biosphere is designated by UNESCO. The Niagara Escarpment Commission is the convener (or manager) of the biosphere.
1994	Ontario	The Province reviews and amends the Niagara Escarpment Plan.
1996	Ontario	The Province reduces the budget and staffing of the Niagara Escarpment Commission by approximately one-third to the levels that generally remain today.
2005	Ontario	The Province reviews and amends the Niagara Escarpment Plan as part of the 10-year review.
2017	Ontario	The Province reviews and amends the Niagara Escarpment Plan as part of the 10-year review.
2019	Ontario	A Transitional Leadership Committee is elected by stakeholders to guide the development of a new governance model for the biosphere. The Niagara Escarpment Commission is no longer the manager of the biosphere.
2022	Ontario	The Niagara Escarpment Biosphere Network is formed and takes over as manager of the biosphere.

Appendix 3: Glossary

Prepared by the Office of the Auditor General of Ontario

Term	Definition
Aggregates	Sand, gravel and bedrock that are extracted from pits and quarries.
Biodiversity	The variety of life on Earth—plants, animals and all other living things—and how they interact with one another and their environment.
Biosphere	An international designation of recognition from the United Nations Educational, Scientific and Cultural Organization under the Man and Biosphere Programme (MAB) that recognizes the unique natural features and socio-economic characteristics of the area.
Conservation	The maintenance and sustainable use of the Earth's resources.
Culvert	A structure that forms an opening through soil.
Development	Includes a change in the use of any land, building or structure.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and the non-living environment interacting as a functional unit.
Ecosystem Services	Direct and indirect benefits derived from properly functioning ecosystems. These include food and water supply, oxygen production, climate regulation, flood and storm control and pollination.
Habitat	The place or type of site where an organism or population naturally occurs and depends on to carry out its life processes such as reproduction, rearing, hibernation, migration or feeding. Species may require different habitats for different uses throughout their lifecycle.
Natural Environment	The air, land and water or any combination or part thereof.
Niagara Escarpment	A prominent geologic feature that extends 725 kilometres from Queenston near Niagara Falls to Tobermory on the northern tip of the Bruce Peninsula. It also extends into parts of the United States.
Nodal Park	A park that represents distinct regional features and characteristics on the Niagara Escarpment. Managed by entities such as Parks Canada and Ontario Parks.
Park System	A provincially co-ordinated network of parks and open spaces on the Niagara Escarpment.
Protected Area	A clearly defined space, dedicated and managed to achieve the long-term conservation of nature with associated ecosystem services and cultural values.
Sustainable Use	The use of components of biodiversity in a way and at a rate that does not lead to their long-term decline, thereby maintaining the potential for future generations to meet their needs and aspirations.
United Nations Educational, Scientific and Cultural Organization	UNESCO seeks to promote peace through international co-operation. It is responsible for overseeing the biosphere program worldwide.

Appendix 4: Other Legislation, Entities, and Their Effect Within

Prepared by the Office of the Auditor General of Ontario

Legislation	Responsible Entity	Example of Effect
<i>Planning Act</i>	Ministry of Municipal Affairs and Housing	Provides for land-use control by municipalities within the Plan Area where the Area of Development Control is not in place. Additionally, provides planning direction in the Provincial Policy Statement.
<i>Greenbelt Act, 2005</i>	Ministry of Municipal Affairs and Housing	The Greenbelt Area includes the Niagara Escarpment Plan Area, and the Niagara Escarpment Plan provides the planning direction with some exceptions
<i>Provincial Parks and Conservation Reserves Act, 2006</i>	Ministry of the Environment, Conservation and Parks (Ontario Parks)	Management of sites to maintain ecological integrity such as Mono Cliffs Provincial Park
<i>Environmental Protection Act</i>	Ministry of the Environment, Conservation and Parks	Prohibits new or expanded waste disposal sites in the Plan Area
<i>Endangered Species Act, 2007</i>	Ministry of the Environment, Conservation and Parks	Approvals to impact regulated species at risk and their habitats
<i>Environmental Bill of Rights, 1993</i>	Ministry of the Environment, Conservation and Parks	Allows for public consultation on plan amendments posted by the Ministry of Natural Resources and Forestry
<i>Conservation Authorities Act</i>	Ministry of Natural Resources and Forestry	Management of sites by conservation authorities
<i>Aggregate Resources Act</i>	Ministry of Natural Resources and Forestry	Approvals for pits and quarries
<i>Public Lands Act</i>	Ministry of Natural Resources and Forestry	Management of provincial Crown lands
<i>Canada National Parks Act</i>	Environment and Climate Change Canada; Parks Canada	Management of sites to maintain ecological integrity such as Bruce Peninsula National Park

