MANAGING NEW CHALLENGES

ANNUAL REPORT 2013/2014

Environmental Commissioner of Ontario

"We cannot solve problems with the same kind of thinking we used when we created them"

–Albert Einstein

Environmental Commissioner of Ontario

Commissaire à l'environnement de l'Ontario

Gord Miller, B.Sc., M.Sc.
Commissioner

Gord Miller, B.Sc., M.Sc.
Commissaire

October 2014

The Honourable Dave Levac
Speaker of the Legislative Assembly of Ontario

Room 180, Legislative Building
Legislative Assembly
Province of Ontario
Queen's Park

Dear Speaker:

In accordance with Section 58 of the *Environmental Bill of Rights, 1993*, I am pleased to present the 2013/2014 Annual Report of the Environmental Commissioner of Ontario for your submission to the Legislative Assembly of Ontario.

Sincerely,

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Environmental Commissioner of Ontario

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MANAGING NEW CHALLENGES

We used to be better. I was around in this business in the 1970s, 1980s and early 1990s, which, looking back, seems like it may have been the golden age of environmental protection. That age was created by a society that valued our natural heritage and showed true concern about the world they were leaving to their children and grandchildren. In 1971 Ontario was the second jurisdiction in the world to establish an Environmental Protection Act*, which pulled together disparate laws and programs attempting to manage problems with air pollution, water pollution and waste and gave them an ecosystem focus. And then Ontario created a new institution, the Ontario Ministry of the Environment (MOE), to administer and enforce that legislation and tackle the new policy challenges revealed by our increasing understanding of our ecosystems and society's interaction with them.*

That led to further developments. We passed the Endangered Species Act*, which had problems, but at least provided a clear acknowledgement that species at risk were a concern and a priority for Ontarians. As it became clear that it was not enough to just react to environmental problems after they emerged, policy makers at MOE turned their attention to how we could head them off by thinking matters through and engaging in a broad public consultation before launching into major new initiatives. As a result, the* Environmental Assessment Act *was created.*

The environmental assessment process changed the way we looked at things. As an example, the Timber Management Class Environmental Assessment was a long and cathartic process in the early 1990s, but it ultimately led the Ministry of Natural Resources (MNR) to draft the Crown Forest Sustainability Act (CFSA)*. The* CFSA *was a piece of legislation that revolutionized the management of Crown forests and fundamentally changed the science of forestry.*

This concept of forethought and engagement of the public in government decision making culminated in 1994 with the implementation of the Environmental Bill of Rights*. This legislation created the office of the Environmental Commissioner, and sought to make government policymaking transparent and accountable. After 20 years it is still seen as an innovative and valuable part of the policy process.*

The synergy of these initiatives combined with the commitment of the public service truly changed and improved the environment of Ontario and the quality of life for its people. Within a few decades between the 1970s and early 1990s, we brought Lake Erie back from extreme eutrophication; stemmed the gross pollution of our rivers and lakes by the pulp and paper industry; greatly improved urban air quality; contained acid rain before the losses became

catastrophic; and vastly improved the way we managed waste materials. Our techniques were monitored and mimicked around the world.

But looking at the articles presented in this report I have to say, we used to be better. These days, MOE's investigations of straightforward pollution abatement seem to drag on for years. Our continued retreat from the environmental assessment process has left us blind to foreseeable looming consequences, not the least of which was the billion dollar gas plant fiasco. We cannot bring ourselves to implement one of the key lessons learned from the Walkerton tragedy, about financing drinking water. And our stewardship of natural resources is stuck in the ruts of policy pathways that we know are flawed or doomed to failure.

It does not have to be so. We still know how to do better! Although capacity has to be restored in the key ministries, the resources needed are modest by government standards; if the combined budgets of the Ministry of the Environment and Climate Change and Ministry of Natural Resources and Forestry were boosted to 1% of government spending, it would probably do the job. We could also tap the immense potential of the talent in our society's highly educated youth. They are every bit as capable as the young scientists and professionals that built the MOE and MNR in the '70s and '80s. In fact, they are probably much more so (with apologies to my contemporaries of that day). We could accelerate some of this young blood into leadership roles in the ministries, harnessing both their environmental passion and their 21st century savvy.

But something more than money and staffing needs harnessing. In those early days we had the push of strong tailwinds with respect to pursuing a better environment for all. I'd like to brag that we were a courageous lot championing the fight against those that would foul nature but that would be a great exaggeration. We had far more audacity than courage and we got away with being audacious because the public was engaged and outspoken about their concern for the environment. Today I see a new generation with as much or even greater concern for the environment. They may not engage with pollsters, however, and they are often skeptical about engaging with government. They are keen observers.

Today we are faced with managing new challenges; possibly the greatest environmental challenges humankind has ever had to face. There is room for hope and perhaps even optimism that we can turn things around and tackle these challenges, but to do so we have to get behind a new generation and offer them effective tools of governance. We have to overcome our discouragement, break our complacency and put the wind in their sails.

PART 1

THE *ENVIRONMENTAL BILL OF RIGHTS, 1993*

The *Environmental Bill of Rights*, *1993* (*EBR*) is a significant environmental law, unlike any other in Canada or the rest of the world. The purposes of the *EBR* are to:

- protect, conserve and, where reasonable, restore the integrity of the environment;
- provide sustainability of the environment; and
- protect the right of Ontarians to a healthful environment.

To achieve these goals, the *EBR* requires the Ontario government to consider the environment in its decision making. While the government has the primary responsibility for protecting the natural environment, the *EBR* recognizes that the people of Ontario have the right to participate in environmental decision making, as well as the right to hold the government accountable for those decisions. The *EBR* enables Ontarians to exercise their rights to:

- comment on environmentally significant ministry proposals;
- ask a ministry to review an environmentally significant policy, act, regulation or instrument;
- ask a ministry to investigate alleged harm to the environment;
- appeal certain ministry decisions; and
- take legal action to prevent environmental harm.

The Environmental Commissioner of Ontario

The Environmental Commissioner of Ontario (ECO), as an independent Officer of the Legislative Assembly, is responsible for reviewing and reporting on the government's compliance with the *EBR*. The ECO reports annually to the Legislative Assembly – not to the governing political party or to a ministry. To ensure the *EBR* is upheld, the ECO monitors how ministries exercise their discretion and carry out their responsibilities in relation to the *EBR*. Each year, the ECO reports on whether ministries have complied with the procedural and technical requirements of the *EBR*, and whether ministry decisions were consistent with their Statements of Environmental Values (SEVs) and the purposes of the *EBR*. The ECO also reports on the progress of the Ontario government in keeping the *EBR* up to date by prescribing new ministries, laws and instruments that are environmentally significant.

Part 1 of this Annual Report contains a summary of these reviews, including a discussion of:

- the number and quality of the notices posted by prescribed ministries on the Environmental Registry;
- ministries' use of information and exception notices;
- failures of prescribed ministries to post environmentally significant proposals on the Environmental Registry for public notice and consultation;
- the level of co-operation of the prescribed ministries in responding to ECO requests for information;
- adherence by prescribed ministries to statutory timelines for responding to applications for review and investigation;
- the government's progress in prescribing ministries, agencies, laws and instruments under the *EBR*; and
- new and revised ministry SEVs.

The *EBR* provides several legal tools that enable Ontarians to enforce and protect their environmental rights. Part 1 also includes a summary of these tools, along with a discussion of how members of the public have used their legal rights during this reporting year.

1.1 The Toolkit of the *EBR*

Statement of Environmental Values

The *Environmental Bill of Rights, 1993* (*EBR*) requires each prescribed ministry to develop and publish a Statement of Environmental Values (SEV), which it must consider when making decisions that might significantly affect the environment. An SEV describes how the ministry will integrate environmental values with social, economic and scientific considerations when it makes environmentally significant decisions. The ministry does not always have to conform to its stated values, but it must clearly explain how it considered its SEV in the decision-making process. This mechanism reveals how a given ministry views its environmental responsibilities.

Public Notice and Consultation through the Environmental Registry

The Environmental Registry is one of the key tools that enable the public to participate in government decision making that affects the environment. It is a searchable online database that provides public access to information about environmentally significant proposals and decisions made by the Ontario government. The Environmental Registry can be accessed at www.ebr.gov.on.ca.

Under the *EBR*, all prescribed ministries are required to give notice of environmentally significant proposals on the Environmental Registry. Ministries must provide a minimum of 30 days for the public to submit comments on the proposal before making a final decision. Once a ministry has made a decision, it must post a notice on the Environmental Registry that describes the outcome and explains the effect of public participation on the decision.

Government responsibilities under the *EBR* only apply to ministries that are prescribed (i.e., designated in a regulation) under the law. Fifteen ministries are currently prescribed under the *EBR* (as listed below). These ministries must prepare and consider an SEV, and must give

notice and consult with the public on any proposed environmentally significant acts or policies through the Environmental Registry. Every year, the ECO reports on a selection of decisions posted on the Environmental Registry. The ECO also reviews ministry compliance with *EBR* public notice and consultation requirements.

The following ministries are prescribed in O. Reg. 73/94 for the purposes of SEV consideration and public consultation:

- Ministry of Agriculture and Food (OMAF);
- Ministry of Consumer Services (MCS);
- Ministry of Economic Development, Trade and Employment (MEDTE);
- Ministry of Education (EDU);
- Ministry of Energy (ENG);
- Ministry of the Environment (MOE);
- Ministry of Government Services (MGS);
- Ministry of Health and Long-Term Care (MOHLTC);
- Ministry of Labour (MOL);
- Ministry of Municipal Affairs and Housing (MMAH);
- Ministry of Natural Resources (MNR);
- Ministry of Northern Development and Mines (MNDM);
- Ministry of Rural Affairs (MRA);
- Ministry of Tourism, Culture and Sport (MTCS); and
- Ministry of Transportation (MTO).

In July 2014, several Ontario government ministries prescribed under the *EBR* were restructured and/or renamed. The following ministries were affected:

- the Ministry of Agriculture and Food and the Ministry of Rural Affairs are now the Ministry of Agriculture, Food and Rural Affairs;
- the Ministry of Consumer Services and the Ministry of Government Services are now the Ministry of Government and Consumer Services;
- the Ministry of Economic Development, Trade and Employment is now the Ministry of Economic Development, Employment and Infrastructure;
- the Ministry of the Environment is now the Ministry of the Environment and Climate Change; and
- the Ministry of Natural Resources is now the Ministry of Natural Resources and Forestry.

In addition, ministries must give notice of proposals for environmentally significant regulations made under prescribed acts. Currently, there are 34 acts prescribed (in whole or in part) in O. Reg. 73/94.

Five ministries – MCS, MOE, MMAH, MNR and MNDM – are prescribed for the purposes of classifying instruments (e.g., permits, licences and other approvals) issued under acts administered by those ministries. Only instruments that are classified in O. Reg. 681/94 are subject to the *EBR*. Currently, select instruments issued under 18 different acts are classified. The responsible ministries must give notice on the Environmental Registry of any proposals and decisions related to those instruments.

See the ECO's website (www.eco.on.ca) for an up-to-date list of ministries, laws and instruments prescribed under the *EBR*.

Applications for Review and Investigation

The *EBR* gives Ontario residents the right to ask a prescribed ministry to review an existing environmentally significant policy, act, regulation or instrument. The public also has the right to ask the government to review the need to develop a new policy, act or regulation. Such requests are called "applications for review." Specific acts must be prescribed in order for those acts and the regulations made under them to be subject to the *EBR* application for review provisions. Instruments must similarly be prescribed under O. Reg. 681/94 to be subject to *EBR* applications for review.

There are currently ten ministries prescribed for purposes of applications for review under the *EBR*:

- Ministry of Agriculture and Food (OMAF);
- Ministry of Consumer Services (MCS);
- Ministry of Energy (ENG);
- Ministry of the Environment (MOE);
- Ministry of Health and Long-Term Care (MOHLTC);
- Ministry of Municipal Affairs and Housing (MMAH);
- Ministry of Natural Resources (MNR);
- Ministry of Northern Development and Mines (MNDM);
- Ministry of Rural Affairs (MRA); and
- Ministry of Transportation (MTO).

The *EBR* also provides Ontarians with the right to ask a prescribed ministry to investigate alleged contraventions of prescribed acts, regulations or instruments; this is called an "application for investigation." Applications for investigation may be filed for alleged contraventions of 19 different laws prescribed under the *EBR*, and for contraventions of any regulations under those laws. Applications for investigation may also be filed for alleged contraventions of prescribed instruments issued under 17 laws, administered by five ministries (MCS, MOE, MMAH, MNR and MNDM).

Applications are a powerful tool that the public can use to influence government decision making and to ensure environmental laws and policies are upheld. Ministries that receive applications must follow the procedures set out in the *EBR* when considering those applications. The ECO reviews and reports on how ministries handle these applications. For the ECO's reviews of applications decided in this reporting year, see Sections 2 and 3 of the Supplement to this Annual Report and Part 1.4 of this Annual Report.

Appeals, Lawsuits and Whistleblower Protection

The *EBR* provides Ontarians with increased access to courts and tribunals for the purposes of environmental protection. The *EBR* provides a special right for members of the public to appeal (i.e., challenge) certain ministry decisions regarding instruments. Ontario residents may also take court action to prevent harm to a public resource and to seek damages for environmental harm caused by a public nuisance. Finally, the *EBR* provides enhanced protection for employees who suffer reprisals from their employers for exercising their *EBR* rights or for complying with or seeking the enforcement of environmental rules.

For information about the public's use of *EBR* appeals, lawsuits and whistleblower protection during this reporting year, see Part 1.7 of this Annual Report.

1.2 Use and Misuse of the Environmental Registry

The Environmental Registry is a key mechanism for the public to exercise their rights under the *Environmental Bill of Rights, 1993* (*EBR*) to participate in government environmental decision making. Prescribed ministries are required to post notices of proposals for environmentally significant policies, acts, regulations and instruments on the Environmental Registry, and to provide the public with a minimum of 30 days to comment on such proposals. The public has the option of submitting comments electronically through the Environmental Registry or by mail. Ministries must consider these public comments when making a final decision and provide an explanation of how the comments affected the decision.

The Environmental Registry also provides other information that may assist the public in exercising their *EBR* rights, including:

- notice of appeals and leave to appeal applications related to prescribed instruments;
- background information about the *EBR*;
- links to the full text of the *EBR* and its regulations;
- links to prescribed ministries' Statements of Environmental Values (SEVs);
- in some cases, links to the full text of proposed and final policies, acts, regulations and instruments; and
- in some cases, links to other information relevant to a proposal.

The Environmental Registry is maintained by the Ministry of the Environment (MOE). The ECO monitors ministries' use of the Environmental Registry to ensure that prescribed ministries are satisfying their obligations under the *EBR*, and that the public's participation rights are being respected.

Ministry Use of the Registry in 2013/2014

In this reporting year, prescribed ministries posted 82 proposal notices on the Environmental Registry for policies, acts and regulations. Of those 82 proposal notices, 53 were for policies, 24 were for regulations, and 5 were for proposed acts (Table 1.2.1). In addition, more than a thousand notices for proposed instruments, such as Environmental Compliance Approvals, Renewable Energy Approvals and Permits to Take Water, are posted to the Registry each year.

TABLE 1.2.1.
Number of Proposal Notices for Policies, Acts and Regulations Posted in the ECO's 2013/2014 Reporting Year (April 1, 2013 – March 31, 2014), by Prescribed Ministry.

Ministry	Total Number of Proposals Posted in 2013/2014	Number of Policy Proposals	Number of Regulation Proposals	Number of Act Proposals
Agriculture and Food (OMAF)	3	1	2	0
Consumer Services (MCS)	0	0	0	0
Economic Development, Trade and Employment (MEDTE)	0	0	0	0
Education (EDU)	0	0	0	0
Energy (ENG)	6	2	4	0
Environment (MOE)	20	8	10	2
Government Services (MGS)	0	0	0	0
Health and Long-Term Care (MOHLTC)	0	0	0	0
Labour (MOL)	0	0	0	0
Municipal Affairs and Housing (MMAH)	2	2	0	0
Natural Resources (MNR)	45	37	7	1
Northern Development and Mines (MNDM)	1	0	0	1
Rural Affairs (MRA)	1	1	0	0
Tourism, Culture and Sport (MTCS)	2	1	1	0
Transportation (MTO)	2	1	0	1
TOTAL	**82**	**53**	**24**	**5**

Under section 58 of the *EBR*, the ECO is required to produce a list of all proposal notices posted on the Environmental Registry between April 1, 2013 and March 31, 2014 that were not decided by March 31, 2014. Open proposals at the end of our reporting year included 1,181 instruments, 47 policies, 15 regulations and 5 acts. A detailed list is available from the ECO by request.

Quality of Registry Notices

Proposal notices on the Environmental Registry must clearly explain the nature of the proposal and the potential impacts of the proposal on the environment. It is helpful for proposal notices to include links to supporting documentation, such as the draft text of a proposed regulation. If a proposal is approved, denied or abandoned, decision notices should explain the ministry's final decision and how public comments shaped the decision. It is also useful for decision notices to include links to relevant documents, such as finalized policies or approvals. Furthermore, decision notices should be posted in a timely fashion after approval has been granted; for example, timeliness is necessary to allow the public to effectively exercise their appeal rights, if necessary and when applicable.

Thousands of proposal and decision notices are posted on the Environmental Registry every year, and the quality and clarity of different proposal notices can vary. In many cases during this reporting year, proposal notices included clear explanations of the actions proposed by ministries and frequently included links to related information or documents. Many decision notices were also posted promptly after approval and provided a good explanation of the rationale behind the decision, including how a ministry considered public comments and how a proposal may have been revised in light of these comments.

However, not all notices posted on the Environmental Registry fulfill the criteria outlined above. For example, in posting a proposal notice for regulatory amendments under the *Fish and Wildlife Conservation Act*, *1997* (#011-9826), the Ministry of Natural Resources (MNR) only

provided a basic description of the proposed amendments; an actual draft regulation was not made available. The ECO contacted MNR in August 2013, and encouraged the ministry to post a draft regulation in order to facilitate informed public input. MNR responded in September 2013, stating that the proposal notice met "the requirement of section 16 of the *Environmental Bill of Rights* to provide 'a brief description of the proposal'" and that the draft regulation would be shaped by the comments received from the public. The ministry also stated that it "provides links to relevant information such as copies of draft documents when practical and appropriate, and assesses the need to do so on a case by case basis." The ECO is disappointed that the ministry provided the public with only the bare minimum information required for a posted notice, and believes that such action goes against the spirit and intent of the *EBR*.

The ECO is further disappointed that many decision notices were not posted in a clear and timely manner after the proposal was approved. MOE has been particularly lax in this regard during this reporting year. Specifically, multiple decision notices for Permits to Take Water were not posted until months after approval was granted. Substantial delays in posting decision notices seriously detract from the public's right to appeal such permits within 15 days of the approval being posted on the Environmental Registry.

In the ECO's 2012/2013 Annual Report, we highlighted the problem of "orphaned" proposal notices. Fortunately, some ministries appear to be taking action on this long-standing problem. In particular, MNR seems to be undertaking efforts to post long overdue decision notices. For example, in March 2014, the ministry posted a decision notice (#AB05E4001) for amendments to seven statues administered by MNR, which were originally proposed in 2005 and implemented in 2006. The ECO commends these efforts and encourages ministries to continue to close off outdated notices on the Environmental Registry.

The Ministry of Transportation (MTO) has also launched an initiative to improve the use of the Environmental Registry and ministry compliance with the *EBR* by creating an Environmental Bill of Rights e-Learning Module. This project aims to educate MTO staff about the *EBR* and the ministry's responsibilities under the Act when developing environmentally significant policies, acts and regulations. For further information, see Part 1.8 of this Annual Report

Information Notices

When ministries are not required to post a proposal notice on the Environmental Registry for public comment, they may still inform the public about important environmental developments by posting an "information notice."

Significant differences exist between regular proposal notices posted on the Environmental Registry and information notices. With proposal notices, a ministry is required to invite and consider public comments, as well as post a decision notice explaining the effect of any comments on the ministry's decision. The ECO then reviews the extent to which the ministry considered those comments and its SEV when it made its final decision. Information notices usually do not include the right to comment and are not followed by a decision notice that clearly indicates what was finally decided. Information notices should only be used by ministries when a regular proposal notice is not required under the *EBR*.

In the 2013/2014 reporting year, nine prescribed ministries posted 160 information notices on the Environmental Registry (see Table 1.2.2). Some of the issues that were most commonly the subject of information notices in this reporting year include: Forest Management Plans; permits

under the *Endangered Species Act, 2007*; amendments to Renewable Energy Approvals under the *Environmental Protection Act*; and Minister's Zoning Orders under the *Planning Act*.

One good example is MNR's posting of an information notice describing a partnership initiative between the ministry and Ducks Unlimited Canada to encourage wetland conservation and restoration (#012-0790). This partnership is to be achieved by a Ministerial Agreement under the *Lakes and Rivers Improvement Act* to streamline the approvals process for Ducks Unlimited Canada's wetland conservation projects. The initiative does not introduce or alter any guidelines, criteria or standards used to issue approvals, but posting this partnership agreement as an information notice made the public aware of the initiative.

TABLE 1.2.2.
Number of Information Notices Posted by Ministry, 2013/2014 Reporting Year.

Ministry	Number of Information Notices
Agriculture and Food (OMAF)	1
Economic Development, Trade and Employment (MEDTE)	1
Environment (MOE)	54
Government Services (MGS)	1
Municipal Affairs and Housing (MMAH)	14
Natural Resources (MNR)	82
Northern Development and Mines (MDNM)	2
Transportation (MTO)	4
Technical Standards and Safety Authority (TSSA)	1
TOTAL	**160**

Exception Notices

In certain situations, the *EBR* relieves prescribed ministries of their obligation to post environmentally significant proposals on the Environmental Registry for public comment. There are two main circumstances under which ministries can post an "exception notice" to inform the public of a decision and explain why it was not posted for public comment. First, there is an "emergency" exception; ministries are permitted to post an exception notice under section 29 of the *EBR* when the delay in waiting for public comment would result in danger to public health or safety, harm or serious risk to the environment, or injury or damage to property. Second, there is an "equivalent public participation" exception; ministries can post an environmentally significant proposal as an exception notice under section 30 of the *EBR* when the proposal will be or has already been considered in another public participation process that is substantially equivalent to the process required under the *EBR*.

During the reporting year, two ministries (MOE and MNR) posted six exception notices on the Environmental Registry. The ECO believes that the exception notices posted on the Environmental Registry were all acceptable uses of the *EBR*'s exception provisions. For example, MOE posted an exception notice (#011-9145) for a Director's Order under the *Environmental Protection Act* to identify and remove waste materials in a building in Hamilton. The ministry stated that the work described in the Order needed to be undertaken as soon as possible to protect human health and the environment.

Failures to Comply with *EBR* Public Consultation Requirements

The ECO has a statutory duty to report to the Ontario Legislature on how well the ministries are complying with their obligations under the *EBR* to notify and consult with the public on environmentally significant proposals through the Environmental Registry. These obligations seem simple enough, yet, every year, the ECO observes instances in which the requirements for notification and comment are circumvented when ministries fail to post proposal notices for new policies, regulations or laws (see Table 1.2.3).

TABLE 1.2.3.
Ministry Non-compliance with the *EBR* by Failing to Post on the Environmental Registry, 2013/2014 Reporting Year.

Ministry of Natural Resources
• Guidance for Assessing Impacts of Activities on Woodland Caribou and their Habitat; Integrated Assessment Protocol for Woodland Caribou Ranges in Ontario • Best Management Practices for Mineral Exploration and Development Activities and Woodland Caribou in Ontario; Best Management Practices for Renewable Energy, Energy Infrastructure and Energy Transmission Activities and Woodland Caribou in Ontario; Best Management Practices for Tourism Activities and Woodland Caribou in Ontario • Effectiveness Monitoring of Forest Management Guides: Strategic Direction • General Habitat Descriptions for fourteen species listed under the *Endangered Species Act, 2007*
Ministry of Northern Development and Mines
• The Northern Industrial Electricity Rate Program
Ministry of Municipal Affairs and Housing
• Regulations under the *Planning Act* that alter the decision-making abilities of certain planning authorities

Sometimes ministries improperly post information notices for initiatives that should be posted as regular proposal notices. Such information notices typically do not include the right to comment; even in cases where ministries post information notices on the Environmental Registry that do seek the public's comments, these ministries still deny the public some of its *EBR* rights in failing to follow the proper *EBR* process to post decision notices that clearly indicate how the comments were considered and what was finally decided. Seeking comments with neither the requirement to consider them, nor the accountability of having the ECO verify compliance with how their comments were considered, is at best misleading to the public, and at worst, a mockery of the instructions of the legislature.

1.2.1 What is a Policy?

Under the *Environmental Bill of Rights, 1993* (*EBR*), prescribed ministries are required to post proposals for environmentally significant policies on the Environmental Registry for public notice and comment. This may appear to be a relatively straightforward requirement, but in practice, a diverse variety of ministry initiatives can constitute policies under the *EBR*.

In general, policies establish principles, considerations and values that are used to guide a ministry's decisions or actions. They may describe the details of how a ministry will apply a law or outline how a ministry will undertake a program or plan of action within its mandate. Policies may also apply to individuals undertaking activities that are regulated by a ministry; for example, policies may establish mandatory standards or suggested practices for the regulated activity.

The *EBR* defines a policy as including the following:

- *Programs*; i.e., government initiatives, projects, and undertakings.
- *Plans*; i.e., a course of action or strategy that sets out how the government will work to accomplish a goal. This may include defining the roles and responsibilities of government and non-government participants.
- *Objectives*; i.e., statements of intent, or specific goals or targets.
- *Guidelines or criteria used to make decisions about the issuance, amendment or revocation of instruments*.

A number of types of documents also fall within this definition, including, but not limited to: policy statements; operational policies; frameworks; guidance documents; technical guidance; best management practices; protocols; standards; strategies; procedures and directives. The requirement to notify and consult the public also applies to "interim" or "draft" policies if they are being applied by ministries.

The *EBR* only requires ministries to post proposals on the Environmental Registry for policies that may have a *significant effect on the environment*. This requirement encompasses policies that could have either a negative or a positive effect on the environment. For example, a policy that might result in harm to a species at risk must be posted as a policy proposal, as well as a policy that exclusively focuses on recovering a species.

There is often confusion about whether guidance that is technical or scientific in nature constitutes a policy for the purpose of the *EBR*'s notification and consultation requirements. Even when direction is science-based, it often constitutes policy direction, especially in cases where there is conflicting or inconclusive science, or where both scientific and socio-economic considerations are applied to develop direction. Technical guidance may also have serious implications; in some circumstances, it may inform whether certain activities are in compliance with the law. For example, in July 2013, the Ministry of Natural Resources (MNR) finalized "general habitat descriptions"

for 14 species at risk without public notice and consultation. Although these materials were characterized by MNR as technical documents, the ECO's position is that they are environmentally significant policies, given that they essentially define the areas where the *Endangered Species Act, 2007* prohibition on damaging or destroying habitat will apply, and define which activities the ministry considers to be compatible with the affected species' general habitats.

The *EBR* contains an exception for proposals that are "*predominantly financial or administrative in nature*," as well as proposals that "*form part of or give effect to a budget or economic statement presented to the Assembly*." However, these exemptions should be construed very narrowly in order to reflect the intentions of the legislation to exclude *predominantly* fiscal or operational decisions from the *EBR*'s public participation requirements. Policies may have serious environmental effects even if they have a financial or administrative component; therefore, the focus must be on what element is "predominant." For example, financial tools such as the pricing of renewable energy, water or carbon can nonetheless be predominantly environmental policies. Similarly, environmentally significant policies are not exempted from the *EBR*'s requirements simply by virtue of being peripherally related to a budget bill, particularly if the bill provides substantial discretion on how to meet budget commitments.

Part of the ECO's mandate is to provide guidance to ministries on how to comply with the requirements of the *EBR*. The ECO encourages ministries to contact our office for advice on whether particular ministry endeavours are environmentally significant policies for the purposes of the *EBR*. Moreover, the ECO encourages ministries to apply a broad and liberal interpretation of its responsibilities under the *EBR* in order to enhance the transparency of their environmental decision making and receive the full benefit of public consultation.

For ministry comments, please see Appendix C.

On occasion, a ministry may fail to post any notice at all on the Environmental Registry because it either misunderstands or is deliberately circumventing its *EBR* obligations. For example, the *EBR* is clear that environmentally significant policies must be posted as proposal notices on the Environmental Registry for public comment; yet, with disturbing frequency, this is not done. Particular program areas of MNR are often the most frequent offenders when it comes to not properly posting environmentally significant policies for public consultation (see Table 1.2.3). Even in cases where the ECO warns MNR of its non-compliance with the *EBR*, the ministry often resists correcting its errors.

No Chance to Comment: MNR's Woodland Caribou Policies

In June 2013, MNR posted three policies on its website related to woodland caribou:

- *Best Management Practices for Mineral Exploration and Development Activities and Woodland Caribou in Ontario;*
- *Best Management Practices for Renewable Energy, Energy Infrastructure and Energy Transmission Activities and Woodland Caribou in Ontario; and*
- *Best Management Practices for Tourism Activities and Woodland Caribou in Ontario.*

These policies provide guidance and direction to industries that operate in forests inhabited by woodland caribou, and are intended to minimize the impacts on this at-risk species.

Woodland caribou are extremely sensitive to human disturbances, such as noise, roads and industrial development. Accordingly, mining, energy and tourism industries can have major impacts on this species at risk. Despite the environmental significance of these policies, MNR did not post these policies on the Environmental Registry for public comment. The ECO contacted the ministry in July 2013 and asked it to clarify whether it considered these policies to be environmentally significant, why the documents were not posted for public consultation in accordance with the *EBR*, and whether MNR had considered its SEV and consulted the public when developing these policies.

MNR responded in August 2013 and stated that the three documents "are intended to help operationalize approved policy direction under the *Endangered Species Act*" and that "these types of documents are considered to be information sources available to sector groups when conducting sector related activities, and do not provide policy direction." The ministry also stated that industry organizations, such as the Ontario Waterpower Association, Ontario Mining Association and Ontario Prospectors Association, as well as the Provincial Caribou Technical Committee, were consulted on the development of these Best Management Practices. The public at large, however, was not consulted.

MNR again failed to conduct proper public consultation on caribou-related policies when the ministry posted its draft *Range Management Policy in Support of Woodland Caribou Conservation and Recovery* (the "Range Management Policy") on the Environmental Registry in September 2013 (#011-9448). While the draft Range Management Policy was posted for comment as a regular proposal notice, links to two related policies were provided only as supporting documents to this proposal: the *Draft Guidance for Assessing Impacts of Activities on Woodland Caribou and their Habitat* and the *Draft Integrated Assessment Protocol for Woodland Caribou Ranges in Ontario*. There was no indication that these other documents, both in the draft stage, were also open for public comment.

