



















Indicators can measure the following:

- driving forces (for example, activities that increase pressures on the environment, such as manufacturing, forestry and mineral extraction);
- the stressors or pressures that result (for example, the use of toxic substances, air and water pollution, land-use changes and waste);
- the effects these pressures have on the state or condition of the environment (for example, air, water and soil quality, and natural habitat);
- the impacts of environmental degradation, such as on wildlife populations and human health; and
- responses by governments and society to the condition of the environment, such as conservation programs and regulations.

International organizations, including the United Nations Environment Programme and the Organisation for Economic Co-operation and Development, have developed guidance and frameworks for developing indicators for environmental reporting. These organizations have recognized that effective environmental indicators are:

- generally useful and relevant to the environmental risk or area;
- understandable to the public;
- objective and unbiased;
- representative of underlying trends;
- timely;
- comparable across space and time; and
- use data that are collected in a transparent, scientifically sound, and relatively easy and inexpensive way.

### 2.2.2 Other Jurisdictions' State of the Environment Reporting

Several other provinces, territories and international jurisdictions use environmental indicators to publicly report on the state of the environment and progress toward meeting environmental targets and goals (see **Appendix 2**). These jurisdictions find that, among other benefits, comprehensive reporting informs and improves environmental policy, increases public and

industry interest in the environment and policies that protect it, and charts the achievement of environmental objectives.

The 1972 United Nations Conference on the Human Environment triggered the publication of the first State of the Environment report in Finland, paving the way for similar reporting in other European countries. In 2003, the European Parliament passed a directive requiring member states to produce national and, where appropriate, regional or local reports on the state of the environment at regular intervals not exceeding four years. As a result, many European countries have incorporated this reporting requirement into national law. Today, more than 25 European countries publish regular reports on the state of the environment.

Australia's *Environment Protection and Biodiversity Conservation Act 1999* requires the Minister of the Environment to table a report in Parliament every five years on the state of the environment. This independent review provides Australians with authoritative information on the state of the environment, and provides the public, government and other decision-makers with an assessment of how effectively the environment is being managed. To ensure that these reports are highly credible and robust, they are authored by a panel of independent experts, using the best available evidence, and a rigorous consultation, peer-review and fact-checking process.

In North America, the United States Environmental Protection Agency (EPA) has published its *Report on the Environment* since 2008. The report is based on more than 80 peer-reviewed indicators in five theme areas (air, water, land, ecological condition, and human exposure and health). The reporting shows how the condition of the environment and human health in the US is changing over time and helps answer 23 questions critical to the EPA's mandate of protecting the environment and human health. Since 2015, the EPA's *Report on the Environment* has been web-based, and indicators are updated as new data become available.

## Canada, Other Provinces and Territories

Canada has had long-standing legislated requirements to provide Canadians with information on the state of the environment. The *Canadian Environmental Protection Act, 1999* requires the federal Minister of the Environment to publish a periodic report on the state of the Canadian environment. Between 1986 and 1996, the federal government released three five-year state-of-the-environment reports, followed by reports in Canada's National Environmental Indicator Series (2000, 2001 and 2003) and Canadian Environmental Sustainability Indicators program (2005, 2006 and 2007). The Canadian Environmental Sustainability Indicators, covering air, water, climate, wildlife and habitat, and socio-economic indicators, have been posted and updated online since 2011 as new information becomes available.

These federal indicators provide limited, snapshot data at the provincial level in some environmental areas (for example, emissions of harmful substances to air, and water quality in rivers). However, gaps in regional reporting on several federal indicators, and the benefits of integrating provincial information to identify connections and interactions, highlight the value of reporting at the provincial and territorial level.

At the provincial and territorial level, regular reporting on the state of the environment is variable, although more consistent where required by law (see **Appendix 2**). For example, under Yukon's *Environment Act*, the Minister of Environment must table a full state-of-the-environment report in the Legislature every three years and interim reports in the years in-between. Yukon's Minister of the Environment has accordingly been releasing Yukon State of the Environment reports since 1996. Likewise, Saskatchewan's *Environmental Management and Protection Act, 2010* (and *The State of the Environment Report Act* before that) has required that a State of the Environment Report be tabled every two years, and the province has released such reports since 1991.

## Benefits of State of the Environment Reporting

Jurisdictions with regular, public reporting on the state of the environment cite several benefits, including its value in:

- providing baseline information for environmental planning, assessment and regulation;
- integrating information to better identify connections and interactions between environmental areas, human well-being and the economy, and to highlight the cumulative effects of pressures, such as pollution, on the environment;
- providing an early warning system of possible emerging trends and environmental impacts;
- informing, influencing and improving environmental policy;
- increasing interest from the public and industry in the environment and protective policies;
- allowing for better interaction between policy-makers and researchers;
- receiving feedback from stakeholders to improve the value and impact of monitoring and reporting;
- distributing timely, targeted and reliable environmental information to decision-makers, citizen groups, institutions and key economic sectors; and
- charting the achievement of environmental objectives.

Continuous, comparable and comprehensive reporting enables governments to understand the state of the environment, look at changes over time, project future conditions for long-term planning (for example, preparing for a changed climate), communicate the effect of current policies, and to adjust these policies and design new ones. For example, the European Union's proposed 8th Environment Action Programme (to guide European environmental policy to 2030) relies on information reported in the European Environment Agency's eighth state-of-the-environment report, *The European Environment—State and Outlook 2020*. Moreover, the European Environment Agency's annual indicator reports have supported the monitoring of progress implementing past EU Environment Action Programmes.

Citizens expect to know whether the air, water and land are clean, and wildlife and natural environments are thriving, contributing to food production, the economy, and people's health and well-being. Holistic, integrated reporting can provide a one-stop overview and lead readers to more detailed, topic-specific reports and data. Consistent, legislated timelines for tabling reports in the Legislature can ensure regular government and public attention on environmental impacts and responses. Several jurisdictions have also moved to web-based reporting, which allows information to be updated as needed, and users to download and analyze data and share interactive graphics.

### 2.2.3 Responsibility for Reporting on Ontario's Environment

At the provincial level, responsibility for monitoring, improving and reporting on the state of Ontario's environment and natural resources falls primarily to the Ministry of the Environment, Conservation and Parks (Environment Ministry) and the Ministry of Northern Development, Mines, Natural Resources and Forestry (Natural Resources Ministry).

#### Environment Ministry

The Environment Ministry is responsible for the following:

- protecting Ontario's air, land, water and species at risk and their habitat;
- tackling climate change;
- managing provincial parks and conservation reserves;
- administering laws, regulations and programs related to air pollution, water use and pollution, climate change, contaminated lands and spills, waste management, pesticides, toxic substances, endangered species, protected areas and conservation authorities;
- conducting environmental monitoring to provide scientific data to track the state of the environment. The data:

- informs policy and program development and assessment; and
- supports the Ministry's compliance, enforcement and emergency response programs; and
- informing Ontarians on the state of their environment.

Conservation authorities are established under legislation administered by the Environment Ministry. The authorities monitor surface and groundwater quality, groundwater levels and surface water flows, and in some cases other natural resources, in their jurisdiction in collaboration with the province.

#### Natural Resources Ministry

The Natural Resources Ministry is the lead provincial body responsible for the conservation of Ontario's biological diversity and for the government's Biodiversity Plan. The Natural Resources Ministry also has primary responsibility for managing Ontario's natural resources, including forests; aggregate, oil, gas and salt resources; fish and wildlife; and Crown lands. To achieve its mandate, the Ministry conducts monitoring, research, and planning for the management and use of Ontario's natural resources.

#### Agriculture Ministry

The Ministry of Agriculture, Food and Rural Affairs (Agriculture Ministry) is responsible for ensuring the sustainability of Ontario's agriculture, which is affected by the health of agricultural soils and pollinators. The Agriculture Ministry's Apiary Program is responsible for monitoring the health of managed honey bees, including their pests and diseases.

### 2.2.4 Ontario Biodiversity Council

Biodiversity conservation is a shared responsibility, and the government alone cannot safeguard Ontario's biodiversity. Recognizing this, in 2004, the Minister of Natural Resources brought together representatives of environmental, industry, Indigenous and other groups, as well as other levels of government, to participate in the development of the first biodiversity strategy for Ontario. In 2005, the then Minister released *Protecting What Sustains Us, Ontario's*

*Biodiversity Strategy*, outlining 37 recommended actions—including a priority action to establish a broad-based Ontario Biodiversity Council to guide implementation of the strategy.

In 2005, the government established the Ontario Biodiversity Council (Council), comprised of the then Minister, representatives of conservation organizations and industry associations, and Indigenous representatives. As of July 2021, the Council is comprised of the Minister and about 40 volunteers—scientists and stakeholders representing a broad range of organizations. Member organizations include the Chiefs of Ontario, the Federation of Ontario Cottagers’ Associations; the Ontario Home Builders’ Association; the Ontario Mining Association; Ontario Power Generation; the Royal Ontario Museum; the Toronto Zoo; and conservation and environmental groups.

*Ontario’s Biodiversity Strategy* also contains a priority action to report on the “State of Ontario’s Biodiversity” every five years, something the Council committed to doing in 2011 when the strategy was renewed. The Council has released multiple reports on the state of Ontario’s biodiversity (in 2008, 2010, and 2015), reporting independently on the status and trends of numerous indicators that are updated online as new information becomes available. These indicators cover the state of ecosystems and species, pressures on biodiversity and conservation response. Up until 2019/20, the Council’s work was funded by the Natural Resources Ministry. (See **Section 4.1.3** for more information on biodiversity reporting by the Council and the Natural Resources Ministry.)

## 3.0 Audit Objective and Scope

Our audit was conducted in two stages. The scope of Stage 1 of our audit, which was released in November 2020, covered the environmental indicators, targets and monitoring programs of three ministries: Ministry of the Environment, Conservation and Parks (Environment Ministry); Ministry of Northern

Development, Mines, Natural Resources and Forestry (Natural Resources Ministry); and the Ministry of Agriculture, Food and Rural Affairs (Agriculture Ministry). Stage 2, found here, assesses the three ministries’ reporting to the public on the state of the environment and progress toward meeting their objectives, goals and targets.

The objective of this stage of our audit was to assess whether the Environment and Natural Resources ministries have effective systems and procedures in place to publicly report on the state of the environment and natural resources respectively, and provincial progress towards meeting set goals, objectives and targets. We also assessed whether the Agriculture Ministry has effective systems and procedures to report publicly on the environmental sustainability of Ontario’s agriculture and provincial progress towards meeting set goals, objectives and targets.

In planning our work, we identified the criteria (see **Appendix 3**) we would use to compare practices against. These criteria were established based on a review of applicable legislation, policies and procedures, internal and external studies and best practices. Senior management at each of the three ministries reviewed and agreed with the suitability of our audit objectives and associated criteria.

We conducted Stage 2 of our audit between January 2020 and September 2021. We obtained written representation from management of the three ministries that, effective November 4, 2021, they had provided us with all the information they were aware of that could significantly affect the findings or the conclusions of this report.

We interviewed senior management and staff, and examined relevant reports, data, protocols, research and other documents from the Environment Ministry, Natural Resources Ministry and Agriculture Ministry to obtain an understanding of each entity’s involvement in reporting to the public. We also interviewed and reviewed information provided by other ministries and agencies, including the Ministry of Health, Ministry of Municipal Affairs and Housing, Ministry

of Transportation, and Public Health Ontario, as well as Agriculture and Agri-Food Canada, Environment and Climate Change Canada, Health Canada and Natural Resources Canada.

We also talked with scientists, subject matter experts and stakeholders from various other organizations and institutions, including the Canadian Wildlife Federation, City of Toronto, Conservation Ontario, the David Suzuki Foundation, the Ontario Biodiversity Council, the Ontario Soil and Crop Improvement Association, the Ontario Waste Management Association, Toronto Environmental Alliance, University of Guelph, University of Toronto, University of Waterloo, Wildlife Conservation Society Canada and York University. Further, we conducted research related to public reporting on the state of the environment undertaken by other provinces and states, countries and international organizations, including the European Environment Agency, the Organisation for Economic Co-operation and Development, and the United Nations.

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. This included obtaining 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: Reporting on the Environment

### 4.1 Comprehensive Reporting

#### 4.1.1 Public Not Informed on Overall State of Ontario's Environment

The Environment Ministry does not report on the overall state of Ontario's environment. This means that the public, businesses, stakeholders and decision-makers do not have a clear, comprehensive picture of the general state of the environment at any given period of time or of changes over time, nor of the connections and interactions between the different areas of the environment, such as water, air and natural resources. Such comprehensive, overall reporting would help in identifying and communicating the impacts of complex pressures, such as climate change, and whether government policies and programs are collectively maintaining Ontario's environment, improving it or harming it.

More than 20 years ago, our Office reported on the lack of comprehensive, objective reporting on the state of Ontario's environment. In our 2000 *Special Report on Accountability and Value for Money*, we noted that the Environment Ministry periodically published reports and news releases on its activity in key environmental areas but these documents generally described recent Ministry successes or initiatives. They lacked objective appraisals of the quality of Ontario's environment.

The Environment Ministry, Natural Resources Ministry and their partners and agencies, such as conservation authorities, publish reports and information on the condition of Ontario's environment and natural resources (see **Appendix 4**). Many of these reports compile the data from monitoring programs on a specific topic into usable information to help readers understand the state of a particular environmental area. In addition, information on some environmental areas, like air quality, are publicly

reported online on an up to hourly basis. Other reports provide a summary of steps taken by the province and partners during the reporting period to address an environmental issue. Some reports include both.

However, the numerous ministries' reports and information sources on the environment do not allow for an easy and effective evaluation of the overall state of the environment. We noted this issue in our 2000 special report. To ensure that the Environment Ministry's progress in managing the environment is measured and communicated in an objective manner, we recommended in 2000 that a state of the environment report should periodically be prepared using a set of comprehensive outcome measures that assess the quality of and changes to the environment over time. Twenty years later, the problem remains.