Appendix 5: Institute on Governance's Recommendations from the Mandate Review of the Niagara Escarpment Program, 2018

Source of data: Institute on Governance

Recommendation	Key Activities	Responsible Entity	Timeline	Risk
Timely Appointments to the Commission (High Impact, Medium Effort)	Fixed municipal and staggered public-at-large appointments to the Commission	Treasury Board Secretariat, Niagara Escarpment Commission's Chair, municipalities	2 years	Irregular member appointment process may result in decline in public support, uncertainty, delays in commercially sensitive decisions, and possible imbalance in Commission membership and decisions.
Improved Commission Orientation and Education (Medium Impact, Low Effort)	Strengthen appointee orientation and ongoing education	Natural Resources Ministry and Commission staff	1 year	May result in increased uncertainty and decisions that are inconsistent with the Niagara Escarpment Plan's policies and intent.
Operational Strategy Implementation (Medium Impact, Medium Effort)	Operational and organizational development initiatives	Ministry and Commission staff	2 years	Efficiencies and improvements unable to keep pace with expected demand, resulting in delays in decisions and possible erosion of public support.
Performance Indicators (Medium Impact, Medium Effort)	Outcome measurement and continuous assessment	Ministry and Commission staff	1 year	Inability to identify, analyze and communicate the true environmental benefit of the Niagara Escarpment Plan. Missed opportunity to increase public support and appreciation.
Public Education (Medium Impact, Low Effort)	Increase public awareness activities	Commissioners and Commission staff	1 year	Missed opportunity to increase public awareness and support for the Niagara Escarpment Plan and government commitment to environmental stewardship.

Appendix 6: Canadian Biospheres Designated by UNESCO

Prepared by the Office of the Auditor General of Ontario

Province	Biosphere Name	Year Designated	Ecosystem Class(es)	Size (hectares)
British Columbia	Mount Arrowsmith	2000	Mountains	118,592
	Clayoquot Sound	2000	Mountains; Marine, Coastal and Island Areas	349,947
	Howe Sound	2021	Mountains; Marine, Coastal and Island Areas	218,723
Northwest Territories	Tsá Tué	2016	Marine, Coastal and Island Areas	9,331,300
Alberta	Waterton	1979	Mountains	767,450
	Beaver Hills	2016	Wetlands	159,560
Saskatchewan	Redberry Lake	2000	Wetlands	112,200
Manitoba	Riding Mountain	1986	Mountains	1,331,000
Ontario	Long Point	1986	Wetlands	40,600
	Niagara Escarpment	1990	Mountains	195,055
	Georgian Bay Littoral	2004	Mountains; Wetlands; Marine, Coastal and Island Areas	347,270
	Thousand Islands-Frontenac Arch	2002	Mountains; Marine, Coastal and Island Areas	220,973
Quebec	Mont Saint-Hilaire	1978	Mountains	1,100
	Charlevoix	1988	Mountains	1,290,000
	Lac-Saint Pierre	2000	Wetlands	739,400
	Manicouagan Uapishka	2007	Mountains; Wetlands	5,480,000
New Brunswick	Fundy	2007	Mountains; Marine, Coastal and Island Areas	432,310
Nova Scotia	South West Nova	2001	Marine, Coastal and Island Areas	1,546,374
	Bras d'Or Lake	2011	Mountains; Marine, Coastal and Island Areas	356,788

Appendix 7: Audit Criteria

Prepared by the Office of the Auditor General of Ontario

1. Roles, responsibilities and accountability requirements for conserving the Niagara Escarpment are clearly defined.
2. Programs to conserve and monitor the Niagara Escarpment exist and are based on best practices, and are developed and implemented in an effective and efficient manner.
3. Processes and procedures for development permits, plan amendments, and compliance are based on best practices and are implemented in an effective and efficient manner to ensure that only development that is compatible with the natural environment occurs on the Niagara Escarpment.
4. Meaningful performance measures and targets are established for conserving the Niagara Escarpment, status and progress are regularly monitored and publicly reported on, and corrective actions are taken on a timely basis when issues are identified.