The ECO wrote MNR and asked it to clarify whether it was inviting public comment on these environmentally significant policies as well. If so, the ECO requested that the ministry amend the Registry notice to explicitly invite the public to comment on all three draft policies.

MNR stated that these two documents included technical information in support of the draft Range Management Policy and, as such, were not posted as separate policy proposal notices. However, MNR noted that any comments on these supporting documents that were received through the Environmental Registry would be considered. However, the ministry did not adjust the proposal notice to inform the public that they could comment on these two supporting policies.

While the ECO recognizes that the ministry was willing to accept comments on the *Draft Guidance for Assessing Impacts of Activities on Woodland Caribou and their Habitat* and the *Draft Integrated Assessment Protocol for Woodland Caribou Ranges in Ontario*, MNR's failure to specify this in the proposal notice obstructed the public consultation process. The ECO disagrees with MNR's position that these policies, which provide guidance and direction affecting an at-risk species, did not warrant formal consultation through the Environmental Registry.

No Chance to Comment: Effectiveness Monitoring of Forest Management Guides

In 2011 MNR released *Effectiveness Monitoring of Forest Management Guides: Strategic Direction* (the "Strategy"). The Strategy is a companion to MNR's forest management guides, which direct forest management practices at both fine and broad scales, and detail how social and ecological values should be managed. Such values include: conserving biodiversity; maintaining or enhancing wildlife habitat; restoring natural landscape patterns; adopting specific harvesting considerations for species, such as caribou and pileated woodpeckers; and preserving cultural heritage and tourism values.

MNR is legally obligated to evaluate the effectiveness of forest management guides, for example, by determining whether they contribute to expected patterns of biodiversity and ecological processes. The ministry released the Strategy in 2011 to assist with this process; it provides a framework for how MNR will design and conduct effectiveness monitoring of its forest management guides.

The ministry did not post a proposal notice on the Environmental Registry for the Strategy. As a result, the ECO only became aware of the existence of this document in September 2013. The ECO wrote to MNR and explained that the Strategy is environmentally significant and it should have been posted on the Environmental Registry as a policy proposal open for public comment. The ECO requested that MNR explain: how it determined that the Strategy did not need to be posted as a policy proposal; how the ministry's SEV had been considered; and whether there was any public consultation during the development of the Strategy.

The ministry responded in November 2013, stating that it did not consider the Strategy to be an environmentally significant document and, as such, had not considered its SEV when developing the Strategy. MNR also stated that "the development of the document was informed by committees and workshops with representation from government, academia, forest industry, environmental organizations and First Nations." However, because the ministry did not post the draft Strategy on the Environmental Registry, there was no opportunity for a formal public consultation process.

The ECO disagrees with MNR's position that the Strategy is not environmentally significant. The Strategy establishes how MNR will evaluate the contribution of forest management guides to expected patterns of biodiversity and ecological processes, and outlines: appropriate research design; the critical uncertainties that effectiveness monitoring should address; and the criteria for assessing and selecting specific research projects. Such substantive direction is clearly a policy that is subject to the *EBR*'s public notice and comment requirements.

For ministry comments, please see Appendix C.

1.3 Ministry Co-operation

The ECO relies on the co-operation of staff in prescribed ministries to carry out our mandate. Ministry co-operation allows the ECO to review the ministries' environmentally significant decisions in an efficient and timely manner.

The prescribed ministries and one agency each have at least one staff person designated as the *Environmental Bill of Rights*, *1993* (*EBR*) co-ordinator, who is responsible for facilitating effective *EBR* implementation within their ministry. Most interactions between the ECO and the ministries occur via these co-ordinators. The ECO also contacts ministry staff responsible for program delivery with specific, detailed information requests, including requests for: data; internal documents; and explanations of ministry positions or interpretations. Under the *EBR*, the ECO is required to report on the co-operation of prescribed ministries with requests for information by the Commissioner.

Overall, during our 2013/2014 reporting year, staff at prescribed ministries were generally co-operative and provided the ECO with: clear and prompt responses to enquiries; additional relevant information; regular updates for matters requiring a longer response time; and staff meetings to discuss matters of interest.

In particular, the ECO wishes to commend the efforts of the Ministry of Natural Resources staff in co-operating with the ECO. Ministry staff have responded promptly to the ECO's requests over this reporting year, and they have provided relevant and sufficient information in their responses. For example, in September 2013, the ECO asked MNR to provide additional information on a recent amendment to the *Algonquin Provincial Park Management Plan* (see Part 3.4 of this Annual Report). MNR and Ontario Parks staff responded quickly to this request, providing thorough answers to the ECO's inquiry, as well as supplementary documentation, including a wood supply analysis, an ecological assessment of new zoning with the park, and an explanation of newly protected zones within the park.

The ECO also recognizes the co-operation of Ministry of the Environment (MOE) staff with requests for information. For example, in October 2013, the ECO requested that the ministry provide information regarding the ministry's approach to environmental compliance and enforcement. In particular, the ECO asked for details about any effectiveness evaluations the ministry may have undertaken, target timelines for resolution of compliance issues and for data on compliance activities over the past ten years. The ministry responded in December 2013 with a lengthy explanation of the compliance process, which went well beyond the question of resolution timelines. It also provided tables and a spreadsheet with the requested data detailing the abatement and enforcement activities of MOE since 2004. Much of this information is shared with the public for the first time in Part 4.1 of this Annual Report.

However, the ECO is disappointed to note that a number of ministries have continued to disregard requests for evidence of Statement of Environmental Value (SEV) consideration for instruments. Ministries are required to document their SEV consideration for every decision they make about a prescribed instrument (for further information refer to Part 1.6 of the ECO's 2012/2013 Annual Report). During the 2013/2014 reporting year, both MOE and MNR failed to provide a number of SEV consideration documents (Table 1.3.1).

TABLE 1.3.1. .
Summary of Requests for SEV Consideration Documents for Instruments Issued Between April 1, 2013 and March 31, 2014 (as of May 1, 2014).

Ministry	Number of Instruments Issued	Number of SEV Consideration Document Requests	Number of SEV Consideration Documents Received
Environment (MOE)	1,039	150	77
Natural Resources (MNR)	113	42	11
Municipal Affairs and Housing (MMAH)	108	3	3
Northern Development and Mines (MNDM)	264	10	10

For ministry comments, please see Appendix C.

1.4 Ministries' Handling of Applications for Review and Investigation

The *Environmental Bill of Rights, 1993* (*EBR*) provides Ontario residents with the right to ask prescribed ministries to review environmental legislation, regulations, policies or instruments, or to review the need to develop new protections for the environment. Similarly, the public can ask ministries to conduct an investigation if they believe that specific environmental laws have been contravened. The public exercises these *EBR* rights by submitting applications for review and applications for investigation to the ECO, which are then forwarded to the appropriate ministries for consideration.

In the 2013/2014 reporting year, the ECO received 13 applications for review. The applications were directed to the ministries of the Environment (MOE), Municipal Affairs and Housing (MMAH), and Natural Resources (MNR). They covered a range of topics, including air emissions, mining, and contaminated sites. The one application submitted to MNR and the two applications submitted to MMAH were all denied. MOE denied seven of the applications submitted to it this year, as well as one submitted to it in 2012/2013, but agreed to undertake two reviews. At the end the ECO's reporting year, one application for review was still undecided.

TABLE 1.4.1.
Summary of Preliminary Ministry Decisions on Applications for Review in 2013/2014.

Ministry	Submitted	Denied	Undertaken	Undecided
Environment (MOE)	10	7	2	1
Municipal Affairs and Housing (MMAH)	2	2	0	0
Natural Resources (MNR)	1	1	0	0
Total	**13**	**10**	**2**	**1**

The ECO received seven applications for investigation in 2013/2014. Most of the applications were directed to MOE as they dealt primarily with alleged contraventions of the *Environmental Protection Act* in relation to discharges of contaminants. MOE denied four of the applications it received and, at the end of the ECO's reporting year, had yet to decide on two other applications. In this reporting year, MOE also decided on two applications for investigation that were submitted in 2012/2013, the ministry denied one application and agreed to undertake the other.

One application submitted related to fuel storage and was directed to the Technical Safety Standards Authority (TSSA), which is an administrative authority of the Ministry of Consumer Services; TSSA agreed to undertake this investigation.

TABLE 1.4.2.
Summary of Preliminary Ministry Decisions on Applications for Investigation in 2013/2014.

Ministry	Submitted	Denied	Undertaken	Undecided
Environment (MOE)	6	4	0	2
Technical Standards and Safety Authority (TSSA)	1	0	1	0
Total	**7**	**4**	**1**	**2**

Overall, most applications for review and investigation were denied, which is consistent with past trends. In several cases, the ECO believed that the applicants raised valid concerns and was disappointed with the ministry's decision to deny the application. For a detailed review of all applications, see Sections 2 and 3 of the Supplement to this Annual Report.

Ministry Non-Compliance with Application Timelines

The *EBR* requires prescribed ministries to notify applicants of preliminary decisions on applications for review within 60 days. The ECO is disappointed to report the continued failure of MOE to meet this non-discretionary deadline. For example, more than two months after the ministry was required to provide a preliminary response to an application requesting a review of the *Ontario Water Resources Act* regarding wells, MOE informed the applicants that its response would be delayed, but provided no date for its intended response. Similarly, MOE was almost three weeks late responding to an application for review regarding the need to improve waste disposal regulations under the *Environmental Protection Act*. For more information about these applications, see Sections 2.1.15 and 2.1.9 of the Supplement to this Annual Report.

Although the ECO appreciates that the ministry informed the applicants and the ECO that it would take additional time to make a preliminary decision on these applications, the statutory deadline is not flexible. As the ECO noted in our 2011/2012 Annual Report, the repeated failure of prescribed ministries to comply with non-discretionary *EBR* deadlines is an affront to the statutory instructions of the legislature. The ECO will continue to monitor ministry compliance with application requirements, and urges all ministries to meet the statutory timelines for responding to *EBR* applications.

For ministry comments, please see Appendix C.

1.4.1 Ministries Failing to Complete Reviews in a Reasonable Amount of Time

Although the *Environmental Bill of Rights, 1993 (EBR)* does not stipulate a timeline for ministries to conduct the reviews they agree to undertake, it does state that ministries "shall conduct the review within a reasonable time." Over the past 14 years, ministries have completed about half of the reviews within one year, though some have taken multiple years (see Figure 1.4.1). Unfortunately, it is not uncommon for ministries to keep applicants in the dark about the status of their review, creating frustration, anger and disillusionment with this *EBR* tool.

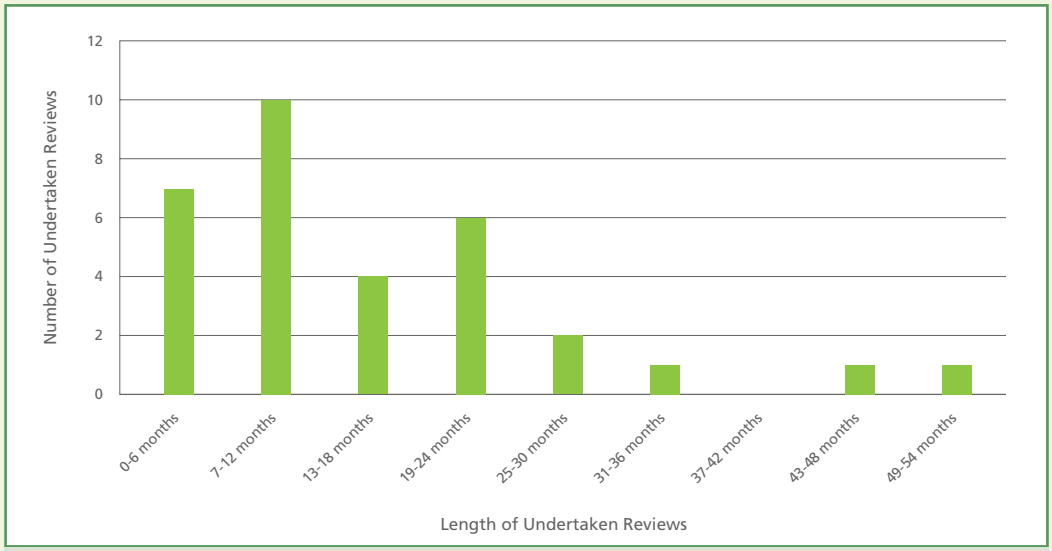


FIGURE 1.4.1. Duration of undertaken and completed *EBR* reviews between 2000 and 2014.

There are currently eight incomplete reviews that ministries agreed to undertake prior to this reporting year. All have been ongoing for over a year, with several outstanding for over two years. For example, in 2011, the Ministry of the Environment (MOE) agreed to review components of the *EBR* itself. Despite anticipating that the review would be completed by December 2012, years have passed with little information about the review's progress. The applicants' concerns about the right of Ontarians to participate in environmentally significant decision making remain unaddressed (see Section 2.1.4 of the Supplement to this Annual Report).

Further, in 2009, MOE undertook to review possible gaps in Ontario's regulatory framework related to the cumulative impacts of air pollution (see Section 2.1.2 of the Supplement to this Annual Report). In particular, the applicants argued that air pollution "hot spots" threaten people's health, compromising their right to live in a healthful environment. Five years later, MOE's review is still ongoing and Ontario's lack of regulation of cumulative air pollution remains unchanged.

It has been 18 years and MOE still has not concluded a review regarding the regulation of chromium wastes (see Section 2.1.1 of the Supplement to this Annual Report).

Although MOE's review was initially delayed to allow co-ordination and harmonization with a similar federal review, the Canadian government updated its hazardous waste regulations in 2005; MOE's inaction on this issue is completely unjustified. The ECO has also previously expressed concern about several unreasonably lengthy reviews undertaken by the Ministry of Natural Resources.

Applications for review are an effective tool that allow Ontarians to get involved in improving environmental protection and health. However, prolonged reviews with little communication to the applicants defeat the *EBR*'s principles of public participation, transparency and accountability. The ECO urges MOE to complete its long overdue reviews and encourages all prescribed ministries to keep applicants regularly informed about progress on undertaken reviews.

1.5 Keeping the *EBR* in Sync with Government Changes and New Laws

Keeping the *Environmental Bill of Rights, 1993* (*EBR*) "in sync" with the evolving nature of government is a major challenge. The enactment of new laws, the occasional re-organization of government portfolios, and the creation of new ministries all need to be reflected in the *EBR* regulations (O. Reg. 73/94 and O. Reg. 681/94). The ECO encourages ministries to work with the Ministry of the Environment to promptly update the *EBR* regulations so that Ontario residents can continue to participate in all environmentally significant government decisions.

Ministry of Infrastructure

For almost a decade, the ECO has been asking the government to update O. Reg. 73/94 following the Ministry of Infrastructure's (MOI's) many organizational changes to ensure that this ministry is prescribed under the *EBR* (for more information see Part 1.7 of the ECO's 2012/2013 Annual Report). Most recently, the ECO repeated this request to MOI in September 2013, November 2013 and January 2014. At the end of our reporting year, the ministry had not responded to any of these letters. The ministry's failure even to respond is unacceptable.

MOI oversees a number of environmentally significant acts; for example, it was responsible for the *Places to Grow Act, 2005*, for nearly a decade. Accordingly, many of MOI's decisions are environmentally significant and should be subject to open and transparent public consultation. For example, in March 2014, the ministry released proposed performance indicators for the *Growth Plan for the Greater Golden Horseshoe*. MOI posted an information notice on the Environmental Registry (#012-1213), inviting the public to provide feedback regarding this environmentally significant decision. However, this process is not as open or transparent as it would be if the ministry was prescribed under the *EBR*, in which case MOI would be required to post a decision notice and explain how any comments received were considered in its decision.

In addition, in November 2013, MOI introduced Bill 141, the *Infrastructure for Jobs and Prosperity Act, 2014*, an act intended to "establish mechanisms to encourage principled, evidence-based and strategic long-term infrastructure planning that supports job creation and training opportunities, economic growth and protection of the environment, and to incorporate design excellence into infrastructure planning." This bill represents yet another example of a missed opportunity for MOI to engage with the public on important infrastructure and environmental issues, an opportunity that would have been afforded if the ministry were prescribed under the *EBR*. The ECO is very disappointed that MOI continued to shun the procedural rights established by the *EBR*.

In July 2014, MOI became part of the new Ministry of Economic Development, Employment and Infrastructure. However, as of July 2014, this ministry is prescribed under its former name; formal recognition under O. Reg. 73/94 is still required. The ECO again strongly urges the Ontario government to move forward in prescribing the infrastructure portfolio without any further delay.

Instruments of the *Far North Act, 2010*

In August 2012, the *Far North Act, 2010* was prescribed under the *EBR*. Staff from the Ministry of Natural Resources (MNR) met with the ECO in July 2013 to discuss classifying certain instruments of the *Far North Act, 2010* under O. Reg. 681/94. Classifying instruments under the *EBR* is an important step for prescribed ministries because it requires them to give notice on the Environmental Registry of any proposals and decisions related to those instruments.

In October 2013, MNR posted an information notice (#012-0087) on the Environmental Registry to inform the public about its intentions to classify nine of the Act's instruments and inviting public comments. The ministry was not technically required to do this; the usual practice is for the Ministry of the Environment to let the public know later in the process that the *EBR* regulations will be updated. However, public consultation at that late stage is less meaningful because the ministries have essentially already decided which instruments will become classified. Thus, the ECO commends MNR for using the Environmental Registry to consult with the public at the early stages of instrument classification.

MNR states that it intends to classify nine instruments of the *Far North Act, 2010*, including Orders allowing development in the absence of a community-based land use plan, if the development is determined to be predominantly for community use in the area, is in the social and economic interests of Ontario, or would contribute directly to meeting community needs of the First Nations. Such an instrument is clearly environmentally significant. The ECO applauds MNR for moving forward with classifying instruments of the *Far North Act, 2010*. Further, the ECO commends MNR for regularly meeting with the ECO and for continuing to provide opportunities for meaningful public participation in decisions related to the *Far North Act, 2010*.

Still Not Prescribed…

Despite the ECO's past recommendations, the following are still not prescribed under the *EBR*:

- Ministry of Finance;
- Ministry of Aboriginal Affairs;
- Ontario Heritage Trust;
- *Building Code Act, 1992* in its entirety (only limited sections are currently prescribed);
- Water Management Plans under the *Lakes and Rivers Improvement Act;* and
- Nutrient Management Instruments under the *Nutrient Management Act, 2002*.

The ECO is disappointed that no progress has been made during this reporting year in prescribing any of these ministries, agencies, acts and instruments.

In July 2014 several ministries prescribed under the *EBR* were restructured and/or renamed. Each time this occurs, O. Reg. 73/94 must be updated to ensure that the environmentally significant activities administered by the affected ministries continue to be subject to the *EBR*. Unfortunately, past government reorganizations have typically taken years to be formally reflected under the *EBR*. Prescribing appropriate ministries under the *EBR* in a timely manner is important, as it provides clarity for the public and ministry staff, and it ensures the ongoing effectiveness of the Act. Conversely, delays in amending the regulation create uncertainty and confusion for the public, the ECO office, and ministry staff with respect to ministry responsibilities under the *EBR*.

The ECO urges the Ontario government to expedite the amendment of O. Reg. 73/94 to ensure the ongoing inclusion of the following renamed ministries: the Ministry of Agriculture, Food and Rural Affairs; the Ministry of Economic Development, Employment and Infrastructure; the Ministry of the Environment and Climate Change; the Ministry of Government and Consumer Services; and the Ministry of Natural Resources and Forestry.

For ministry comments, please see Appendix C.

1.6 New Statements of Environmental Values Maintain the Status Quo

Statements of Environmental Values (SEVs) set out how the purposes of the *Environmental Bill of Rights, 1993* (*EBR*) are to be applied when environmentally significant decisions are made by a prescribed ministry. In addition, an SEV should explain how the purposes of the *EBR* will be

integrated with the other factors, including social, economic and scientific considerations, which inform decision making within a ministry.

An SEV should be both a statement of ministry-specific environmental principles, as well as a guidance document that establishes the general framework by which these environmental principles will be integrated into ministry decision making in a meaningful way (for more on the purposes underlying SEVs, see Part 8.2 of the ECO's 2008/2009 Annual Report).

New SEVs for the Ministries of Education and Energy

As noted in our 2012/2013 Annual Report, both the Ministry of Education (EDU) and the Ministry of Energy (ENG) were prescribed under the *EBR* in August 2012. The *EBR* requires ministries to prepare a draft SEV within three months of being prescribed, and to solicit public comment before finalizing the document. Accordingly, the SEVs for these ministries were proposed in late 2012 and finalized in 2013.

Both SEVs are short documents, dedicating about half their length to boilerplate information about the background and purpose of the *EBR*, the general intent of SEVs, and a high-level overview of ministerial vision, mandate and a description of its business. Each of the SEVs also states that the respective ministry will take into account social, economic and other considerations along with the purposes of the *EBR* when making environmentally significant decisions.

In addition to this standard content, each ministry sets out two core principles to inform its environmental decision making and, additionally, makes some specific commitments to pursue certain actions. In this respect, the Ministry of Education identifies the following principles:

1. Prepare "students with the knowledge, skills, perspectives and practices they need to be environmentally responsible citizens;" and
2. Encourage school boards, Consolidated Municipal Service Managers/District Social Services Administrative Boards, First Nations, child care operators and EDU transfer payment agencies to practise environmentally responsible behaviour, while recognizing the autonomy of these organizations.

It also commits to continue to encourage energy conservation and resource conservation in its own operations.

The Ministry of Energy commits to:

1. Consider the effects of its decisions on current and future generations, consistent with sustainable development principles; and
2. Consider and evaluate environmental benefits and risks when planning future initiatives, such as considering the differing environmental impacts of energy sources and technologies, including greenhouse gas emissions, and provide opportunities for increased use of cleaner sources of energy.

ENG also commits to: encourage energy conservation programs; provide opportunities for an open and consultative process, particularly for interested Aboriginal peoples; and support Government of Ontario initiatives to conserve energy and water, and encourage wise use of resources in its own operations.

ECO COMMENT

Preparing an SEV is an important first step in ensuring that environmentally significant decisions are given due consideration and are made in a consistent, transparent and justifiable manner. EDU and ENG are required to consider their SEVs when making any decision that may have a significant effect on the environment. In theory, the SEVs will provide guidance to ministry staff regarding how to incorporate the purposes of the *EBR* and environmental principles into ministry decision making.

In practice, however, both EDU and ENG followed the trend set by other ministries and produced SEVs that are largely boilerplate in nature, use vague language and provide little in the way of actual guidance on *how* to approach decision making, particularly where competing priorities may be at play. This means that decision makers are left with broad discretion to interpret and apply the SEVs as they so desire, minimizing the potential value of these documents. Accordingly, it is difficult to imagine how the SEVs will meaningfully influence decision making within the ministries. This lack of detail also makes it difficult to hold the ministry to account for its implementation (or lack thereof) of the SEV, as there are no clear requirements.

Nonetheless, the commitments to specific actions in each SEV may offer some tangible benefits. In the case of ENG, these commitments include the pledge to encourage energy conservation programs and to provide opportunities for an open and consultative process around environmentally significant decision making. For EDU, the pledge to work with school boards and other agencies to encourage the adoption of environmentally responsible behaviours, including energy and resource conservation, may build on existing collaborative work.

For more detailed reviews of the two SEV decisions, please refer to Sections 1.1.1 and 1.2.1 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

1.7 Appeals, Lawsuits and Whistleblowers

The *Environmental Bill of Rights, 1993* (*EBR*) provides Ontarians with several legal tools that enable them to enforce and protect their environmental rights, including:

- appeal rights;
- public nuisance claims;
- claims for harm to a public resource; and
- whistleblower protection.

Instrument-Holder Appeals

Many Ontario statutes provide individuals and companies with a right to appeal (i.e., challenge) government decisions that directly affect them, such as a decision to deny, amend or revoke a permit, licence or approval (an "instrument") for which they applied or that was issued to them. These are called "instrument-holder appeals." If an instrument-holder appeal relates to an instrument prescribed under O. Reg. 681/94 under the *EBR*, the public has a right to receive notice of that appeal. Accordingly, the ECO posts notice of instrument holder appeals on the Environmental Registry; the ECO also posts notices on the Environmental Registry of the final dispositions of these appeals (i.e., whether the appeal was allowed, denied or withdrawn).

During the 2013/2014 reporting year, the ECO posted three new instrument holder notices of appeal on the Registry and three decision notices for appeals initiated in earlier reporting years (see Table 1.7.1).

TABLE 1.7.1.
Instrument Holder Appeals of *EBR*-Prescribed Instruments Initiated or Decided in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	Date of Appeal	Outcome
Nestlé Canada Inc.	Permit to Take Water	011-6182	October 11, 2012	Appeal withdrawn (see Box 1.7.1 on the importance of public participation in environmental appeals)
The Corporation of the City of Barrie	Environmental Compliance Approval (Sewage)	011-3201	July 12, 2012	Appeal withdrawn pursuant to settlement agreement
Timco Foods Ltd.	Environmental Compliance Approval (Air)	011-5984	November 28, 2012	Appeal withdrawn pursuant to settlement agreement
Town of Grand Valley	Official Plan Amendment No. 4 to the Township of East Luther Grand Valley Official Plan	011-7925	June 28, 2013	Appeal disposed of pursuant to a settlement agreement
ML Ready Mix Concrete Inc.	Environmental Compliance Approval (Air)	011-7505	October 4, 2013	Appeal ongoing as of March 31, 2014
2157536 Ontario Inc.	Environmental Compliance Approval (Air)	011-7964	February 28, 2014	Appeal ongoing as of March 31, 2014

Third-Party Appeals

The *EBR* expands the basic appeal rights granted to instrument holders by allowing members of the public ("third parties") to apply for "leave" (i.e., permission) to appeal ministry decisions about instruments prescribed under the *EBR*. These are called "third-party appeals." Ontario residents who wish to seek leave to appeal a decision must apply to the proper appellate body – usually the Environmental Review Tribunal or the Ontario Municipal Board – within 15 days of the instrument decision being posted on the Environmental Registry. Like instrument holder appeals, the public has a right to receive notice of third-party leave to appeal applications.

Accordingly, the ECO posts notices of third-party leave to appeal applications and of the final dispositions of these appeals on the Environmental Registry.

To be granted leave to appeal, applicants must establish that they have an interest in the decision at issue. This is generally a low threshold to meet; for example, the applicant may live near the facility that holds the instrument or may have commented on the original proposal to issue the instrument. If they meet this preliminary threshold, then the applicant must satisfy the more onerous, two-part test for leave to appeal set out in section 41 of the *EBR* by successfully demonstrating that:

1. there is good reason to believe that no reasonable person, having regard to the relevant law and to any government policies developed to guide decisions of that kind, could have made the decision; and
2. the decision could result in significant harm to the environment.

If a third party is granted leave, they may then file their appeal of the decision, which will be heard and decided by the appellate body. During the 2013/2014 reporting period, members of the public sought leave to appeal six instrument decisions. The ECO also received notice of one decision for an application initiated in an earlier reporting year (see Table 1.7.2).

TABLE 1.7.2.
Third-Party Applications for Leave to Appeal (LTA) Initiated or Decided Under the *EBR* in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	LTA Applicants	Date of LTA Application	Outcome
Atlantic Packaging Products Ltd.	Environmental Compliance Approval (Air)	011-1639	Brimley Progress Development Inc.	October 31, 2012	Application dismissed
Mount Pleasant Group of Cemeteries	Environmental Compliance Approval (Air and Noise)	011-6508	Kristyn Wong-Tam	May 10, 2013	Application dismissed
Gilbert-McEachern Electric Limited	Environmental Compliance Approval (Air)	011-0486	Robert Protani; Jakki Protani	June 7, 2013	Application withdrawn
Miller Paving Limited	Environmental Compliance Approval (Air)	010-6718	Katryna Bennett and Alice Hearn-Flannigan, representing the Sharp Lake Area Residents Association	June 7, 2013	Application withdrawn
Sunrise Metals Inc.	Environmental Compliance Approval (Air)	011-9270	Environment Hamilton Inc.	October 15, 2013	Application dismissed
Goldcorp Canada Inc.	Environmental Compliance Approval (Air)	011-4164	1301578 Ontario Inc.; 1602724 Ontario Inc.	December 5, 2013	Application dismissed
atPlay Adventures Inc.	Environmental Compliance Approval (Municipal and Private Sewage)	011-8044	Claudia Unterstab	March 6, 2014	Not decided as of March 31, 2014

Direct Right of Appeal by Third Parties

There is a separate set of rules for third-party appeals of Renewable Energy Approvals (REAs) issued under the *Environmental Protection Act* (*EPA*) for solar, wind or bioenergy projects. Under the *EPA*, all residents of Ontario have an automatic right to appeal a ministry decision about a REA, meaning they are not required to first seek leave from the appellate body. Unlike appeals under the *EBR*, however, a REA appeal is only permitted on the grounds that engaging in the renewable energy project in accordance with the REA will either:

a. cause serious harm to human health; or
b. cause serious and irreversible harm to plant life, animal life or the natural environment.

Notices of third-party appeals of REAs are posted on the Environmental Registry.

Similarly, the *Planning Act* provides a broad, direct right of appeal for third parties, which is different than the third-party rights under the *EBR*. Therefore, third-party appeals of prescribed *Planning Act* instrument decisions are usually made under the *Planning Act* rather than the *EBR*. Notices of such appeals are still posted on the Environmental Registry.

During the ECO's 2013/2014 reporting period, members of the public appealed 22 REAs under the *EPA* and two official plan amendments under the *Planning Act* (see Table 1.7.3). The ECO also posted decision notices for two appeals of REAs that were initiated in an earlier reporting year.