Several of the reports released by ministries are required by law to be prepared (for example, on drinking water, forests, the Great Lakes, Lake Simcoe, protected areas, and toxic substances), often within legally mandated time frames such as annually, every two years, or every five years. However, as discussed in **Section 4.3**, not all reporting meets legislated timelines.

Where no legislated reporting requirements exist, reporting to the public has been lacking. For example, the Natural Resources Ministry has not released regular, public reports on the state of Ontario's rivers, fish populations or wildlife (such as birds, reptiles, amphibians, bears, wolves and deer), although it has published information on hunting activity, harvest levels and moose numbers, and may share information with local stakeholders. Further, the Environment Ministry does not report to the public on the amount of water withdrawn in the province, or how water takings compare to water availability.

Likewise, the Niagara Escarpment Commission, which reports into the Natural Resources Ministry, has not released regular reports on the state of the Niagara Escarpment (a UNESCO World Biosphere Reserve). In 1985, the government released the *Niagara Escarpment Plan* to preserve the escarpment and nearby land as a continuous environment, and to

ensure only development that is compatible with that natural environment occurs. A 2005 update to the *Niagara Escarpment Plan* states that the results of an environmental monitoring program will be provided through the Commission's website, regular reports, conferences, presentations and publications. The Commission identified its intention to develop State of the Escarpment reporting as early as 2012. However, there is no legislated requirement for reporting to the public on the state of the Niagara Escarpment, no regular reporting has occurred, and the two reports that the Commission prepared on the condition of the Niagara Escarpment (in 2008 and 2011) are no longer available on its website.

Regular reporting on the state of the environment could draw the attention of the public, industry and Legislative Assembly to newly emerging contaminants and risks (such as microplastics and nanomaterials), as well as improving environmental conditions. This would allow transparent evaluation of the coverage and effectiveness of the province's environmental monitoring, targets and programs.

## RECOMMENDATION 1

So that decision-makers, industry, stakeholders, and the public are regularly and consistently provided with a comprehensive assessment of the state of Ontario's environment, whether it is getting better or worse, and how effectively it is being managed, we recommend that the Ministry of the Environment, Conservation and Parks work with the Ministry of Northern Development, Mines, Natural Resources and Forestry, Ministry of Agriculture, Food and Rural Affairs, and Environment and Climate Change Canada and other relevant partners to:

- prepare and publicly release state-of-the-environment reports every five years, describing the drivers of change, pressures on natural and physical resources, the state of the environment (including air, water, land, climate, biodiversity and ecosystems), how the environment has changed, the impacts

of changes, and forecasts for the state of the environment and potential impacts in the future; and

- table these reports in the Legislative Assembly.

## ENVIRONMENT MINISTRY RESPONSE

The Ministry of the Environment, Conservation and Parks (Ministry) acknowledges the Auditor General's recommendation and agrees that providing the public information about Ontario's environment is important. The Ministry will continue to make environmental reports of interest available to the public, on a local, regional or province-wide scale or specific to media as most appropriate, including the Minister's annual report on drinking water, Great Lakes strategy progress report, Lake Erie Action Plan, Lake Simcoe reports, *Air Quality in Ontario* report and many others. In addition, the Ministry makes location-specific information available on the Ontario Data Catalogue, e.g., water quality data through the Lake Partner Program.

The Ministry will continue to review the existing format, frequency and distribution of its environmental reporting and consider options that would improve how the public access reporting information.

## AUDITOR GENERAL'S RESPONSE

The Ministry did not agree to regularly prepare, publicly release, and table a comprehensive assessment on the state of Ontario's environment.

## RECOMMENDATION 2

So that Ontario's environmental reporting is credible, informed, consistent and beneficial in improving environmental protection and management policies, programs and initiatives, we recommend that the Ministry of the Environment,

Conservation and Parks, in consultation with the Ministry of Northern Development, Mines, Natural Resources and Forestry and the Ministry of Agriculture, Food and Rural Affairs:

- establish a scientific advisory panel to provide independent, expert advice on the focus, priority issues and content of state-of-the-environment reports, as well as the research, monitoring and data needed to provide robust, comprehensive and effective reporting;
- develop and implement a transparent process for appointing qualified experts to this panel;
- define, in consultation with this panel, a set of core environmental indicators, and consistently collect the data needed to regularly report on the status of these indicators and changes over time;
- include in state-of-the-environment reports a description—in the context of the report's findings—of what policies, programs and initiatives currently exist, what new policies, programs and initiatives are proposed or planned, and what analysis will be undertaken to identify any other policies, programs and initiatives needed; and
- use published state-of-the-environment reports in internal program evaluations.

## ENVIRONMENT MINISTRY RESPONSE

The Ministry of the Environment, Conservation and Parks acknowledges this recommendation. The three ministries have and can continue to collaboratively produce credible, informed, consistent and beneficial reporting without the assistance of an advisory panel.

## AUDITOR GENERAL'S RESPONSE

The Ministry did not agree to establish and engage a panel of independent experts to inform its environmental monitoring and reporting;

determine a set of core environmental indicators for consistent reporting over time; and use state-of-the-environment reports in program evaluations.

### RECOMMENDATION 3

To improve environmental protection and natural resource management policies, programs and initiatives, we recommend that the Ministry of Northern Development, Mines, Natural Resources and Forestry use published state-of-the-environment reports in internal program evaluations.

#### NATURAL RESOURCES MINISTRY RESPONSE

The Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry) appreciates the Auditor General's recommendation and agrees that state-of-the-environment reports provide a valuable source of information to support policy and program decisions and improvements. The Ministry will continue its practice of considering relevant information, data and reports when conducting policy and program evaluations. This will include using future published state-of-the-environment reports to inform the Ministry's internal program evaluations.

### RECOMMENDATION 4

To improve the environmental sustainability of Ontario's agriculture and the effectiveness of environmental protection and management policies, programs and initiatives, we recommend that the Ministry of Agriculture, Food and Rural Affairs use published state-of-the-environment reports in internal program evaluations.

#### AGRICULTURE MINISTRY RESPONSE

The Ministry of Agriculture, Food and Rural Affairs (Ministry) recognizes the value in

understanding progress toward environmental outcomes and will actively collaborate with the Ministry of the Environment, Conservation and Parks as requested to support the development of environmental reports to ensure they are accurately representative of information, data and science relevant to Ontario agriculture and food.

The Ministry understands the value in using credible, informed and consistent information to continuously improve the effectiveness of environmental policies, programs and initiatives, and will explore the use of state-of-the-environment reports, as they become available, to inform program evaluations. The Ministry will continue to use existing reporting and/or credible science to inform internal program evaluations.

#### 4.1.2 Environment Ministry Stopped Publicly Reporting on Overall State of Ontario's Water Quality in 2016

In 2016, the Environment Ministry stopped regularly reporting on the overall state of Ontario's water quality. As a result, there is no longer a consolidated publication on the state of all water resources in Ontario, including inland lakes, streams and groundwater.

Starting in 2009, the Ministry had published biennial *Water Quality in Ontario* reports, summarizing the results of multiple water monitoring programs, including key findings on the Great Lakes, inland lakes, streams and groundwater. These reports included updates on a number of issues that affect Ontario's water quality, such as climate change, nutrients and algae and contaminants. The reports also highlighted progress toward various environmental priorities. Stakeholders found these reports informative and valuable, providing Ministry analysis of the collected data besides the raw data itself.

However, the Ministry stopped issuing *Water Quality in Ontario* reports in 2016. The Ministry informed us that it ceased issuing the "ad-hoc reports" as it moved to posting data on the Ontario Data



Catalogue. The Data Catalogue contains datasets with the raw data from a number of the Ministry's water-monitoring programs, such as measurements on phosphorus, nitrogen, temperature, nutrients and metals. Although the posted data is not summarized to explain what it means (for example, the underlying reasons for observed results and the impacts on people and the environment), posted data supports various water-related reports (see below).

Currently, information on the state of Ontario's water quality is published in a variety of different places (see **Appendix 4**), including the following:

- The Minister's annual drinking water report, which provides a comprehensive overview of the actions taken to protect water sources—but not the results of those actions or the state of waterbodies.
- *Ontario's Great Lakes Strategy Progress Report*, which reports on key measures, actions and accomplishments made toward goals in Ontario's Great Lakes Strategy. At the time of our audit, it had not been released despite its 2019 legislated release deadline (see **Section 4.3**).
- The binational (Canada-US) *State of the Great Lakes Reports*, which report on the status and trends of the Great Lakes ecosystem in great detail, with technical reports in excess of 500 pages.
- Ontario's 36 conservation authorities each produce report cards on the quality of the surface water and groundwater within their watershed every five years, and Conservation Ontario provides summary reporting on the State of Ontario's Watersheds. However, the individual reports are not consolidated, some report cards are difficult to locate online, and reporting is based on only a few indicators.
- The Minister's *Reports on Lake Simcoe*, which focus on the state of the Lake Simcoe watershed.
- Peer-reviewed articles co-authored by Ministry scientists.
- Public Health Ontario's website includes a Raw Water Chemicals Map that displays data on water contaminant concentrations in surface and

groundwater, by public health unit. These data are collected by the Ministry of the Environment, Conservation and Parks.

As mentioned in **Section 4.1.1**, the Environment Ministry also does not publicly report water withdrawal and consumption quantities, and how this compares to available water resources. Although the Environment Ministry has stopped consolidated reporting on Ontario's water quality, by contrast, it continues to report on Ontario's overall air quality. Since 1971, the Environment Ministry has released an annual report on the state of Ontario's air quality. This report, called the *Air Quality in Ontario* report since 1984, summarizes for the public the annual and trend data in ambient air quality gathered at a network of sampling stations throughout the province.

## RECOMMENDATION 5

To provide the public with regular and comprehensive information on the overall state of Ontario's water quality for decision-making, policy and program development, and holding the government accountable for progress, we recommend that the Ministry of the Environment, Conservation and Parks review its current water reporting and provide biennial summarized reporting to the public as well, as part of a future regular, comprehensive state-of-the-environment reporting.

## ENVIRONMENT MINISTRY RESPONSE

The Ministry of the Environment, Conservation and Parks (Ministry) acknowledges the Auditor General's recommendation and agrees that the public is interested in obtaining information on the state of Ontario's water quality. The Ministry will continue to report on the state of Ontario's water while avoiding duplication by producing regular reports, for example on drinking water, Lake Simcoe, and the Great Lakes; supporting the Canadian government on compiling reports; making data publicly available on the Ontario Data Catalogue; and continually reviewing the ministry's environmental reporting.

## AUDITOR GENERAL'S RESPONSE

The Ministry did not agree to provide the public with regular, comprehensive, summarized reporting on the overall state of Ontario's water.

### 4.1.3 Natural Resources Ministry Currently Does Not Have Plans to Publicly Release Its Prepared, Consolidated Report on State of Natural Resources

In June 2021, the Natural Resources Ministry informed us during our audit that it did not have plans to make its prepared report on the state of Ontario's natural resources public, although this was originally planned when the Ministry initiated work on the report in 2017.

Instead, the Natural Resources Ministry said the report (which covers a range of topics, including aggregates, fish, forests, invasive species, protected areas and wetlands) will be used as an internal document to inform program and policy decisions, and was used to produce the 2021 *State of Natural Resources—Forests Report*, which was publicly released in September 2021. According to the Ministry, it has not shared the *State of Ontario's Natural Resources Report* with the public because the Ministry has not sought or obtained approval from the new Minister, who was appointed in June 2021.

Between 2012 and 2015, the Natural Resources Ministry underwent a transformation to more effectively deliver on its core mandate and modernize its approaches to natural resource management. During this process, the Ministry identified the need to consolidate and streamline its legislated “state of” public reporting on forests and protected areas (required under the *Crown Forest Sustainability Act, 1994* and the *Provincial Parks and Conservation Reserves Act, 2006* respectively), as well as reporting commitments in *Ontario's Biodiversity Strategy, 2011* (described in **Appendix 4**).

With reports on each of these areas (forests, protected areas and biodiversity) previously released separately, staff noted a duplication of efforts in

reporting on similar topics, and the risk of inconsistent public communication on how resources are doing, for example, on afforestation, deforestation and protected areas. Ministry staff's proposed approach was to unify the Ministry's legally required public reporting into one easily navigated online report. Internally, Ministry staff expected that this new, modern approach would cut costs and make it easier for Ontarians to access reliable and up-to-date information on how Ontario's natural resources are doing.

Since 2017, the Natural Resources Ministry has been consulting staff on the best indicators to include, compiling and analyzing data, and developing indicator reports to consolidate its public reporting on the state of Ontario's natural resources. The Ministry's initial focus for this new state of Ontario's natural resources report was on forests, fisheries and biodiversity. This reflected reporting requirements in legislation (the *Crown Forest Sustainability Act, 1994*), and commitments in policies (*Ontario's Provincial Fish Strategy*, and *Biodiversity: It's In Our Nature*). Statutory responsibility for managing and reporting on protected areas (including provincial parks and conservation reserves) was transferred from the Natural Resources Ministry to the Environment Ministry in 2018.

In its 2012 biodiversity action plan *Biodiversity: It's In Our Nature*, the province recognized that, to track and report on progress conserving biodiversity, support decision-making, and help with communicating to the public, it is important to develop an effective set of biodiversity indicators. With this in mind, the province committed to reviewing and refining indicators for measuring and reporting on the state of biodiversity. The Natural Resources Ministry's project to consolidate its public reporting on the state of Ontario's natural resources involved such a review and refinement of biodiversity indicators.

Through an internal working group and several staff consultation workshops held in 2018, the Natural Resources Ministry reduced a preliminary list of 202 indicators down to roughly 65 key indicators, supported by multiple measures to report on. Indicators

were selected based on their policy relevance, ability to be communicated to the public, and data quality. Reports for each indicator—assessing their status, trend and geographic coverage—were drafted by Policy Division staff and reviewed by subject matter experts across the Ministry for publication on the planned new website. The Ministry's intention was to update the indicator reports and add new reporting themes and indicators as data became available.