Appendix 8: Niagara Escarpment Commissioners, May 2022

Prepared by the Office of the Auditor General of Ontario

Member	Terms	Background
Municipal Representatives		
Barry Burton (Simcoe County)	Apr 11, 2018–May 10, 2019 Aug 16, 2019–Dec 31, 2022	Deputy Warden, County of Simcoe; Deputy Mayor, Clearview Township.
Brad Clark (City of Hamilton)	Jan 17, 2020–Dec 31, 2022	City Councillor, City of Hamilton (also served 2006 to 2014).
Johanna Downey (Peel Region)	Nov 4, 2015–Nov 3, 2019 Nov 21, 2019–Dec 31, 2022	Councillor, Peel Regional Council (since 2014).
Laurie Golden (Bruce County)	Oct 17, 2019–Dec 31, 2022	Councillor, Northern Bruce Peninsula (since 2019).
Janet Horner (Dufferin County)	Dec 2, 2015–Dec 1, 2019 Nov 21, 2019–Dec 31, 2022	Councillor, Township of Mulmur; Mayor, Township of Mulmur.
Gordon Krantz (Halton Region)	Mar 11, 1996–Mar 10, 1998 Mar 4, 1998–Feb 28, 2001 Mar 1, 2001–Feb 29, 2004 Oct 31, 2019–Dec 31, 2022	Mayor and Head of Milton Town Council (since 1980); Councillor, Halton Regional Council (since 1980).
Paul McQueen (Grey County)	May 4, 2011–May 3, 2015 May 27, 2015–May 26, 2019 Sep 13, 2019–Dec 31, 2022	Deputy Mayor, Municipality of Grey Highlands; Warden, Grey County.
Albert Witteveen (Niagara Region)	Oct 17, 2019–Dec 31, 2022	Councillor, Township of West Lincoln (since 2018, and from 2000 to 2006).
Public-at-Large Representatives		
Rob Nicholson (Chair) (Niagara Falls)	Jun 10, 1998–Feb 28, 2001 Mar 1, 2001–Feb 28, 2003 Mar 12, 2020–Mar 11, 2022 Mar 12, 2022–Mar 10, 2023	Former Member of Parliament for Niagara Falls (1984 to 1993 and 2004 to 2019). Former Niagara Regional Councillor (1997 to 2003). Former member of the Niagara Escarpment Commission (1998 to 2003).
Michael Curley (Stoney Creek)	Oct 31, 2019–Oct 30, 2021 Oct 31, 2021–Oct 30, 2024	Business owner of a project and construction management company in Grimsby.
Gordon Driedger (Waterloo)	Apr 24, 2020–Apr 23, 2022 Apr 24, 2022–Apr 24, 2025	President, Skyline Retail Asset Management Inc. Member of several industry associations, including the International Council of Shopping Centers. Chairs the Halton Hills Committee of Adjustment.
Ronald Gibson (Niagara Falls)	Jul 2, 2020–Jul 1, 2022 Jul 2, 2022–Jul 1 2025	Twenty years of experience in municipal social services and 10 years in administration (strategic planning and project management).
David Hutcheon (Toronto)	Apr 24, 2020–Apr 23, 2022 Apr 24, 2022–Apr 24, 2025	Previously volunteered on the Humber River Watershed Task Force and Alliance. Previously served as the Vice Chair of the Environmental Review Tribunal and as a Hearing Officer for appeals and hearings related to the Niagara Escarpment.
Ken Lucyshyn (Grimsby)	Apr 24, 2020–Apr 23, 2022 Apr 24, 2022–Apr 23, 2025	Executive Vice President of an aggregate and road-building business. Serves on the boards of the Ontario Stone, Sand & Gravel Association, the Ontario Aggregate Resources Corporation, and the Cornerstone Standards Council.

Member	Terms	Background
Bruce Mackenzie (Grimsby)	Apr 11, 2018–Apr 10, 2020 Apr 11, 2020–Apr 10, 2023	Retired Director of Customer Services at the Hamilton Conservation Authority. Director of Bird Studies Group at Hamilton Naturalists' Club. Involved with the environmental projects Grimsby Wetlands and Save the Woodlot.
Duncan McKinlay (Ravenna)	Jun 28, 2017–Jun 27, 2019 Sep 13, 2019–Sep 12, 2022	Beef farmer in Ravenna. Previously a Municipal Councillor, County Councillor and Grey County Warden.
Jennifer Vida (Niagara Falls)	Jan 14, 2021–Jan 13, 2023	Planner, land development and construction. Sits on the Government Liaison Committee for the Niagara Home Builders' Association, a network of professionals that manage residential construction issues in the Niagara Region.



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