TABLE 1.7.3.
Direct Third-Party Appeals of *EBR*-Prescribed Instruments Initiated or Decided in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	Applicants	Date of Appeal	Outcome
Gilead Power Corporation	Renewable Energy Approval (Wind)	011-5239	Prince Edward County Field Naturalists; Alliance to Protect Prince Edward County	January 4, 2013	Appeals granted
CSI Solar Project 16 Inc. (formerly SkyPower Limited)	Renewable Energy Approval (Solar)	011-6840	The Corporation of the Town of Greater Napanee; Kathy Cuthill; James Cuthill; Pamela McCracken	February 8, 2013	Appeals withdrawn pursuant to a settlement agreement
RE Adelaide 1 ULC	Renewable Energy Approval (Solar)	011-7319	Corporation of the Township of Adelaide Metcalfe	April 22, 2013	Appeal withdrawn

TABLE 1.7.3.
Direct Third-Party Appeals of *EBR*-Prescribed Instruments Initiated or Decided in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	Applicants	Date of Appeal	Outcome
2327461 Ontario Inc. operating as Marsh Hill Limited Partnership	Renewable Energy Approval (Wind)	011-7238	Township of Scugog	April 30, 2013	Appeal withdrawn
Varna Wind, Inc.	Renewable Energy Approval (Wind)	011-7101	Middlesex-Lambton Wind Action Group Inc.	May 7, 2013	Appeal dismissed
Bornish Wind G.P. Inc.	Renewable Energy Approval (Wind)	011-7317	Robert Lewis; Municipality of North Middlesex	May 13, 2013	Appeals dismissed
Dufferin Wind Power Inc.	Renewable Energy Approval (Wind)	011-7852	William S. Crysdale; Kathleen Kurtin; John Maguire; Roselyn Bovaird; Dennis Sanford; D&C Vander Zaag Farms Ltd.; Conserve Our Rural Environment	June 19, 2013	Crysdale appeal withdrawn; all other appeals dismissed
Town of Grand Valley	Official Plan Amendment No. 4 to the Township of East Luther Grand Valley Official Plan	011-7925	MocoFarms Ltd.; Corseed Inc.; Thomasfield Homes Limited; Brentwood Building Group Limited	June 28, 2013	Appeal disposed of pursuant to a settlement agreement
2241656 Ontario Corp. operating as Goodlight LP	Renewable Energy Approval (Solar)	011-7807	Kevin Linton	July 2, 2013	Appeal withdrawn pursuant to settlement agreement
2241660 Ontario Corp. operating as Illumination LP	Renewable Energy Approval (Solar)	011-7470	Jacqueline Visconti; Township of Scugog	July 3, 2013	Appeals withdrawn pursuant to settlement agreement

TABLE 1.7.3.
Direct Third-Party Appeals of *EBR*-Prescribed Instruments Initiated or Decided in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	Applicants	Date of Appeal	Outcome
Vineland Power Inc.	Renewable Energy Approval (Wind)	011-7795	Anne L. Fairfield; Edward Engel	July 4, 2013	Appeals withdrawn pursuant to settlement agreement
RE Orillia 3 ULC	Renewable Energy Approval (Solar)	011-8690	Bernard Pope	July 5, 2013	Appeal withdrawn
St. Columban Energy LP	Renewable Energy Approval (Wind)	011-7629	Scotty Dixon; Jennifer Dixon; Thomas Ryan; Catherine Ryan; Middlesex-Lambton Wind Action Group Inc.; Harvey Wrightman	July 17, 2013	Appeals dismissed
South Kent Wind G.P.	(amended) Renewable Energy Approval (Wind)	011-9551	Platinum Produce Company	July 26, 2013	Appeal dismissed
K2 Wind Ontario Inc. operating as K2 Wind Ontario Limited Partnership	Renewable Energy Approval (Wind)	011-8307	Shawn Drennan; Tricia Drennan	August 6, 2013	Appeals dismissed
Kerwood Wind Inc.	Renewable Energy Approval (Wind)	011-7625	Middlesex-Lambton Wind Action Group; Harvey Wrightman; Esther Wrightman	August 16, 2013	Appeals dismissed
Ernestown Windpark Inc. operating as Ernestown Windpark LP	Renewable Energy Approval (Wind)	011-8090	Pam Calver; Mark Bain; Kimberly Bain	August 28, 2013	Calver appeal withdrawn; Bain appeals dismissed
Wainfleet Wind Energy Inc.	Renewable Energy Approval (Wind)	011-7796	Mikel Pitt; Skydive Burnaby Ltd.	October 22, 2013	Not decided as of March 31, 2014

TABLE 1.7.3.
Direct Third-Party Appeals of *EBR*-Prescribed Instruments Initiated or Decided in the ECO's 2013/2014 Reporting Year.

Instrument Holder	Instrument	Registry Number	Applicants	Date of Appeal	Outcome
SP Development Limited Partnership	Renewable Energy Approval (Wind)	011-8558	Doug Moseley	October 21, 2013	Not decided as of March 31, 2014
SP Armow Wind Ontario GP Inc. operating as SP Armow Wind Ontario LP	Renewable Energy Approval (Wind)	011-8557	Sharon Anne Kroeplin; Kenneth George Kroeplin	October 23, 2013	Not decided as of March 31, 2014
District of Muskoka	Official Plan Amendment No. 42 to the District Municipality of Muskoka Official Plan	011-8845	Robert List; Marie Poirer	October 28, 2013	Not decided as of March 31, 2014
Suncor Energy Products Inc.	Renewable Energy Approval (Wind)	011-8848	Middlesex-Lambton Wind Action Group; Sarah Hornblower	December 23, 2013	Hornblower appeal withdrawn; MLWAG appeal determined to be invalid
wpd Sumac Ridge Wind Incorporated	Renewable Energy Approval (Wind)	011-8756	Manvers Wind Concerns; Cransley Home Farm Limited; Cham Shan Temple	December 23, 2013	Not decided as of March 31, 2014
Nodin Kitagan Limited Partnership and Nodin Kitagan 2 Limited Partnership	Renewable Energy Approval (Wind)	011-9127	James Fata; 2401339 Ontario Ltd.	January 3, 2014	Not decided as of March 31, 2014
East Durham Wind Inc.	Renewable Energy Approval (Wind)	011-9146	Leonard Van Den Bosch	January 28, 2014	Not decided as of March 31, 2014
2239279 Ontario Corp. operating as CityLights LP	Renewable Energy Approval (Solar)	011-8539	Philippe Thomas	February 19, 2014	Appeal withdrawn

1.7.1 The Importance of Public Participation in Environmental Appeals

In October 2012, Nestlé Canada Inc. (the "Appellant") filed an appeal of the Ministry of the Environment's decision to impose certain conditions in a Permit to Take Water (Environmental Registry #011-6182). The permit at issue governed the Appellant's entitlement to take water from a well near Erin; the company had been drawing water from the well since 1988 and bottling it for commercial sale at a different location. In April 2012, the Appellant applied for a new permit to replace a previous version that would expire in August 2012.

Unlike previous permits issued for this well, the 2012 permit allowed the Appellant to take water at increased rates on a per minute or per day basis between April and September, as long as a total monthly cap was not exceeded. The Appellant had requested this condition to allow it greater flexibility in its operations. The permit imposed another condition, which further restricted the maximum daily water taking during drought conditions; this restriction was the subject of the appeal.

Following the filing of the appeal, two non-profit non-government organizations, Wellington Water Watchers and the Council of Canadians (the "NGOs"), applied for and were granted party status in the appeal, meaning they were entitled to make their own submissions on any potential changes to the permit.

Subsequently, the Appellant and the ministry reached an agreement that would loosen the drought restrictions and see the company withdraw its appeal; they submitted this settlement agreement to the Environmental Review Tribunal (the "Tribunal") for approval, as required. The NGOs objected to the terms of the agreement, however, arguing that loosening the drought-related restrictions would not be in the public interest. At a preliminary hearing in October 2013, the Tribunal agreed with the NGOs and refused to approve the proposed settlement, instead ordering a full hearing. A month later, the Appellant filed notice that it wished to withdraw its appeal; none of the other parties objected and the Tribunal accepted the withdrawal and dismissed the appeal without changing any of the conditions of the permit.

This case demonstrates the importance of public involvement in appeal processes. Without the submissions of the NGOs it seems unlikely the Tribunal would have rejected the original settlement agreement, since there would have been no one to raise issues relating to the public interest. As a result of their involvement, the Tribunal was asked to carefully consider these aspects, which ultimately led to a stronger, more protective permit.

Public Nuisance Cases

Before the *EBR* came into force in 1994, claims for public nuisances in Ontario generally had to be brought by, or with the permission of, the Attorney General. Under section 103 of the *EBR*, however, someone who has suffered direct economic loss or personal injury as a result of a public nuisance that has harmed the environment can bring forward a claim without the approval of the Attorney General. No new lawsuits claiming public nuisance as a cause of action were brought to the ECO's attention during this reporting year.

The Right to Sue for Harm to a Public Resource

The *EBR* gives Ontarians the right to sue any person who is breaking, or is about to break, an environmental law, regulation or instrument that has caused, or will cause, harm to a public resource. No such proceedings were brought to the ECO's attention during this reporting year.

Whistleblower Rights

The *EBR* provides rights to employees who experience reprisals (e.g., dismissal, discipline, etc.) by their employers for reporting environmental violations in the workplace or otherwise exercising their rights under the *EBR*. The ECO is not aware of any employer reprisal ("whistleblower") cases in this reporting year.

For ministry comments, please see Appendix C.

1.8 The ECO Recognition Award

Every year, the ECO asks prescribed ministries to submit outstanding programs and projects to be considered for the ECO's Recognition Award. This award is meant to recognize the hard work of ministry staff in an initiative that betters Ontario's environment and that meets the goals of the *Environmental Bill of Rights, 1993* (*EBR*). This year, the ECO received nominations for ten projects or programs from three ministries. An arm's-length panel reviewed the submissions.

Ministry of Natural Resources: Water Chestnut Management in Voyageur Provincial Park

This year, the ECO is bestowing its Recognition Award to staff from the Ministry of Natural Resources (MNR) for an innovative project to control an infestation of European water chestnut (*Trapa natans*), an invasive aquatic species, in Voyageur Provincial Park. The water chestnut has become a serious nuisance in other jurisdictions because it can choke out native vegetation, decrease biodiversity, and negatively affect recreational activities.

The Voyageur Provincial Park water chestnut infestation was one of the first known cases in Ontario, and MNR staff acted swiftly to minimize its impact and spread. Staff consulted other jurisdictions for information and support, researched new control methods, experimented with control and monitoring techniques, and designed new equipment that can control the species more efficiently and effectively. For example, the water chestnut can be controlled by hand-pulling from a canoe but this method is time-consuming and labour-intensive. MNR staff developed a new system of specially adapted boats to remove and collect the tops of the plants, decreasing the possibility of flower and seed production. MNR staff also engaged and informed the public throughout the project; for example, staff circulated newsletters, created a volunteer program to assist with plant removal activities, and held education programs for park visitors.

As a result of this successful project, the infestation has been contained to Voyageur Provincial Park, certain sections of the park have been cleared of water chestnut, native species are re-establishing in areas once covered by the invasive aquatic plant, and there has been a 95 per cent reduction of viable water chestnut seeds in the sediment.

Honourable Mention: Ministry of Transportation's Environmental Bill of Rights e-Learning Module

The ECO would also like to acknowledge the staff at the Ministry of Transportation (MTO) who created and launched the Environmental Bill of Rights e-Learning Module to educate ministry staff about the *EBR* and the ministry's responsibilities under the *EBR*. This innovative electronic tool teaches MTO staff about the *EBR*, the role of the ECO, the meaning of environmental significance and the ministry's obligations when developing environmentally significant policies, acts and regulations. The online module also provides links to *EBR* resources, including MTO's Statement of Environmental Values, templates for posting notices on the Environmental Registry, checklists, and approval documents. A self-evaluating quiz at the end of the module ensures greater understanding of the ministry's requirements for complying with the *EBR*. The module was designed to allow broader access to staff, as it can be accessed online at any time. All ministries prescribed under the *EBR* could benefit from such a useful staff training tool.

RECIPIENTS OF THE ECO'S RECOGNITION AWARD	
2014	Water Chestnut Management in Voyageur Provincial Park (MNR)
2013	Wasaga Beach Provincial Park Piping Plover Program (MNR)
2012	Algonquin Provincial Park's Waste Management System (MNR)
2011	Bioretention Cells and Rubber Modified Asphalt at the QEW Ontario Street Carpool Lot, Beamsville (MTO)
2010	Green Power for the Summer Beaver Airport (MTO)
2009	Project Green (MOE)
2008	Zero Waste Events at the Metro Toronto Convention Centre (MTC)
2007	no submissions found to be acceptable
2006	Southern Ontario Land Resource Information System (MNR)
2005	Conservation of Alfred Bog (MNR, MOE, MMAH)
2004	Environmental Monitoring (MOE)
2003	Ontario's Living Legacy (MNR)
2002	Oak Ridges Moraine Strategy (MMAH)
2001	Eastern Massasauga Rattlesnake Project for Highway 69 Reconstruction (MTO)
2000	Septic System Program (MMAH)

1.9 Education and Outreach

The Environmental Commissioner of Ontario reaches out in many ways to make the *Environmental Bill of Rights*, *1993* (*EBR*) toolkit easily accessible to the Ontario public.

This year we celebrated the *EBR*'s 20th anniversary with a day-long conference at Hart House in Toronto, followed by an evening reception at Queen's Park. We also released a graphic booklet featuring inspiring stories of real change brought about by Ontarians using the *EBR* over the past 20 years. As well, we launched a video contest, inviting creative minds to illustrate and sum up the *EBR*'s benefits in two minutes.

As in past years, our website – www.eco.on.ca – remains the main source of information about the *EBR* and the activities of the ECO. We also provide a searchable database allowing visitors to access thousands of articles published by our office at www.ecoissues.ca.

The ECO maintains four Twitter accounts: official ECO articles and news (@Ont_ECO); Commissioner Miller's personal account (@EcoCommish); Environmental Registry postings of interest (@EBR_EnvRegistry); and Climate and Energy tweets (@Ont_ECO_CO2NRG). The public can also follow the ECO through our blog and YouTube channel.

Every year, our Public Information and Outreach Officer handles a wide range of public inquiries on a variety of environmental concerns, including energy conservation and climate change, and answers questions from members of the public who are interested in exercising their rights under the *EBR*. During the 2013/2014 reporting year, over 1,600 enquiries were handled.

The ECO also manages an active presentation and exhibit outreach program. For example, the ECO staffs an exhibit with an interactive information centre at many conferences, symposia and other events. This year the ECO also held a half-day *EBR* training workshop in Toronto, and is planning additional training events in other Ontario locations. The Commissioner himself maintains a busy speaking schedule; a typical week might include a CBC Radio Sudbury interview, a presentation to the Law Society of Upper Canada, a phone interview by Grade 9 students and a keynote address to a conservation group in the Kawartha Lakes.

The ECO is always interested in sharing information about the *EBR* with new audiences. The ECO is happy to offer overview presentations about the *EBR* to audiences of all kinds, including university, college and school classes, as our staff schedules and outreach budget allow. For more information, contact us at commissioner@eco.on.ca.

1.10 The Environmental Commissioner of Ontario's Annual Site Visit

Throughout the year, the Environmental Commissioner makes many presentations, speeches and appearances across the province. In addition, Commissioner Miller tours a different part of Ontario for a few days each summer to learn about the environmental issues, challenges and successes unique to that particular region. These site visits give him the opportunity to meet with government staff, industry representatives, environmental organizations and the public. He also gets to see – firsthand and on the ground – the results of local research, conservation and environmental initiatives. These trips provide the office of the ECO with a broader and more informed perspective when reporting on issues in our annual reports. Past site visits have included tours of: the electric power generating facility in Thunder Bay; conservation lands on Pelee Island; a Niagara Falls landfill that converts landfill gas to energy; research projects in Algonquin Provincial Park; and Severn Sound, where the Commissioner learned about the success of the *Severn Sound Remedial Action Plan*.

On this year's site visit, Commissioner Miller visited parts of the Region of Waterloo and the County of Wellington. Highlights of the Environmental Commissioner's June 2014 trip included:

- Touring the *rare* Charitable Research Reserve in Cambridge and learning from staff about its conservation programs, research studies and education outreach;
- Meeting students and professors of the University of Waterloo's Faculty of Environment to hear about their research on the Ring of Fire, water governance, adaptation to climate change, planning healthy communities, the market value of green homes, consumer adoption of residential ground source heat pumps, and advances in conservation and restoration ecology; and
- Touring a rehabilitated limestone quarry at Fletcher's Creek Ecological Preserve in Puslinch with representatives of The Ontario Aggregate Resources Corporation and Dr. Paul Richardson, who is researching the potential for alvars to serve as target ecosystems in quarry rehabilitation.

Commissioner Miller sincerely thanks everyone he met during the visit for taking the time to share their research and knowledge with him.

PART 2

THE ENVIRONMENTAL IMPACTS OF AGRICULTURE

The Ontario Ministry of Agriculture and Food (OMAF) operates with a mandate to oversee our province's food production system, from farm to table. Besides being vital to our basic health and welfare, food production has significant impacts on Ontario's culture, economy and environment.

In this part of the Annual Report, the ECO examines several reasons for both concern and for optimism in the world of Ontario agriculture. The areas of concern addressed in this part include: the growing problem of pollinator declines and the possible role of neonicotinoid pesticides; and the introduction to Ontario farms of genetically engineered alfalfa without a full provincial assessment of its potential environmental, social and economic impacts.

This part also highlights two areas for optimism. The ECO reviews the recent *Local Food Act, 2013* and is encouraged by the government's recognition of the importance of promoting local food and its potential for significant environmental and social benefits. The ECO also profiles three Ontario farmers who show inspiring leadership in the area of soil health. These farmers demonstrate that an emphasis on soil health can have both environmental and economic benefits.

2.1 Building a Sustainable Food System from the Ground Up: Ontario's New *Local Food Act, 2013*

Food is much more than simply something to eat. Food plays a central role in the lives of Ontarians. For many of us, food provides a direct connection to our family heritage and cultural roots, while reflecting contemporary values, income and lifestyle choices. Food is also one of the most fundamental ways individuals can connect to the natural environment.

The various global and local processes that make up the "food system" – from food production to food processing, distribution and waste management – are so integrated into daily life, it can be easy to overlook their profound impact on communities, the economy and the environment.

For example: improperly managed manure, fertilizer and pesticides can result in contamination of soil and water; rearing livestock and other agricultural activities have led to deforestation and land degradation in many parts of the world; and shipping food around the globe releases significant volumes of greenhouse gases (GHGs) and other air pollutants into the atmosphere each year.

Conversely, food systems offer many potential benefits, including environmental advantages. For example, many farmers provide stewardship services that support and enhance surrounding ecosystems, such as providing and protecting species-at-risk habitat. There is growing recognition that vibrant localized food systems help foster community resiliency – the ability of a society to withstand and recover from stresses. Perhaps most fundamentally, exposure to and interaction with one's local food system enhances environmental literacy, which can improve one's understanding of the natural environment and the human impact upon it.

In recent years, there has been growing interest in the effects of the food system on the local and global environment, as well as public health and social equality, which has led many to consider ways to create a more sustainable food system. At its core, sustainable food systems are those that protect and further the ecological, social and economic values of the community. Creating a more sustainable food system, in Ontario and around the world, will require governments and communities to address a number of challenges, including:

- Reducing the environmental impacts of the food system, including reducing chemical and petroleum inputs, minimizing GHG emissions, and maximizing the carbon storage potential of soils;
- Ensuring fair treatment and sufficient wages for all workers throughout the food system;
- Ensuring the humane treatment of livestock;
- Providing access to safe, healthy food for all; and
- Educating the public about the food system, food choices and nutrition.

As part of an expanding conversation about how to build this more sustainable food system, the potential role of "local food" has emerged as one recurring theme. Ontario formally joined this conversation in 2013 with the creation of the *Local Food Act, 2013*. As discussed below, choosing local food over imports may help address some of the challenges identified above.

The *Local Food Act, 2013*

In November 2013, Ontario passed the *Local Food Act, 2013*, a law intended to "foster successful and resilient local food economies and systems in Ontario, help increase awareness of local food in Ontario and develop new markets for local food." The law defines local food as food produced or harvested (or containing ingredients produced or harvested) in Ontario.

The main mechanism for achieving the Act's objectives is the establishment of aspirational goals or targets by the Minister of Agriculture and Food. The legislation currently identifies three defined areas for which the Minister is required to set targets or goals:

1. Improving food literacy in respect of local food;
2. Encouraging increased use of local food by public sector organizations; and
3. Increasing access to local food.

Goals or targets must be established within one year after the day the paragraph setting out the area comes into force. Paragraph 1 came into force January 31, 2014; Paragraphs 2 and 3 have not been proclaimed into force as of July 2014.

The Act requires the Minister to consult with interested organizations before establishing or amending a goal or target, which must then be published on a Government of Ontario website along with a summary of the information relied upon in establishing the objective. In order to assist the Minister in establishing and achieving the goals or targets, the Act creates certain obligations for public sector organizations (e.g., ministries, municipalities, universities, hospitals) to provide information to the Minister upon request.

The Minister is required to prepare an annual report detailing the government's activities with respect to local food, including established goals or targets and the progress made in achieving them. These reports must also be published on a government website. In addition, the Act establishes the first week of June as "Local Food Week."

In anticipation of the passage of the Act, the government announced the creation of a Local Food Fund, which will distribute $30 million over three years to create jobs and support local food projects in Ontario. Funds will be distributed to projects that: market and promote local food; strengthen regional and local food networks; and use new and innovative equipment and processes to boost the supply, quality, availability and distribution of local food.

Despite the broad and admirable purposes of the *Local Food Act, 2013*, the actual outcomes of the legislation will depend heavily on the goals or targets set by the Minister and the level of commitment to implementing measures to achieve those goals. The Ministry of Agriculture and Food's Local Food website suggests a ministerial focus on fostering the local food system and economy largely through public outreach and by expanding institutional local food procurement policies.

There are several additional issues that were not addressed in the Act, despite calls from many food, agricultural and environmental organizations. These issues include: the creation of direct mechanisms of support for local farmers; mechanisms to address systemic issues that currently make it difficult for some Ontario farmers to reach a wider provincial market; and incentives for environmentally sustainable production methods.

The Benefits of Local Food

Building a more sustainable food system is a complicated undertaking, subject to much debate. It can be tempting to use "local" as a proxy for "sustainable;" while locally produced food *can* be more sustainable than imports, the question of sustainability encompasses many other factors relating to production and distribution methods. Nonetheless, increasing the availability of locally produced foods in the Ontario market can bring some substantial environmental benefits, contributing toward the development of a more sustainable food system.

Reducing Travel-related Greenhouse Gas Emissions

One of the most intuitive environmental benefits of replacing imports with more locally produced food is the resulting reduction in GHG emissions from transportation. The impact of "food miles" – the distance food travels from the place of production to consumption – can be considerable. For example, a study by the non-profit group FoodShare Toronto concluded that the carbon dioxide emissions from the seven imported foods studied were almost 100 times higher than the local counterparts; a similar study by the Region of Waterloo Public Health found that the GHG emissions of the top ten imported foods with the highest GHG emissions were about 289 times higher than the locally sourced options. Inevitable research limitations, as well as potential biases (e.g., using a limited number of products, focusing on very local foods, etc.), mean these studies do not provide a complete picture of the differential impact of all imported foodstuffs as compared to those produced in Ontario. They do make it clear, however, that the difference in GHG emissions from local versus imported items can be several orders of magnitude.

The food miles approach can over-simplify the GHG contribution of a product by ignoring the total lifecycle emissions. In this respect, some studies have found cases where certain imported foods produced fewer emissions overall than local counterparts (particularly where local heated winter storage is required). Regardless, where production methods are similar, or when local products are in season, food grown close to home will usually result in lower total GHG outputs than food shipped from distant destinations.

Creating Resilient and Food Secure Communities

Strong local food systems are an important component of resilient, food-secure communities. The concept of ecological resilience was originally developed to describe the ability of a system to tolerate disturbances without collapse and to ultimately recover from disruption. This concept has evolved to refer to social resilience as well: the ability of human communities to adapt and recover from major disruptions, including environmental, social, economic and political changes. In the context of food systems, resilience relates to the concept of food security, which refers to a state where all people have secure access to sufficient, safe and nutritious food to maintain a healthy and active life.

A 2008 Toronto Public Health report estimated that there is only three days' worth of fresh produce available in Toronto – the entry point for most of Ontario's food – at any given time. This reveals a critical weakness in Ontario's food system. Millions of people are dependent on a near constant flow of food imported from all over the world; if our international border was closed to trade, even temporarily, the city would run out of fresh food very quickly. The situation may be even more precarious for smaller urban and more rural areas that are farther removed from the international supply chain. Because localized food chains tend to be much shorter and less complex than international food chains, there are fewer opportunities for the chain to breakdown; accordingly, communities that produce a diversity of products

locally are more resilient in the face of outside emergencies.

Local food systems also encourage (although by no means require) the cultivation of crops best suited to a particular climate and microclimate, as well as products that are poorly suited to extended periods of travel prior to consumption. This can include heritage or heirloom varieties that may not be widely grown. In this respect, the improved biological and nutritional diversity of a robust local food system also enhances resiliency.

Building Environmental Literacy

Supporting the development of a strong local food system presents an exceptional opportunity for wider community education about a range of important environmental issues connected to food.

In a society grown accustomed to year-round availability of almost every fruit and vegetable, something as simple as highlighting locally grown items through in-store campaigns can educate consumers about the growing seasons of different crops, as well as the climate conditions upon which they depend. Restaurants that emphasize a seasonal and locally-sourced menu also serve an educational function in this respect. This type of passive education builds basic environmental literacy among consumers.

There can be more far-reaching educational influences as well: a strong network of local food producers, and increased visibility of these producers in the marketplace, allows and encourages people to learn more about how and where their food is produced. Recent years have seen profound growth in farmers' markets and Community Supported Agriculture programs (where customers commit to a set fee prior to the growing season in exchange for regular allotments of the harvest). Both of these sales models directly connect farmers and consumers, creating unparalleled opportunities for people to learn about how their food is produced and the environmental impacts of that production. Recognizing the value of these relationships, several jurisdictions in Canada have adopted "Open Farm Day" as a public engagement tool to encourage consumers to visit farms to learn about where and how their food is produced (and to ultimately urge them to support local farmers). This not only results in a more informed public, but has the potential to motivate their involvement in issues relevant to the food system and its impact on the environment.

ECO COMMENT

Creating a more sustainable food system will ultimately require more than simply increasing the amount of locally produced foods available to consumers, since the sustainability concept engages a host of complex issues beyond place of food origin. Nonetheless, encouraging greater reliance on Ontario-grown food holds potential for some significant environmental benefits, among other advantages. This is not to say that people should not have their morning coffee, or occasionally enjoy the bananas and avocados that cannot be grown here. Rather, increasing the focus on food produced as close to market as possible is one part of creating a food system that encourages consumers to make more sustainable choices.

In this wider context, the *Local Food Act, 2013* is an important starting point for a much larger conversation and the ECO is pleased to see Ontario become the first province to introduce such an act. By enhancing the profile of Ontario-grown and/or produced food in the marketplace, and raising the visibility of Ontario food products and producers within Ontario, the Act acknowledges the importance of food and farms in Ontario. However, the Act is but one small agent of change where so much more is ultimately needed.

Although many issues, including environmental sustainability, are largely unaddressed by the law, the framework for establishing goals and targets has the potential to create a strong foundation for a vibrant local food system. The test will be whether the Minister seizes the opportunity to establish and implement quantifiable and ambitious targets. The areas identified for goal-setting raise some important issues; of special interest to the ECO is improving food literacy with respect to local food. This issue, in particular, has the potential to launch the necessary wider conversation about building a more sustainable food system in Ontario.

For ministry comments, please see Appendix C.

2.2 Plight of the Pollinators

There is growing global alarm over declining populations of honey bees and other pollinators. While it is uncertain whether these declines constitute a "pollinator crisis," they cannot be taken lightly. Pollinators are integral to our environmental and socio-economic welfare, and their loss would be nothing short of catastrophic.

In Ontario, most fruits, vegetables, forages (e.g., alfalfa, clover) and oilseeds (e.g., canola, sunflower) rely on animal pollination. Globally, pollinators are involved in an estimated 35 per cent of food production, and 87 of the world's major food crops depend on pollinators to some extent. Over the last half century, pollinator-dependent agricultural production has increased by more than 300 per cent, and the total economic value of pollination in agricultural production has been estimated at $213 billion.

Pollinators of all kinds – not just honey bees – play a vital role in maintaining biodiversity and ecosystem stability. Wild pollinators, including bees and other invertebrates (e.g., moths, flies, wasps, beetles, butterflies), as well as vertebrate pollinators (e.g., bats, birds), have a key function in the fertilization of both crops and non-crop flowering plants. By one estimate, 87.5 per cent of the world's flowering plants rely on pollinators for reproduction. Losing a species

within a pollination network may trigger further reductions in biodiversity that cascade throughout the food chain.

Pollinator Populations are Declining

In recent years, substantial abnormal declines in honey bee (*Apis mellifera*) populations have been observed, notably in North America and Europe. These observations include above-average colony losses in Ontario: over the last eight years, the average overwintering loss of bee colonies in Ontario has been approximately 34 per cent – more than double the 15 per cent winter loss rate that is considered to be acceptable by apiculturists (see Figure 2.2.1).

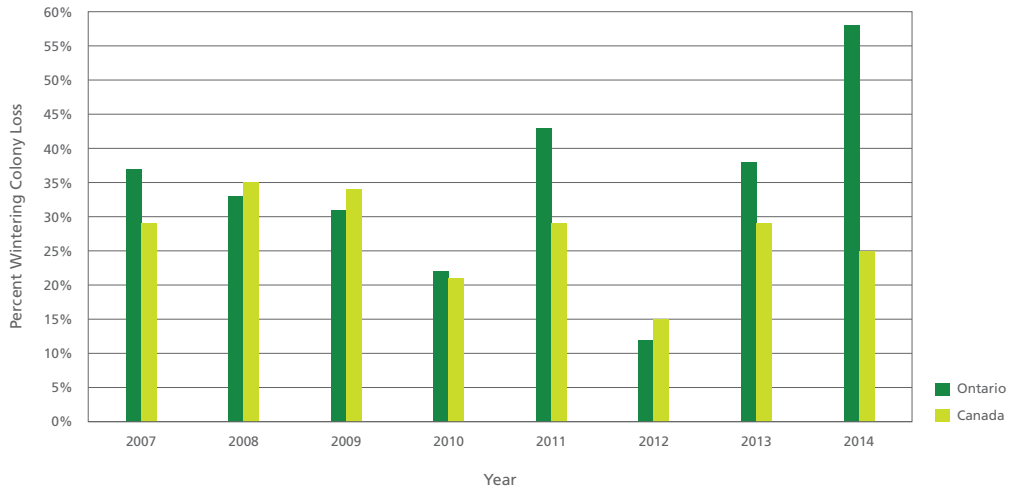


FIGURE 2.2.1. Overwintering bee losses in Ontario and Canada (Source: Canadian Association of Professional Apiculturists).

In addition to these overwintering losses, a number of other large-scale bee deaths have been reported in Canada in recent years. In the spring and summer of 2012 and 2013, Canada's Pest Management Regulatory Agency (PMRA) received numerous reports of honey bee mortalities from beekeepers in Ontario, Quebec and Manitoba.