Several of the indicators relate to the state or condition of Ontario's biodiversity, including aquatic ecosystems, fish community diversity, fish populations and wetland area. At the time of our audit, the Ministry was also working to update other biodiversity-related indicators: rare ecosystems, species of conservation concern, wildlife habitat and wildlife population. Other biodiversity-related indicators that were discussed during internal sessions, but not ultimately included in the final list of indicators, were aquatic and terrestrial species, pollinators, vegetation, Great Lakes ecosystems, and geological features that contribute to ecosystems.

Initially, the proposed publication date for a subset of 39 indicator reports was March 29, 2019. In addition to reporting on fisheries, forests, invasive species and ecosystems, indicator reports in this group include information on flows and barriers in Ontario streams; how much oil, gas and aggregate (like bedrock, sand and gravel) is produced in Ontario; and the roads, dams and waste management sites on Crown land. In January 2020, Ministry staff sought the then Minister's approval to publish the new *State of Ontario's Natural Resources Report* online (on Ontario.ca), with a revised target publication date of March 25, 2020. At the time, staff noted to the Minister's Office that this web-based public reporting on the state of natural resources would address several Ministry needs, including:

- legal requirements to report publicly on the state of Ontario's forests, and policy requirements to report on fisheries, biodiversity and the Ministry's progress under *Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan* (2018) (see **Appendix 5**

for a Ministry-prepared list of indicators in the *State of Ontario's Natural Resources Report* and their potential contribution to meeting reporting requirements);

- the need to use staff time efficiently and reduce duplication in public reporting; and
- providing needed information to the natural resource business sector (for planning and management purposes), Ministry staff (for policy and program development purposes), and the public and politicians.

No decision was made by the then Minister at that time, and the Ministry could not provide our Office with an explanation why. In late 2020, in the absence of ministerial approval, senior Ministry staff decided that the *State of Ontario's Natural Resources Report* and its accompanying indicators would not be planned for public release, though approval from the new Minister may be sought in the future. Instead, the Ministry will keep the report as an internal resource.

The Ministry told us it continues to develop and update indicators for the *State of Ontario's Natural Resources Report* but has no plans to share the prepared website or indicator reports with the public without Ministerial approval to do so.

During the course of our audit, we also learned that, as part of the government's commitment to balance the budget, in 2019 the Ministry ended financial support for the Ontario Biodiversity Council (Council)—a group of volunteer stakeholders and scientists who report to the public on the state of Ontario's biodiversity in support of commitments in *Ontario's Biodiversity Strategy*. As discussed in **Section 2.2.4**, the Council was established by the Ministry in 2005, and has released reports on the state of Ontario's biodiversity in 2008, 2010, and 2015, and updated indicators online in 2021. Although the Ministry lends support to the Council (planning meetings and updating biodiversity indicators), and the Council currently operates on residual funds previously provided by the province (as well as proceeds from the 2015 Ontario Biodiversity Summit), there is no legislated requirement or sustained funding for the Council to continue its valuable reporting.

## RECOMMENDATION 6

So that Ontarians are fully informed regarding the province's natural resources, and that the Ministry efficiently and effectively meets its statutory and policy requirements for public reporting, we recommend that the Ministry of Northern Development, Mines, Natural Resources and Forestry:

- regularly release consolidated information on the state of Ontario's natural resources (including on aggregates, fisheries, forests, oil and gas and, in co-operation with the Ontario Biodiversity Council, aspects of Ontario's biodiversity); and
- work with the Ministry of the Environment, Conservation and Parks to include relevant areas of this reporting in any future regular, comprehensive state-of-the-environment reporting.

### NATURAL RESOURCES MINISTRY RESPONSE

The Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry) agrees that there are many benefits to public reporting on the state of the environment, including natural resources. The Ministry makes a wide variety of natural resource data and information available through existing channels such as the Ontario Data Catalogue and Ontario.ca. The Ministry will continue to meet its statutory requirements for public reporting on the state of forests, and will continue to collaborate with its partners, including the Ministry of the Environment, Conservation and Parks and the Ontario Biodiversity Council. The Ministry will continue to make improvements.

Going forward, the Ministry will consider releasing consolidated information on Ontario's natural resources when data has been updated and validated for public release.

### 4.1.4 Public Has No Source of Information on Wild Pollinators, Regional, Local Soil Health and Pesticide Use

The Agriculture Ministry and Natural Resources Ministry have little data to report on wild pollinators because neither ministry has a broadscale, long-term wild pollinator monitoring program. The Agriculture Ministry also does not report to the public on the health of soils or on the pesticides applied to agricultural lands, which can contribute to negative impacts on watersheds and pollinators. Neither the Agriculture Ministry nor the Environment Ministry collects and reports information on the amount, type, timing and location of the application of pesticides to farmland, which makes up about 5.6 million hectares (or 5.7%) of Ontario's land area.

#### Wild Pollinators

Wild pollinators, including species of bees, flies, wasps, butterflies, moths, beetles and hummingbirds, are essential to Ontario's agricultural production—especially fruit, vegetable and nut crops—and to sustaining the health and diversity of wild plant communities. A 2016 study commissioned by the Natural Resources Ministry estimated that the total value of pollination by wild species for agricultural purposes in Ontario ranges from \$470 million to \$1.35 billion. The study also estimated that wild pollinators provide between 50% and 56% of the value of pollination services for Ontario's agriculture. Neither the Agriculture Ministry nor the Natural Resources Ministry reports regularly to the public on the status of wild pollinators. Ontario has no comprehensive, long-term wild pollinator monitoring program to report on (see **Section 5.2.4** of our *2020 Annual Report* audit, Setting Indicators and Targets, and Monitoring Ontario's Environment).

In October 2019, the Agriculture Ministry began drafting an Agri-Food Environment Plan, with a key action to improve the Ministry's reporting on environmental outcomes. For various environmental themes (water, soils, climate change, waste, farmland and biodiversity), the draft plan describes the current regulatory framework and programs, outlines key

actions, provides specific targets where available, identifies performance metrics and the recent status of those metrics, and indicates plans to measure progress. The draft plan indicates that quantitative performance targets will be established across several metrics, including soil erosion risk, soil organic carbon, soil cover, agriculture greenhouse gas emissions and hectares of farmland. The current draft, however, does not discuss the state, targets, metrics or status of crop pollination in Ontario by wild species. The Agriculture Ministry expects to release the draft plan for public consultation, but does not yet have a date for release.

The Agriculture Ministry told us that tracking and reporting on wild pollinators is outside its mandate. This is because wildlife management is the responsibility of the Natural Resources Ministry. Still, the Agriculture Ministry also does not regularly assess the dependence of agricultural crops on wild pollinators, nor changes in the pollination services and impacts over time on Ontario's crops. Rather, the Agriculture Ministry focuses on the pollination provided by domesticated honey bees.

Though not required by legislation, the Agriculture Ministry reports annually on the health, diseases and pests of Ontario's managed honey bees through its *Provincial Apiarist Reports* and *Apiculture Winter Loss Surveys*. However, only two years of reporting are available online; the 2016 and 2017 *Provincial Apiarist Reports* are available on the Ministry's website. Reports from all other years between 2003 and 2019 are not publicly available on the Ministry's website. When asked why this is, the Ministry indicated that the pre-2016 reports were dated and considered of little value, the webpage was inundated with links to older reports, the reports are available upon request, and the 2019 report needs to be reformatted for posting on the Ministry's new website (on Ontario.ca). According to the Ministry, it is working on migrating content to the new website, with a March 2022 deadline.

In our 2020 audit, we recommended that the Natural Resources Ministry develop and implement a broad-scale, long-term monitoring program for wild

pollinators and report annually to the public on the results of this program and the status of wild pollinators. We also recommended that the Agriculture Ministry work with the Natural Resources Ministry to develop and implement a research and monitoring program on wild species that pollinate Ontario's crops. In response, the Natural Resources Ministry acknowledged the information gaps in pollinator monitoring provincially; the Ministry committed to consulting with partner ministries on how to address wild pollinators within a broader monitoring framework, and exploring how to monitor and report. As of July 2021, the Natural Resources Ministry had not yet consulted partner ministries on this.

### Agricultural Soil Health

Like wild pollinator health, there is a gap in provincial reporting on the health of Ontario's agricultural soils. Because the Agriculture Ministry does not have its own soil health monitoring program, it relies on national-scale reporting by the federal government. Agri-Food and Agriculture Canada (Agriculture Canada) uses Agri-Environmental Indicators that measure the agriculture and agri-food sector's environmental performance for soil, water and air quality and farmland management at a national scale. Information is collected every five years, with the most recently published indicator reports covering results and trends from 1981 to 2011. Agriculture Canada has uploaded updated data (to 2018) online and plans to update the indicator website information by the end of March 2022.

The Ministry has noted that province-wide soil assessment tools are not well developed, and that creating Ontario-specific indicators at different scales (for example, farm, field, regional and provincial) would allow for better analysis and reporting, and would be more useful than using only the federal Agri-Environmental Indicators. In 2018, the Agriculture Ministry, as a member of the Soil Health Working Group, worked alongside various stakeholders to release *New Horizons: Ontario's Agricultural Soil Health and Conservation Strategy* (Soil Health Strategy), highlighting the need to report, where

appropriate and feasible, on province-specific indicators of Ontario's soil health. The Soil Health Strategy outlines more than 30 actions related to collecting and sharing soil health information.

However, as we reported in Stage 1 of this audit, Setting Indicators and Targets, and Monitoring Ontario's Environment in our *2020 Annual Report*, since the release of Ontario's Soil Health Strategy in 2018, little progress had been made to implement foundational actions within it. To improve the tracking, measuring, analyzing and reporting on the state of Ontario's agricultural soil health, we recommended that the Agriculture Ministry work with the Soil Action Group (a partnership between government, industry, conservation groups and academics to lead and monitor the strategy's implementation) to promptly develop and execute a collaborative implementation plan for the Soil Health Strategy and report annually to the public on progress.

After the release of our audit report, the Soil Action Group, which first met in January 2020, established a collaborative implementation approach and three task teams to support the development of a three-year plan to implement the strategy. The implementation plan is expected by December 2021, including options for how to report on progress implementing the Soil Health Strategy.

### Pesticides

Between 1973 and 2013, the Agriculture Ministry collected detailed pesticide use data by means of a voluntary survey, and released public reports every five years summarizing the survey results. For over 40 years, the survey provided information on the types, amounts and use of pesticides on agricultural crops. According to the Ministry, the collected data was useful in estimating and reporting pesticide use; tracking trends in pesticide use by crop and by region; and supporting studies that evaluated the environmental risks of pesticides used in Ontario, which informed the development and sharing of best practices for integrated pest management. Early surveys were also used to gauge the local and overall effectiveness of a pest management program that was completed in 2002.

According to the Agriculture Ministry, it stopped conducting these surveys due to low response rates. The Ministry received more than 1,200 submissions for the 1998, 2003 and 2008 mail-in surveys, but received only 475 submissions for the 2013 online survey. The Ministry speculates that the lower response rate was due to growers' reluctance to share pesticide use data, similar to the general public's reluctance to share what they see as sensitive business information.

While the Agriculture Ministry does not have a mechanism to require mandatory reporting of agricultural pesticide use, it told us that it is reviewing its approach for collecting information and exploring options that may provide more robust data on pesticide use.

## RECOMMENDATION 7

To understand and inform the public about the types and amounts of pesticides applied to Ontario crops, detect trends in pesticide use and environmental impact, and inform policy development, decision-making and the public, we recommend that Ministry of Agriculture, Food and Rural Affairs develop and implement an approach for collecting and publicly reporting information on agricultural pesticide use.

## AGRICULTURE MINISTRY RESPONSE

The Ministry of Agriculture, Food and Rural Affairs (Ministry) acknowledges this recommendation and notes that the data challenge is not central to Ontario; the collection of pesticide use and environmental monitoring data is being investigated at the federal-provincial-territorial (FPT) level to support common interests for improved access to data for policy development and scientific review of pesticide registrations. The Ministry will be participating in these FPT discussions and will ensure that any potential solutions will consider Ontario's needs and take this recommendation into consideration. This collaborative

approach may also help to support sustainable pest management strategies with industry.

The Ministry notes that all pesticides must be authorized before they can be sold or used in Canada, and rigorous scientific review is undertaken by Health Canada's Pest Management Regulatory Agency to ensure they meet the latest health and environmental risk assessment standards. While pesticide use data can provide general information on volume applied and inform trends on product types used, pesticide use data in isolation will not provide a true assessment of environmental impact. The assessment to understand environmental performance is far more complicated and is dependent on science-informed, responsible use and application of pesticides in accordance with regulated labels, as well as adoption of best practices and integrated pest management approaches that influence their sustainable use. Environmental monitoring (e.g., stream monitoring) is a valuable approach to assess potential impacts associated with pesticide use. Data for the types and amounts of pesticides used can inform trends that may support interpretation of environmental monitoring data, such as the joint water monitoring project with the Ministry of the Environment, Conservation and Parks.

The Ministry's voluntary pesticide use survey that was completed every five years from 1973 to 2013 faced challenges with decreasing response rates, especially for horticulture crops. The data collected was not fulsome or complete and limited the ability to estimate and report on pesticide use. There is no regulated requirement for Ontario farmers to provide pesticide use information to the Ministry.

The Ministry will continue to explore options with industry that may provide more robust pesticide use data to complement environmental monitoring data. If a viable option is identified for collection of pesticide use data, the Ministry will work with industry to implement a pilot project to evaluate the effectiveness of that approach.

## 4.2 Ministries Not Reporting Progress Implementing Environmental Strategies, Plans and Policies, or Progress Toward Targets

The province's numerous environmental plans, strategies and policies contain objectives and key actions to achieve overarching goals. Effective progress reporting would regularly explain to the public what steps have been taken to implement each action and tactic, and the outcomes of implementing these actions in achieving stated objectives and targets. However, the three ministries we audited (Environment, Natural Resources and Agriculture) have not regularly reported publicly on progress implementing some of their strategies, plans and policies, and the resulting outcomes (see **Appendix 6**). Further, we found that none of these three ministries have overarching policies or requirements for reporting back publicly on progress.

### Environment Ministry

#### Greenhouse Gas Emissions

The *Cap and Trade Cancellation Act, 2018* compels the Minister of the Environment, Conservation and Parks to prepare a climate change plan and regular reports on progress.