Assessment of the health and abundance of wild pollinator populations is hampered by an absence of monitoring and data collection. However, evidence is emerging that many wild pollinators, particularly bumble bees, are in decline. The Committee on the Status of Pollinators in North America has stated that long-term population trends are demonstrably tipping downward for several wild bee species, as well as for some butterflies, bats and hummingbirds. Evidence of declines among insectivorous birds may also suggest broader negative trends in insect populations.

A number of factors are believed to be at play in driving pollinator declines, including pathogens, parasites, agrochemicals, habitat degradation and loss, decreased resource diversity, climate change and invasive species. Researchers have determined that honey bee losses are likely the result of several of these factors interacting to make colonies more susceptible to disease.

Lately, however, the role of pesticides in pollinator decline is receiving increasing attention. The ECO first highlighted the emerging connection between pollinator declines and pesticide use in Part 4.6 of our 2008/2009 Annual Report. In recent years, particular scrutiny has fallen on a class of pesticides called neonicotinoids.

Growing Concern about Neonicotinoids

Neonicotinoids are a class of insecticides that includes such products as imidacloprid, clothianidin, thiamethoxam, thiacloprid and acetamiprid. The use of neonicotinoids has increased significantly since their introduction in the 1990s. They are now the most widely used insecticides in the world, representing more than a quarter of the global market share. In Ontario, neonicotinoids are registered (i.e., permitted) for use on all field crops except forages, and are frequently used on corn, canola, dry beans and soybeans.

Neonicotinoids act systemically, meaning that they diffuse throughout the tissues and sap of treated plants, and are found in pollen, nectar and guttation droplets (i.e., small drops of liquid exuded by some plants). They are most commonly used as seed treatments, although they may be applied in other ways, such as foliar sprays and soil additions. Pollinators are primarily exposed to neonicotinoids through nectar, pollen and, notably, contaminated dust generated during the planting of treated seeds. Pollinators may also transport pollen or other materials containing neonicotinoids back to the hive, allowing for continued exposure.

2.2.1 Habitat Regulation for the Endangered Rusty-patched Bumble Bee

The rusty-patched bumble bee (*Bombus affinis*) was once the fourth most common bumble bee species in southern Ontario. However, the species has been in serious decline, likely beginning in the mid-1990s, and is now virtually absent throughout much of its historic range, which spans from southern Ontario and southwestern Quebec, south to Georgia and west to the Dakotas. In the past decade, the only part of Ontario in which the rusty-patched bumble bee has been documented is Pinery Provincial Park. The most pressing threats to the species include pesticide use, disease, and habitat loss and fragmentation.

Due to its drastic decline, the rusty-patched bumble bee was listed as endangered under Ontario's *Endangered Species Act, 2007* (*ESA*) in 2010. Under the *ESA*, the Ministry of Natural Resources (MNR) is required, in certain circumstances, to make a habitat regulation, which defines where the Act's habitat protections will apply for a given species.

In December 2013, MNR finalized the habitat regulation for the rusty-patched bumble bee (Environmental Registry #011-9021). The regulatory provisions apply to the area

of Ontario south of Algonquin Provincial Park, and cover nesting or hibernation sites and the surrounding 30-metre area. The regulation also applies to certain natural areas (namely prairies, savannahs, woodlands, marshes, bogs, forests, sand dunes, old fields or similar areas) used by a rusty-patched bumble bee for any purpose. Natural areas that provide suitable foraging conditions are also protected up to 1,000 metres away from an area used by a rusty-patched bumble bee, provided that specific criteria are met.

Additional guidance provided by MNR notes that activities in regulated habitat are allowed if the function of the area is maintained, and if individuals of the species are not killed, harmed or harassed. MNR notes that the following activities are generally not compatible with the bee's regulated habitat: large-scale construction; significant removal of flowering plants, woody debris, and nesting or hibernation sites; and "broad-scale application of herbicides or pesticides (particularly neonicotinoids) within or near regulated habitat, including areas where drift into regulated habitat may occur."

The regulation does not apply, however, to areas used in the past year for: pasture; farm animals; agricultural crops; or growing a garden or lawn. While this exclusion appears reasonable with respect to foraging areas, the ECO is concerned that the regulation permits damage to or destruction of any nesting or hibernation sites that might occur in these areas. This exemption is particularly troubling given the rarity of the species, which is apparently confined to Pinery Provincial Park – a thin strip of land along the shore of Lake Huron and entirely surrounded by agricultural lands.

These pesticides act as neurotoxins in the insect nervous system and are toxic in very small quantities relative to other types of pesticides. Exposure to neonicotinoids has been linked to both lethal and sublethal effects on pollinators. For example, there is now clear evidence that acute exposure to neonicotinoid-contaminated dust is linked to mass bee deaths observed during the planting of seed-treated crops. The PMRA's investigation into the 2012 and 2013 bee kills in Canada concluded that neonicotinoids were a contributing factor in many cases. Accordingly, in 2013, the PMRA declared that "current agricultural practices related to the use of neonicotinoid-treated corn and soybean seed are not sustainable."

A number of studies have also concluded that neonicotinoids can cause adverse sublethal effects on honey and bumble bees, such as: impaired memory and learning; interference with orientation, homing, mobility and other foraging behaviours; reduced development, reproduction and queen production; and impaired immune function and increased susceptibility to pathogens. However, further research is needed to ascertain whether these effects are expected at the exposure concentrations that are experienced by pollinators in the field. Even with lower concentrations, cumulative and/or synergistic effects may cause impaired colony function or even failure. For example, one recent study concluded that chronic sublethal stress can be a cause of honey bee colony failure, noting that if many bees in a colony become impaired, it may lead to a cumulative effect on normal colony function.

While the impact of neonicotinoids on bees has received a great deal of attention, honey bee declines may be a warning sign of a larger ecological problem. Troubling questions are being raised about the broader environmental effects of these pesticides. Only a small portion of the active substance is taken up by plants in seed-treated crops, and the rest enters the environment. This is of concern because neonicotinoids are not only persistent in soil and water, but are also water soluble and highly mobile within ecosystems.

As a result, neonicotinoids may accumulate in soil, potentially having adverse effects on soil ecosystems and creating a likelihood of uptake by subsequently planted crops and wild plants. They may also migrate into ground and surface water. Runoff and spray drift can have an impact on aquatic invertebrates in streams and ponds. In one California study, imidacloprid was detected in 89 per cent of surface water samples – with 19 per cent of samples exceeding aquatic invertebrate toxicity guidelines. A recent study in the Netherlands demonstrated that aquatic macro-invertebrates are less abundant in surface water with higher imidacloprid concentrations, suggesting potential consequences for the food chain and ecosystem functions. Finally, neonicotinoids can pose serious risks to birds and mammals that consume treated seeds.

Action to Protect Pollinators from Neonicotinoids

In September 2013, the PMRA issued a Notice of Intent that outlined a series of proposed federal actions in response to the agency's determination that the current neonicotinoid practices are not sustainable. The PMRA announced that for the 2014 planting season, it would implement additional protective measures, such as: requiring the use of dust-reducing seed flow lubricants; setting safer seed planting practices; and placing warnings on pesticide and seed package labels. It will also require industry to provide additional information to support the position that continued neonicotinoid treatment is necessary on up to 100 per cent of corn and

50 per cent of soybean seed. The PMRA is in the process of re-evaluating three neonicotinoid insecticides (clothianidin, thiamethoxam and imidacloprid), and states that it will take action if there are reasonable grounds to believe that the health and environmental risks are unacceptable. An interim report is expected by 2015.

Ontario has started to take note of this issue as well. In March 2013, the Ministry of Agriculture and Food (OMAF) issued a document that included a series of suggested best practices to help reduce the risk of bee kills when planting (e.g., limiting the amount of seed lubricant used, altering the timing of planting, etc.). The ministry document also stated that "it is time to get back to integrated pest management" (see box, "What is Integrated Pest Management?"). In March 2014, OMAF released detailed direction on the use of planter deflectors to mitigate dust drift.

What is Integrated Pest Management?

Integrated pest management (IPM) is an ecological approach to pest control that uses a variety of management measures to prevent economic loss. The foundation of IPM is the identification and ongoing monitoring of pests and beneficial species.

IPM emphasizes preventing pests from becoming a threat through cultural control methods, including crop rotation, the selection of proper planting sites, and the cultivation of pest resistant crop varieties. If monitoring reveals that preventative measures are ineffective and pest populations reach a threshold at which they become an economic threat, then a variety of additional management options can be undertaken, including biological, mechanical and chemical controls. Control techniques with high environmental impact, such as the wide application of non-specific pesticides, are only employed as a last resort.

Ultimately, IPM encourages the more efficient use of agrochemicals and other inputs – which maintains economic returns – while minimizing the adverse effects of pesticide use.

In July 2013, the Ontario government announced that it would be establishing a Bee Health Working Group with a mandate to develop and support strategies to mitigate the risk of exposure to neonicotinoid seed treatments on corn and soybeans. The group's report was released in March 2014, and included a series of 13 "options for action," along with benefits and considerations. The options identified by the working group are primarily focused on improvements to growing practices, technical options to reduce the production of and exposure to contaminated dust, and improved training for users of seed treated crops. The report's recommendations also include developing a strategy on pollinator friendly habitats.
The working group's report states that some members of the group endorsed a temporary ban on the use of neonicotinoids, noting that this course of action would be consistent with the precautionary approach and action taken by other jurisdictions. However, OMAF stated that it would "continue to look to the federal government, the regulator of pesticides in Canada, to provide evidence-based direction on a national approach to neonicotinoid use."

Following the release of the working group's report, the Ontario government stated that it is addressing pollinator health issues through a range of actions, including committing more than $1.2 million to research bee health and best management practices in field crop production, and establishing a new Ontario Pollinator Health Working Group to address concerns regarding all pollinators in the province.

Other jurisdictions are taking more aggressive action on neonicotinoids. Following earlier restrictions on neonicotinoids in Germany, France, Italy and Slovenia, the European Union adopted a proposal to restrict certain uses of clothianidin, imidacloprid and thiamethoxam for a period of two years beginning December 1, 2013. This decision was made in response to a report by the European Food Safety Authority, which identified a number of "high acute risks" for bees with respect to the three pesticides.

In the United States, legislation has been introduced in Congress that would suspend the registrations of neonicotinoids and ban new registrations of any pesticide for use on bee-attractive plants until the U.S. Environmental Protection Agency determines that the insecticide will not cause "unreasonable adverse effects" on pollinators, including native bees, honey bees, and other beneficial insects, as well as birds and bats. The proposed law would require a monitoring program for native bees, with annual reporting obligations. In addition, in August 2013, the U.S. Environmental Protection Agency announced new labelling requirements for neonicotinoids, including a bee advisory that prohibits use of some neonicotinoid pesticides where bees are present.

The Regulation of Pesticides in Ontario

Pesticides are regulated by both the federal and provincial governments. Pesticides are registered federally under the *Pest Control Products Act* (*PCPA*) after being evaluated by the Pest Management Regulatory Agency (PMRA) of Health Canada, which assesses possible health and environmental effects. As is the case with several neonicotinoids, the PMRA may grant conditional registration of pesticides (allowing the pesticide to be used for a limited period of time), with the potential for full registration once additional data requirements are met.

The Ontario government classifies federally registered pesticides for sale and use in the province. Ontario is able to regulate the sale, use, storage, transportation and disposal of pesticides under the *Pesticides Act* and O. Reg. 63/09. The Ontario government has the ability to prohibit the use of a registered pesticide within the province or impose more restrictive conditions on the use of the product than those under the *PCPA*. For example, in 2009, Ontario enacted a ban on the sale and use of pesticides for cosmetic purposes (see Part 4.6 of the ECO's 2008/2009 Annual Report).

ECO COMMENT

The ECO is encouraged that the Ontario government is recognizing the importance of pollinators and the serious nature of the threats they face. Recognition of the problem, however, is only the beginning. The Ontario government needs to take swift action and commit dedicated resources in order to avert a potential ecological and economic crisis. The steps taken today to protect pollinators will determine the state of our biodiversity and food security for years to come.

There is now abundant evidence linking bee kills to neonicotinoid-contaminated dust generated during the planting of seed-treated crops. The ECO is hopeful that the federal government's new dust mitigation requirements that apply to the use of neonicotinoid-treated seed will be effective. However, if these measures prove to be insufficient, restrictions on seed treatment with neonicotinoids should be considered by the Ontario government for the 2015 planting season.

The Ontario government's commitment of funds for research on bee health is commendable. However, the government should clarify whether it will provide ongoing funding, and it should publicly articulate its research priorities. In particular, further research is needed with respect to the risks posed to all pollinators by field-realistic exposure levels of neonicotinoids.

While these first steps are encouraging, the Ontario government's relatively narrow focus on pollinators fails to address the broader effects of neonicotinoids in the environment. Questions about the wide-ranging ecosystem impacts of neonicotinoids warrant immediate attention. The ECO strongly urges OMAF and the Ministry of the Environment to undertake environmental monitoring to determine the prevalence and effects of neonicotinoids in soil, waterways and wild plants.

The ECO commends OMAF for acknowledging the importance of protecting all pollinators in the province. There is a pressing need for monitoring wild pollinators, such as butterflies, moths, wild bees and bats. Without this knowledge the Ontario government will not have the ability to recognize, let alone prevent or mitigate, a pollinator crisis. The ECO urges OMAF and the Ministry of Natural Resources to commit to a broad-scale monitoring program for wild pollinators, and ensure adequate funding. Such a program could also be implemented as a component of a larger provincial biodiversity monitoring initiative; the ECO has repeatedly advocated for the government to undertake biodiversity monitoring (see Part 4.1 of the ECO's 2012/2013 Annual Report). This work is also an important component in meeting Canada's commitment to the international Aichi Biodiversity Targets, which are to be achieved by 2020. The ECO also reminds the government that any future strategy for pollinator health should be posted on the Environmental Registry for public notice and consultation, as this would clearly constitute an environmentally significant policy.

Although reducing exposure to neonicotinoids presents an immediate challenge, fully protecting our pollinators requires a more comprehensive and long-term approach that accounts for the influence of additional contributing factors, such as habitat loss, nutrition, pathogens, exposure to other agrochemicals, etc. Focused research, along with ongoing monitoring of pollinator populations, should provide the baseline data necessary to develop an effective action plan. Since agricultural management practices are bound to be a crucial element of such a strategy, the ECO is encouraged to see OMAF's apparent renewed interest

in integrated pest management. The ECO hopes that the ministry will continue to build on and actively promote the integrated pest management concept and to discourage (and control, if necessary) the broad-scale prophylactic use of pesticides.

For ministry comments, please see Appendix C.

RECOMMENDATION 1

The ECO recommends that the Ministry of Agriculture and Food and the Ministry of the Environment undertake monitoring to determine the prevalence and effects of neonicotinoids in soil, waterways and wild plants.

2.3 Introducing Genetically Engineered Alfalfa without Ecological Assessment

Farmers have always used selective breeding techniques to increase the prevalence of desirable traits in their crops. Over the last two decades, genetic engineering – introducing a new segment of DNA into the genetic sequence of an organism – has emerged as a novel method of creating crops with particular characteristics, while surmounting some of the limitations of traditional breeding. Proponents of genetically engineered (GE) crops assert that their use will increase yields, decrease agrochemical use and help meet the global food demand. However, there is ongoing debate and uncertainty about the validity of these claims, as well as about the environmental, health and socio-economic risks of GE crops.

Several field crops, including canola, corn, soybean and sugarbeet, have been designed to better tolerate certain herbicides, allowing farmers to eradicate a broad spectrum of weeds without harming the crop itself. For example, a variety of crops have been engineered to tolerate the popular broad-spectrum herbicide glyphosate (see Chapter 2.11 of the ECO's 2011/2012 Annual Report, Part 2).

On July 24, 2013, two applicants submitted an application for review to the ECO, requesting new regulations under the *Environmental Assessment Act* (*EAA*) that would make activities related to the distribution and/or sale of genetically engineered glyphosate-tolerant alfalfa subject to the Act. The ECO forwarded this application to the Ministry of the Environment (MOE).

Regulation and Approval of Genetically Engineered Alfalfa

GE crops are regulated at the federal level. The Canadian Food Inspection Agency (CFIA) and Health Canada are responsible for the regulation of what the CFIA calls "plants with novel traits" (PNTs), which include GE plants. The CFIA assesses the environmental safety of GE plants based on five criteria:

- the potential of the plant to become a weed of agriculture or be invasive of natural habitats;
- the potential for gene flow to sexually compatible plants whose hybrid offspring may become more weedy or more invasive;
- the potential for the plant to become a plant pest;
- the potential impact of the plant or its gene products on non-target species, including humans; and
- the potential impact on biodiversity.

The CFIA will approve the unconfined release of a PNT if it determines that the release poses a "minimal apparent risk" to the environment (conditions may be imposed on the release to minimize risks). Conversely, the CFIA will refuse approval if the release poses an unacceptable risk to the environment.

In 2005, GE glyphosate-tolerant alfalfa underwent food, feed and environmental safety assessments by the CFIA and Health Canada and received authorization for release. In April 2013, one variety of GE alfalfa was registered by CFIA under the federal *Seeds Act*, allowing the seeds to be commercially sold in Canada. Four additional varieties of GE alfalfa were registered in August 2013.

The Ontario government does not play a role in the commercialization or regulation of GE crops.

Environmental Assessment in Ontario

Environmental assessment (EA) is a process that facilitates informed planning and provides a structured decision-making framework for certain undertakings that may have environmental effects. In Ontario, EA is governed by the *EAA*, which was enacted in 1975. The purpose of the Act is "the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment." The "environment" is defined very broadly in the Act – it not only includes air, land, water, and plant and animal (including human) life, but it also extends to social, economic and cultural conditions, and the interrelationships between these elements.

The Act primarily applies to undertakings by or on behalf of the provincial government, municipalities and other public bodies. The legal definition of "undertakings" includes more than just projects – its broad definition includes "enterprises" and "activities," as well as proposals, plans or programs related to such enterprises or activities. The Act can also apply to the private sector if undertakings are either designated in a regulation under the *EAA*, or if a proponent voluntarily agrees to undergo an EA. The EA itself examines factors such as: the

rationale for the undertaking and possible alternatives; potential environmental effects; and actions to prevent and mitigate environmental effects. The EA process also has requirements for public notice and consultation.

Request for a Provincial Environmental Assessment for GE Alfalfa

The applicants asserted that the distribution, sale and use of GE glyphosate-tolerant alfalfa would adversely affect the environment, or might reasonably be expected to adversely affect the environment, in a number of ways, including contaminating conventional alfalfa and adversely affecting biodiversity.

The applicants also argued that the introduction of glyphosate-tolerant alfalfa will increase the use of glyphosate and accelerate the development of herbicide-resistant weeds. The applicants cited research demonstrating that since the introduction of GE herbicide-tolerant crops, herbicide use has increased substantially, including a study that found that in the United States, between 1996 and 2011, herbicide-resistant crop technology led to a 239 million kilogram increase in herbicide use (mostly glyphosate), compared to the estimated herbicide use in the absence of herbicide-resistant crops. The applicants also provided research showing that similar increases in glyphosate use have occurred in Ontario.

Compounding these concerns, the applicants argued that there are limited prospects for remediating environmental impacts once they occur. Moreover, the applicants asserted that these potential environmental effects have not been properly assessed by the federal government, and that the federal approval process lacks transparency and accountability.

In addition to the environmental impacts, the applicants stated that contamination of conventional crops by GE alfalfa will negatively affect farmers who choose not to grow GE alfalfa, particularly those who must exclude the plant from their farms to maintain their livelihoods. For example, the applicants argued that the introduction of GE alfalfa will increase production costs for Ontario farmers, including increased costs for weed management and employing GE avoidance and mitigation practices, such as creating buffer zones and testing for GE contamination.

The applicants asserted that some farmers may simply abandon growing alfalfa due to the threat of contamination and fear of litigation over patent infringement if GE alfalfa is found in their fields. Further, the applicants stated that the legal framework is contradictory and unbalanced because there is no liability regime in Canada to compensate farmers if GE products infiltrate their land and crops.

The applicants also argued that the potential for contamination from GE alfalfa is a threat to organic certification and could ultimately reduce the prevalence of organic farming in Ontario. Further, they suggested that the potential for contamination might make it harder to sell the non-GE alfalfa, seed and products grown from seed in the organic and non-GE markets.

Finally, the applicants noted that mitigation strategies are limited, and that avoidance is largely out of the hands of the farmers who would be most affected by GE contamination. Therefore, the applicants asserted that a provincial EA that addresses social, economic and cultural impacts is required.

MINISTRY RESPONSE

On September 30, 2013, MOE informed the applicants that it had declined to undertake the review. The ministry stated that a new provincial regulation making activities related to the sale and distribution of GE alfalfa subject to the *EAA* would overlap with existing federal regulation; therefore, it stated that the public interest does not warrant the requested review.

The ministry noted that the CFIA and Health Canada are responsible for the regulation of GE crops, and provided a summary of the factors considered in the CFIA's environmental safety assessment and registration process. MOE stated that "plants with [genetically modified] traits cannot enter the marketplace unless the CFIA and Health Canada's assessment determines whether seeds and plants are safe for use as food, feed and release into the environment as other conventional plant varieties already being grown."

MOE also listed the various approvals granted for GE alfalfa at the federal level, including regulatory approvals by the CFIA and Health Canada in 2005, approval for use of glyphosate on GE alfalfa in 2012, and registration of one variety of GE alfalfa in April 2013.

The ministry did not comment on the validity of the applicants' broader concerns, or whether the federal assessment process was sufficient to address all of the issues that were raised in the application. MOE also provided no indication of any other regulatory mechanisms in place, federally or provincially, to address the applicants' concerns.

For the full text of the ministry decision, see our website at www.eco.on.ca.

ECO COMMENT

The ECO agrees with MOE's determination that it would not be in the public interest for the Ontario government to duplicate the federal approval process for GE alfalfa. The responsible federal agencies assessed the environmental safety of the GE alfalfa plant – including the potential for genetic contamination and potential impacts on biodiversity – and concluded that the plant poses a "minimal apparent risk" to the environment. Provincial ministries should be able to rely on the review process of one of its federal counterparts.

However, the applicants raised several valid issues that clearly fall outside the scope of the narrow federal safety assessment. Issues related to sustainable and organic agriculture, increased herbicide use, and related social and economic effects play no role in the federal approval process for GE crops. These important environmental and socio-economic concerns should not be ignored by the Ontario government. The applicants also voiced concerns regarding the lack of transparency and public participation in the federal approval process. The ECO is disappointed that MOE failed to address any of these issues in its response to the application.

In theory, Ontario's *EAA* has great potential to encourage informed, responsible and sustainable public planning; in practice, however, the government's increasingly narrow application of the Act significantly undermines this potential. The ECO has long called for the Ontario government to revive the original purpose of the *EAA*: the *betterment* of the people of Ontario. Although using the *EAA* to regulate the distribution and sale of GE alfalfa would be a novel application of the Act, consideration of the environmental, social and economic issues raised by the applicants

through an EA would be in line with the original purpose and intent of the *EAA*. Such a process would provide a measure of transparency and an opportunity for public participation, something that is severely lacking in the federal process. Input from the public and the province's farmers could help ensure that the decision to allow such activities is based on the best possible information.

Finally, the ECO believes that the cultivation of GE crops in general raises important environmental issues that warrant attention; for example, the ECO previously expressed reservations about glyphosate-resistant GE crops in our 2011/2012 Annual Report. The ECO encourages the Ontario government to play a more active role in regulating the sale and use of GE crops in the province, rather than simply following federal decisions that may not encompass provincial environmental goals and interests.

2.3.1 Agricultural Activities and Environmental Assessment

In addition to individual environmental assessments for specific undertakings, the *Environmental Assessment Act* also allows for Class Environmental Assessments (Class EAs), a streamlined, self-assessment process for defined classes of activities. Activities that fall within a Class EA may proceed if they follow the requirements set out in a Class EA document approved by the Minister of the Environment. According to the Ministry of the Environment, Class EAs generally apply to activities that have "predictable and manageable environmental effects." Ontario currently has 11 approved Class EAs for a variety of projects and activities, including forest management, mining, waterpower projects, and flood and erosion control.

Ontario has more than 50,000 farms, and more than five million hectares of land are used for agriculture. Agriculture is a massive undertaking that can affect many different aspects of the environment, including water quality, soil health, biodiversity, climate change and wildlife habitat. In order to address such issues, the Ministry of Agriculture and Food (OMAF) has established a variety of laws, regulations, best management practices (BMPs), protocols and factsheets. However, unlike other ministries that regulate industries with potential environmental impacts, OMAF does not have a Class EA that applies to agricultural activities. In fact, OMAF is currently exempt from the requirements of the *EAA*.

A Class EA for agricultural activities would provide OMAF with an opportunity to codify its BMPs and other requirements for agricultural activities that have environmental effects. A Class EA would also provide a formal opportunity to monitor these BMPs and requirements in order to assess and improve their effectiveness. Ultimately, a Class EA for agricultural activities would not only serve to enhance environmental protection, but would also increase transparency and public confidence in the agricultural sector.

For a more detailed review of this application, please refer to Section 2.1.11 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

2.4 Healthy Soils Yield Benefits for Ontario's Farmers

Soils as Living Systems

Soil health has generally been a low priority in modern agriculture, typically overshadowed by efforts to increase production and lower costs. This focus is beginning to change, however, as evidence of the benefits of healthy soils mounts in both the scientific literature and in the practical world of farming. A vital part of this new emphasis has been the growing recognition of soils as ecosystems. One teaspoon of native grassland soil can contain up to a billion bacteria, several kilometres of fungal threads (called hyphae), and thousands of protozoa (e.g., amoebae), as well as many of the other microscopic organisms that make up the foundation of what scientists call the "soil food web." This amazingly complex and dynamic ecosystem is responsible for such diverse functions as nutrient cycling, soil aggregation, toxicity reduction, and pest and disease suppression (see box, "Some Important Functions of the Soil Food Web").

The Natural Resources Conservation Service (NRCS), a branch of the U.S. Department of Agriculture, is a leader on soil health in the United States. The NRCS states: "managing for soil health … is mostly a matter of maintaining suitable habitat for the myriad of creatures that comprise the soil food web. This can be accomplished by disturbing the soil as little as possible, growing as many different species of plants as practical, keeping living plants in the soil as much as possible, and keeping the soil covered at all times." NRCS emphasizes that farmers applying these principles and techniques have reported consistently higher yields and greater drought resistance, as well as lower fertilizer and pesticide requirements. Other ways to improve and sustain soil health include: the application of manures and compost; including perennial forages in crop rotations; and the application of microbial foods and inoculants. Some studies have also suggested that minimizing the use of synthetic fertilizers and practicing integrated pest management may also contribute to soil health.

Ontario's Leaders in Soil Health

In Ontario, farmers' interest in soil health is growing and the province has a number of true leaders operating within the farming community. The three farmers profiled here have each taken a different route to optimizing soil health, and each has succeeded in his own way.

- Dan Konzelmann grows organically, which means that he cannot use any synthetic fertilizers or pesticides and that all his inputs (e.g., fish fertilizer, manures, microbial inoculants, etc.) are closely prescribed by the rules of organic certification.
- Dean Glenney is a conventional farmer who uses synthetic fertilizers and pesticides, but who does so within a system he calls "fencerow farming," which he characterizes as extremely protective of the soil food web.
- Joe Gorski employs an emerging approach known as "biological farming," which attempts to use the best of both the organic and conventional systems, but within a management framework that emphasizes greater attention to micronutrients, as well as the protection and enhancement of the soil food web.

All three farmers include corn and soybeans, the most common field crops in Ontario, as principal components of their rotations.

Some Important Functions of the Soil Food Web

Making nutrients available to plants. Bacteria and fungi consume dead organic matter. The nutrients from that organic matter ultimately become plant-available in the waste products of predator organisms, such as protozoa and nematodes, which eat these microbes. Most of this predation occurs in the plants' root zones. Another key process for making nutrients available is carried out by mycorrhizal fungi. This type of fungus colonizes plant root cells and then grows thread-like filaments, known as hyphae, out into the soil to scavenge for nutrients and water, which it exchanges with plants in return for carbon. Other processes by which various microbes increase nutrient availability include fixing atmospheric nitrogen and solubilizing phosphorus and other minerals.

Soil aggregation. The formation of aggregates in soil is a key benefit of a large and healthy food web. Aggregates are formed when microbes and earthworms secrete glues that bind tiny bits of mineral and organic matter together into little clumps; fungi then grow their hyphae in and around the small clumps to pull together larger clumps, or aggregates. These aggregates create structure in the soil; the spaces between them, created by their irregular shapes, hold air and water and house large numbers of microbes. Without these aggregates, the soil becomes compacted, difficult for roots to penetrate, closed to air and water infiltration and retention, and generally inimical to the soil food web.

Toxicity reduction. Some of the soil food web organisms are able to break down and render harmless many of the toxic pollutants that find their way into the soil, such as certain pesticides, petroleum hydrocarbons and solvents.

Disease and pest suppression. All soil food webs include disease organisms and pests (e.g., root-feeding nematodes). However, in healthy soils, the beneficial organisms greatly outnumber the harmful; moreover, they can actively suppress pests in a number of ways. For example, beneficial microbes can: out-compete pathogens for food; create a protective barrier around plant roots, excluding pests and disease organisms; or consume them as predators.