In 2018, the Environment Ministry released *Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan* for public consultation, including the province's climate change plan. The plan sets a target to reduce Ontario's greenhouse gas emissions, which contribute to global climate change, by 30% below 2005 levels by 2030.

In 2019 and 2020, the Ministry released progress updates on the *Made-in-Ontario Environment Plan* and the climate change plan within it. However, these updates are brief, high-level summaries that focus on outputs and do not report the status of recent emissions relative to Ontario's 2030 target; the estimated emissions in each sector; the outcomes and expected contribution that taken actions have had on reducing emissions; nor revised emissions forecasts based on

progress implementing the plan (see Climate Change: Follow-Up on VFM Chapter 3, Volume 2 in our *2021 Annual Report*, which is a follow-up to our 2019 audit, Climate Change: Ontario's Plan to Reduce Greenhouse Gas Emissions).

### Waste Diversion

Historically, the Environment Ministry also has not regularly reported on progress meeting the province's waste diversion targets, including its most recent targets to divert 30% of Ontario's total waste generated by 2020, 50% by 2030 and 80% by 2050. The first five-year progress report on the *Strategy for a Waste-Free Ontario: Building a Circular Economy* is expected in 2022.

### Species at Risk

Under the *Endangered Species Act, 2007*, the Environment Ministry must publish reports on progress made toward protecting and recovering species at risk. These reports are due no later than the time specified in a species' government response statement (species-specific plans of action) or no later than five years after the response statement is published. This year, in *Protecting and Recovering Species at Risk* of our *2021 Annual Report*, our Office found that all 85 reports on progress have been completed on time as required, with 18 additional reviews of progress due to be completed in December 2021. However, a sample of progress reports we reviewed found that they fail to clearly specify all of the work that remains outstanding. We also noted that progress reviews did not assess the effectiveness of action taken, due in part because response statements contain no performance measures against which to compare. These reports focus on the outputs and not the actual outcomes of actions identified in response statements to protect and recover species at risk.

## Natural Resources Ministry

### Wetland Conservation

The Natural Resources Ministry has also not released reports on progress in implementing strategies and meeting targets. For example, *A Wetland Conservation Strategy for Ontario: 2017-2030* lays out targets

and actions to conserve the area and function of Ontario's wetlands. In the strategy, the government committed to developing performance measures and reporting to the public on progress implementing the strategy's actions and achieving the targets, with progress reports to be published every five years beginning in 2020. At the time of our audit, the Ministry had given no priority to draft or release such a progress report. Moreover, no performance measurement framework was in place for reporting on progress implementing this strategy, and no data was being collected.

During the course of our audit, however, the Ministry informed us that *A Wetland Conservation Strategy for Ontario: 2017-2030* is an archived product of a previous government, and the direction and targets within it are no longer in effect. The Natural Resources Ministry did not notify or consult the public on this decision through the Environmental Registry, as required under the *Environmental Bill of Rights, 1993* (see our 2021 report on the *Environmental Bill of Rights*). As a result, wetland researchers, stakeholders and the public were unaware that the strategy and its targets had been cancelled.

### Biodiversity, Resilience, Wildlife Management and Invasive Species

Similarly, the Natural Resources Ministry's 2017 climate adaptation strategy, *Naturally Resilient: MNR's Natural Resource Climate Adaptation Strategy (2017-2021)*, states that the Ministry will assess and report on its progress meeting the goals of the strategy to build biodiversity and resilience (the capacity of a community, business or natural environment to anticipate, prevent, withstand, respond to and recover from a climate change-related disruption or impact). However, the Ministry has released no such progress reporting.

Likewise, the Ministry has not published status reports on progress in implementing actions in the 2012 *Ontario Invasive Species Strategic Plan*, Ontario's 2012 biodiversity action plan *Biodiversity: It's In Our Nature*, or various wildlife management strategies, including the Ministry's *Strategy for Wolf Conservation*



in Ontario (2005), *Moose Management Policy* (2009) and *Ontario's Provincial Fish Strategy* (2015), which states that progress toward achieving the goals, objectives and outcomes of the strategy will be measured regularly and reported on through provincial State of Resource Reporting.

Though the Ministry points to the Ontario Biodiversity Council's reporting on certain relevant indicators (for example, wetlands and invasive species) in its *State of Ontario's Biodiversity Report* (see **Section 2.2.4**) as public reporting in these areas, reporting on the state of these indicators is not a substitute for reporting on progress in implementing actions and achieving objectives of the Ministry's strategies and plans.

### Niagara Escarpment Plan

The *Niagara Escarpment Plan* (first released in 1985, and updated most recently in 2017) states that the province will develop a set of performance indicators to measure the implementation of the Plan's policies, and that the Plan's implementation will be monitored and reported. (The Niagara Escarpment Commission, which is tasked with developing, interpreting and applying policies that maintain and enhance the Niagara Escarpment's unique environmental and landscape features, reports to the Natural Resources Ministry.) The *Niagara Escarpment Plan's* performance indicators are contained within the Ministry of Municipal Affairs and Housing's *Performance Indicators for the Greenbelt Plan*, and have not been publicly reported since they were first published in 2015, some with data dating back to 2002.

### Agriculture Ministry

#### Soil Health

The Agriculture Ministry has also not reported to the general public on progress in implementing the province's strategy to sustain and enhance the health of agricultural soils, *New Horizons: Ontario's Agricultural Soil Health and Conservation Strategy* (2018). The 2018 strategy commits to establishing a schedule for reporting on progress but nothing

on that is expected until December 2021. Updates on the strategy's implementation have not been reported publicly—only within the Soil Action Group (a select group of members from government, industry, conservation groups and academia).

#### Pollinator Health

The former *Pollinator Health Action Plan* (2016) stated that the Agriculture Ministry would keep partners and the public informed on the progress of the plan, including reporting on targets. However, a report on progress that the Ministry prepared in 2018 was never approved for public release. Further, though certain actions to improve pollinator health continue, the Ministry cancelled the plan's overarching framework and targets sometime after July 2018 without informing or consulting the public (see **Chapter 2, Section 8.3** of our 2020 report, *Operation of the Environmental Bill of Rights*).

## RECOMMENDATION 8

To promote accountability, transparency and progress on achieving published goals, objectives and targets, we recommend that the Ministry of the Environment, Conservation and Parks develop and implement policies and frameworks that require regular reporting to the public on progress in implementing all its environmental strategies, policies and plans.

## ENVIRONMENT MINISTRY RESPONSE

As recognized in the Auditor General's report, the Ministry of the Environment, Conservation and Parks (Ministry) reports publicly on progress in implementing several environmental strategies, policies and plans, such as through the Minister's annual reports on drinking water, Great Lakes strategy progress report, Lake Erie Action Plan annual update, Lake Simcoe reports, *Air Quality in Ontario* reports and many others. The Ministry is also required to report on progress toward implementing the *Strategy for a Waste-Free Ontario* every five years. The Ministry reports on progress

toward implementing *Ontario's Food and Organic Waste Policy Statement*.

The Ministry will consider additional opportunities of reporting to enhance the public's understanding of the Ministry's progress in implementing its environmental strategies, policies and plans.

### AUDITOR GENERAL'S RESPONSE

The Environment Ministry did not agree to develop and implement policies and frameworks requiring regular reporting to the public on progress in implementing its environmental strategies, policies and plans.

### RECOMMENDATION 9

To promote accountability, transparency and progress on achieving published goals, objectives and targets, we recommend that the Ministry of Northern Development, Mines, Natural Resources and Forestry develop and implement policies and frameworks that require regular reporting to the public on progress in implementing all its environmental strategies, policies and plans.

### NATURAL RESOURCES MINISTRY RESPONSE

The Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry) agrees public reporting on progress in implementing environmental strategies, policies and plans has many benefits. As recognized by the Auditor, the Ministry reports to the public on progress toward achieving many of its environmental goals, objectives and targets and will continue to make improvements. Given the change in Ministers, the new Minister will need to be provided with more information to formulate a decision on reporting on progress implementing the Ministry's strategies, policies and plans.

### RECOMMENDATION 10

To promote accountability, transparency and progress on achieving published goals, objectives and targets, we recommend that the Ministry of Agriculture, Food and Rural Affairs develop and implement policies and frameworks that require regular reporting to the public on progress in implementing all its environmental strategies, policies and plans.

### AGRICULTURE MINISTRY RESPONSE

The Ministry of Agriculture, Food and Rural Affairs (Ministry) agrees that public reporting on progress on environmental strategies, policies and plans helps promote accountability, transparency and progress on achieving published goals, objectives and targets. The Ministry commits to develop and implement a policy on regular reporting to the public on progress implementing its environmental strategies, policies and plans.

With regard to the current Soil Health Strategy, the Ministry co-ordinates the strategy's actions through its membership on the Soil Action Group, a collaboration that includes over 20 partners from government, academia, industry and conservation groups. No partner on the Soil Action Group, including the Ministry, has unilateral control over decisions impacting the Soil Health Strategy. Recognizing the value for transparency and measuring progress, the Ministry commits to leveraging its role as a member on the Soil Action Group to influence the potential development and execution of a collaborative implementation plan and annual public reporting on progress. The Ministry believes that current Soil Action Group activities are on track to meet the December 2021 timeline for the completion of the implementation plan, while recognizing that building consensus within the Soil Action Group takes time and is not under the Ministry's unilateral control.

### 4.3 Ministries Missing Public Reporting Deadlines in Legislation and Policies by Several Years

Ministries are not always meeting public reporting deadlines laid out in legislation and policy. We found several cases where ministries are not meeting their legal requirements and policy commitments to report (see **Appendix 4**). Further, ministries face no consequences for failing to meet these deadlines. Putting reporting requirements in law is supposed to help ensure that public reporting occurs and is timely. But public confidence in government is undermined when ministries do not meet public reporting deadlines in acts, regulations and policies, and ministries are not held accountable.

A process exists to provide assurance that provincial ministries have complied with applicable laws, regulations, directives and policies. Each year, ministries conduct a self-assessment on the achievement of organizational objectives by evaluating the effectiveness of their internal controls to provide reasonable assurance over the reliability of financial reporting; effectiveness of operations; and compliance with applicable laws, regulations, as well as directives and policies issued by the Ministry of Finance, Treasury Board Secretariat and Treasury Board/Management Board of Cabinet. Relying on the results of self-assessments carried out at branch and division levels, Deputy Ministers sign a formal attestation memo, referred to as a Certificate of Assurance, consisting of a standard set of statements formulated by the Office of the Provincial Controller Division. Ministries identify instances of non-compliance with any of these statements as exceptions. We found that the following instances of non-compliance in public reporting do not appear in ministries' Certificates of Assurance, and there is no requirement to report non-compliance with ministries' own policies.

#### Environment Ministry

##### **Non-compliance with *Great Lakes Protection Act, 2015***

Under the *Great Lakes Protection Act, 2015*, the Environment Minister must prepare a progress report at least once every three years, including, among other things:

- a description of recent actions that have been taken to address the priorities identified in Ontario's Great Lakes Strategy;
- a description of any established targets and progress made in achieving those targets;
- a description of progress made in achieving the purposes of this Act; and
- a summary of the information with respect to the monitoring and reporting programs.

The Environment Ministry published one Great Lakes progress report in 2016, which indicated the Ministry's intention to report again in three years using a suite of performance measures to track progress. However, the second report, which was due in 2019, has not been drafted or released, hampering the public's understanding of the state of the lakes and provincial progress. According to the Ministry, the report was delayed so that the Ministry could prioritize revisions to the *Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health*. However, the *Great Lakes Protection Act, 2015* does not make accommodations for deferring the preparation of progress reports to respond to other priorities.

##### **Non-compliance with the *Lake Simcoe Protection Act, 2008***

Despite requirements under the *Lake Simcoe Protection Act, 2008* to produce annual progress reports, the Environment Ministry did not release the Minister's annual report on Lake Simcoe in 2013, 2014 or 2018. The Ministry did report on progress made during those years in its five-year and 10-year progress reports (released in 2015 and 2020). The Ministry asserts that it therefore met the annual reporting obligations. However, the *Lake Simcoe Protection Act, 2008* has both annual and five-year reporting requirements.

### **Non-compliance with the *Toxics Reduction Act, 2009***

The *Toxics Reduction Act, 2009*, which is scheduled to be repealed on December 31, 2021, requires the Environment Minister to prepare annual reports describing progress relating to the implementation of this Act. However, no such reports have been prepared or published since the *2017 Minister's Report on Toxics Reduction* was released in 2018.

### **Natural Resources Ministry**

#### **Failure to Meet Reporting Commitments in *Provincial Wildlife Population Monitoring Program Plan (2004)* and *A Wetland Conservation Strategy for Ontario: 2017–2030***

In its *Provincial Wildlife Population Monitoring Program Plan*, the Natural Resources Ministry committed to producing an annual report on the program's accomplishments from 2015 to 2019, and a five-year report covering 2015 to 2019. In 2018, the Ministry published a 2015 annual report, as well as a 2016/2017 report. However, these reports are not easily located or accessed online, and the Ministry has not produced a 2018 annual report or the five-year report. Fieldwork was not conducted in 2019 because, according to the Natural Resources Ministry, it needed to focus on data analysis and improving the wildlife monitoring program.

Furthermore, as discussed in **Section 4.2**, despite a commitment in *A Wetland Conservation Strategy for Ontario: 2017–2030* to initiate public reporting on progress in 2020, the Natural Resources Ministry has not developed a framework for reporting on progress and no data has been collected.

## **RECOMMENDATION 11**

So that ministries' legislated and policy requirements and deadlines for reporting to the public are met, and so that ministries are held accountable for failing to meet these responsibilities, we recommend that the Treasury Board Secretariat:

- require ministries, either as part of or separate from the Certificate of Assurance process, to itemize, attest to and report annually to

Treasury Board Secretariat on their compliance with all applicable legislation and meeting of policy commitments: and

- annually report the results of this ministry reporting to the Treasury Board.

## **TREASURY BOARD SECRETARIAT RESPONSE**

Ministries are accountable for adherence to their legislation and policy commitments, including any deadlines for public reporting.

Treasury Board Secretariat supports the current ministry accountability mechanisms that are in place.

Risks associated with ministries' legislated requirements will be considered as part of internal audit planning processes.

## **4.4 Public Could Be Notified and Provided Environmental Reports through Environmental Registry**

Ministries have an excellent opportunity to use the Environmental Registry—a centralized website of environmental information—to notify the public of the release of environmental reports. However, we found that the Environment, Natural Resources and Agriculture ministries are not fully utilizing this platform for this purpose.

Under Ontario's *Environmental Bill of Rights, 1993* (EBR), 16 ministries—including the Environment Ministry, Natural Resources Ministry, and Agriculture Ministry—are required to notify and consult the public through the Environmental Registry when proposing laws, regulations and policies, including strategies and action plans, that might have a significant effect on the environment.

The Environmental Registry is a website that the Environment Ministry created in 1994 and continues to maintain. The Environmental Registry has a well-established reputation as an easily accessible and centralized source of information on environmental activities. In 2020/21, the Environmental Registry

received over 400,000 visits. For more than 25 years, it has served as a central point for the public to learn about proposals and actions of the government that might affect the environment, including those that are required by law to be posted and others that are posted voluntarily by a ministry. A “one-window” approach to informing Ontarians about environmental proposals, decisions and information is convenient and transparent.

Although not required under the EBR, ministries post many bulletins (previously referred to as “information notices”) on the Environmental Registry for information purposes, including to let Ontarians know about the release of environmental reports by other organizations. For example, the Environment Ministry has used the Environmental Registry to advise the public about reports by:

- the Resource Productivity and Recovery Authority, a non-Crown, not-for-profit corporation created to deliver services to support the province’s transition to a waste-free Ontario;
- the Committee on the Status of Species at Risk in Ontario, an independent committee of experts responsible for assessing and classifying species at risk in Ontario; and
- Waste Diversion Ontario, a non-Crown corporation that previously developed, implemented and operated waste diversion programs.

The Natural Resources Ministry has used the Environmental Registry to advise the public about reports by the Nuisance Bear Review Committee (a committee established to independently review scientific information related to nuisance bears).

According to the EBR, the purpose of the Environmental Registry is “to provide a means of giving information about the environment to the public.” However, we found that legislative requirements to post prepared environmental progress reports on the Environmental Registry are found in only two acts: the *Lake Simcoe Protection Act, 2008* and the *Water Opportunities Act, 2010*. Further, the Environment Ministry, Natural Resources Ministry and Agriculture Ministry have not fully used the Environmental Registry to inform the public of the release of reports

that relate to the environment (see **Appendix 4**).

For example:

- The Environment Ministry has not posted any of its *Air Quality in Ontario* reports, *Water Quality in Ontario* reports, Minister’s Reports on Toxics Reduction, or progress reports on the 2018 *Made-in-Ontario Environment Plan*.
- The Natural Resources Ministry has posted some but not all of its forest-related reports, and has not used the Environmental Registry to inform the public of the 2010 and 2015 *State of Ontario’s Biodiversity* reports, or its annual reports related to its Provincial Wildlife Population Monitoring Program.
- The Agriculture Ministry has not posted its reports related to diseases and pests that affect managed honey bees, many of which are also not available elsewhere online.

Given the Environmental Registry’s well-established reputation and extensive use as a source of information about government environmental decisions, it would be sensible and beneficial for ministries prescribed under the EBR to use the Environmental Registry as a central site for informing the public about all important environmental activities and developments, regardless of whether more detailed information is provided elsewhere. Moreover, the newly updated (as of 2019) Environmental Registry platform allows ministries to attach reports and other documents to notices. Attached documents would remain accessible to the public even when a ministry’s website is changed and weblinks are buried or broken over time. Members of the public can also register to receive email alerts when notices with specified keywords are posted on the Environmental Registry.

## RECOMMENDATION 12

So that Ontarians can readily find and access information about all environmental reports, publications, and research, we recommend that the Ministry of the Environment, Conservation and Parks post all its reports related to the environment on the Environmental Registry.

## ENVIRONMENT MINISTRY RESPONSE

The Ministry of the Environment, Conservation and Parks (Ministry) thanks the Auditor General for this recommendation and will consider whether it would be appropriate to post additional reports, publications, and research on the Environmental Registry.

The Ministry will continue to use various methods to provide environmental-based information to the public, including the Environmental Registry as appropriate.

## RECOMMENDATION 13

So that Ontarians can readily find and access information about all environmental reports, publications, and research, we recommend that the Ministry of Northern Development, Mines, Natural Resources and Forestry post all its reports related to the environment and natural resources on the Environmental Registry.

## NATURAL RESOURCES MINISTRY RESPONSE

The Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry) thanks the Auditor General for this recommendation and will consider whether it would be appropriate to post additional reports, publications and research on the Environmental Registry. The Ministry will continue to use various methods to provide environmental-based information to the public, including the Environmental Registry, as appropriate.

## RECOMMENDATION 14

So that Ontarians can readily find and access information about all environmental reports, publications and research, we recommend that the Ministry of Agriculture, Food and Rural Affairs post all its reports related to the environment, and the environmental sustainability of Ontario's agriculture, on the Environmental Registry.

## AGRICULTURE MINISTRY RESPONSE

The Ministry of Agriculture, Food and Rural Affairs (Ministry) recognizes the important role of the Environmental Registry in informing the public on environmental matters in the province and agrees with the recommendation to post reports related to the environment and the environmental sustainability of Ontario's agriculture on the Environmental Registry, as appropriate.

The Ministry commits to develop and implement a policy on posting reports generated by the Ministry that may be of interest to the public related to the environment and the environmental sustainability of Ontario's agriculture, on the Environmental Registry.

## Appendix 1: Glossary of Terms

Prepared by the Office of the Auditor General of Ontario

| Term  | Definition  |
|---|---|
| <b>Ambient air quality</b>  | The condition or general quality of surrounding outdoor or open air   |
| <b>Biodiversity</b>   | The variety of life—including plants, animals, fish and other organisms. It includes diversity of individuals, species, and ecosystems  |
| <b>Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health</b> | An agreement between the government of Canada and Province of Ontario, signed in 1971, to restore, protect and conserve Great Lakes water quality and ecosystem health  |
| <b>Climate adaptation</b>   | Actions taken to reduce the potential damage caused by climate change and prepare for its impacts (e.g., higher temperatures, extreme weather, flooding). Adaptation is often viewed as one of two core strategies for addressing climate change, with the other being mitigation, or the reduction of greenhouse gases in the atmosphere   |
| <b>Climate change</b>   | Climate change is the long-term change in weather patterns, which is causing shifts in temperatures, precipitation, and/or the timing or length of seasons. The climate change observed since the early 20th century is a result of global warming, or the long-term heating of Earth's surface due to human activities, primarily fossil fuel burning  |
| <b>Ecosystem</b>  | All of the living things, such as plants and animals, and all of the non-living things in their environment, such as water, soil and sunlight, and how these living and non-living things interact with each other  |
| <b>Environmental Registry</b>   | A website maintained by the Environment Ministry, and used by all prescribed ministries, to provide information about the environment to the public, including notices about proposals and decisions that could affect the environment, pursuant to the <i>Environmental Bill of Rights, 1993</i> . The Environmental Registry of Ontario ( <a href="http://www.ero.ontario.ca">www.ero.ontario.ca</a> ) became the official Environmental Registry in April 2019 |
| <b>Goal</b>   | A long-term desired outcome. Goals tend to be broad in scope, general in intention, intangible, abstract and difficult to measure. Goals are often broken into more specific objectives   |
| <b>Greenbelt Plan</b>   | A provincial plan introduced in 2005 intended to protect Ontario's Greenbelt, a region within the Greater Golden Horseshoe, by identifying where urbanization should not occur in order to permanently protect agricultural lands and ecological and hydrological features, areas and functions occurring within the Greenbelt  |
| <b>Greenhouse gas</b>   | Water vapour, carbon dioxide, methane, nitrous oxide, ozone and other gases that absorb and emit infrared radiation in Earth's atmosphere, causing the greenhouse effect (i.e., letting the sun's energy in, but blocking its heat from escaping). Increasing greenhouse gas emissions from human activities since the industrial revolution are the primary cause of climate change  |
| <b>Indicator</b>  | A variable or metric to describe or measure a condition, phenomenon or dynamic. A goal may have many indicators   |
| <b>Invasive species</b>   | Invasive species are species that are introduced outside of their normal range that establish and spread, and threaten the economy, environment, society or human health  |
| <b>Niagara Escarpment</b>   | A ridge of sedimentary rock that rises up to 510 metres at its highest point and runs 725 kilometres from Niagara to Tobermory. The Escarpment has been designated as a World Biosphere Reserve because it provides habitat to numerous and diverse animal and plant ecosystems   |
| <b>Objective</b>  | A specific, tangible and measurable outcome toward achieving an overarching goal  |

| Term                         | Definition  |
|------------------------------|---|
| <b>Performance indicator</b> | A quantitative or qualitative measure that indicates progress on desired outcomes, or the extent to which a program's objectives are achieved. It may take multiple performance indicators to capture an outcome  |
| <b>Pollinator</b>            | Species, including bees, flies, wasps, butterflies, moths, beetles and hummingbirds, that spread pollen from male to female plants, providing pollination services and facilitating plant reproduction  |
| <b>Protected areas</b>       | A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature  |
| <b>Soil erosion</b>          | The natural process by which the surface of soils wears away due to natural physical forces (water or wind) or human activities, such as agricultural tillage. Soil erosion can deplete the organic matter and soil organic carbon stored, reducing soil productivity, degrading nearby waterbodies and increasing soil carbon emissions  |
| <b>Soil organic carbon</b>   | The solid carbon stored in soils, which is the measurable component of soil organic matter, or the total organic materials built up from decaying plants, animals and microorganisms  |
| <b>Species at risk</b>       | The plants, animals and other organisms in danger of going extinct and being lost forever   |
| <b>Sustainability</b>        | The ability of the Earth's surface, atmosphere and hydrosphere to be able to persist in a state of balance over the long term. Sustainable human development involves human use of renewable and non-renewable resources and aims to ensure that needs of present and future generations can be met   |
| <b>Target</b>                | A future desired value of an indicator. A target is a time-bound benchmark for driving and measuring progress toward meeting an objective   |
| <b>Waste diversion</b>       | When materials that would otherwise be disposed of are instead reused, recycled or composted and are therefore diverted from landfills, incinerators or facilities that recover energy from the waste incineration process  |
| <b>Wetlands</b>              | Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of very wet soils and has favoured the dominance of either plants that grow partly or totally submerged in water or water-tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens |
| <b>Wildlife</b>              | Living things that are neither human nor domesticated   |



## Appendix 2: Comprehensive State of the Environment Reporting in Other Jurisdictions

Prepared by the Office of the Auditor General of Ontario

| Jurisdiction                              | Environmental Themes  | Reporting  |   |  |
|---|---|--|---|--|
|   |   | History  | Format  | Requirement  |
| <b>Canadian Provinces and Territories</b> |   |  |   |  |
| <b>AB</b>                                 | n/a   | n/a  | n/a   | n/a  |
| <b>BC</b>                                 | Air, climate change, land and forests, plants and animals, sustainability, water  | 1993, 1998, 2000, 2002, 2006 (coastal environment), 2007, 2012–present | Report document (1993–2012) and updated, web-based reporting (2012–present) | None   |
| <b>MB</b>                                 | Air, biodiversity and habitat conservation, climate change, fish, forests, water  | 2005, 2009   | Report document (Provincial Sustainability Report for Manitoba)             | Previously required under <i>The Sustainable Development Act</i> , which was repealed in 2018  |
| <b>NB</b>                                 | Air, land, water  | 2003   | Report document   | n/a  |
| <b>NL</b>                                 | n/a   | n/a  | n/a   | n/a  |
| <b>NS</b>                                 | Air quality, water resources, waste-resources management  | 1998   | Report document   | The <i>Environment Act</i> states that the Minister of the Environment shall report periodically on the state of Nova Scotia's environment         |
| <b>NU</b>                                 | n/a   | n/a  | n/a   | n/a  |
| <b>NW</b>                                 | Air, biodiversity, climate change, economy and energy, land and ocean, people, water  | 2009, 2010 (biodiversity), 2011, 2016                                  | Long form report online, highlight report document                          | <i>Environmental Rights Act</i> (2019) now requires that a state-of-the-environment report be tabled every four years                              |
| <b>ON</b>                                 | n/a   | n/a  | n/a   | n/a  |
| <b>PE</b>                                 | Air quality, biodiversity, climate change, drinking water quality, environmental stewardship, energy use, land use, pesticides, soil quality, surface water quality | 2003, 2010   | Report document   | None   |
| <b>QC</b>                                 | Agricultural land, air quality, biodiversity, climate, forests, surface water   | 2014 (reporting on 2006–2013), 2020 (reporting on 2013–2019)           | Report document   | <i>Sustainable Development Act</i> requires status reports, based on indicators, upon periodic review of Quebec's sustainable development strategy |
| <b>SK</b>                                 | Individual indicators are no longer categorized into air, habitat, land or water  | 1991–2021  | Report document   | The <i>Environmental Management and Protection Act</i> requires a State of the Environment report every two years                                  |