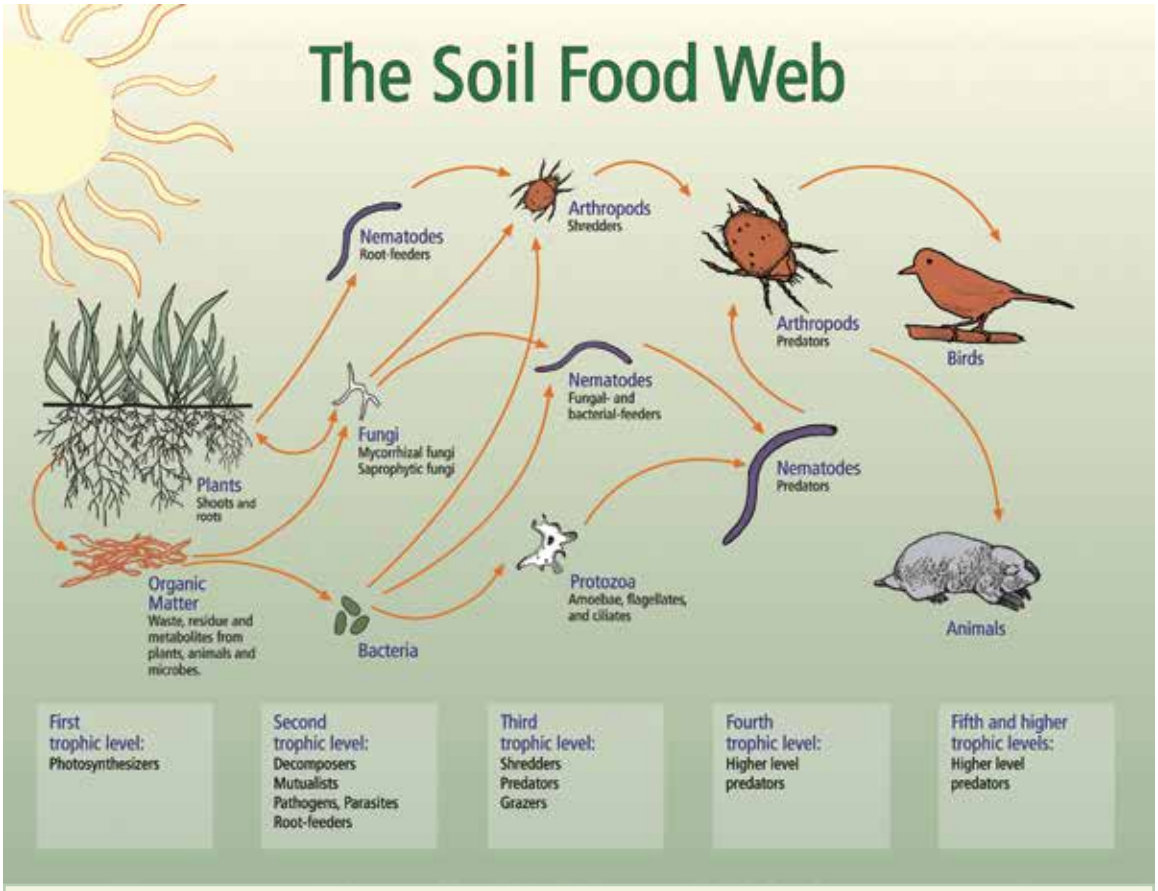


FIGURE 2.4.1. The soil food web. Bacteria and fungi are at the base of the soil food web and are the primary decomposers of plant and animal residues. They are consumed by larger organisms such as protozoa and nematodes (tiny worms), which are in turn consumed by even larger predators. At each level of the soil food web, predation ensures that nutrients are released in plant-available form. (Source: *Soil Biology Primer*, Soil and Water Conservation Society, 2000).

Dan Konzelmann – Organic Farming

Dan Konzelmann immigrated to Canada from Switzerland in 1996. He bought land near Wyoming, Ontario, and began farming using conventional methods. He had always been interested in environmental issues and when he began talking to a neighbour who was growing organically, it piqued his interest. In 1999 he took the leap and began the process of taking his corn-soybean-spelt rotation fully organic.

Konzelmann says that he struggled so much at the beginning, as the weed pressure grew year after year, that he feared that he would not make it as an organic farmer. He persevered, however, and he gradually learned how to use non-chemical methods to control weeds. In particular, he found that specific crop rotations reliably reduced the pressure from some of the most difficult weeds and that the others could be controlled through a combination of cover crops and well-timed shallow cultivation (i.e., mechanically raking the soil to uproot the weeds). For a long time he applied horse manure mixed with straw bedding to his fields to boost fertility, but he found that composting the manure made it easier to apply. Eventually, Konzelmann designed and built his own compost-turning machine, which won a Premier's Award for Agri-food Innovation and Excellence in 2011. He explains that he now applies three tons of his own compost to each of his 1,500 acres (607 hectares) every fall and supplements this compost with several biological and mineral inputs that have been approved for organic farming. Konzelmann states that the results have been extraordinary: higher yields that at least equal and often surpass those of conventional growers (e.g., his 50-55 bushels per acre of soybeans is 5 to 10 bushels above the provincial average); increased levels of soil organic matter (now in the range of 5 per cent, the target level for good structure for this soil type); reduced weed and disease pressure; greater water-retention capacity and drought resistance; and increased profitability.

Konzelmann believes that his long-term success has been due to his carefully planned seven-year crop rotations and his use of cover crops, such as red clover and oats. However, he feels that it was the decision to compost the manure before applying it to his fields that has really taken his farm to the next level in terms of both productivity and soil health. His goals for the future include finding ways to further reduce the light tillage he uses to control weeds, fine-tuning his understanding of the micronutrients his crops require, continuing to build his soil's health, and continuing to improve yields and profitability.

Dean Glenney – Fencerow Farming

Dean Glenney has owned and operated a structural engineering firm since 1992. He also farms, having inherited 200 acres (80 hectares) of farmland near Dunnville, Ontario, more than two decades ago. He started out using conventional tillage, but explains that an accidental observation caused him to rethink his approach. The wider plow he had recently purchased turned over some previously undisturbed soil at the edge of a fencerow. Glenney says that he immediately noticed a difference in appearance between the fencerow soil and his regular field soil. As the season progressed, he noticed another difference: the corn planted in the fencerow soil grew two feet taller than the rest of his corn. Realizing that he could be on to something, Glenney applied his engineering skills to adapting his planting equipment to a no-till system based on minimal soil disturbance.

Over the past 20 years, his equipment has continued to evolve but the principle has always remained the same: do not disturb the soil any more than absolutely necessary. He plants in strips, which he alternates annually between corn and soybeans, taking full advantage of the

latter's nitrogen-fixing abilities. Glenney explains that he uses a GPS system to place each seed into the ground in exactly the same spot as the previous year's plant and also to inject fertilizer into the soil close to the seed, precisely where it is most accessible. The wheels of the planter, sprayer, and harvester go over the same narrow strips of soil, controlling the effect of traffic and leaving the growing areas of soil untouched.

Glenney states that he has been extremely successful with this approach. His reported yield of 300 bushels of corn per acre (and rising) is almost twice the provincial average of 160 and more than twice the regional average of 135. He attributes this additional yield to the quantity and diversity of life in his undisturbed crop soils. He points out the high frequency of worm middens (little clumps of plant residue above worm holes) near both his soy and corn plants. He feels that optimizing soil life in this way results in high nutrient turnover rates, reducing his fertilizer requirements by half. The worms also improve soil structure, which may allow his plants' roots to go deeper and grow larger. In the summer of 2012, when the farms in his region were suffering from a prolonged drought, Glenney found that his crops were not affected. Finally, Glenney states that testing of the water leaving his land has shown that it contains no excess nutrients; he concludes that his crops utilize everything he applies, leaving nothing to run off and pollute local waters.

Glenney recognizes that his approach may lead to micronutrient deficiencies over the years to come (because of the corn and soybeans removed at harvest) and is beginning to experiment with compost applications. He is also interested in using cover crops to further improve soil health.

Joe Gorski – Biological Farming

Joe Gorski grows wheat, corn and conventional (i.e., non-genetically engineered) soybeans on 2,700 acres (1,092 hectares) near Harrow, Ontario. He began to farm biologically about seven years ago, after reading some of the literature that is emerging on this innovative system of farming. The approach has been likened to a hybrid of organic and conventional farming, in that it prioritizes soil health but does not restrict the use of any input, provided that the health of the soil is protected. Biological farmers also pay more attention to the levels of the many micronutrients used by crops (e.g., iron, boron, manganese), as measured both in the soil and in plant sap and tissues, than do either conventional or organic farmers. The goal of biological farming is to optimize both soil and plant health.

Gorski states that he minimizes tillage, with the exception of an occasional strip till (a deep vertical till used to break up compaction created by previous poor management). Like Glenney, he explains that he is careful in his use of fertilizer; for instance, he applies it in combination with humic acid, which binds to the fertilizer, ultimately reducing run-off and increasing nutrient availability. He also uses various microbial inoculants, such as phosphorus solubilizing microbes and disease-supressing fungi.

Gorski has also developed a simple mobile technology that allows farmers to quickly and easily measure the electrical conductivity of soil. He uses this device to map out areas within a field that are comprised of different soil types and may, therefore, have different nutrient requirements. Gorski believes that this allows for more accurate soil testing and, subsequently, more efficient use of nutrients.

Gorski reports that his five-year average yield for wheat is 130 bushels per acre, about 60 per cent higher than the provincial average, and his corn yield in 2013 was 272 bushels per acre, 70 per cent higher than the provincial average. At the same time, he says that his use of nitrogen fertilizer has dropped by more than 50 per cent and his need for pesticides is decreasing each year. He believes that the plants' own immune systems are becoming strong enough to minimize pest damage. For the future, he is interested in municipal compost as an input and hopes to continue to develop his biological approach to the point where his need for the use of pesticides and synthetic fertilizer is reduced even further.

ECO COMMENT

The three farmers profiled use different approaches to farming, yet they have one important thing in common: they focus on optimizing soil health by protecting and enhancing the soil food web. The benefits are numerous: they are able to produce more food with fewer inputs; they have less negative impact on the environment; and they have increased their profits. Sustainability does not have to mean sacrificing profitability; indeed, the opposite appears to be true.

The ECO believes that there is an opportunity for the Ontario Ministry of Agriculture and Food (OMAF) to bolster its current educational programs on soil health by actively communicating the successes of these leaders and others like them. Accordingly, OMAF should institute a process for identifying Ontario's innovators in soil health and for determining the key factors in their success. Furthermore, the ministry should integrate this information, along with more detailed and effective educational material on the soil food web, into the *Canada-Ontario Environmental Farm Plan*, updated Best Management Practices, seminars and workshops, as well as into its research priorities.

For ministry comments, please see Appendix C.

RECOMMENDATION 2

The ECO recommends that the Ministry of Agriculture and Food identify Ontario's leaders in soil health and systematically integrate their key success factors in the ministry's farm educational materials and research priorities.

PART 3

MNR: BIG PICTURE, LITTLE CAPACITY

Ontarians rely on the Ministry of Natural Resources (MNR) to sustainably manage the province's vast natural wealth. However, the ministry's mandate is complex; it is responsible for promoting opportunities in the resource sector (e.g., commercial logging, mining, oil and gas extraction, hunting and fishing), while simultaneously protecting the province's biodiversity and ensuring the health of our ecosystems.

Accomplishing this difficult task requires several elements: clear law and policy; adequate regulatory oversight and enforcement capabilities; ongoing monitoring and scientific research; and the proper allocation of financial resources. In last year's Annual Report, the ECO reviewed MNR's transformation plan, which signaled a shift in philosophy and approach for managing Ontario's resources. This year, the ECO continues to explore MNR's attempts to "modernize" its management of the province's natural resources under the ministry's transformation plan.

In this part of the Annual Report, we review the ministry's overarching policy framework for taking a broader landscape approach to natural resources management, as well as new exemptions to work permit requirements under the *Public Lands Act*. In addition, the ECO examines the *Fish Community Objectives for Lake Ontario*, which emphasize non-native sport fish and prey at the expense of the health of the native fish community. In this part, the ECO also reports on some of MNR's efforts to manage the province's forests, including recent changes to timber harvesting in Algonquin Provincial Park, the only provincial park in Ontario that is commercially logged. The ECO also looks at the ministry's implementation of the *Crown Forest Sustainability Act*, twenty years since it was first enacted, and calls for the Ontario government to undertake a comprehensive examination of whether the Act is achieving its intended outcomes.

3.1 A Broad View Without Perspective: MNR's Landscape Approach

The Ministry of Natural Resources (MNR) is responsible for managing Ontario's forests, lands, waters, fish and wildlife, aggregates, salt, oil and gas, and protected areas. These natural resources are scattered over an area of more than one million square kilometres, ranging from the subarctic tundra around Hudson Bay to the Carolinian forest along Lake Erie. Until recently, many of the ministry's resource management strategies have been relatively focused (e.g., short-term, species-specific, etc.). However, MNR now states that such an approach can be costly and inefficient, and it may neglect patterns and processes that occur at broader scales.

At the same time, the ministry notes that demands on the province's natural resources are growing and that pressures from a range of threats are being felt across the province. MNR states that these "ecological considerations and fiscal realities" necessitate a reassessment of the best scales for resource management, and that management approaches are needed that address broad-scale influences and impacts while continuing to manage important small-scale issues.

In June 2013, as part of the ministry's efforts to deliver on a transformation plan to "modernize its business and operate on a more cost efficient basis," MNR finalized *Taking a Broader Landscape Approach – A Policy Framework for Modernizing Ontario's Approach to Natural Resource Management* ("Broader Landscape Approach" or the "Framework"). This policy document explains how MNR intends to apply a landscape approach to managing the province's natural resources. In effect, MNR will implement management activities over larger areas and longer time periods, and decisions will be informed by a broader environmental, social and economic context. The Framework is intended to assist individual MNR programs as they incorporate broader management approaches.

MNR's Broader Landscape Approach

The Broader Landscape Approach sets out two goals:

1. Adopt a modern and sustainable approach to managing Ontario's natural resources over broader areas and longer time periods.
2. Support, enable and advance ecosystem-based, landscape management approaches in Ontario over time.

To achieve these goals, the Framework articulates five "management elements," each with a series of "considerations" to guide program-level change (Table 3.1.1). The Framework also discusses how the ministry intends to apply each of the management elements. The Framework does not, however, provide a schedule or implementation plan for initiating these efforts.

TABLE 3.1.1.
Management Elements and Considerations for a Broader Landscape Approach (Source: *Taking a Broader Landscape Approach – A Policy Framework for Modernizing Ontario's Approach to Natural Resource Management, Ministry of Natural Resources,* 2013).

Management Element	Considerations
1. Manage at appropriate scales	• Where appropriate, use ecological functions and structures (e.g., natural disturbance patterns, watersheds, species distribution) to help identify ecologically meaningful scales of management. • Seek economies of scale in management effort and cost.
2. Integrate and co-ordinate	• Co-ordinate and integrate across programs and align resources relative to natural resource management priorities. • Ensure clear policy and legislative guidance. • Leverage and co-ordinate with the work of others.
3. Assess, manage and mitigate risk	• Use risk assessment techniques to prioritize management efforts. • Use a standard risk management framework to assess, manage and mitigate risk. • Recognize that finer-scale, more detailed management effort may sometimes be necessary within a broader management approach.
4. Focus science and information resources	• Focus research and monitoring priorities on supporting management efforts at appropriate scales. • Effectively manage and utilize science and information, including expert and traditional knowledge. • Continue to develop and use tools to support decision making at larger scales.
5. Manage adaptively	• Review the effectiveness of management strategies over time. • Identify knowledge gaps and uncertainties.

IMPLICATIONS OF THE DECISION

In theory, using an ecosystem or landscape-based approach can help identify the connectivity between ecological systems and, potentially, can contribute to the sustainable management of natural resources. The success or failure of MNR's landscape approach, however, depends on how each element of the Framework is defined, prioritized and implemented. Management at larger scales and over longer time periods needs to be informed and supported by adequate information and monitoring, and it must be based on sound scientific principles and clearly defined decision-making criteria. Ensuring that these efforts are supported with sufficient expertise and resources is equally important.

No Criteria for Determining Management Scales

It is well established that the effective management of natural resources necessitates strategies and actions based on ecologically appropriate spatial and temporal scales. The selection of appropriate scales should be informed by the characteristics and dynamics of the system in question – too large a scale can neglect important processes or features, while too small a scale can fail to account for the factors that drive a system. In most cases, it is essential to simultaneously implement management activities on multiple scales to address both coarse-scale and fine-scale issues.

The Broader Landscape Approach appears to be premised on these principles and, in theory, it could encourage the ministry to adopt more meaningful management scales. The ECO has repeatedly encouraged MNR to adopt management scales that align with ecological realities in many different contexts, including afforestation, the management of protected areas, and land use planning.

However, MNR did not provide criteria in the Framework for determining appropriate management scales. While the Framework's considerations include using "ecological functions and structures" to help identify management scales, it also emphasizes "seek[ing] economies of scale in management effort and cost." The Framework notes that social and economic factors play important roles, and suggests that cost-benefit analysis may be helpful in determining appropriate scales. Notably absent is any discussion of how these factors should be weighed under circumstances where ecological and socio-economic objectives result in conflicting optimal management scales.

The Framework's lack of clear decision-making criteria could allow MNR – under the guise of taking a broader-scale approach – to more easily justify management decisions based on cost-cutting concerns, to the potential detriment of the province's natural resources. If management scales are not based primarily on ecological factors, the long-term sustainability of natural resources could be jeopardized, ultimately undermining the interests of both industry and the public.

Further, the absence of decision-making criteria impairs public transparency and accountability. The ECO highlighted this concern with respect to MNR's landscape approach to managing cervids (e.g., caribou, moose, elk and deer), noting that the ministry did not provide a detailed rationale for the Cervid Ecological Zone boundaries.

Potential for Downsizing and Outsourcing

Managing at broader scales requires co-ordination between multiple actors, often across administrative boundaries. As such, integration and co-ordination is one of the Broader Landscape Approach's core elements, including:

- co-ordination and integration across programs;
- aligning resources relative to natural resource management priorities; and
- leveraging and co-ordinating with the work of others.

This emphasis on integration and co-ordination could potentially result in better dialogue between ministries and other agencies, ultimately leading to more robust and informed decisions. In fact, the ECO has long advocated better co-ordination among ministries, particularly with respect to broad-scale land use planning such as in Ontario's Far North. However, there is a risk that the guidance to "align resources relative to natural resource management priorities" and to "leverage and co-ordinate with the work of others" may be used as justification for downsizing or eliminating MNR programs, and/or for offloading ministry responsibilities to other organizations, under the pretext of integration and co-ordination. This concern is bolstered by some recent developments, including:

- reductions in ministry staff that occurred in 2013; and
- legislative amendments made by the 2012 budget bill (Bill 55, the *Strong Action for Ontario Act (Budget Measures), 2012*) that give the Minister of Natural Resources the discretion to outsource many ministry decision-making powers.

There are early indications that MNR's "integration and co-ordination" efforts are in fact taking this direction. For example, recent changes to MNR's Bear Wise program left the provincial and local police generally responsible for responding to human-bear conflicts instead of trained MNR technicians; as a result, nuisance bears likely will be shot rather than relocated (see Part 2.1 of the ECO's 2012/2013 Annual Report).

Furthermore, it appears that MNR will likely continue to allow development to proceed under landscape-scale policies without ensuring that all necessary safeguards are first established and that all co-ordinating agencies have met their responsibilities. For example, the Framework highlights the Far North Land Use Planning Initiative as "a good example of an integrated and co-ordinated broader-scale policy approach." However, proposals for major infrastructure and development in the Ring of Fire are being considered prior to the completion of land use plans and the development of a Far North Land Use Strategy, which is intended to be "the foundation of policy and information that provides the big-picture, broad-scale land use interests to support community based land use planning."

No Transparency for Risk Assessment

The Broader Landscape Approach advocates using a "risk-based" approach to inform management strategies. A risk-based approach can potentially allow the ministry to focus its resources on Ontario's most vulnerable natural resources and the most pressing issues faced by the province's ecosystems. In order for a risk-based approach to be legitimate and defensible, the ministry needs to employ a transparent method that applies consistent considerations at each of the risk assessment, management and mitigation stages.

The Framework itself does not articulate how MNR will assess and manage risk, but contemplates the use of "a standard risk management framework." In December 2013, MNR released *Integrating Risk in MNR: Risk Management How to Guide* ("Risk Management Guide"). While this document provides an overview of the steps undertaken in a generic risk management process, it does not provide substantive guidance with respect to the specific risks MNR faces in making natural resource management decisions.

This continuing lack of transparency has already proven to be problematic in the context of the ministry's transformation – MNR has not provided information about the risk assessment process for its modernization of approvals initiative. For example, in July 2013, MNR purportedly used a risk-based approach to create regulatory exemptions under the *Endangered Species Act, 2007* (*ESA*). However, the ministry provided no details about risk assessment, and ultimately exempted many potentially damaging activities (e.g., forestry, aggregate pits and quarries, and development and infrastructure projects) from the protections for species at risk established by the Act. (For further details refer to the ECO's 2013 Special Report: *Laying Siege to the Last Line of Defence – A Review of Ontario's Weakened Protections for Species at Risk*.)

Similarly, MNR has exempted certain activities from the requirement to obtain a work permit under the *Public Lands Act* as of January 2014. The ECO requested the ministry to provide documentation detailing the risk management assessment undertaken in the course of finalizing the new exemptions. Despite the fact that the Risk Management Guide emphasizes the need for documentation throughout all stages of the risk management process, the ministry declined to provide any such documentation (for further details, see Part 3.2 of this Annual Report).

Although the Broader Landscape Approach is aimed at implementing landscape-level natural resource management, there is also an acknowledgement that finer-scale management "may sometimes be necessary" for certain areas, features, species or issues. However, without the necessary articulation of risk assessment and management priorities, it is not clear how MNR will consistently ensure that fine-scale issues are addressed. This issue arises, for example, in MNR's management of protected areas. MNR acknowledges a variety of systemic, coarse-level, threats and pressures to the ecological integrity of provincial parks in its *State of Ontario's Protected Areas Report*; however, the fine-scale management direction for individual parks does not adequately address most of these threats.

Even Less Monitoring

The Broader Landscape Approach highlights the importance of science and information resources in a broad-scale resource management system. Adequate monitoring, science and information resources are clearly critical to making consistent and defensible natural resources management decisions. They should also be integral components of many of the Framework's other management elements, including the determination of ecologically appropriate scales, risk-based decision making and adaptive management.

However, the Framework provides little information on how MNR intends to support the new monitoring and information management programs that will be required under its broad-scale approach. Instead, the Framework emphasizes:

- focusing programs;
- streamlining and replacing intensive, inefficient processes; and
- collaborating and leveraging the work of scientists in other agencies, the broader scientific community, natural resource industries and other stakeholders.

Further, the Broader Landscape Approach places almost no emphasis on the role of monitoring in implementing adaptive management. Despite the Framework's commitment to collecting information, MNR has repeatedly demonstrated an unwillingness and inability to carry out sufficient monitoring activities. Recent examples include the ministry's failure to conduct adequate monitoring for: biodiversity; wildlife; the Far North; and the impacts of forest management. Moreover, in 2013, the ministry announced that it would be eliminating its Science and Information Resources Division and integrating its functions into other operational divisions.

Collectively, the fiscal restraint guided by the ministry's transformation plan, the elimination of MNR's science division, the ministry's past failures in monitoring, and the Framework's emphasis on focusing, streamlining, collaborating and leveraging the work of others for its monitoring programs, suggest that MNR may undertake even less monitoring work in the future.

ECO COMMENT

Applying a landscape approach to natural resource management could produce significant environmental benefits if properly applied. It could account for, and ideally protect, the underlying processes, ecological communities and species that drive ecological systems. It also could be an effective way to sustainably manage natural resources to meet the needs of communities and industry. Employing such an approach is particularly important given the ongoing loss of biodiversity in Ontario and, accordingly, the ECO has long encouraged MNR to apply an ecosystem approach in its decision making.

Taken at face value, it is difficult to disagree with the basic principles articulated in MNR's Broader Landscape Approach, which largely reflect simple truisms of natural resource management. However, the ECO has serious concerns about the ministry's approach in light of MNR's broader transformation plan to downsize the ministry and its responsibilities. The ministry's track record of offloading programs, obscuring decision-making criteria, failing to undertake adequate monitoring, and cutting the public out of key decisions makes the ECO skeptical of the application of this Framework.

At best, MNR's Broader Landscape Approach is a meek attempt to re-focus the ministry; at worst, it is a vague and non-committal document that will be used as justification to marginalize the much-needed conservation work that underlies the ministry's core function. The lack of detail and decision-making criteria in the Broader Landscape Approach raises the concern that the ministry could use the Framework to rationalize deregulation, reduced regulatory oversight, and outsourcing. The ECO urges MNR to develop – and explain the rationale behind – clear criteria for determining appropriate management scales and to publicly articulate the considerations MNR will apply in its risk assessment process. The ECO cautions that the ministry's intent to manage at broader scales should not be used to justify managing *only* at a broad level, thereby ignoring important fine-scale and local issues.

A defensible ecosystem-based approach requires a comprehensive understanding of the structure and function of the ecosystem in question. Extensive, long-term environmental monitoring is the only way to achieve this understanding. To date, the ministry's monitoring efforts have been relatively short-term and piecemeal and, ultimately, have failed to provide the long-term baseline information necessary to successfully apply a landscape approach to the management of natural resources. Moreover, failing to recognize the critical role of monitoring in adaptive management effectively predestines the failure of this approach.

Therefore, a legitimate, broad-scale approach to natural resource management will require new monitoring programs and systems for collecting and sharing information. While integration and co-ordination are worthy goals, MNR's plans to "leverage and co-ordinate with the work of others" should not be used to justify outsourcing MNR's responsibilities to third parties without ensuring that they have the necessary expertise and resources to take them on. Moreover, MNR needs to articulate how it intends to finance and implement the monitoring necessary for broad-scale landscape management, as well as how collected data will then be used to inform and improve its natural resource management programs.

For a more detailed review of this decision, please refer to Section 1.5.4 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

3.2 *Public Lands Act* Changes Create Threat of Uncontrolled Cumulative Impacts

The *Public Lands Act* regulates the management, sale and disposition of most Crown lands and forests, making it applicable to three-quarters of Ontario's land base. Work permits issued under the Act are one of the ways that the Ministry of Natural Resources (MNR) ensures that activities carried out by private parties on Crown land are done in a responsible manner that does not put undue pressure on the surrounding environment.

Work permits are generally required for certain mineral exploration-related activities, construction work and shoreline alterations. Lakes and river beds adjacent to private land are often Crown land, meaning owners of waterfront property require permits for shoreline alteration activities, such as dredging or filling shore lands and building waterfront structures like breakwalls. MNR reports that the majority of work permits historically have been issued to individual private property owners undertaking work along the shoreline border of their properties.

Recently, as part of MNR's effort to "modernize" approvals under its transformation plan, the ministry made changes to the work permit requirements under the *Public Lands Act*. (For more on the transformation plan, see Part 2.1 of the ECO's 2012/2013 Annual Report.) As of January 2014, certain activities are now exempt from the requirement to obtain a work permit if proponents follow specified conditions set out in regulation (O. Reg. 239/13). This is known as a "rules-in-regulation" process.

New Exemptions to the Work Permit Requirement

MNR no longer requires work permits for "minor maintenance activities" to trails, water crossings or roads; there are no conditions attached to this new exemption.

Parties constructing or placing a building within an area where they hold an unpatented mining claim for the purpose of mineral exploration and development must register with the ministry rather than obtain a work permit. For this exemption to apply, the building must not be within 120 metres of a shoreline reservation or on land for which the surface rights are held by another person.

The remaining exemptions apply to proponents undertaking activities in waters adjacent to their own properties. The following activities are generally exempt from the work permit requirement as long as proponents follow the rules set out in regulation:

- maintenance dredging;
- relocation of rocks and/or boulders;
- removal of invasive aquatic vegetation from shore lands;
- removal of native aquatic vegetation from shore lands in southern Ontario; and
- restoring, repairing or replacing an existing erosion control structure (with registration).

The rules set out in O. Reg. 239/13 for each of these activities are similar, including: requirements to minimize environmental impacts; the prohibition of in-water work during certain timing windows; and a requirement to carry out new work within the footprint of any previous activity (although in some cases parties may expand beyond the original footprint). In the case of dredging, a work permit must have been issued within the last five years and parties must only dredge within the boundaries of the previously dredged area, among other rules set out in regulation.

IMPLICATIONS OF THE DECISION

No Option to Deny Work

For non-exempt activities, Regulation 975 under the *Public Lands Act* requires MNR to deny a work permit if the activity in question is likely to pose a threat to public safety or to a natural resource. Under the new rules-in-regulation system for exempted activities, MNR has no authority to deny permission for a prescribed activity even if it is likely to have unacceptable environmental effects, such as threatening a provincially significant wetland or an area of natural and scientific interest.

This inability to deny permits may have a particularly damaging effect on fish habitat. Individual instances of plant or rock removal, erosion control structure repairs, or maintenance dredging may seem minor, but where multiple parties undertake such work it may create significant potential for negative cumulative effects on fish habitat. Although other laws, such as the *Endangered Species Act, 2007* and the federal *Fisheries Act*, and the requirement that parties follow the *In-water Work Timing Window Guidelines*, afford limited protection for some fish populations, there is no longer a comprehensive mechanism for managing concerns about habitat degradation.

Reduced Oversight

Work permits provide MNR with the information needed to track the location and types of work being undertaken on Crown lands, enabling MNR to monitor areas susceptible to cumulative impacts and to watch for other environmental trends. The ministry is also made aware of locations where inspection and enforcement action may be required to ensure compliance with the terms of a permit.

Activities now exempt from the permitting requirement fall into two general categories: those that require registration (two of the seven activities affected) and those that do not (five of the seven activities). Through registration, MNR maintains its ability to monitor and inspect, much the same as under the permit system. For those activities that do not require registration, however, MNR no longer has any information as to when and where these activities occur on Crown lands. The move to a rules-in-regulation approach also removes MNR's ability to impose customized permit conditions to address situation-specific concerns that may exist for proponents relying on the permit exemption.

Furthermore, while activities requiring work permits are subject to the *Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects*, which may impose additional environmental protection conditions, exempted activities are excluded. In other words, by no longer requiring work permits, activities are no longer subject to the additional oversight provided by this Class Environmental Assessment. This may set an alarming precedent for MNR to avoid the requirements of the Class Environmental Assessment and the *Environmental Assessment Act* by simply legislating away its own ability to deny permission for an activity.

Reduced Costs

By eliminating permit requirements for certain activities, MNR has reduced its administrative costs. The ministry no longer requires staff to review application materials, work with proponents and prepare permits. There may be reduced costs associated with enforcement as well, since MNR no longer knows when or where non-registered activities are taking place and will presumably investigate compliance issues for these sites on a complaints-driven basis, rather than through spot-checking.

Proponents may also experience some benefits, as they will no longer have to invest time in preparing application materials or wait for approval before commencing an activity.

ECO COMMENT

The efficient operation of government is a laudable goal, and program reviews should be regularly undertaken to ensure services are delivered in the best possible manner. These efforts, however, must not detract from MNR's core mandate to protect and sustainably manage natural resources. The ECO continues to be troubled by MNR's push to "modernize" approvals by simply eliminating the permitting process altogether, particularly without requiring registration. This trend is especially worrisome given that eliminating the permit also removes the activity from the oversight of the *Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects*.