| Jurisdiction          | Environmental Themes   | Reporting  |   |   |
|-----------------------|--|--|---|---|
|                       |  | History  | Format  | Requirement   |
| <b>YT</b>             | Air, climate change, land, fish and wildlife, water  | 1995–2020 (excluding 1996, 1998, 2009–2011)                            | Report document                                   | The <i>Environment Act</i> requires state-of-the-environment report every three years (and annual interim reports)  |
| <b>Countries</b>      |  |  |   |   |
| <b>Australia</b>      | Antarctic environment, atmosphere, built environment, biodiversity, coasts, heritage, land, inland water, marine environment   | 1996, 2001, 2006, 2011, 2016   | Report document and online                        | <i>Environment Protection and Biodiversity Conservation Act 1999</i> requires a report on Australian environment to be prepared and tabled every five years                               |
| <b>Austria</b>        | Air pollution control, biodiversity, changing climate, climate protection, humans as a mirror of the environment, soil preservation, water and aquatic habitats protection   | 1988, 1991, 1993, 1995, 1998, 2001, 2004, 2007, 2010, 2013, 2016, 2019 | Report document                                   | European Union (EU) directive on public access to environmental information   |
| <b>Canada</b>         | Air, climate, socio-economics, wildlife and habitat, water   | 1986, 1991, 1996, 2003–present   | Report document, then updated web-based reporting | <i>Canadian Environmental Protection Act, 1999</i> requires federal Minister of the Environment to publish a periodic report on the state of the Canadian environment                     |
| <b>England</b>        | Air quality, soil, water quality, water resources  | 2013–2021  | Report document                                   | None  |
| <b>European Union</b> | Air pollution, biodiversity and nature, climate change, freshwater, land and soil, marine environment  | 1985, 1992, 1995, 1999, 2005, 2010, 2015, 2020                         | Report document                                   | Regulation No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network |
| <b>Finland</b>        | Air pollutants, biodiversity, chemicals and hazardous substances, circular economy, climate change and black carbon, communities and transport, green economy, microplastics, natural resources, urban nature and human health, waters | 1972, 1982, 1992, 1996, 2000, 2008, 2013, 2017                         | Report document                                   | EU directive on public access to environmental information  |
| <b>France</b>         | Air, biodiversity and ecosystems, sea and coastline, soil, water   | 1994, 1998, 2002, 2006, 2010, 2014, 2019                               | Report document, online                           | EU directive on public access to environmental information  |
| <b>Germany</b>        | Air, chemicals, climate change, green economy, health and the environment, nature and biodiversity, raw materials and waste, soil, water   | 1994, 1998, 2002, 2006, 2010, 2015, 2019                               | Report document, online                           | EU directive on public access to environmental information  |

| Jurisdiction               | Environmental Themes   | Reporting  |   |   |
|----------------------------|--|--|---|---|
|                            |  | History  | Format  | Requirement   |
| <b>Ireland</b>             | Air quality and emissions, climate change, environment, health and well-being, inland and marine, nature, land and soil, nature, waste, waters | 1985, 1996, 2000, 2004, 2008, 2012, 2016, 2020   | Report document, online   | EU directive on public access to environmental information  |
| <b>Italy</b>               | air pollution, biodiversity, chemical pollution, climate change, freshwater, land and soil, marine environment, noise, waste and resources     | 1986, 1989, 1996, 2001–2013, 2015–2020   | Report document, online   | EU directive on public access to environmental information  |
| <b>Japan</b>               | Air, biodiversity, climate change, waste, water  | 1969–2021  | Report document   | <i>Basic Environment Law</i><br><i>Basic Act on Establishing a Sound Material-Cycle Society</i><br><i>Basic Act on Biodiversity</i> |
| <b>Netherlands</b>         | Circular economy, climate adaptation and mitigation, food and agriculture, healthy environment, nature, water quality                          | 1988, 1995–2010, 2012, 2014, 2016, 2018, 2020  | Report document   | EU directive on public access to environmental information  |
| <b>New Zealand</b>         | Air, atmosphere and climate, fresh water, land, marine   | 2015, 2019   | Report document   | <i>Environmental Reporting Act 2015</i>   |
| <b>South Africa</b>        | Air quality, biodiversity, climate change, forests, land degradation, oceans and coasts, waste   | 1999, 2002, 2004, 2006, 2008, 2009, 2010, 2011, 2014, 2016, 2019   | Report document and web-based reporting                                 | <i>National Environmental Management Act, 1998</i>  |
| <b>Spain</b>               | Air, climate change, coasts and marine environment, energy, natural and man-made disasters natural environment, soil, waste, water             | 2006–2019  | Report document, mobile app   | EU directive on public access to environmental information  |
| <b>Switzerland</b>         | Air, biodiversity, climate, contaminated sites, forest, landscape, soil, waste and raw materials   | 1991, 1993, 1997, 2002, 2007, 2009, 2011, 2013, 2015, 2018   | Report document   | <i>Environmental Protection Act</i>   |
| <b>United Kingdom (UK)</b> | n/a  | Annual digest of environmental statistics (1979–1997), after which the four UK administrations were made responsible for all aspects of the environment, including reporting | Report document   | None  |
| <b>USA</b>                 | Air, ecological condition, human exposure and health, land, water  | 2008, 2015–present   | Report document (2008), and updated, web-based reporting (2015–present) | None  |

## Appendix 3: Audit Criteria

Prepared by the Office of the Auditor General of Ontario

This audit is being conducted in two stages. Stage 1, which our Office released in November 2020, covered the environmental indicators, targets and monitoring programs of the Ministry of the Environment, Conservation and Parks, the Ministry of Northern Development, Mines, Natural Resources and Forestry, and the Ministry of Agriculture, Food and Rural Affairs.

Stage 2, found in this report, is reviewing the ministries' reporting to the public on the state of the environment and progress toward meeting their objectives, goals and targets.

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### **Ministry of the Environment, Conservation and Parks**

The Ministry regularly reports to the public on the state of Ontario's environment, and progress in meeting environmental targets, goals and objectives. This reporting is objective, timely and understandable to the general public.

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### **Ministry of Northern Development, Mines, Natural Resources and Forestry**

The Ministry regularly reports to the public on the state of Ontario's natural resources, and progress in meeting environmental targets, goals and objectives. This reporting is objective, timely and understandable to the general public.

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### **Ministry of Agriculture, Food and Rural Affairs**

The Ministry regularly reports to the public on the sustainability of Ontario's agriculture, and progress in meeting environmental targets, goals and objectives. This reporting is objective, timely and understandable to the general public.

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## Appendix 4: Key Public Reporting on the State of the Environment in Ontario

Prepared by the Office of the Auditor General of Ontario

..... indicates information that supports findings in the report.

| Report (Lead Author)   | Topic   | Public Reporting Requirements | Frequency of Reporting  | Posted on Environmental Registry? | Timely?   | Comprehensive and Understandable?¹  |
|--|---|-------------------------------|---|-----------------------------------|---|---|
| <b>Air Pollution/Air Quality</b>   |   |                               |   |                                   |   |   |
| <b>Air Quality in Ontario Report</b> (Environment Ministry)  | State of air quality in Ontario and long-term trends for key air pollutants<br><br>Includes pollution data by area (air monitoring site) and source of emissions by sector  | None                          | Annually.<br>First published: 1971<br>Most recent release: 2021 (reporting on 2018)           | No                                | Data delay: 1.5 years   | Yes   |
| <b>Water Pollution/Water Quality</b>   |   |                               |   |                                   |   |   |
| <b>Water Quality in Ontario Report</b> (Environment Ministry)  | State of water quality in Ontario, including the Great Lakes, inland lakes, streams and groundwater<br><br>Summary of multiple monitoring program results and progress toward various environmental priorities        | None                          | Years published: 2009 (reporting on 2008); 2011 (on 2010); 2013 (on 2012); and 2016 (on 2014) | No                                | Data delay: 1.5 years<br>Not published since 2016                     | Yes   |
| <b>Watershed Report Cards: Surface Water and Groundwater Quality</b> (Ontario's 36 conservation authorities) | Report cards grading the quality of the surface water and groundwater (and forest condition) within each watershed, based on each conservation authority's monitoring results of several key water-quality indicators | None                          | Every five years.<br>Published in 2013 and 2018. Next due in 2023                             | No                                | All conservation authorities met timeline set by Conservation Ontario | Understandable, but individual report cards not consolidated, and some difficult to find online |

| Report (Lead Author)  | Topic   | Public Reporting Requirements   | Frequency of Reporting   | Posted on Environmental Registry? | Timely?   | Comprehensive and Understandable?¹ |
|---|---|---|--|-----------------------------------|---|------------------------------------|
| <b>Ontario's Great Lakes Strategy Progress Report</b><br>(Environment Ministry)   | Key measures, actions and accomplishments made by provincial government and its partners during previous three years toward meeting each of the goals in Ontario's Great Lakes Strategy<br><br>Also highlights developments in Great Lakes science, with links to comprehensive resources | <i>Great Lakes Protection Act, 2015</i> requires progress report every three years    | Published in 2016  | No                                | Required 2019 progress report not yet published                       | Yes                                |
| <b>State of the Great Lakes Report</b><br>(Jointly by Canada and US governments, with contribution from Ontario ministries) | Status and trends of the Great Lakes ecosystem, based on assessment of nine indicators of ecosystem health, including assessments for each lake (there is also a separate annual progress report for each lake)   | <i>Great Lakes Water Quality Agreement</i> requires progress report every three years | Every two years.<br>First published: 1982<br>Most recent release: 2020 (of 2019 report)  | No                                | Yes, timelines have been met  | Yes                                |
| <b>Minister's Annual Report (and Five-Year and Ten-Year Reports) on Lake Simcoe</b><br>(Environment Ministry)               | State of the Lake Simcoe watershed, including results of various monitoring programs in the watershed, as well as actions and progress made toward achieving the objectives set out in the Lake Simcoe Protection Plan  | Annual and five-year reports required by <i>Lake Simcoe Protection Act, 2008</i>      | Annual and five-year summary reports.<br>First annual report in 2010; last release in 2019 (for 2017).<br>Annual reports not released in 2013, 2014 or 2018 (but bundled with five-year reports). Five-year reports released in 2015 and 2020. | Yes, as is required               | Inconsistent in publishing.<br>Annual reports often 1.5 years behind. | Yes                                |
| <b>Chief Drinking Water Inspector's Annual Report</b><br>(Chief Drinking Water Inspector, Environment Ministry)             | Performance of Ontario drinking water systems over the past year and the Ministry's inspection activity, including drinking water test results and adverse water quality incidents  | Required under the <i>Safe Drinking Water Act, 2002</i>                               | Annually.<br>First published: 2005<br>Most recent: December 2020 (for 2019/20)   | No                                | Yes, on time and timely   | Yes                                |

| Report (Lead Author)   | Topic  | Public Reporting Requirements   | Frequency of Reporting  | Posted on Environmental Registry? | Timely?                 | Comprehensive and Understandable?¹  |
|--|--|---|---|-----------------------------------|-------------------------|---|
| Minister's Annual Report on Drinking Water (Environment Ministry)  | Overview of provincial government's programs, initiatives and actions taken in the past year to reduce contaminants from entering Ontario's waterways and to protect drinking water                  | Required annually under the <i>Safe Drinking Water Act, 2002</i> . The <i>Water Opportunities Act, 2010</i> also requires progress report every three years, though this progress report can be included in the Minister's Annual Report on Drinking Water under the <i>Safe Drinking Water Act, 2002</i> . | Annually.<br>First published: 2007<br>Most recent release: 2020                           | No                                | Yes, on time and timely | Comprehensive summary of actions and some state of water quality information. Not as comprehensive as the former Water Quality in Ontario Reports. Refers readers to Source Protection Committees' annual progress reports, but does not comprehensively summarize their contents |
| Source Protection Plan Progress Reports (Conservation authorities) | Annual report by each lead Source Protection Authority on progress implementing their source protection plan   | Required by the <i>Clean Water Act, 2006</i>  | Annually  | No                                | Yes, on time and timely | Understandable, but individual reports not consolidated, and some hard to find online   |
| <b>General Pollution (Toxic Substances and Waste)</b>              |  |   |   |                                   |                         |   |
| Minister's Report on Toxics Reduction (Environment Ministry)       | Amounts of toxic substances used, created, contained in products, and released into the environment (air, land and water) by industrial facilities in Ontario, and trends over time of these amounts | Required by the <i>Toxics Reduction Act, 2009</i> (which is to be repealed December 31, 2021) requires annual progress reports on implementation of the Act   | Annually.<br>Published for 2012 to 2017. Not published as required for 2018, 2019 or 2020 | No                                | Timely when published   | Yes   |

| Report (Lead Author)  | Topic   | Public Reporting Requirements  | Frequency of Reporting   | Posted on Environmental Registry? | Timely?                                       | Comprehensive and Understandable?¹  |
|---|---|--|--|-----------------------------------|---|---|
| Resource Productivity and Recovery Authority Annual Report (Resource Productivity and Recovery Authority) | Waste diversion results and rates of the programs operating under the <i>Waste Diversion Transition Act, 2016</i> and the <i>Resource Recovery and Circular Economy Act, 2016</i> (i.e., Blue Box program, municipal hazardous or special waste, tires and waste electronics) | Annual reporting requirements in the <i>Waste Diversion Transition Act, 2016</i> and the <i>Resource Recovery and Circular Economy Act, 2016</i> | Annually. Published between 2017 and 2021 (for 2020)   | Yes                               | Yes   | Yes   |
| <b>Climate Change</b>   |   |  |  |                                   |   |   |
| Progress Reports on the Made-In-Ontario Environment Plan (Environment Ministry)                           | Short, high-level summary of some steps taken and planned to implement the <i>Made-In-Ontario Environment Plan</i> , including its chapter on climate change  | <i>Cap and Trade Cancellation Act, 2018</i> compels the Minister to, on a regular basis, prepare reports in respect to the climate change plan   | Annually. Published 2019 and 2020  | No                                | Yes   | Understandable, but no information on the current status of greenhouse gas emissions, progress achieving target or contribution of actions to emissions reductions  |
| <b>Nature and Wildlife</b>  |   |  |  |                                   |   |   |
| State of Ontario's Protected Areas Report (Natural Resources Ministry/Environment Ministry)               | State of Ontario's protected areas, including ecological, geological and cultural heritage features within Ontario's provincial parks and conservation reserves   | Required by <i>Provincial Parks and Conservation Reserves Act, 2006</i>  | Every 10 years. First report published: 2011 (on the period 2001-2009) Most recent release: 2021 (on the period 2010-2019) | Yes                               | On time; reasonably timely (a one-year delay) | Understandable. Reports on protected areas number, size, representation targets, biodiversity, socio-economic condition and benefits, education and outreach, and policy, planning and research – but not yet ecological condition. |



| Report (Lead Author)   | Topic  | Public Reporting Requirements  | Frequency of Reporting   | Posted on Environmental Registry?                 | Timely?   | Comprehensive and Understandable?¹ |
|--|--|--|--|---|---|------------------------------------|
| <b>State of Ontario's Biodiversity Report</b><br>(Ontario Biodiversity Council)    | State of Ontario's biodiversity and progress in achieving the 15 biodiversity targets in <i>Ontario's Biodiversity Strategy, 2011</i>                                      | Not legally required, but commitment in Ontario Biodiversity Strategy to monitor and publicly report on progress every five years  | Interim report published in 2008. Reports published in 2010 and 2015 and indicators updated online throughout 2021 | 2008 interim report but not 2010 and 2015 reports | 2020 report to be released in 2021, indicators updated online throughout 2021     | Yes                                |
| <b>State of Ontario's Natural Resources – Forests</b> (Natural Resources Ministry) | State of Ontario's forests, based on the assessment of 63 indicators, which reflect both the environmental health of the forests and state of the forest industry          | Required at least once every five years under the <i>Crown Forest Sustainability Act, 1994</i> (and by requirements in declaration order <sup>2</sup> prior to July 1, 2020) | Every five years. First published: 2001 Most recent: 2021  | Yes   | Yes   | Understandable                     |
| <b>Forest Resources of Ontario</b> (Natural Resources Ministry)                    | Overview and statistics on Ontario's forests by area and type, including by ownership type, by forest type, and by distribution of tree species.                           | Required every five years under the Forest Resource Assessment Policy  | Every five years. First published: 1920s Most recent: 2016 Next due: 2021  | No  | Yes, published every five years, on time  | Yes                                |
| <b>Forest Health Conditions Report</b> (Natural Resources Ministry)                | Description of forest health and monitoring results of disturbances to Ontario forested areas from insects, disease, and weather-related disturbances like wind or drought | None   | Annual. Most recent report: 2020 (reporting on 2019)   | No  | Yes   | Yes                                |
| <b>Ontario Apiculture Winter Loss Survey Report</b> (Agriculture Ministry)         | Results of voluntary survey of beekeepers on estimated honey bee colony winter mortality   | None   | 2011, 2014–2018  | No  | Yes   | Yes                                |
| <b>Report on Forest Management</b> (Natural Resources Ministry)                    | Report on forest management activities within Crown (i.e., publicly owned) land in managed forest  | Requirements in declaration order <sup>2</sup> prior to July 1, 2020   | Annually from 1994–2015, then every two years<br>Last report published: 2020 (reporting on 2016/17 and 2017/18)    | 2008/09, 2012/13 and 2013/14                      | Reporting on 2016/17 and 2017/18 was expected in 2019 but not released until 2020 | Yes                                |

| Report (Lead Author)  | Topic   | Public Reporting Requirements   | Frequency of Reporting   | Posted on Environmental Registry? | Timely?  | Comprehensive and Understandable?¹  |
|---|---|---|--|-----------------------------------|--|---|
| Provincial Wildlife Population Monitoring Program Annual Report (Natural Resources Ministry)                                    | Annual accomplishments of Provincial Wildlife Population Monitoring Program and recommendations for future work   | Under the <i>Provincial Wildlife Population Monitoring Program Plan</i> (released in 2004, revised in 2010 and 2015), the Ministry committed to producing annual reports from 2015 to 2019 and a five-year summary report | Annual and five-year summary reports (2015-2019)<br>Most recently published: 2018 (for 2015, 2016 and 2017)<br>A five-report was not completed and an annual report from the 2018 field season was not prepared. No data was collected in 2019 | No                                | Annual Reports for 2018 and 2019, and five-year summary report (2015-2020) not yet published | Yes   |
| Progress Reports on the Protection and Recovery of Ontario's Species at Risk (Natural Resources Ministry/ Environment Ministry) | A separate report for each species at risk on the progress made to protect and recover that species, summarizing actions taken by the provincial government and its partners toward meeting the recovery goal for the species | Under the <i>Endangered Species Act, 2007</i> , required within five years after release of a species' government response statement (or within time specified in government response statement)                          | Progress reports published for 85 species between 2014 and 2020  | Yes                               | Yes, all 85 reports on progress completed on time as required                                | Some progress reports fail to clearly specify outstanding work or assess the effectiveness of actions taken, focusing on outputs rather than outcomes |
| Provincial Apiarist Report (Agriculture Ministry)   | Provides statistics and information on the beekeeping industry, diseases and pests, honey bee mortality, inspections and monitoring   | None  | Annually since 2003, though no report in 2009 or 2020, and only 2016 and 2017 reports available on Ministry's website  | No                                | Yes  | Yes   |

1. We categorized a report as "understandable" when it was clear, in plain language and had explanations for technical terms.

2. The Minister of the Environment, Conservation and Parks can exempt a project from the requirement to prepare an environmental assessment, or require compliance with only certain requirements of the *Environmental Assessment Act*. This is known as a declaration order.

## Appendix 5: Draft State of Ontario's Natural Resources Report Indicators and Their Potential to Support Legal and Policy Reporting Requirements

Source: Ministry of Northern Development, Mines, Natural Resources and Forestry<sup>1</sup>

| Indicator <sup>2</sup>                        | Source of Reporting Requirement              |   |   |   |  |
|---|--|---|---|---|--|
|   | <i>Crown Forest Sustainability Act, 1994</i> | <i>Ontario Government Plan to Conserve Biodiversity, 2012-2020 (2012)</i> | <i>Ontario's Provincial Fish Strategy: Fish for the Future (2015)</i> | <i>Provincial Parks and Conservation Reserves Act, 2006<sup>3</sup></i> | <i>Made-in-Ontario Environment Plan (2018)</i> |
| Aggregates production                         |  |   |   |   |  |
| Aquaculture economics                         |  |   | X   |   |  |
| Aquatic ecosystems                            |  | X   | X   | X   |  |
| Aquatic invasive species                      |  | X   | X   | X   | X  |
| Aquatic stress                                |  | X   | X   | X   |  |
| Commercial fishing value                      |  |   | X   |   |  |
| Crown land infrastructure                     | X  |   |   |   |  |
| Fish community diversity                      |  | X   | X   | X   |  |
| Fish populations                              |  | X   | X   | X   |  |
| Fish stocking                                 |  |   | X   | X   |  |
| Fisheries harvest                             |  | X   | X   | X   |  |
| Forest certification                          | X  | X   |   |   |  |
| Forest composition                            | X  | X   |   | X   |  |
| Forest growth                                 | X  | X   |   | X   |  |
| Forest harvest                                | X  |   |   |   |  |
| Forest products                               | X  |   |   |   |  |
| Forest regeneration                           | X  |   |   |   |  |
| Forest sector exports                         | X  |   |   |   |  |
| Forest sector GDP                             | X  |   |   |   |  |
| Growing season                                | X  | X   |   |   | X  |
| Ice cover                                     |  | X   | X   |   |  |
| Independent forest audits                     | X  |   |   |   |  |
| Indigenous involvement in management planning | X  | X   |   |   |  |
| Invasive insects and diseases                 | X  | X   |   | X   | X  |
| Natural forest disturbance                    | X  | X   |   | X   |  |
| Natural resource employment                   | X  |   |   |   |  |
| Oil and gas industry                          |  |   |   |   |  |
| Protected area system                         | X  | X   |   | X   | X  |

| Indicator <sup>2</sup>                           | Source of Reporting Requirement              |   |   |   |  |
|--|--|---|---|---|--|
|  | <i>Crown Forest Sustainability Act, 1994</i> | <i>Ontario Government Plan to Conserve Biodiversity, 2012-2020 (2012)</i> | <i>Ontario's Provincial Fish Strategy: Fish for the Future (2015)</i> | <i>Provincial Parks and Conservation Reserves Act, 2006<sup>3</sup></i> | <i>Made-in-Ontario Environment Plan (2018)</i> |
| Public awareness of natural resource management  | X  | X   | X   |   | X  |
| Public engagement in natural resource management | X  | X   | X   |   |  |
| Recreational fishing and hunting expenditures    |  |   | X   | X   |  |
| Recreational opportunities                       | X  |   | X   | X   | X  |
| Resources management and land use planning       | X  | X   | X   | X   |  |
| Stream flows and connectivity                    |  | X   | X   | X   |  |
| Tax incentive programs                           | X  | X   |   |   | X  |
| Terrestrial connectivity                         | X  | X   |   | X   | X  |
| Terrestrial invasive plants                      | X  | X   |   | X   | X  |
| Water quality                                    |  | X   | X   |   |  |
| Wetland area                                     |  | X   | X   | X   | X  |
| <b>Total</b>                                     | <b>23</b>                                    | <b>24</b>   | <b>18</b>   | <b>19</b>   | <b>10</b>                                      |

1. This table was prepared by Ministry staff in 2019 for internal purposes only.

2. Since preparing this table, the Ministry identified 12 additional indicators that it is developing and updating: deforestation/afforestation; ecological footprint; forest carbon; forest compliance; forest stumpage revenue; governance in forest management; habitat for wildlife; mainstreaming biodiversity and climate change (i.e., integrating these concepts into Ministry policies); resource revenue sharing; species of conservation concern; stewardship effort; and wildlife population.

3. In 2018, responsibility for reporting on the state of Ontario's protected areas under the *Provincial Parks and Conservation Reserves Act, 2006* was transferred from the Ministry of Northern Development, Mines, Natural Resources and Forestry to the Ministry of the Environment, Conservation and Parks.

## Appendix 6: Reporting on Progress Achieving Published Environmental Goals, Objectives and Targets Administered by the Three Ministries

Prepared by the Office of the Auditor General of Ontario

Highlighted text indicates information that supports findings in the report.

| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)  | Most Recent Status of Progress Toward Target(s)                                | Public Reporting on Progress <sup>1</sup>                                    |
|--|--|---|--|--|
| <b>Ministry of Agriculture, Food and Rural Affairs (Agriculture Ministry)</b>            |  |   |  |  |
| <i>Bees Act</i>  | Protect the health of managed honey bees, particularly from pests and diseases   | No targets set (but see targets set under <i>Ontario's Pollinator Health Action Plan</i> )                          | n/a  | Provincial Apiarist Reports<br>Ontario Apiculture Winter Loss Survey Reports |
| <i>New Horizons: Ontario's Agricultural Soil Health and Conservation Strategy (2018)</i> | Sustain and enhance soil health, make reliable soil data and tools available, track the health and status of Ontario's agricultural soils over time and optimize soil knowledge and skills                     | No targets set  | n/a  | None   |
| <i>Nutrient Management Act, 2002</i>   | Provide for the management of nutrient-containing materials in ways that will enhance protection of the natural environment and provide a sustainable future for agricultural operations and rural development | No targets set  | n/a  | None   |
| <i>Ontario's Pollinator Health Action Plan (2016) (No longer in effect)<sup>2</sup></i>  | Reduce level of exposure of pollinators to pesticides  | 80% reduction in the number of acres planted with insecticide (neonicotinoid)-treated corn and soybean seed by 2017 | n/a – no longer tracked by Agriculture Ministry and Environment Ministry       | None   |
|  | Reduce impacts of diseases and pests on pollinators  | Reduce overwinter mortality rates for managed honeybees to 15% by 2020  | 19% for commercial sector (winter 2019/2020)                                   | Provincial Apiarist Reports<br>Ontario Apiculture Winter Loss Survey Reports |
|  | Improve habitats and nutrition for pollinators   | Restore, enhance and protect one million acres of pollinator habitat  | n/a – no longer tracked by Agriculture Ministry and Natural Resources Ministry | None   |

| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)   | Most Recent Status of Progress Toward Target(s)             | Public Reporting on Progress <sup>1</sup>  |
|--|--|--|---|--|
| <b>Ministry of the Environment, Conservation and Parks (Environment Ministry)</b>  |  |  |   |  |
| <i>Cap and Trade Cancellation Act, 2018</i> (Target set in <i>Preserving and Protecting Our Environment for Future Generations: A Made-in-Ontario Environment Plan</i> ) | Establish targets to reduce greenhouse gas emissions and prepare a climate change plan | Reduce emissions 30% below 2005 levels by 2030   | 21% below 2005 levels (based on 2019 data released in 2021) | Under the <i>Cap and Trade Cancellation Act, 2018</i> , the Minister shall regularly report publicly in respect of a climate change plan. The Minister released progress reports on the climate change plan contained in <i>A Made-in-Ontario Environment Plan</i> in 2019 and 2020. Neither mentioned Ontario's emissions levels nor the outcomes and expected contribution of actions on reducing emissions. |
| <i>Clean Water Act, 2006</i>   | Protect sources of drinking water  | No targets set. Under this Act, the Minister may establish targets relating to the use of the Great Lakes as a source of drinking water  | n/a   | Minister's <i>Annual Report on Drinking Water</i> , which refers readers to Source Protection Committees' annual progress reports  |
| <i>Endangered Species Act, 2007</i>  | Protect and recover species at risk and their habitats                                 | No high-level targets set, although some species-specific targets set through recovery goals in the development of government response statements  | n/a   | Reviews of Progress Towards the Protection and Recovery of Ontario's Species at Risk   |
| <i>Environmental Protection Act</i>  | Protect and conserve Ontario's natural environment                                     | No targets set under the Act. However, Ministry has established internal target to decrease, by March 31, 2021, ambient pollutant levels to be equal to or lower (< 100%) than the Canadian Ambient Air Quality Standards for ozone, fine particulate matter, sulphur dioxide and nitrogen dioxide | 100% (in 2019/2020)   | <i>Air Quality in Ontario</i> Reports  |