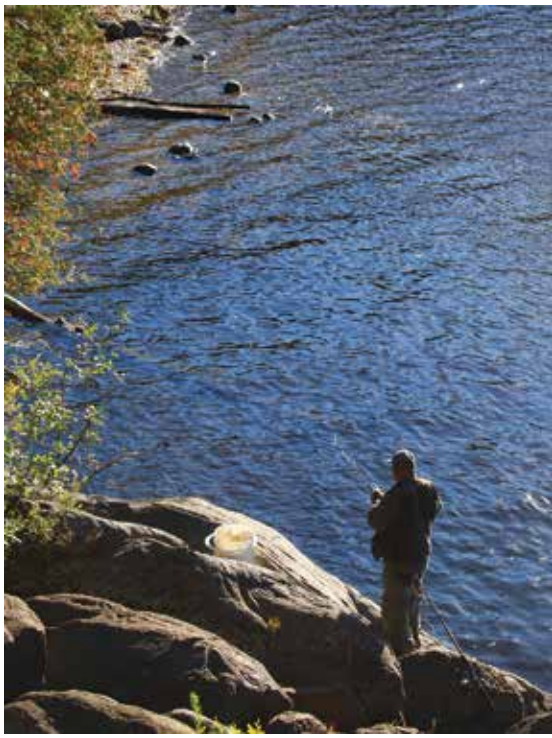
The ECO believes that the reduced MNR oversight and authority associated with this regulatory change will have several negative repercussions. Of particular concern is the likely impact of negative cumulative effects on fish habitat and near-shore ecosystems. The ECO believes that the ministry has underestimated the sum impact of these regulatory changes and their potential for harm to the natural environment.

While a rules-in-regulation with registration regime can be appropriate for low-risk activities, additional safeguards are needed. For such a system to work efficiently while still protecting the natural environment, MNR has to develop a comprehensive outreach program to educate waterfront property owners about the appropriate methods to be used when undertaking the exempted activities. Registration of all work is critical in order to allow MNR to track activities in particularly sensitive areas and identify locations susceptible to cumulative effects, as well as to undertake spot audits and enforcement activities. Finally, such a system must retain MNR's ability to deny activities that pose an unacceptable threat to public safety or the natural environment.

For a more detailed review of this decision, refer to Section 1.5.5 of the Supplement to this Annual Report. For ministry comments, see Appendix C.

3.3 Outdated Priorities for a Changing Lake: The *Fish Community Objectives for Lake Ontario*

Centuries of exploitation, contamination, habitat alteration and ecological invasions have devastated Lake Ontario's native fish community and replaced it with a motley mix of non-native and native species. Enormous efforts have been made to improve Lake Ontario's water quality, ecosystems and, notably, its fisheries. These efforts include binational initiatives between Canada and the United States, the two countries that share jurisdiction over the Great Lakes.



The Lake Ontario fish community has been subject to multiple pressures since European colonization. These stressors include: the introduction (both intentional and accidental) of invasive species, such as alewife and sea lamprey; the destruction and the degradation of fish habitat; and the overfishing of some species, including the Atlantic salmon (which have been extirpated in the Great Lakes) and the threatened lake sturgeon. Water quality issues have also affected the Lake Ontario ecosystem; contaminants, such as polychlorinated biphenyls (PCBs) and mercury, can bioaccumulate through the food chain, while dissolved phosphorus (e.g., from agricultural run-off) contributes to algal blooms, eutrophication and poor water quality.

The structure of the fish community has been dramatically altered by the deliberate introduction of a number of

non-native species. For example, non-native chinook and coho salmon were introduced in 1968 to control invasive alewife populations, which eat native larval fish and eggs, and to provide a sport fishery. However, in an ironic twist, alewife are now necessary to maintain as a food source for these non-native salmon, which have become popular with anglers.

As a result of these introductions and invasions, the populations of many native fish species have significantly declined and been replaced by non-native fish; in particular, several disruptive invasive species, such as sea lamprey, common carp and round goby, have increased in abundance.

These pressures are exacerbated by climate change, which is expected to raise water temperatures in Lake Ontario, thus decreasing habitat for cold water fish species and increasing mortality rates for a variety of fish species, such as lake sturgeon and deepwater cisco.

Lake Ontario's commercial fishery has declined substantially with the exception of one small, but locally important, commercial fishery in the Bay of Quinte. In contrast, Lake Ontario supports a large recreational fishery. The lake hosts a nearshore recreational fishery for walleye, largemouth bass, smallmouth bass, yellow perch, sunfish, northern pike and muskellunge, and an offshore recreational fishery for chinook salmon and rainbow trout. Other fisheries for at-risk species, such as lake sturgeon and American eel, have been closed.

The Great Lakes Fishery Commission and the *Fish Community Objectives for Lake Ontario*

As a result of historical pressures on the Great Lakes, Canada and the United States established the Great Lakes Fishery Commission (the "Commission") in 1956 to address concerns about the state of the Great Lakes fisheries and fish communities. Established under the *Convention on Great Lakes Fisheries between the United States and Canada* (the "Convention"), and codified in Canadian federal law by the *Great Lakes Fisheries Convention Act*, the major responsibilities of the Commission are to research and recommend measures to attain the maximum sustained productivity of fish stocks and to develop and implement a program to eliminate or reduce sea lamprey populations in the Great Lakes.

The Commission's goals and strategic directions for Lake Ontario are enacted through policies and initiatives developed co-operatively by Ontario's Ministry of Natural Resources (MNR) and the New York State Department of Environmental Conservation (NYSDEC). Under the Commission's *A Joint Strategic Plan for Management of Great Lakes Fisheries* (the "Joint Strategic Plan"), MNR and NYSDEC developed the *Fish Community Objectives for Lake Ontario*, 1999 (the "Objectives") to manage the Lake Ontario fishery.

The Objectives, which were revised in 2013, provide goals and indicators for managing the Lake Ontario fish community and are intended to form the basis for discussions with management agencies, interest groups and the public for developing more detailed fishery, habitat and watershed management plans. The Objectives also are utilized in other planning and management initiatives, including the remedial action plans and the *Lake Ontario Lakewide Management Plan* under the *Great Lakes Water Quality Agreement*.

The *Fish Community Objectives for Lake Ontario*

The Objectives are designed to protect and restore the native and naturalized fish community, with the purpose of sustaining, increasing and re-establishing various fisheries. They seek

to fulfil the goal statement in the Commission's Joint Strategic Plan for all Great Lakes fishery management agencies: to safeguard stable self-sustaining fish communities that are "supplemented by judicious plantings of hatchery-reared fish," thus providing "an optimum contribution of fish, fishing opportunities and associated benefits for wholesome food, recreation, culture heritage, employment and income, [and] a healthy aquatic environment."

The Objectives contain a goal for each of the three different habitat zones to protect, restore and sustain the species and fisheries of the zone. Each goal is composed of several objectives, with indicators measuring progress toward the objectives.

IMPLICATIONS OF THE DECISION

Focus on the Recreational Fishery

The Objectives state that "the goal of fisheries management is to provide sustainable benefits to humans through the use of fish for food, recreation, culture, ecological function and aesthetics by sustaining or increasing the abundance of desirable fish." Although the Objectives do not explicitly rank one objective over another, they do state that maintaining the chinook salmon fishery and the alewife population on which it depends "may limit the capacity to fully restore some of these [native] species to their full potential." In other words, the objective to ensure a supply of trophy-sized fish, particularly chinook salmon, for recreational anglers could take precedence over conflicting objectives to protect and restore native fish populations.

This focus on the socio-economic benefits of a recreational and commercial fishery versus a robust native fish community is not new. The ECO previously raised a similar concern with the 1999 *Fish Community Objectives for Lake Ontario* (see pages 127-130 of the Supplement to the ECO's 2000/2001 Annual Report). An emphasis on non-native fisheries continues to be demonstrated by objectives that seek to maintain populations of non-native predators for angling opportunities through stocking.

Objectives related to native fish populations also prioritize a recreational fishery. For example, the Joint Strategic Plan aims to restore Atlantic salmon populations and fisheries "to levels supporting sustainable recreational fisheries" and states that a recreational fishery can also be supplied, where appropriate, through stocking. Therefore, despite Atlantic salmon being extirpated in Lake Ontario, the only objective related to this species focuses on establishing a recreational fishery.

Indicators

Monitoring specific indicators is necessary to accurately measure progress towards environmental management objectives. Notably, many of the indicators in the 2013 Objectives are more detailed than in the earlier 1999 Objectives. However, many objectives that address the maintenance of fish communities and fisheries are represented by indicators that simply refer to "maintaining or increasing catch rates," or "maintaining or increasing native fish species richness and diversity." These indicators do not specify population targets or catch rates, nor do they identify years or conditions against which catch rates, populations or species diversity should be compared.

Climate Change

The guiding principles in the *Fish Community Objectives for Lake Ontario* acknowledge that "climate change is an important ecological influence that could both positively and negatively affect future Lake Ontario fish communities." For example, changes in temperature and water levels due to climate change could potentially disrupt the timing of lake sturgeon spawning and hatching events, result in habitat loss and create barriers between overwintering and spawning locations. However, the objectives and indicators in the document make no mention of climate change, nor do they provide any direction to monitor or address climate change-associated effects on the Lake Ontario fish community.

Achieving Action at the Provincial Level within a Binational Framework

Canada and the United States have been co-operatively managing fisheries through the Great Lakes Fishery Commission since they ratified the Convention in 1955. The Commission still retains the goals that the Convention set out almost 60 years ago, including developing research programs and suitable actions to attain "the maximum sustained productivity of any stock of fish" of concern in the Great Lakes. As discussed above, part of this effort involves prioritizing non-native species, such as alewife and chinook salmon, in order to support a strong recreational fishery. While achieving a robust fishery may be a valid aim in general, the Commission – and by extension, MNR – bases its direction on goals that are over half-a-century old. These goals were established using a very different body of ecological knowledge and different resource management concepts than exist today. The result is Objectives that include no direction on monitoring or addressing the effects of climate change on the Lake Ontario fish community and indicators that mainly focus on catch rates and the health of fisheries, as opposed to ecosystems.

ECO COMMENT

Significant efforts have been made to restore the health of Lake Ontario, including initiatives to decrease contaminants and nutrient loadings, and to reintroduce certain species (such as Atlantic salmon). However, managing the fish community of Lake Ontario continues to be extremely challenging due to the sheer volume and variety of pressures, coupled with the socio-economic value of non-native species, which are now abundant. Lake Ontario's fisheries managers are faced with multiple, and often conflicting, priorities. However, these challenges should not preclude fisheries managers from setting strong goals and developing effective measures to rehabilitate native species.

The ECO is concerned that the Objectives emphasize non-native sport fish and prey, such as chinook salmon and alewife, at the expense of the native fish community. While commercial and recreational fisheries can also benefit from healthy aquatic ecosystems, the conservation of native fish communities is sometimes traded off by the continued stocking and supporting of non-native fisheries. This trade-off can place additional pressure on already vulnerable aquatic species and compromise the rehabilitation of fish communities that have been massively altered. MNR does not manage Lake Ontario fisheries in a vacuum. The ministry is guided by the high-level objectives set by the Great Lakes Fishery Commission. While a binational Great Lakes management framework is vital, such a framework should be framed by modern fisheries science, with sufficient regard for the importance of native fish communities. The goals of the Commission were written in a different age, and there is now a strong argument that

it is time to revisit the half-century-old federal law and binational convention that guides Ontario's efforts.

For a more detailed review of this decision, please refer to Section 1.5.3 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

3.4 Cutting into Ecological Integrity: Commercial Logging in Algonquin Provincial Park

Algonquin Provincial Park is the only protected area in Ontario in which commercial timber harvesting is allowed. For nearly a decade, the Ministry of Natural Resources (MNR) has been considering ways to "lighten the ecological footprint of logging" in the park. In June 2013, the ministry finalized the *Algonquin Park Management Plan Amendment* (the "Plan Amendment"), which modifies the 1998 *Algonquin Provincial Park Management Plan* ("Management Plan"). The Plan Amendment alters zoning within the park, increasing the area in which logging is prohibited from 22.1 per cent to 34.7 per cent of the park.

Algonquin Park was established in 1893 as a public park, forest reservation, fish and game preserve, and "health resort and pleasure ground" for the people of Ontario. As the oldest provincial park in Ontario, the early administration of Algonquin Park differed greatly from today's accepted approaches to protected area management. For example, the legislation establishing the park allowed for many activities that would now be viewed as incompatible with the purposes of a protected area, including: killing wolves, bears and other "noxious or injurious" wildlife; mining; and logging.

Much has changed since the park's early days. Today, the park is more than twice its original size, covering over 7,600 square kilometres. Algonquin Park has become an integral part of Ontario's natural heritage and cultural identity; it receives more than 800,000 visitors a year. The park's abundant biological diversity, which includes at least 16 species at risk, has become increasingly important given the mounting threats to biodiversity in Ontario.

The science, planning and management of protected areas have also evolved considerably over the last 120 years, with increasing recognition of the importance of conserving biodiversity and maintaining ecological integrity. Between 2004 and 2006, MNR reviewed the outdated law that governed the province's protected areas, with the aim of modernizing how these areas are managed. This process ultimately resulted in the *Provincial Parks and Conservation Reserves Act, 2006*, which now governs the management of all provincial protected areas, including Algonquin Park.

The *Provincial Parks and Conservation Reserves Act, 2006* enshrines the principle of maintaining ecological integrity as the first priority in the planning and management of Ontario's protected areas. Protected areas have integrity when their biological components, abiotic components and natural processes can function unimpaired. According to MNR, the heart of ecological integrity is the "naturalness" of a given protected area. The Act generally prohibits industrial activities, such as commercial timber harvesting, electricity generation, mining and aggregate extraction, in protected areas. However, commercial timber harvesting and limited aggregate extraction continue to be permitted in Algonquin Park under exemptions.

The *Algonquin Provincial Park Management Plan*

The park's Management Plan provides the long-term planning direction for Algonquin Park. Among other things, the Plan sets out a goal and objectives for the park, establishes zoning designations and articulates stewardship, operations and development policies.

The Plan establishes which land uses are permitted within Algonquin Park through the application of seven different types of zoning:

- **Nature reserve zones** protect representative and significant earth and life science features.
- **Wilderness zones** preserve the natural state of the area and provide visitors with a "wilderness experience."
- **Natural environment zones** include "aesthetic landscapes in which there is minimum development required to support low-intensity recreational activities" (e.g., hiking, backpacking, canoeing).
- **Historical zones** apply to significant historical resources that require distinct management (e.g., archaeological sites).
- **Development zones** contain operational, research, recreational and interpretive facilities.
- **Access zones** are "staging areas" that support the use of other zones, and include such facilities as access roads, parking, washrooms, boat launches, etc.
- **Recreation/utilization zones** cover the area of the park where both low-intensity recreational activities (e.g., canoeing, camping, hiking) and resource development activities are permitted. Development activities include logging, hunting and trapping, and aggregate extraction for the construction and maintenance of logging roads. This zone type is unique to Algonquin Park.

Collectively, all areas outside of the recreation/utilization zones are referred to as the "protection zones."

The *Provincial Parks and Conservation Reserves Act, 2006* requires the ministry to review each park's "management direction" (usually a park management plan) every 20 years to determine whether it should be amended or replaced. As such, MNR must review Algonquin Park's Management Plan in 2018.

Commercial Timber Harvesting in Algonquin Park

The area that is now Algonquin Park has been commercially logged since about 1830. In recent decades, the actual amount of wood harvested in the park has been much less than planned. Roughly 135,000 hectares are currently designated as the available harvest area for the 2010-2020 period.

Commercial forestry in Algonquin Park is managed by the Algonquin Forestry Authority (AFA), a Crown agency established in 1974. The AFA conducts forestry operations in the park under a licence issued by MNR pursuant to the *Crown Forest Sustainability Act, 1994* and in accordance with the *Algonquin Park Forest Management Plan (2010-2020)* ("Forest Management Plan").

The Forest Management Plan identifies any "area of concern" in the park where logging may affect a sensitive natural resource feature, land use, or other "value." For each area of concern, the Forest Management Plan includes an "operational prescription" to prevent, minimize or mitigate adverse effects on the value, which can include a complete prohibition on logging within the area. Despite being in the recreation/utilization zone, these areas of concern are considered "unavailable" for forestry activities by MNR. Furthermore, MNR states that roughly 56,000 hectares within the recreation/utilization zone are simply not suitable for logging (e.g., water, swamps or rocks). Accordingly, while logging is technically allowed under the park's Management Plan in all 498,785 hectares of the recreation/utilization zone, MNR states that about one-fifth of this zone (107,648 hectares) is currently "unavailable for forest management" (i.e., not currently open to logging).

To support logging activities, Algonquin Park contains more than two thousand kilometres of active logging roads, in addition to several thousand kilometres of abandoned (but not rehabilitated) roads. New roads are constructed in the park each year, and hundreds of kilometres of road are actively maintained. Logging roads are constructed using aggregate extracted within the park.

Road construction and use can result in a number of serious impacts in the park, including: habitat fragmentation; pollution from vehicles; and wildlife mortality, including species at risk. The presence of roads also provides opportunities for public access into previously inaccessible areas of the park. In turn, this increases hunting and fishing pressure and facilitates the introduction of invasive species, which may be brought in by people and their pets, and carried in their cars, boats and other equipment. In Algonquin Park, the illegal use of baitfish in particular poses a serious threat to the park's native aquatic species; this risk is exacerbated by the presence of logging roads.

Lightening the Footprint of Logging in Algonquin Park

The passage of the *Provincial Parks and Conservation Reserves Act, 2006* sparked renewed interest in examining the effects of logging in Algonquin Park. As a result, the Minister of Natural Resources asked the Ontario Parks Board – a public advisory committee appointed by Cabinet – for advice on how to "lighten the ecological footprint of logging in Algonquin Provincial Park." In December 2006, the Board responded with *Recommendations of the Ontario Parks Board, Lightening the Ecological Footprint of Logging in Algonquin Provincial Park*, which recommended expanding the protection zones to 54 per cent of the park, thus reducing the area where logging is potentially allowed to 46 per cent of the park.

The Minister subsequently asked the Ontario Parks Board and the AFA Board to jointly develop recommendations. The final joint proposal, released in fall 2009, noted that the report was "not about reducing logging in the Park; rather, it [was] intended to be about lightening the ecological footprint of logging in the Park," and stated that "any impacts on wood supply should be manageable." The joint proposal recommended expanding protection zones by 98,202 hectares (approximately 13 per cent of the park's area) to enhance the protection of under-represented ecosystems and important park values. In response to the joint proposal, MNR developed the proposed amendment to the park's Management Plan.

The *Algonquin Park Management Plan Amendment*

In line with the recommendations of the joint proposal, the Plan Amendment increases the area under protection zoning and amends both the stewardship and operational policies of the park's Management Plan.

Increased Protection Zoning

The Plan Amendment adds a total of 96,089 hectares to the nature reserve, wilderness, natural environment and historical zones (Figure 3.4.1). As a result of these additions, the total area where logging is not permitted has increased from 22.1 per cent to 34.7 per cent of the total park area (Table 3.4.1).

FIGURE 3.4.1. New protection zoning in Algonquin Provincial Park (Source: Adapted from *Algonquin Park Management Plan Amendment*, Ministry of Natural Resources, 2013).

Six new nature reserve zones were added to protect representative examples of landform-vegetation associations. The Plan Amendment also expanded 24 existing nature reserve zones to improve connectivity between zones that are not logged, to better reflect ecologically recognizable features and to capture hydrological features and functions.

The Plan Amendment also increased the area of two wilderness zones: the Harness Lake wilderness zone was expanded by 1,706 hectares; and the Burnt Island wilderness zone was expanded by 12,586 hectares.

Additions to Algonquin Park's natural environment zones represent the most significant change made through the Plan Amendment, with a total of 69,584 hectares designated as new and expanded zones of this type. The Plan Amendment notes that the new natural environment zones were largely designed to provide additional protection along various canoe routes. However, proportionately less land was allocated to the new natural environment zones in areas along canoe routes where the AFA wants to log. Other new natural environment zones were

created to protect areas of inaccessible or inoperable forest, areas that increase connectivity between core protection zones, and areas that protect natural heritage values.

Hunting and trapping will continue in new natural environment zones that fall within Bruton, Clyde and Eyre townships. Existing temporary hunt camps will also be permitted in these zones; however, the Plan Amendment notes that the ministry will consider relocating these camps in the future. The Plan Amendment also specifies that the construction of forest access roads may be permitted in the newly established natural environment zones, subject to approval.

The recreation/utilization zone, where logging is permitted, has been reduced from 594,860 hectares to 498,785 hectares. Within this zone, the area currently available and suitable for logging has changed from 73 per cent to 78 per cent of this zone, ultimately representing a reduction from 57 to 51.2 per cent of the total park area.

TABLE 3.4.1.
Zoning Changes Implemented by the Plan Amendment. (Source: *Algonquin Park Management Plan Amendment,* Ministry of Natural Resources, 2013).

Park Zoning Type	1998		2013	
	Area (ha)	Area (%)	Area (ha)*	Area (%)
Nature Reserve	39,250	5.1	51,462	6.8
Wilderness	90,475	11.9	104,792	13.7
Natural Environment	13,765	1.8	83,470	10.9
Historical	1,680	0.2	1,624	0.2
Development	22,545	3.0	22,502	3.0
Access	735	0.1	824	0.1
Recreation/Utilization (area open to logging)	594,860	77.9	498,785	65.3
Total	**763,310**	**100**	**763,459**	**100**

**Since the publication of the park Management Plan, improved geo-spatial information and technology have resulted in more accurate area figures for park zones.*

The Plan Amendment explicitly states that new forest access roads, skid trails or landings are not permitted within nature reserve, wilderness or historical zones; however, it also notes that if practical road access for forestry operations has been restricted through this amendment, then a planning process may be initiated to address the issue.

IMPLICATIONS OF THE DECISION

More Land Protected, but Large Area Still Open to Logging

Nearly 100,000 hectares of the park will now receive greater protection by virtue of their inclusion in the nature reserve, wilderness, natural environment and historical zones. However, 65.3 per cent of the park remains under the recreation/utilization zone designation and, therefore, remains potentially open to commercial timber harvesting and its associated impacts.

Currently, 107,648 out of the 498,785 hectares in the recreation/utilization zone are considered "unavailable for forest management" according to MNR, either because the area is physically not suitable for logging or is within an area of concern identified in the Forest Management Plan. While the areas unsuitable for logging will presumably remain relatively constant, the areas of concern that are protected from logging may change over time.

Neglecting Ecological Integrity

The *Provincial Parks and Conservation Reserves Act, 2006* requires the maintenance of ecological integrity to be the first priority in planning and managing Algonquin Park. Although the law exempts Algonquin Park from the prohibitions on logging and aggregate extraction, the legislation does not state or imply that such activities have equal or greater priority than the ecological integrity of the park.

While the Plan Amendment makes a number of positive contributions to the ecological integrity of the park (e.g., increasing ecological connectivity, protecting additional natural heritage values, etc.), the maintenance or restoration of ecological integrity does not appear to have been the priority in determining the final zoning amendments. Instead, the Plan Amendment is a compromise that improves ecological integrity only to the extent that resource extraction is relatively unaffected. For example, the Plan Amendment provides less protection along canoe routes in areas where the AFA wants to log.

The 2006 Ontario Parks Board proposal recommended expanding protection zones by 241,032 hectares to permanently protect 54 per cent of the park from logging; this would have considerably improved the connectivity of protected zones. The final joint proposal notes that "as a result of further study, consultation and compromise, a new proposal was developed that reduced the productive forest to be moved to protection, and exchanged other areas to reduce the risk of supply impacts on local mills." In its assessment, the AFA concluded that "there is only a 2% reduction in wood supply objective achievement and a 1% reduction overall compared to the original [Forest Management Plan]." The final Plan Amendment is substantially different from the initial Ontario Parks Board proposal, with only 34.7 per cent of the park permanently off limits to logging and, ultimately, greater fragmentation than originally proposed.

The Plan Amendment also effectively reduces the degree of protection afforded by the natural environment zoning designation. For example, allowing forest access roads and hunting within the new natural environment zones waters down the overall protection provided by this zoning designation that, prior to the Plan Amendment, only allowed for low intensity recreational activities.

ECO COMMENT

MNR should be commended for increasing the area under full protection from logging in Algonquin Park. However, the ECO is deeply troubled that Algonquin Provincial Park, Ontario's flagship park, continues to receive the lowest level of protection of all of the province's protected areas. It is also disappointing that the ministry's amendment to the park Management Plan appears to give little weight to the direction in the *Provincial Parks and Conservation Reserve Act, 2006* to prioritize ecological integrity in planning and managing the park. Indeed, the government has never allowed public consultation with regard to *if* Algonquin Park should be logged, only where and how much.

Logging in Algonquin Park is conducted under similar standards and practices as any other forest operation in Ontario. While certain zones within the park receive the full protection afforded to all other provincial parks, the remainder of the park is essentially a forest management unit like any other piece of Crown land in the province. The result is that Algonquin Park is effectively made up of a collection of islands of protection surrounded by roads and timber harvesting. MNR itself acknowledges that the two-thirds of the park that are open to logging do not even qualify as a "park" under international standards for protected areas.

Algonquin Park was established more than 120 years ago at a time when ideas about protected areas were in their infancy and the scientific concepts concerning biodiversity conservation and ecological integrity did not exist. The current science, practice and law of protected areas management bear little resemblance to early thinking about provincial parks. Similarly, the role

of parks has changed a great deal, particularly as protected areas are one of the most critical tools in the fight to maintain and restore biodiversity. Viewed in this context, many aspects of the park's management appear to be antiquated holdovers from a bygone era.

Protected areas only cover nine percent of Ontario and are the last refuges for wilderness; in the rest of the province, wildlife habitat and ecosystems are open to constant pressure from industry. It is imperative that our protected areas actually provide protection, otherwise they are simply lines on a map. Much of the debate around Algonquin Park's management to date has been focused on the issue of whether logging in the park is "sustainable." However, there is a fundamental distinction between logging sustainably and maintaining the ecological integrity of a protected area.

MNR should bring the management of the province's flagship park into alignment with the important role of provincial parks today and afford Algonquin Park the same level of protection as the rest of Ontario's protected areas. The ECO strongly urges MNR to end commercial logging in Algonquin Provincial Park. The Ontario government should live up to its commitment to the conservation of biodiversity by ensuring that *all* provincial parks and conservation reserves receive appropriate protection.

For a more detailed review of this decision, please refer to Section 1.5.1 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

RECOMMENDATION 3

The ECO recommends that the Ministry of Natural Resources publicly commit to the end of commercial logging in Algonquin Provincial Park

3.5 The *Crown Forest Sustainability Act, 1994*: 20 Years Later

Twenty years ago, Ontario adopted a bold new approach to the management of our forests. The *Crown Forest Sustainability Act, 1994* (*CFSA*) transformed forest management by directing that public forests be managed "to meet [the] social, economic and environmental needs of present and future generations." The government stipulated that sustainability – the long-term health of the forests – must be the central purpose of forest management in Ontario. Since that time, there have been significant economic shifts in the forestry sector that have impacted the needs of forest-dependent communities, as well as advances in our understanding of the science behind forest ecosystems. While adjustments and tweaks have been made to particular forestry policies and programs since 1994, the government has never undertaken a comprehensive assessment to see if the total management system is working.

Ontario's Forests

Almost two-thirds of Ontario is covered by forests, stretching from Hudson Bay in the north to Lake Erie in the southwest. Our forests contain hundreds of plant and animal species from the iconic moose, North America's largest land animal, to the endangered drooping trillium. Our forests also are part of a global network of ecosystems that provide key habitat for migrating birds, such as the Canada warbler which travels between our province and South America each year.

Forests supply us with many of life's necessities, including clean air, fresh water and food. They also offer hundreds of thousands of visitors beautiful places to hike, paddle, hunt, camp and connect with nature. Forests are a defining feature across the province, and their importance is reflected in the way Ontarians choose to use and value them.

Almost all of Ontario's forests are on publicly owned Crown land. These lands are managed by the Ministry of Natural Resources (MNR), which is charged with ensuring forest sustainability.

Commercial Logging in Ontario

Commercial timber harvesting takes place across the vast middle swath of the province, within a zone known as the "Area of the Undertaking" that covers about 438,000 square kilometres (km^2). Since 1994, an average of almost 1,900 km^2 of forest has been logged annually. The forestry sector contributes billions of dollars to the provincial economy and employs thousands of Ontarians, making it a significant financial driver in many communities across the province.

In 2011, revenues from primary and secondary wood products in Ontario were estimated at $11.9 billion. More than 100 communities in Ontario are considered to be moderately to highly dependent on the forest sector.

The Evolution of Forestry Law from the 1950s to the 1990s

Historically, forestry policy focused almost exclusively on cutting down trees for timber and pulp; it managed our forests for short-term financial benefit. Ontario's previous forestry law, the *Crown Timber Act*, was enacted in 1953 and centred on the concept of sustained yield, attempting to balance forest growth with timber harvesting to ensure a continuous resource flow to industry. This law did not address broader issues of ecological and social sustainability. It also placed little weight on other forest uses, such as conservation, recreation and the harvest of other resources besides timber.

Over time, public perceptions and the scientific understanding of forests began to change, challenging the conventional ways of thinking about their management. The importance of ecological and social values, coupled with a demand for outdoor recreational opportunities, became more widely recognized. Heated conflicts arose over logging, such as in Ontario's old-growth forests in Temagami, heightening public awareness of harvesting and forest regeneration issues. Many groups began to warn loudly of the shortcomings of forest management. For example, a task force report in 1983, *The Last Stand*, warned of low levels of forest regeneration, expected wood shortages for industry and questionable provincial forestry data. As public debate around sustainability and forests grew, politicians recognized the need to change our Crown forest management system.

This desire for change ultimately led to public hearings, spanning over four-and-a-half years, to develop a Class Environmental Assessment for forestry activities, known as the 1994 Timber Class EA (see box, "Dwindling Oversight of MNR"). Concurrently, a re-examination of the *Crown Timber Act* led to a dramatic shift in forestry law in Ontario with the introduction of the *CFSA* in 1994.

Dwindling Oversight of MNR

The Ministry of the Environment (MOE) has an incredibly important oversight role over MNR's management of our Crown forests through the *Environmental Assessment Act* (*EAA*). Forestry as an entire body of activity ultimately requires approval by MOE. MOE's environmental assessment approval sets a series of legally binding conditions that MNR must follow in the way it manages Crown forests and regulates industry. The 1994 Timber Class EA established 115 terms and conditions that had to be followed in forest management. The development of the Timber Class EA entailed the most comprehensive set of forestry-related public hearings held in Canada, which explored a wide range of issues, including:

- how and whether clear cuts should be conducted;
- the need for more and better quality regeneration and monitoring;
- how to manage wildlife and associated habitat;
- the importance of social and economic values; and
- the rights and roles of Aboriginal communities in forestry.

In approving the Timber Class EA, the Environmental Assessment Board was clear that its approval rested on MNR complying with the "long and detailed set of conditions, many of which were negotiated by the parties to the hearing." The Board noted that the temporary (nine-year) term of the approval meant that the approval would be tested in the forest. The Board was prescient in stating: "the successes and failures of the timber management planning process will be demonstrated. The results of monitoring will prove if MNR is protecting non-timber values. The results of research into biodiversity conservation and landscape management will show if these are more than good ideas and can actually be implemented and produce the benefits we expect."

In 2003, MOE replaced the Timber Class EA with an *EAA* Declaration Order that both reduced MNR's forest management responsibilities and significantly weakened, but did not eliminate, MOE's oversight role. Declaration Order MNR-71 reduced the original 115 terms and conditions to 55. Major changes included: extending the requirement for forest management plans to every 10 years instead of every five; removing details from the public consultation, inventory and data requirements; removing the EA Board's restrictions on clearcut size and replacing with direction to follow MNR's guide, as revised from time to time. In addition, the Declaration Order had no expiry date, although MNR was required to prepare a report every five years.

MNR has proposed additional changes to its *EAA* coverage over the years. Most recently, it has sought to combine its 2009 Declaration Order covering forestry in Ontario's Far North with Declaration Order MNR-71, as well as to further condense the terms and conditions.

The *Crown Forest Sustainability Act, 1994*: A Bold New Vision

With the passage of the *Crown Forest Sustainability Act, 1994*, Ontario's Cabinet laid out a bold vision for a new approach to forestry: "Our goal is to ensure the long-term health of our forest ecosystems for the benefit of the local and global environments, while enabling present and future generations to meet their material and social needs." This Cabinet policy reinforces the principles enshrined in the *CFSA*:

- Large, healthy, diverse and productive Crown forests and their associated ecological processes and biological diversity should be conserved.

- The long-term health and vigour of Crown forests should be provided for by using forest practices that, within the limits of silvicultural requirements, emulate natural disturbances and landscape patterns while minimizing adverse effects on plant life, animal life, water, soil, air and social and economic values, including recreational values and heritage values.

This vision carefully balanced the need for wood products with the protection of equally important values, such as old growth forests, healthy wildlife populations and recreation. It recognized that our province is fortunate to possess vast forests that can sustain both commercial logging and a healthy environment; it did not postulate a false dichotomy between jobs and the environment.

The Cabinet direction, which was reflected in the new law, stressed the necessity of meeting wood supply needs, as well as: diversifying employment within the forestry sector; providing for other renewable goods from our forest; investing sufficient funds to maintain forest sustainability; and providing for a range of quality tourism opportunities

Key Elements of the *CFSA*

MNR Responsibility for Forest Sustainability

The responsibility to meet the objectives of the *CFSA* lies with the Ministry of Natural Resources. To ensure the sustainability of Crown forests, MNR's job is to provide leadership and oversight of the forestry industry through policy and program development, as well as scientific monitoring and enforcement. While the *CFSA* envisages an important role for MNR to support Ontario's forest industry, MNR's primary responsibility is to protect the needs of Ontario's forest-dependent communities and the long-term sustainability of forest ecosystems. In theory, the *CFSA* shifted MNR's role from a narrow focus on logging to a much broader focus on the "triple bottom line."

Forest Management Planning

Under the Act, MNR divides Ontario's forests into a number of "forest management units," which are manageable-sized geographic areas designed to be governed by individual "forest management plans." Each forest management plan details the strategies and objectives for sustainably managing the designated block of forest. The scale of these management units is important to ensure that the forest management plan adequately addresses the particular needs of communities, the local economy and the environment.

Allocation and Licensing

The second key premise of the *Crown Forest Sustainability Act, 1994* is that private companies will develop forest management plans pursuant to licences issued by MNR. MNR issues several different types of licences to companies to harvest trees within the designated management units.

Sustainable Forest Licences (SFLs) are long-term licences that allow a licensee to harvest forest resources in a specified forest management unit for up to 20 years (with the possibility of extension). A licence holder is an integral part of the forest management system and is responsible for developing a forest management plan that explains, in great detail, how the licensee will sustainably manage the forest.

All forest management plans must be approved by MNR before they can take effect, and the law directs that plans cannot be approved "unless the Minister is satisfied that the plan provides for the sustainability of Crown forest, having regard to the plant life, animal life, water, soil, air and social and economic values, including recreational values and heritage values, of the Crown forest." The plans govern everything from harvest operations to access road construction and removal, as well as forest renewal and monitoring.

Forest Resource Licences (FRLs) allow timber harvesting, but cover a smaller geographic area than SFLs and are issued for periods up to five years. FRLs may be granted for lands already subject to an SFL, with the SFL holder continuing to be responsible for overall forest management.

MNR also grants Supply Agreements to forest resource users, which guarantees those companies a set volume of wood supply for a period of time. Supply agreements can obligate FRL holders to supply their harvested wood to a specific licensed mill operator. In turn, MNR licenses the operation of the mills through Forest Resource Processing Facility Licences. The volumes of wood and the scale of these licensed operations vary significantly, ranging from small wood chippers to large sawmills.

Independent Forest Audits

A key element of the *CFSA*'s framework is a system of checks and balances created through a requirement for independent forest audits, at least every five years, for each forest management unit. The results of these audits are tabled in the Ontario Legislature. Third party auditors assess:

- forest management plans and activities to ensure compliance with the law and forestry policies;
- the effectiveness in meeting planned objectives;
- whether shortcomings revealed by a previous audit have been addressed; and
- the licensee's compliance with the terms and conditions of their licence.

The audit can include recommendations to the licensee to address non-compliance or improve effectiveness. According to MNR, independent forest audits on average show a 95 per cent compliance rate with the *CFSA*, ministry policies and guides. Audits can also include recommendations to MNR if the auditors conclude that improvements to ministry direction are necessary.

Investing in the Future of Forests

A strategic objective of our forest management system is to ensure that revenues from forest uses cover the investments required to maintain forest sustainability. To meet this objective, the *CFSA* established two trusts funded by fees paid by licence holders; these fees are intended to be in line with the benefits licensees receive from using Crown forests.

The Forestry Futures Trust is designed to fund needed silviculture activities where Crown forest resources have been damaged by fire or natural causes, or where a licensee has become insolvent (serving as a kind of insurance policy for forest regeneration). The trust also provides funding for intensive stand management, pest control and the independent forest audits. The trust is funded through fees levied on all licence holders and administered by an arm's length body.

The Forest Renewal Trust is dedicated to regenerating and maintaining forest health. The *CFSA* requires all licence holders to pay a fee to the province that goes into a special account for this purpose. MNR varies the applicable charge based on the management unit and tree species in order to reflect the regional differences in cost based on forest types and species.

MNR states that "both Trusts are significant parts of the Ontario's forest management program."

Learning through Doing

Accurate and ongoing feedback on how the resource is being managed is key to forest management. The *CFSA* requires that the Minister of Natural Resources prepare a report on the state of the Crown forests at least once every five years to provide "a big picture" overview. The report must address a range of topics including: the status of the forest resources using indicators; advances in forest research; external factors influencing the management of Ontario's forests; and a summary of progress of ongoing negotiations with Aboriginal peoples. This type of reporting is, in theory, based on comprehensive monitoring by MNR.

Twenty Years Later

De-evolution of the Vision

The *CFSA* assumes that forest management units are operated by private companies pursuant to a ministry licence. Over time, MNR has incrementally consolidated and reduced the total number of forest management units. In the 1990s, there were 90 forest management units in Ontario; currently, there are 41. While arguably cost-effective in the short-term, the creation of larger-scale forest management units could lead to management challenges, reduce their relevance to local forest-dependent communities, and generate inadequate information on local forest ecology.

In 2009, the Ontario government announced a substantial review of the forest tenure system (i.e., the system for allocating and licensing timber). This review included a proposal to reduce the number of forest management units to between 5 and 15, run by new Local Forest Management Corporations (LFMCs). The government stated that these LFMCs would increase market competition, while allowing for greater local and Aboriginal community

involvement. However, after industry backlash, the *Ontario Forest Tenure Modernization Act* was passed in 2011; the Act allows just two LFMCs to be created as pilot projects. Currently, there are 32 SFL holders operating forest management units; nine forest management units are being run by MNR because of the lack of interest from the business community.

The Boom and Bust of Commercial Logging

In building a sustainable forestry sector, one of MNR's strategic objectives is to manage Ontario's forests in a manner that will "encourage optimum levels and diversity of employment … while being consistent with all other strategic objectives." The fate of many towns across northern Ontario is closely tied to the health of the forest industry (see Table 3.5.1).

TABLE 3.5.1.
Population Changes in a Sample of Ten Northern Ontario Communities with at least One Forest Resource Processing Facility that Closed Temporarily or Permanently during the Period 1996 to 2011. (Source: Statistics Canada).

Municipalities	1996	2011	Population Change from 1996-2011
Chapleau	2,934	2,116	-28%
Dubreuilville	990	635	-36%
Hornepayne	1,480	1,050	-29%
Wawa	4,145	2,975	-28%
White River	1,022	607	-40%
Greenstone	6,530	4,724	-28%
Nipigon	2,210	1,631	-26%
Atikokan	4,043	2,787	-31%
Marathon	4,791	3,353	-30%
Average population decrease	**30,219**	**21,266**	**-30%**

In the 1990s, the forest industry experienced a period of growth and success. However, both harvest volumes and forest product revenues decreased significantly over the next ten years. This resulted in mill closures and layoffs; direct forestry jobs in Ontario decreased from 84,600 in 2002 to 55,600 in 2012, according to Natural Resources Canada. Since then, harvest volumes have increased slightly but still remain short of historical levels (see Figure 3.5.1). A large part of this industry downturn is attributed to the typical boom-bust commodity cycle, which was exacerbated by the global economic recession.

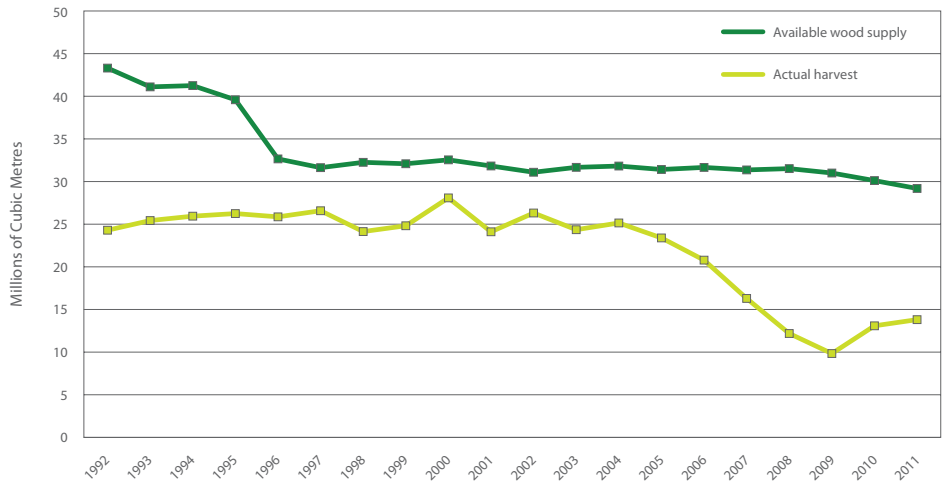


FIGURE 3.5.1. Available wood supply and actual harvest volume in Ontario, 1992-2011. (Source: National Forestry Database).

Not Paying Their Dues

In 2011 and 2013, the Auditor General of Ontario reported that multiple SFL holders had not maintained their minimum balance requirement for the purposes of the Forest Renewal Trust, contravening the terms of their licences. The Auditor reported $45 million in stumpage fees were outstanding in 2011, and that the province was still owed $40.6 million in 2013. The Auditor also concluded that MNR lacked appropriate measures and controls to ensure that Crown forest revenue was appropriately calculated and submitted. MNR itself has acknowledged that the lack of indexation to inflation of the Forest Futures Trust charge to companies since 1997 has undermined the ability of that trust to meet its legislated purposes.

Subsidies

Since 2005, MNR reports that the forestry sector has received more than $1 billion through various provincial incentives and subsidies. For example, the sector received more than $223 million though the Northern Industrial Electricity Rate Program and the Northern Pulp and Paper Electricity Transition Program. Additionally, up to $75 million annually is given to companies to construct and maintain forest access roads, including within protected areas.

Can't See the Forest for the Lack of Monitoring

MNR has multiple legal obligations to conduct monitoring in order to assess the impact of logging. In fact, MNR can be charged by the Ministry of the Environment under the *Environmental Assessment Act* if some monitoring programs are not carried out sufficiently. However, MNR has had significant challenges carrying out some of these legal responsibilities.

In our 2011/12 Annual Report, the ECO concluded that MNR's wildlife monitoring program in all practical terms does not exist; part of the rationale of this program is to ensure that there are no declines of select forest-dwelling species as a result of logging. According to the ministry's strategic direction, "directed new funding from MNR is required to fund the core effectiveness monitoring data collection activities" of its own forestry guides. Additionally, the Auditor General of Ontario has raised repeated concerns with the ministry's silviculture effectiveness monitoring program and its inconsistent implementation by the ministry.

Whittling Away at the *CFSA*

The Government's Attempt to Fundamentally Alter the *CFSA*

In 2012, the government attempted to amend the *Crown Forest Sustainability Act, 1994* through a budget bill and with no public consultation. Bill 55, the *Strong Action for Ontario Act (Budget Measures), 2012* proposed that forest management plans would no longer be required in circumstances to be determined later in regulation. It also was proposed that the Minister of Natural Resources could delegate any of his/her powers to a person or body, again subject to circumstances to be decided later. After a public backlash, this proposed amendment was dropped from the final budget bill.

Imperilling Species

In 2013, MNR lowered the protections for species at risk from logging. The *Endangered Species Act, 2007* prohibits the killing or harming of a species at risk or damaging its habitat. Any person who wishes to engage in such prohibited activities requires approval from MNR; as a term of this approval, the proponent normally would be obligated to take steps to achieve an "overall benefit" for the affected species at risk (i.e., the species is in a better state than before the activity). MNR could deem a forest management plan to be a compatible approval provided that the overall benefit test was met. Instead, MNR's regulatory changes now exempt forest operations until 2018 from needing to meet this overall benefit requirement. Coupled with a lack of monitoring by MNR, the practical result is that the government has little ability to ensure that timber harvesting is (or is not) causing declines of imperilled species.

ECO COMMENT

The *Crown Forest Sustainability Act, 1994* lays out a sophisticated vision for Ontario's public forests. At the heart of this law is sustainability; it seeks to ensure that not only the natural environment is protected, but also the vitality of our communities and the health of the economy. Ontario was at the forefront of forest policy when it passed this law in 1994.

Much has changed in the 20 years since the *CFSA* was enacted by the Ontario government. Economic downturns and globalization, in hand with climate change and biodiversity loss, have moved us into a different era. While government has responded with one-off changes to specific government policies and programs since then, no comprehensive assessment has ever been conducted to determine if the total forest management system is working.

The *CFSA* provided hope that MNR would give non-timber values equal footing in forest management, be it for recreation, old growth protection, wildlife management, climate change adaption, or countless other values. It is critical to examine whether the *CFSA*'s vision of managing for the highest value forest use is being achieved on the ground by MNR; gone should be the days when logging was the unquestioned preeminent use of our forests.

Significant challenges will present themselves in the decades ahead. External pressures beyond the direct control of the Ontario government will continue to alter the foundations of forest management, ranging from the profound impacts of climate change to global demand cycles in the timber market. It is imperative that our forest management system, led by MNR, be equipped and flexible enough to address such challenges. Most fundamentally, almost all of our forests are public resources on Crown lands; it is critical that they be managed to serve the needs of local communities, including Aboriginal communities. That imperative rests on ensuring a robust system that prioritizes the long-term health of our forests.

The *Crown Forest Sustainability Act, 1994* has been in place for two decades. The government should assess whether the Act, and the regulatory and policy regime it supports, are producing the desired social, economic and environmental outcomes. The need for such a comprehensive examination is not a condemnation. Rather, it is a necessity to ensure that our forests, one of our most important natural resources, are being managed based on the best possible information, practices and policies.

For ministry comments, please see Appendix C.

PART 4

MOE: WEAK RESPONSES TO INCREASING CHALLENGES

The Ministry of the Environment is responsible for administering and enforcing much of Ontario's environmental regulatory framework. The ministry establishes rules for activities that may have an impact on the environment – such as setting limits on the amount of contaminants that can be released into the air, water and soil – which allow Ontarians to live side-by-side with the businesses that provide jobs, goods and services throughout the province. In theory, this regulatory system makes sure that the polluting realities of industrial and commercial operations are minimized such that they do not interfere with neighbouring property uses, damage the environment, or threaten public health. To be effective, however, the regulatory framework must be periodically reviewed to ensure it reflects up-to-date information and addresses new challenges, and the rules must be strictly enforced.

In this part of the Annual Report, the ECO examines the Ministry of the Environment's performance on regulatory enforcement. The ECO reports that the ministry appears to be relying too heavily on voluntary compliance and is too relaxed with deadlines for compliance; as a result, neighbours of industrial operations, such as the Aamjiwnaang First Nation in Sarnia and neighbours of a mine near Peterborough, suffer unreasonable adverse effects. This part also evaluates the ministry's efforts to update regulations in two areas: the ECO is cautiously optimistic about new rules for noise, but is disappointed by the ministry's unwillingness to reconsider the rules for dust suppressants in light of new realities in the use of high-sodium brines.

4.1 MOE Compliance: Spare the Rod, Spoil the Environment

Each year, the ECO hears from hundreds of Ontarians concerned about their local environment and how these issues are being dealt with by the provincial government. One recurring theme is strong concern, and sometimes anger, about negative effects from industrial operations near homes and workplaces across the province. In particular, individuals frequently express frustration that the Ministry of the Environment (MOE) is inadequately addressing and resolving environmental problems despite laws that specifically prohibit or restrict the activity at hand.

These comments, as well as a number of recent applications for investigation under the *Environmental Bill of Rights, 1993* (*EBR*), illustrate cases of non-compliance dragging on for many months or sometimes years (see box, "Public Complaints of Non-Compliance"). These troubling situations raise questions about the effectiveness of MOE's mechanisms for ensuring compliance with Ontario's environmental laws and regulations. Accordingly, the ECO undertook a review of the ministry's approach to achieving environmental compliance.

Public Complaints of Non-Compliance

In recent years, Ontarians have submitted a number of applications for investigation under the *EBR* alleging cases of ongoing non-compliance despite MOE's involvement. The following examples provide insight into some of the on-the-ground realities of MOE's compliance activities.

Dust emissions from cement manufacturing facility: One of the longest running cases of which the ECO is aware involved the Essroc Canada Inc. cement manufacturing facility north of Picton. Neighbours had complained to MOE for several years about adverse effects from dust emissions suspected to originate from the facility. In fact, the ministry was notified of adverse effects related to dust emissions 27 times between 2003 and 2011. Although MOE requested that Essroc undertake a number of voluntary measures in response to these complaints – and, in more recent years, escalated to the use of some mandatory tools including referrals to the ministry's Investigations and Enforcement Branch – negative impacts continued to occur until at least 2013, a full decade after the complaints began. For more on this case, see Part 5.3 of the ECO's 2011/2012 Annual Report.

Dust emissions from mine operation: A similar situation involved neighbours of a Unimin Corporation mine near Nephton, northeast of Peterborough, who had complained of dust impacts and possible air contamination since at least March 2012. MOE acknowledged there had been ongoing problems at the site throughout 2012 and reported that it had worked with the facility throughout the year to address the issues and referred the matter to the ministry's Investigations and Enforcement Branch in May 2012. In March 2013, the ministry issued a Provincial Officer's Order requiring the mine to, among other actions, take all measures necessary to control dust emissions. In the summer of 2013, MOE reported that the facility was in compliance with the terms of its Environmental Compliance Approval (ECA); however, the applicants continued to complain of adverse effects as of May 2014 – over two years since the problems began. For more on this case, see Part 4.3 of this Annual Report.

Asphalt blender operating without environmental approval: In a straightforward example of non-compliance, McAsphalt Industries Limited operated for months without an ECA for its asphalt blending facility in Hamilton. The company applied for the ECA in 2011, but then began partially operating the facility before the ECA was issued. MOE was aware of this case of non-compliance as early as June 2012, but took no action at that time. It was not until five months later – after Environment Hamilton (a non-profit organization) submitted an application for investigation of the matter – that the ministry issued a Provincial Officer's Order requiring McAsphalt Industries to cease operations within two weeks. However, MOE issued the ECA to the company before that date, avoiding a shutdown. For more on this case, see Part 5.5 of the ECO's 2012/2013 Annual Report.

Concrete plant operating without environmental approval: Most recently, MOE acknowledged that a batch concrete plant had been operating without the required ECA for air and noise, without an approval for an industrial sewage works, and without reporting to the ministry as required. These violations were first identified by the ministry in 2006. Although the ministry was aware of this issue, MOE took no corrective action beyond requesting that the proponent submit an ECA application and the required reports. In March 2014, two applicants filed an application under the *EBR* requesting that MOE investigate these alleged contraventions. Eight years after the non-compliance was first identified by the ministry, but just a few weeks after receiving the request for investigation, MOE issued an ECA to the company on April 29, 2014. The ministry then denied the application to investigate. A complete review of the ministry's handling of this application will be included in the ECO's 2014/2015 Annual Report.

The Ministry's Compliance Policy

MOE has responsibility for ensuring compliance with numerous environmental laws, including the *Environmental Protection Act*, the *Ontario Water Resources Act* and the *Safe Drinking Water Act, 2002*. MOE employs a team of officers to inspect and address potential violations of these laws, which may range from minor or inadvertent transgressions with little or no adverse effect, to intentional or repeated contraventions that seriously threaten the health and well-being of Ontarians and/or the environment. The implicated parties can include everyone from private individuals to large international corporations operating under complex regulatory conditions across multiple sites and their employees, managers, owner/operators and company directors and officers.

Given the range of situations with which it must deal, the ministry uses a variety of tools to address violations. MOE's 2007 *Compliance Policy: Applying Abatement and Enforcement Tools* (the "Compliance Policy") sets out the ministry's overall enforcement strategy and provides guidance for ministry staff to determine which tool is most appropriate to address particular violations and achieve compliance with environmental laws.

The Compliance Policy uses two broad approaches to achieve compliance with environmental laws: abatement and enforcement. MOE defines "abatement" to include voluntary and mandatory actions intended to bring proponents into compliance, but not intended to punish the violator. By contrast, the ministry classifies "enforcement" as "prosecuting alleged violators for the purpose of punishing wrongdoing and deterring further non-compliance." Abatement and enforcement are not mutually exclusive, and MOE can apply both types of tools concurrently to achieve compliance with applicable environmental laws, as well as to punish offenders and deter future offences.

Examples of Abatement and Enforcement Tools

Abatement tools

- Voluntary actions such as:
  - Education and outreach; and
  - Abatement plans.
- Mandatory actions such as:
  - Amendment or suspension of an Authorizing Document (e.g., ECA);
  - Issuance of Control Documents (e.g., Orders); and
  - Monetary Environmental Penalties.

Enforcement tools

- Prosecutions under the *Provincial Offences Act*, including:
  - Issuing tickets;
  - Issuing a summons; and
  - Laying charges.

MOE's Compliance Policy sets out a four-stage process for determining the appropriate response to a case of non-compliance, as set out in Table 4.1.1.

TABLE 4.1.1.
Four-Step Process for Addressing Non-Compliance. (Based on: *Compliance Policy: Applying Abatement and Enforcement Tools*, Ministry of the Environment, 2007).

Stage	Ministry Actions
1.	Officers determine whether a violation has occurred or whether there is a potential for adverse health and/or environmental impacts.
2.	Officers use an evaluation rubric – the "informed judgment matrix" – to assess and rank the violator's compliance history and the actual and potential health and environmental consequences (see Figure 4.1.1). Officers also evaluate "case-specific considerations" (e.g., public concern about the incident, the violator's willingness to co-operate, etc.) that may influence the ministry's approach to achieving compliance.
3.	Officers categorize the violation (based on the informed judgment matrix, with case-specific considerations as a secondary factor) and select the appropriate abatement and/or enforcement tool(s).
4.	MOE monitors to ensure compliance has been achieved and, if not, the situation is reassessed and officers must consider escalating the response.

The Compliance Policy directs MOE staff to evaluate: (a) the severity of the situation, and (b) the compliance history of the violator; then staff consider a list of case-specific factors to determine which tool is most appropriate. Figure 4.1.1 shows how the informed judgment matrix guides this compliance categorization.

Under the policy, voluntary measures are to be used to correct only the most minor transgressions, while mandatory abatement or enforcement should be considered in all other cases. The recommended approach for minor (Category I) incidents is generally for ministry staff to work with the violator to voluntarily achieve compliance (i.e., a "soft" approach). As the situation becomes more grievous (Category II incidents) – for example, due to an unco-operative proponent or more significant adverse environmental or health effects – "harder" mandatory abatement activities (such as the issuance of Orders) are recommended. For the most serious (Category III) cases, the policy requires staff to also refer the incident to the ministry's Investigations and Enforcement Branch (IEB) for possible prosecution.

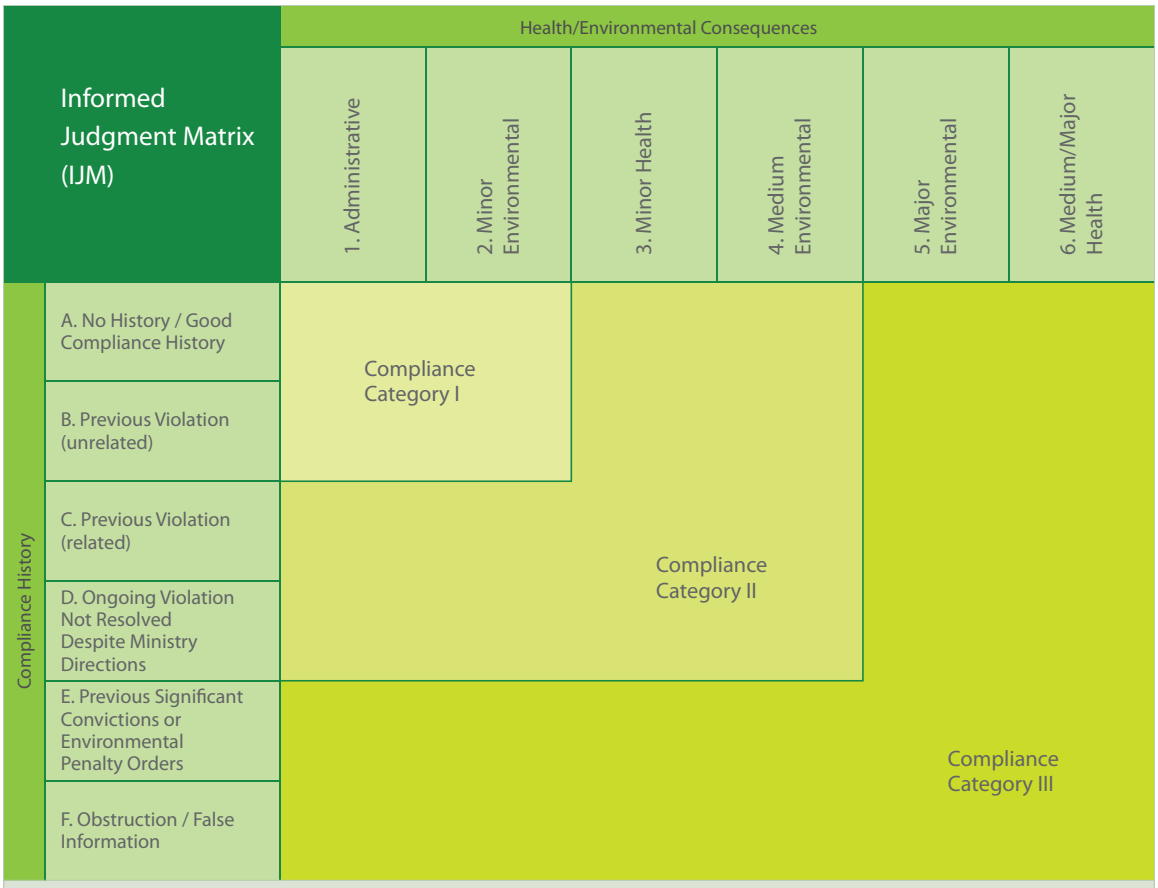


FIGURE 4.1.1. Informed Judgment Matrix. (Source: *Compliance Policy: Applying Abatement and Enforcement Tools*, Ministry of the Environment, 2007).

The Compliance Policy is intended to ensure that the response to a given situation is proportionate to: the risk involved; the compliance history of the site; and whether the proponent is co-operative. It also helps ensure that similar situations are handled consistently. According to the Compliance Policy, "this approach seeks to provide enhanced environmental protection by using firm and swift action to [address] incidents that result in or have the potential for significant health and/or environment consequences, while allowing flexibility to address other situations."

MOE has implemented several procedures intended to ensure that the Compliance Policy is followed and, in particular, ensure that the required monitoring and follow-up work are undertaken promptly. As a first step, officers undergo mandatory training and testing on the Compliance Policy as part of the designation process. MOE has also issued the *Field Guide for Environmental Officers: Applying Compliance and Enforcement Tools* (the "Field Guide"). The Field Guide directs that "in no case will the [m]inistry tolerate unsatisfactory progress with an abatement plan beyond 180 calendar days." The ministry confirms that voluntary abatement requests should be reassessed if compliance is not achieved within six months, at which time "the officer may either elevate the item to mandatory abatement, or extend the due date based on site specific considerations."

In addition, an internal *Inspections Guidance Manual* provides checklists for supervisors and officers that set out steps for documenting, tracking and monitoring corrective actions. Since

the 2007/2008 reporting year, the ministry has also used a centralized tracking and reminder system for all inspections. MOE believes that "there is now a high degree of rigour employed to document all abatement action items and establish implementation dates for resolution."

The Compliance Policy in Practice

Despite MOE policies to direct ministry compliance activities and to ensure that progress is being tracked, the ECO regularly hears stories from the public that raise serious questions about the effectiveness of MOE's compliance and enforcement approach. For example, while the Compliance Policy and Field Guide both state that the ministry will not tolerate unsatisfactory progress on a voluntary abatement plan beyond six months, the ECO is aware of a number of cases (including those described in the box, "Public Complaints of Non-Compliance") where non-compliant operations continued for well over a year or, in some cases, several years. The fact that such stories continue to surface suggests that the ministry's approach to environmental compliance lacks sufficient threat of enforcement to adequately motivate some proponents to comply with laws and resolve compliance problems promptly.