| Legislation, Strategy or Policy   | Environmental Goals or Objectives  | Relevant Target(s)  | Most Recent Status of Progress Toward Target(s)  | Public Reporting on Progress <sup>1</sup>   |
|---|--|---|--|---|
| <i>Ontario's Food and Organic Waste Policy Statement (2018)</i>   | Prevent and reduce food waste, effectively and efficiently collect and process food and organic waste, and reintegrate recovered resources back into the economy   | By 2023 or 2025, prescribed municipalities, businesses and institutions must divert 50% or 70% of food waste (depending on the subsector) from landfills                                      | n/a  | Progress reporting to be included as part of five-year progress reports on the <i>Strategy for a Waste-Free Ontario: Building a Circular Economy (2017)</i>             |
| <i>Great Lakes Protection Act, 2015</i><br><i>Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (2014)</i><br><i>Canada–Ontario Lake Erie Action Plan: Partnering on Achieving Phosphorus Loading Reductions to Lake Erie from Canadian Sources (2018)</i> | Protect human health and well-being through protecting and restoring water quality, hydrologic functions, natural habitats, biodiversity and the ecological health of the Great Lakes–St. Lawrence River Basin | Reduce phosphorus loadings to the Ontario portion of Lake Erie western and central basins by 40% by 2025 (from 2008 levels), as well as an interim target of reducing loadings by 20% by 2020 | n/a  | Ontario's Great Lakes Strategy Progress Reports<br>State of the Great Lakes Reports<br>Reporting on Canada-Ontario Lake Erie Action Plan through the Ontario.ca website |
| <i>Lake Simcoe Protection Act, 2008</i><br><i>Lake Simcoe Protection Plan (2009)</i>  | Protect and restore the ecological health of the Lake Simcoe watershed   | Minimum 7 milligrams/litre of dissolved oxygen in Lake Simcoe at end of summer in each year<br><br>Reduce loading of pathogens (disease-causing organisms) to eliminate beach closures        | 5.9 mg/L (in 2020/2021)<br><br>As of 2017, this target had not been met. In 2017, the beaches in Lake Simcoe's three regions averaged between one to five swim advisory postings | Minister's Annual Reports (and Five-Year and Ten-Year Reports) on Lake Simcoe   |

| Legislation, Strategy or Policy   | Environmental Goals or Objectives   | Relevant Target(s)   | Most Recent Status of Progress Toward Target(s)  | Public Reporting on Progress <sup>1</sup>   |
|---|---|--|--|---|
|   |   | Reduce contaminants to levels that achieve Provincial Water Quality Objectives or better   | Chloride levels have steadily increased, but are still well below (a little less than 50%) Canadian Council of Ministers of the Environment Guidelines for the Protection of Aquatic Life for chronic exposure to chloride. Spring total phosphorus concentrations have decreased, averaging 14 micrograms (µg/L) in 1980 and 7 µg/L in 2018. Both concentrations meet the province's Interim Provincial Water Quality Objective of 20 µg/L. |   |
| <i>Ontario Water Resources Act</i>  | Conserve, protect and manage Ontario's waters and their efficient and sustainable use   | No targets set   | n/a  | Water Quality in Ontario Reports (Ministry stopped issuing this report in 2016)<br>Minister's Annual Report on Drinking Water<br>Conservation authorities' individual Watershed Report Cards: Surface Water and Groundwater Quality |
| <i>Provincial Parks and Conservation Reserves Act, 2006</i><br><i>Ontario Provincial Parks: Planning and Management Policies (1992)</i> | Permanently protect a system of provincial parks and conservation reserves that includes ecosystems representative of all of Ontario's natural regions, protects provincially significant elements of Ontario's natural and cultural heritage, maintains biodiversity, and provides opportunities for compatible, ecologically sustainable recreation | Provincial park class targets—specific targets for the number, size and distribution of wilderness, natural-environment and waterway-class parks within ecoregions and ecodistricts                | Targets not met. For details on the recent status of each target, see <b>Section 4.4.1</b> of our <i>2020 Annual Report</i> audit on Conserving the Natural Environment with Protected Areas   | State of Ontario's Protected Areas Reports  |
|   |   | Representation targets—targets for provincial parks, conservation reserves and areas of natural and scientific interest have been defined by frameworks for geological and biological conservation | Targets not met. For details on the recent status of each target, see <b>Section 4.4.1</b> of our <i>2020 Annual Report</i> audit on Conserving the Natural Environment with Protected Areas   |   |



| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)   | Most Recent Status of Progress Toward Target(s)                   | Public Reporting on Progress <sup>1</sup>   |
|--|--|--|---|---|
| <i>Resource Recovery and Circular Economy Act, 2016</i>                        | Minimize the use of raw materials, maximize the useful life of materials and other resources through resource recovery, and minimize waste generation at the end of life of products and packaging | No provincial targets set under Act. However, regulations under the Act set out targets for each waste diversion program, and the Ministry has set internal indicators to decrease the amount of waste disposed per capita each year | 585 kilograms of waste sent to disposal per person (in 2018/2019) | Expected to be included as part of five-year progress reports on the <i>Strategy for a Waste-Free Ontario: Building a Circular Economy</i> (2017)<br>Resource Productivity and Recovery Authority publishes annual reports on progress toward program targets |
| <i>Safe Drinking Water Act, 2002</i>   | Protect human health and prevent drinking water health hazards through the control and regulation of drinking water systems and testing  | 99.75% of drinking water test results from municipal residential systems meet Ontario Drinking Water Quality Standards   | 99.85% (in 2019/2020)   | Minister's Annual Report on Drinking Water  |
| <i>Strategy for a Waste-Free Ontario: Building the Circular Economy</i> (2017) | Achieve a zero waste (waste-free) Ontario and zero greenhouse gas emissions from the waste sector  | <ul style="list-style-type: none"> <li>• 30% waste diversion by 2020</li> <li>• 50% waste diversion by 2030</li> <li>• 80% waste diversion by 2050</li> </ul>  | 31% (in 2019)   | First progress report to be released in 2022  |
| <i>Toxics Reduction Act, 2009</i> (to be repealed December 31, 2021)           | Prevent pollution and protect human health and the environment by reducing the use and creation of toxic substances, and inform Ontarians about toxic substances                                   | No targets set, although regulated facilities could have set targets for reducing the use and creation of toxic substances   | n/a   | Minister's Reports on Toxics Reduction (last report published was the 2017 report)  |
| <i>Water Opportunities Act, 2010</i>   | Conserve and sustain water resources for present and future generations  | No targets set. Under this Act, the Minister may establish targets with respect to water conservation  | n/a   | Minister's Annual Report on Drinking Water  |

| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)   | Most Recent Status of Progress Toward Target(s)  | Public Reporting on Progress <sup>1</sup>  |
|--|--|--|--|--|
| <b>Ministry of Northern Development, Mines, Natural Resources and Forestry (Natural Resources Ministry)</b>  |  |  |  |  |
| <i>A Wetland Conservation Strategy for Ontario: 2017-2030</i> (No longer in effect) <sup>3</sup>             | Develop and advance public awareness of, appreciation for and connection to Ontario's wetlands   | Using 2010 as a baseline, by 2025, the net loss of wetland area and function is to be halted where wetland loss has been the greatest  | n/a  | Progress reports are to be published every five years, beginning in 2020. However, the Ministry has no framework in place for progress reporting and no data is being collected<br><br>The Ontario Biodiversity Council also reports on the extent of wetland cover and wetland loss |
|  | Increase knowledge about Ontario's wetlands, including their status, distribution, functions and vulnerability   | Using 2010 as a baseline, by 2030, a net gain in wetland area and function is to be achieved where wetland loss has been the greatest  | n/a  |  |
|  | Establish and strengthen partnerships to focus and maximize conservation efforts for Ontario's wetlands  |  |  |  |
|  | Develop conservation approaches and improve policy tools to conserve the area and function of Ontario's wetlands   |  |  |  |
| <i>Aggregate Resources Act, 1990</i>   | Minimize adverse impacts of aggregate operations on the environment, and require the rehabilitation of land from which aggregate has been excavated                            | No targets set   | n/a  | The Ontario Aggregate Resources Corporation's Annual Reports<br><br>State of the Aggregate Resource in Ontario Study (2010)<br><br>Licence and permit holders' annual Compliance Assessment Reports available to the public on request   |
| <i>Biodiversity: It's In Our Nature (Ontario Government Plan to Conserve Biodiversity, 2012-2020)</i> (2012) | Goals found in <i>Ontario's Biodiversity Strategy, 2011</i> : mainstream biodiversity, protect and restore Ontario's biodiversity, use Ontario's biological assets sustainably | 15 biodiversity targets are set out in <i>Ontario's Biodiversity Strategy, 2011</i> , including: <ul style="list-style-type: none"> <li>• By 2020, at least 17% of land and water systems are conserved through well-connected networks of protected areas and other effective area-based conservation measures.</li> <li>• By 2015, the release of pollutants harmful to biodiversity is reduced.</li> <li>• By 2020, the growth of Ontario's per-capita resource consumption and waste generation is halted and reversed.</li> </ul> | Status of targets reported in the Ontario Biodiversity Council's State of Ontario's Biodiversity reporting (to be updated in 2021) | No reporting on progress implementing actions and activities in the government's plan to conserve biodiversity. Status of targets set out in <i>Ontario's Biodiversity Strategy, 2011</i> presented in Ontario Biodiversity Council's State of Ontario's Biodiversity reporting      |

| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)  | Most Recent Status of Progress Toward Target(s)  | Public Reporting on Progress <sup>1</sup>  |
|--|--|---|--|--|
| <i>Cervid Ecological Framework (2009)</i>  | Ensure ecologically sustainable populations of cervids (members of the deer family) and the ecosystems on which they rely  | Targets identified through species-specific policies. Cervid Ecological Framework provides framework for integrating management across Ontario's cervid species | n/a  | None   |
| <i>Crown Forest Sustainability Act, 1994</i>   | Provide for the sustainability of Crown forests, and manage Crown forests to meet social, economic and environmental needs of present and future generations                                   | Targets identified in individual forest management plans  | Status of targets found in Forest Management Unit annual reports   | Management Unit Annual Reports<br>Report on Forest Management<br>State of Ontario's Natural Resources Report – Forests |
| <i>Elk Management Plan (2010)</i>  | Support sustainable elk populations and the ecosystems on which they rely  | Population objectives for each herd directed by <i>Elk Population Objective Setting Guidelines (2011)</i>   | n/a  | None   |
| <i>Far North Act, 2010</i>   | Protect ecological systems and areas of cultural value in the Far North; maintain biological diversity, ecological processes and ecological functions in the Far North                         | Include at least 225,000 km <sup>2</sup> of the Far North in an interconnected network of protected areas designated in community-based land-use plans          | 47,068 km <sup>2</sup> in 2020, representing total area protected in the Far North, including Dedicated Protected Areas (approximately 12,260 km <sup>2</sup> ) and provincial parks and conservation reserves (approximately 34,808 km <sup>2</sup> ) | None   |
| <i>Framework for Enhanced Black Bear Management in Ontario (2009)</i>                      | Ensure sustainable black bear populations across the landscape and the ecosystems on which they rely   | No targets set  | n/a  | None   |
| <i>Invasive Species Act, 2015</i><br><i>Ontario Invasive Species Strategic Plan (2012)</i> | Prevent, detect and respond to the spread of invasive species  | No targets set  | n/a  | None   |
| <i>Lakes and Rivers Improvement Act</i>  | Provide for the management, protection, preservation and use of Ontario's lakes and rivers, specifically in relation to the construction, operation, alteration, improvement or repair of dams | No targets set  | n/a  | None   |

| Legislation, Strategy or Policy  | Environmental Goals or Objectives  | Relevant Target(s)  | Most Recent Status of Progress Toward Target(s) | Public Reporting on Progress <sup>1</sup>              |
|--|--|---|---|--|
| <i>Moose Management Policy</i> (2009)<br><i>Moose Population Objectives Setting Guidelines</i> (2009)                                      | Ensure sustainable moose populations and the ecosystems on which they rely   | 2030 population objectives for wildlife management units  | Varied  | Online at Ontario.ca                                   |
| <i>Naturally Resilient: MNR's Natural Resource Climate Adaptation Strategy</i> (2017–2021) (2017)  | Build resilience and biodiversity  | No targets set  | n/a   | None   |
| <i>Niagara Escarpment Planning and Development Act</i><br><i>Niagara Escarpment Plan</i> (released in 1985, updated most recently in 2017) | Provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and ensure only such development occurs as is compatible with that natural environment | No targets set  | n/a   | None   |
| <i>Ontario's Provincial Fish Strategy: Fish for the Future</i> (2015)  | Healthy ecosystems that support self-sustaining native fish communities  | No targets set  | n/a   | None   |
| <i>Small Game and Furbearer Management Framework</i> (2017)  | Ensure sustainable populations of small game and furbearers in an ecosystem context  | No targets set. Framework provides overarching program direction  | n/a   | None   |
| <i>Strategic Policy for Ontario's Commercial Fisheries</i> (2011)  | Ensure the long-term sustainability of fish populations, safeguarding function and biodiversity  | No targets set  | n/a   | Annual Reports of Great Lake Management Units          |
| <i>Strategy for Wolf Conservation in Ontario</i> (2005)  | Ensure ecologically sustainable wolf populations and the ecosystems on which they rely   | No targets set. Strategy provides overarching program direction   | n/a   | State of Resources Reporting: Wolves in Ontario (2007) |
| <i>White-Tailed Deer Management Policy for Ontario</i> (2017)  | Manage for sustainable deer populations and the ecosystems on which they rely  | Local objectives set through direction provided in <i>White-tailed Deer Population Objective Setting and Harvest Management Guidelines</i> (2019) | n/a   | None   |

| Legislation, Strategy or Policy           | Environmental Goals or Objectives  | Relevant Target(s)  | Most Recent Status of Progress Toward Target(s) | Public Reporting on Progress <sup>1</sup> |
|---|--|---|---|---|
| <i>Wild Turkey Management Plan</i> (2007) | Ensure sustainable management of turkeys as important components of the biodiversity of southern Ontario | No targets set. Plan provides overarching program direction | n/a   | None                                      |

1. See **Appendix 4** for details on the public reporting identified here.
2. During the course of our audit, we found that while some actions and support work from the plan may continue, the overarching framework of *Ontario's Pollinator Health Action Plan*, and the targets within it, were cancelled sometime after July 2018.
3. During the course of our audit, the Natural Resources Ministry informed us that *A Wetland Conservation Strategy for Ontario: 2017-2030* is an archived product of a previous government, and the direction and targets within it are no longer in effect.



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