Strong Reliance on Soft Compliance

MOE reports that ministry officers have undertaken an average of 7,136 inspections each reporting year between 2006/2007 and 2012/2013, with an increased number of inspections in more recent years. Inspections can be initiated by the ministry at random or as the result of a complaint or self-reporting by the proponent. Over the past seven years, 29 per cent of MOE inspections found "non-administrative" violations (i.e., excluding cases of errant bookkeeping practices or similar paperwork-related violations). In response to these violations, MOE requested voluntary abatement actions far more frequently than mandatory abatement or enforcement, with an average of 77 per cent of violations being addressed through voluntary measures over this seven-year period, according to ministry figures. Figure 4.1.2 summarizes MOE responses to violations.

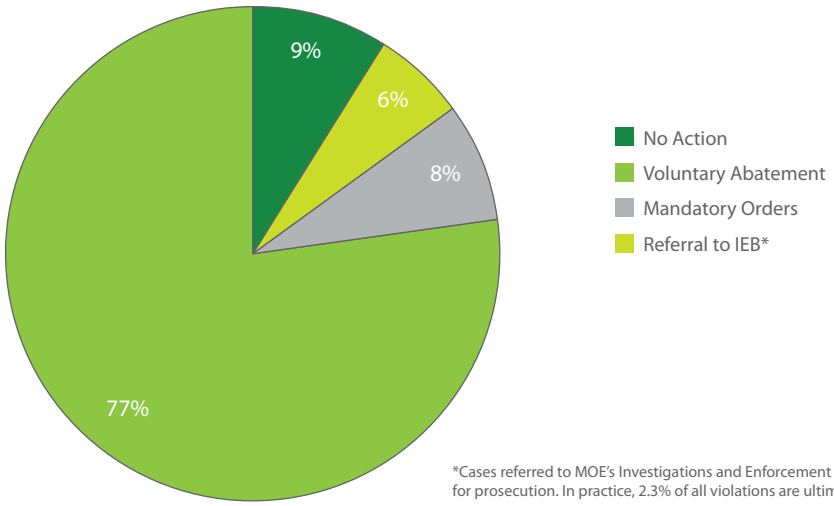


FIGURE 4.1.2. Breakdown of abatement and enforcement responses to identified violations from 2006/2007 to 2012/2013. (Source: Ministry of the Environment, 2013).

It is clear from these data that mandatory abatement and enforcement actions are rarely applied. It is also noteworthy that, on average, the ministry takes no further action in nine per cent of all violation cases. MOE did not offer an explanation why this might be the case, although it seems plausible that there may be some minor violations that are resolved at the time of the inspection and legitimately require no further action.

A soft approach to compliance has certain benefits. For example, it encourages a co-operative attitude from proponents as well as a positive relationship between the ministry and the regulated community. In turn, this may confer additional benefits, such as making proponents more likely to self-report violations and to consult with the ministry about potential problems they may experience. Avoiding the adversarial process of court or tribunal proceedings also saves both the ministry and proponents valuable resources; in theory, this allows MOE to focus its prosecution efforts on the most significant matters, rather than possibly overextending its limited reserves.

However, the decision to use a soft approach must not be made lightly; there must be a credible threat of stronger measures to ensure that the regulatory regime is respected. An over-reliance on a soft approach can create a perception that the ministry does not take enforcement seriously, which can allow a culture of non-compliance to develop. For example, in the McAsphalt Industries case (see box), the ministry was aware that the facility was operating without an ECA for months, but initially took no action at all. And then, only after receiving an application for investigation, MOE issued an Order with an extended compliance deadline, which allowed the company to continue to operate until the ministry issued the ECA. Thus, MOE effectively sanctioned the actions of McAsphalt Industries by allowing it to continue to operate without penalty despite its clear violation of the *Environmental Protection Act.* The case of the batch concrete plant (see box, "Public Complaints of Non-Compliance") is even more straightforward, with the ministry allowing the facility to operate for years without an ECA, issuing the approval only after receiving the application for investigation.

Sadly, it does not appear that McAsphalt Industries or the concrete plant are isolated cases; the ECO is aware of even more cases where it appears that MOE turned a blind eye to companies operating while an ECA was still pending (see, for example, Section 6.1.1 of the Supplement to the ECO's 2008/2009 Annual Report). This is unacceptable. The requirement that companies obtain ECAs prior to operation is a cornerstone of our environmental regulation regime. Even the perception that MOE is willing to overlook such violations means there is little incentive for companies to take this requirement seriously, thus undermining the entire system.

When Voluntary Compliance goes on too Long

Over the past two reporting years, in those cases where MOE requested that violators take voluntary abatement measures, the ministry reports that 63.5 per cent of cases were resolved by the compliance deadline and 77.5 per cent achieved compliance within one month after the original deadline. In other words, one month after the deadline for voluntary compliance, an average of 22.5 per cent of matters remained non-compliant. Of these cases, on average, only 8 per cent were eventually escalated to some type of mandatory action, leaving 14.5 per cent of cases to remain in the voluntary track despite their failure to achieve compliance voluntarily.

These figures seem to suggest a heavy reliance on a voluntary approach that is not appropriately counterbalanced by a clear willingness to escalate cases with the use of stronger enforcement measures when the situation is warranted. Allowing violations to continue for months, or sometimes years, erodes the integrity of the entire regulatory process. Mandatory measures

and enforcement action, whether imposed initially or after voluntary attempts have failed, are critical tools both to deter the violator from repeating violations and to deter the larger regulated community from viewing non-compliance as a feasible, low-risk option. Failure to pursue stronger action risks bringing both MOE and the laws it upholds into disrepute.

Although the ministry has developed protocols and tools to help officers follow the Compliance Policy, there is little guidance regarding when an extension beyond six months might be appropriate, leaving this decision to the discretion of the officer. It also appears that there are no special accountability mechanisms requiring officers to justify such a decision. The only direction offered by the ministry is that officers should revisit the Compliance Policy.

ECO COMMENT

MOE data indicate that its on-the-ground enforcement approach is too often ineffective in bringing violators into compliance within a reasonable timeframe. This reality also applies to many applications for investigation submitted to the ECO. For MOE to allow any violation to continue for nearly a decade or more without resolution – such as in the case of the cement facility – is completely unacceptable. In addition, decisions to delay initiating mandatory actions after the initial six-month window, where neighbouring residents were unable to enjoy normal use of their properties due to dust – as in the cases of both the cement facility and the mine – is similarly unjustified in the circumstances. Further, MOE allowing any facility to operate without the necessary environmental approvals is simply inexcusable. Businesses should not be allowed to knowingly and deliberately violate the law with impunity – this sends the wrong message to the broader business community.

MOE's data indicate that a significant percentage of violations are addressed through voluntary measures. One factor in this allocation could be that the informed judgment matrix specifically categorizes "localized impacts" to the environment as "minor" and, therefore, likely to be classified as a Category I violation. Voluntary abatement measures are strongly favoured in such cases; yet localized impacts may not feel so "minor" to those locally affected.

In these situations, the case-specific considerations are intended to guide an officer to escalate the matter where appropriate. One of the case-specific considerations that officers are directed to contemplate is: "is there public concern about the incident?" This question highlights the fact that some cases may have only localized impacts on the environment, but may still have serious adverse impacts on neighbours, for example, through loss of the use and enjoyment of their properties. MOE officers should place a greater emphasis on case-specific considerations – particularly impacts on neighbours – when deciding which compliance tools to use. Officers should bear in mind that a soft compliance approach with a timeframe for resolution that may otherwise be reasonable for MOE and the approval holder, may not be reasonable for a community or individuals who are losing enjoyment of their property each day that the problem persists.

The ECO recognizes that there are many cases for which voluntary action is initially appropriate; however, too often, these cases are allowed to remain in the voluntary stream far too long. The ECO believes that extensions for voluntary compliance beyond the initial deadline should be extremely rare occurrences. Insofar as extensions do occur, the ministry should develop a clear policy outlining when extensions are and are not appropriate and setting absolute limits for compliance in order to ensure that cases do not languish indefinitely. Furthermore, if additional

time is granted beyond the deadline, the ministry should set out the next steps and a timetable for their completion through a control document (e.g., an Order), even for co-operative proponents. This use of control documents is clearly contemplated by the Compliance Policy, and there are clear benefits for the ministry and community in using such a document to formalize the agreed-upon steps. Taking such action brings clarity to the abatement process, ensures public accountability of both the ministry and the proponent, and improves the ability of complainants to remain involved and notified of progress.

To motivate proponents, the threat of mandatory and punitive action must be real and present within the abatement and enforcement regime. The ministry must not hesitate to use a firm hand where appropriate and, in particular, to escalate matters into the mandatory stream if unacceptable delays continue. MOE must hold paramount the Compliance Policy's objective of protecting the environment through "firm and swift action" when circumstances merit.

For ministry comments, please see Appendix C.

4.2 MOE Continues to Fail the Aamjiwnaang First Nation

The Aamjiwnaang First Nation community (also referred to as the Chippewas of Sarnia) is located on the St. Clair River and within the city limits of Sarnia. The ancestors of the First Nation's current members have lived in southwestern Ontario for centuries (if not millennia), and the current community site has been inhabited by the First Nation since at least 1827. Today, about 850 of the First Nation's approximately 2,000 band members live in the Aamjiwnaang community.

Over the past century, and particularly since the 1940s, the area surrounding Aamjiwnaang has developed into one of the most heavily industrialised enclaves in Canada. Widely known as "Chemical Valley," the area is home to several dozen large industrial facilities, representing 40 per cent of Canada's chemical industry.

As a result of this concentration of industrial facilities, Sarnia suffers some of the worst air pollution in Canada according to the World Health Organization's 2011 Urban Outdoor Air Pollution Database. Over 110 million kilograms of pollution were released into the air in 2009 and about 60 per cent of this volume was released within five kilometres of the Aamjiwnaang First Nation community. The way Ontario regulates air emissions – on a stand-alone, facility-by-facility basis – is at least partially to blame for these high pollution loadings. There is no consideration given to the potential cumulative or synergistic impacts on human health or the environment in locales were emitters are clustered together.

Air Quality Impacts on Aamjiwnaang Residents and Community Response

Given their proximity to industrial facilities, the residents of Aamjiwnaang are heavily affected by Sarnia's air pollution. In addition to the permitted air emissions that occur on a daily basis, the community has experienced "shelter-in-place" advisories requiring residents to stay inside, seal air exchanges and await further instructions. These advisories are issued when air quality is particularly bad, often due to a sudden release of chemicals to the outside environment (i.e., a spill). Residents report that this situation significantly affects their cultural life, including their ability to participate in hunting, fishing, medicine gathering and ceremonial activities.

This exposure may also have significant repercussions for the health of the community. Respondents to a 2004-2005 Aamjiwnaang community health survey self-reported noteworthy rates of: asthma; high blood pressure; severe and chronic headaches; learning and behavioural problems in children; skin rashes; and miscarriages and stillbirths. Furthermore, the entire City of Sarnia (which includes Aamjiwnaang) experiences high frequencies of many illnesses. Hospital admissions for respiratory and cardiovascular illnesses are higher than those seen in neighbouring cities, while the incidence of certain cancers exceeds the provincial average. The Ontario Medical Association has determined that Sarnia-Lambton is among the most heavily affected communities with respect to health effects of air pollution.

A study released in 2013 concluded that mothers and children in Aamjiwnaang are exposed to a number of pollutants, which may come from a variety of sources, including industry. In particular, it found that there may be above average exposure levels to a number of chemicals, including cadmium, mercury, some perfluorinated compounds, polychlorinated biphenyls (PCBs) and organochlorine pesticides.

The community has responded to these health and environmental concerns with a number of public initiatives to prevent further industrial development and improve environmental protections in the area. In 2002, the Aamjiwnaang Environment Committee was formed as a vehicle for challenging a proposed ethanol plant. Since that time, the Committee has been involved in a number of ongoing projects, including air quality monitoring. In 2008, members of the First Nation submitted an application for review under the *Environmental Bill of Rights, 1993* (*EBR*) calling for the creation of legislation to better deal with pollution hotspots like Sarnia; the Ministry of the Environment (MOE) has yet to complete its promised review (see Section 2.1.2 of the Supplement to this Annual Report). Community members are also involved in a legal challenge of a MOE decision to issue air emissions approvals for facilities in the area.

Request to Investigate a Series of Contaminant Releases

On May 2, 2013, two members of the Aamjiwnaang First Nation submitted an *EBR* application requesting an investigation into alleged contraventions of the *Environmental Protection Act* and its regulations by Shell Canada Products Limited ("Shell") at its Sarnia facility. Shell operates a petrochemical manufacturing centre (i.e., a refinery) near the Aamjiwnaang community, which produces a range of products including: gasoline and diesel fuels; propane; benzene; toluene; and xylene. The application alleged that on January 11, 2013 and April 26, 2013, chemical contaminants were released from the facility into the air, adversely affecting residents of Aamjiwnaang. The ECO forwarded the application to MOE.

During the January incident, the applicants alleged that a strong, rotten egg-like odour, as well as a gasoline smell, was evident for several hours and that many residents experienced: red eyes; headaches; nausea; throat irritation; dizziness; shortness of breath; coughing; and skin irritation. Beyond these physical effects, the applicants also expressed concerns with how the incident was managed. Specifically, they reported that the emergency sirens that alert the community that a shelter-in-place advisory has been issued were not sounded in the area until almost an hour after the advisory was issued, and that information from Shell and other sources (e.g., emergency radio broadcasts) differed or changed over the course of the day regarding which chemicals had been released.

In addition, the applicants stated that the ministry conducted air testing after the incident and reported that the contaminant levels were elevated but still within provincial guidelines. The applicants challenged this assertion on the grounds that MOE did not explain what guidelines it was referencing and that exceedances had occurred.

With respect to the April incident, the applicants reported that a strong rotten egg odour was again noticed by several people in Aamjiwnaang. One applicant reported that she was advised by MOE that hydrogen sulphide and sulphur dioxide were released from the Shell facility.

In support of their application, the applicants submitted a number of documents, including: emergency notification documents issued by Shell; MOE air testing results from Aamjiwnaang; and media reports on both incidents.

MINISTRY RESPONSE

MOE denied the application for investigation because it was already investigating the identified incidents and the ministry believed that a separate *EBR* investigation would be duplicative of these measures.

In its decision on the application, the ministry also reviewed two additional incidents that occurred on January 10 and 15, 2013. On January 10, Shell reported an oil spill; the ministry advised that it "was satisfied with the actions taken by the company in response to the spill and determined that no further abatement action was required."

The ministry confirmed that on January 11, 2013, Shell reported a pipeline leak of sour water (i.e., wastewater produced during many refining processes). Roads were closed and a shelter-in-place advisory was issued for the entire Aamjiwnaang reserve. The ministry did not comment on the allegation that warning sirens failed to sound for an hour after the advisory was issued.

The ministry concluded that while contaminant levels were below those that cause toxicological effects, it was nonetheless possible that individuals may have reacted to associated odours by exhibiting symptoms such as: nausea; headaches; difficulty breathing; and eye irritation. Furthermore, the ministry reconfirmed elevated levels of certain chemicals, but stated that these were below applicable standards.

According to the ministry, a second pipeline leak was reported by Shell on January 15, 2013. In response, Shell conducted air monitoring and perimeter checks, and contained the leak. The ministry conducted a site inspection and determined that no odours could be detected off-site. Following this incident, Shell was required to inspect and assess all pipelines of similar age for the likelihood of failure; as a result of this process, 4,700 metres of pipeline were replaced by April 2013. The ministry referred both the January 11 and 15, 2013 incidents to its investigations branch.

The ministry confirmed that Shell reported a further incident on April 26, 2013. MOE reports that air monitoring was conducted by Shell and that the results did not indicate health concerns beyond the immediate site. Ministry staff inspected the Shell facility to ensure required steps were taken, and Shell committed to no longer undertake the process that had led to the chemical reaction and release. The ministry also reported that seven workers required medical attention as a result of exposure to emissions from the incident. This incident was also referred to the ministry's investigations branch.

For the full text of the ministry decision, see our website at www.eco.on.ca.

ECO COMMENT

The ECO agrees with the applicants that the incidents of January and April 2013 warranted investigation. The information provided by the applicants, and confirmed by the ministry, clearly indicates that these events were serious and deserving of investigation in accordance with the ministry's *Compliance Policy: Applying Abatement and Enforcement Tools* (for more on this policy, see Part 4.1 of this Annual Report).

What is lacking in the ministry's response, to both these individual incidents and the application itself, is an acknowledgement of the wider context in which these events occurred. The people of Aamjiwnaang suffer daily from the serious effects of the pollution that plagues their community. Under today's land use rules, it would be highly unlikely that this type of concentrated industrial development would occur in such close proximity to a residential community. Yet, the Aamjiwnaang First Nation suffers a daily assault on their ancestral land as a result of this disturbing historical legacy, coupled with contemporary indifference.

Given the gravity of this situation, the ministry must be unyielding in its abatement and enforcement work throughout Chemical Valley. Moreover, although the ministry appears to have responded promptly to these specific incidents, this largely reactive approach is clearly not sufficient to prevent such incidents from occurring in the first place. Greater proactive efforts must be made to eliminate the adverse effects of these facilities on their neighbours and the environment. Ongoing spills from the industrial facilities operating in the area are simply unacceptable.

In this context, the ECO is disappointed that, although the ministry is investigating the incidents, it declined to conduct the investigation under the ambit of the *EBR*. The ECO urges ministries to consider the benefits of accepting an *EBR* application for investigation even where a ministry investigation is underway; the *EBR* process would have added greater transparency and accountability to the investigation.

Furthermore, the ongoing heath and environmental difficulties that this community continues to face make the ministry's failure to address the systemic issues highlighted in the application especially distressing. The ministry did not acknowledge or address:

- the severity and persistence of the reported health symptoms (which do not appear to be fully explained by the suggestion that they may have been a reaction to a disagreeable odour alone);
- the reported failure to sound the emergency sirens at the time the shelter-in-place advisory was issued; nor
- the applicants' concerns about communication breakdowns and lack of information from both Shell and the Ministry of the Environment regarding the chemicals involved in the incidents and the interpretation of air testing results.

It is troubling that the ministry failed to acknowledge all of the applicants' valid concerns. Despite decades of work fighting for government accountability and for an end to new air emission approvals, the Aamjiwnaang First Nation still faces a number of unknowns about their past and present exposure to toxic airborne chemicals. They cannot even be sure that the community warning sirens are reliable or that the government will communicate openly and promptly about its environmental findings. Such a situation would be intolerable for any community, but in light of the particular historical context of this case, it is truly shameful.

For a more detailed review of this decision, please refer to Section 3.1.3 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

RECOMMENDATION 4:

The ECO recommends that the Ministry of the Environment enhance its efforts to eliminate the adverse effects of the industrial facilities within Chemical Valley on the Aamjiwnaang community and the environment.

4.3 Dust and Noise from Mining Operations

Over the past year, the ECO received three separate applications under the *Environmental Bill of Rights, 1993* with regard to one of the mining operations of Unimin Corporation. The company quarries nepheline syenite, a non-metallic mineral used primarily in glass production, from open pit mines located about 45 kilometres northeast of Peterborough. The ore is then processed at two nearby sites, each of which has a designated disposal area for the waste rock tailings. The Ministry of the Environment (MOE) has issued Environmental Compliance Approvals for air emissions at both sites.

The applicants are residents of the area around Kasshabog Lake, which is located just south of the company's mining operations. The lake's shores are home to almost 700 seasonal cottages and some year-round, permanent residences.

Applicants' Concerns

Beginning in the spring of 2012, residents noticed periodic "dust storms;" some residences also experienced "soiling" and the deposition of large amounts of dust on outdoor surfaces. In August 2012, the Peterborough County-City Health Unit advised residents that episodes of exceptionally high levels of dust, periodically exceeding jurisdictional standards, had occurred in the area since March. As a result, several residents became concerned that these events posed risks to human health that were not being fully addressed by the ministry.

- The first application requested an investigation of the company's operations, claiming that Unimin's operation was responsible for adverse effects caused by dust and noise, in contravention of the *Environmental Protection Act* (*EPA*).
- The second application requested a review of the company's air approvals, as well as the ministry's standards for airborne particulate matter set out in O. Reg. 419/05 (Air Pollution – Local Air Quality), under the *EPA*, claiming that neither were sufficiently protective of the environment.
- The third application asked for a review of Schedules 2 and 3 of O. Reg. 419/05 (which set out the standards for total suspended particulate) and of MOE's noise guidelines, *Publication NPC-232 – Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)*. This last application also requested a review of MOE's decision to fast track the company from the Schedule 2 to Schedule 3 air standards (Schedule 2 standards are being phased out and replaced with those set out in Schedule 3, which requires facilities to use newer, more precise dispersion models, but which also allows emissions levels to be calculated and averaged out over longer time periods).

Air Quality

The primary concern in all of the applications was with particulate matter that is less than 2.5 microns in size (known as $PM_{2.5}$), an air pollutant dangerous to human health. A February 2013 MOE Provincial Officer's report stated that between May and November of 2012, a monitoring program conducted at the site of a local resident determined that short-term emissions of $PM_{2.5}$ had approached or exceeded levels of concern, but that emission averages over 24 hours were such that the company had remained in compliance with its air approvals. This information was referenced by the applicants to support their claim that the regulatory framework for dealing with $PM_{2.5}$ was inadequate. Since the report had also stated that short-term spikes in emissions had occasionally exceeded the half-hour Schedule 2 average, the applicants contended that the longer 24-hour Schedule 3 average was not protective of the environment.

Noise

The applicants stated that noise from the mine frequently reaches levels that "disrupt sleep and hinder normal conversation." Since the mine operates on a 24-hour basis, noise levels at night had caused some residents to insulate rooms, close their windows even on hot nights, and use fans to mask the mine's noise.

MINISTRY RESPONSE

The ministry denied all three *EBR* applications. With respect to the requested investigation, the ministry stated that it was already working with Unimin to mitigate the dust and noise concerns, and it had issued a Provincial Officer's Order requiring the company to control its dust emissions. The company had subsequently submitted plans for mitigating the problem, the ministry had reviewed them and found them satisfactory, and the company had begun implementation.

With respect to the application for review of the company's air approvals, the ministry stated that these permits had been issued less than five years ago and that they contained the appropriate measures to protect the environment. Moreover, the company had recently applied for amendments to one of its air approvals, and it would soon be applying for an amendment to the other one. Both of these would be posted on the Environmental Registry for public comment. As for the $PM_{2.5}$ standards, the ministry stated that these had been reviewed just a year earlier, and they had been found to be adequate.

With respect to the application to review Schedules 2 and 3 of O. Reg. 419/05, the ministry pointed out that the standards for total suspended particulate in these schedules are based on visibility rather than health protection. Fine particulates such as $PM_{2.5}$ are considered regional pollutants, arising from such varied sources as residences and transportation, and the ministry stated that they are not effectively managed by means of "point of impingement" air standards, such as those included in O. Reg. 419/05. MOE argued that short-term peaks of $PM_{2.5}$ can be controlled through best management practices required by a company's air approval. MOE also noted that it has adopted the Canada-Wide Standard for $PM_{2.5}$, which "may be used to evaluate air quality and to inform requirements to manage dust on site." As for the ministry's decision to fast track the company's shift from Schedule 2 to Schedule 3, MOE argued that the regulation's Schedule 3 standards are based on more modern and sophisticated air dispersion models, which are considered superior to the models used for Schedule 2, and thus provide more stringent conditions, not less.

On the issue of averaging, the ministry indicated that it is "currently considering how best to address the potential for short-term peak exposures to contaminants that may occur within longer averaging periods of the air standards in Schedule 3."

Finally, with respect to the concerns regarding noise brought forward in all three applications, MOE stated that the province's guidance document for noise in rural areas had just been updated and its noise standards confirmed. Testing by an independent consultant had determined that the company was in compliance with those guidelines.

For the full text of the ministry decision, please see our website at www.eco.on.ca.

ECO COMMENT

The ECO agrees with MOE's rationale for denying all three applications. Nevertheless, some serious concerns remain. Some of the applicants continue to assert that Unimin's dust issues have not been fully resolved, producing photographs that indicate significant dust deposition on their property. The ECO strongly encourages the ministry to resolve this issue expeditiously and permanently; local residents should not have to endure continuing air quality issues of this kind, and these issues may represent an ongoing compliance failure on the part of Unimin.

Secondly, these applications highlight an important gap in MOE's regulation of fine particulate matter. The ECO is concerned that short-term peak emissions of $PM_{2.5}$, particularly in sensitive locations, could present a risk to health. Emitters are not required to model or monitor for $PM_{2.5}$; accordingly, occasional short-term high emission levels of this contaminant could be hidden in averaged total suspended particulate emissions, as was clearly demonstrated in this case. The ECO appreciates that health-related issues associated with $PM_{2.5}$ are difficult to manage using point of impingement standards (i.e., standards that limit the contaminants emitted from individual facilities); fine particles can travel long distances and can come from a variety of sources, such as vehicle emissions.

Despite these regulatory challenges, however, the ECO reiterates our previous comments urging MOE to take a firmer approach to the issue of local $PM_{2.5}$ emissions. MOE should, at a minimum, adopt more protective $PM_{2.5}$ objectives and develop a policy for including conditions in air approvals that seek to prevent ambient levels of $PM_{2.5}$ from exceeding provincial guidelines (see Part 5.8 of the ECO's 2012/2013 Annual Report).

For more detailed reviews of these applications, please refer to Sections 2.1.7, 2.1.8 and 3.1.2 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

4.4 A Review of the New Noise Guideline

Noise is an ever-present feature of modern life and a frequent source of conflict in Ontario, often requiring response from staff of the Ministry of the Environment (MOE). For over three decades, MOE has used noise guidelines in its approvals work and in its responses to noise complaints. In August of 2013, MOE published its Environmental Noise Guideline NPC-300 (the "guideline"), which consolidated several older noise guidelines dating from the 1990s and harmonized a number of previously inconsistent noise limits.

The guideline measures noise in decibels weighted to express loudness as perceived by human hearing (dBA), and assigns a value of 0 dBA to the lower threshold of human hearing. The decibel scale is logarithmic – not linear – and, thus, any increase of 10 decibels reflects a ten-fold increase in the power of the sound.

Under MOE's regulatory approach to noise, assigned limits vary depending on the geographic location. Urban areas (defined as "Class 1 areas") are allowed the highest noise limits. Somewhat more stringent limits are set for urban areas that typically experience quiet evenings and nights

("Class 2 areas"). The most stringent noise limits are set for rural areas ("Class 3 areas"). The noise limits apply at the point of reception, not at the source and, therefore, are determined not just by the noise level emitted, but also by the proximity of the closest neighbour.

The guideline has several regulatory functions. MOE uses the guideline's noise limits whenever an owner of a subject facility applies for an Environmental Compliance Approval (ECA) under the *Environmental Protection Act*. MOE also relies on the noise limits when it responds to a noise-related complaint to determine whether an "adverse effect," prohibited under section 14 of the *Environmental Protection Act,* has occurred. Municipalities and other land use planning authorities are also encouraged (but not required) to use the noise guideline as policy guidance in planning decisions and in municipal noise control by-laws. The guideline is also used by the Ministry of Natural Resources in regulating sand, gravel and quarry operations under the *Aggregate Resources Act.*

MOE's intentions in updating the guideline were: (1) to protect current and future Ontario residents from excessive noise; and (2) to better protect and buffer lawfully operating sources of noise – such as industrial or commercial facilities – from the encroachment of incompatible development that might create new noise-based complaints and conflicts. Industry, developers, municipalities, the Ontario Municipal Board and noise consultants all had concerns with the various old guidelines, which applied inconsistent noise limits in certain situations to noise sources and to residential land uses.

IMPLICATIONS OF THE DECISION

The new guideline, which went into use in October 2013, consolidated four older noise guidelines and harmonized noise limits. This consolidation has somewhat improved regulatory clarity and increased certainty for the regulated community, their consultants and land use planners. The

guideline also gives planning authorities the option of establishing a new "Class 4 area" with significantly relaxed noise limits. Compared to limits in a Class 1 (urban) area, Class 4 limits are 5 dBA less stringent in outdoor areas and 10 dBA less stringent at window panes. MOE makes the explicit assumption, however, that these limits are based on closed windows for sensitive land uses such as dwellings. To be eligible for Class 4 designation, the area must not yet be built on, but must be in an urban or suburban area and be close to "lawfully established" noise sources. The guideline envisages signed agreements for noise mitigation between involved parties and land use planning authorities. The guideline also recommends that prospective purchasers of Class 4 dwellings be informed through registration on title that sound level limits are based on the assumption of closed windows.

Another novel feature of Class 4 areas is that MOE will accept the installation of noise control measures (such as sealed-in balconies) on the building of the receptor. Generally, MOE prefers that noise control measures be installed on the property of the noise source. The Class 4 area concept, with its assumption of closed windows and central air conditioning at the receptor building, gives developers the new option of controlling industrial noise at the receiving building.

The scope of the noise guideline is broad, but not universal; it applies to most (though not all) industrial and commercial establishments, as well as many aggregate extraction facilities; natural gas plants; repair or storage garages for public vehicles; truck terminals; warehouses; solar farms; and works yards. The land use planning portion of the guideline also advises developers how to assess noise impacts from nearby transportation sources.

However, many kinds of activities, including blasting operations, wind turbines, landfills and transit corridors are excluded because they are each governed by their own specific guidelines. Agricultural activities generally are not covered under this guideline and also do not require MOE approvals. Racetracks, car washes, firearm ranges and snow disposal sites are all excluded by regulation from the need for an ECA and, thus, are also outside the scope of this guideline. Construction noise is not covered because the guideline's definition of "stationary source" explicitly excludes construction sounds.

The noise guideline is silent on the effects of noise on human health and wildlife. For example, there is no mention of a growing body of wildlife research, indicating that urban background noise can interfere with the way animals communicate, mate and hunt. Nor does the guideline mention the established human health effects of noise. The World Health Organization (WHO) recommends a guideline of 40 decibels for outside night-time noise (11:00 p.m. – 7:00 a.m.) in Europe, reflecting observations of adverse health effects above that threshold. WHO recommends a 55 decibel interim target for outside night-time noise for countries where 40 decibels cannot be achieved in the short term. MOE's new guideline has relaxed noise limits in some situations, and permits noise levels up to 50 dBA between 7:00 p.m. and 11:00 p.m., and up to 45 dBA between 11:00 p.m. and 7:00 a.m. for urban (Class 1) areas.

MOE's updated noise guideline remains optional for municipalities and other planning authorities, so future planning decisions made by municipalities or the Ontario Municipal Board will not always be consistent with the guideline. The new *Provincial Policy Statement, 2014* is also merely advisory on noise control. Not only does Ontario planning policy give municipalities flexibility on noise mitigation, but high real estate values and the pursuit of a denser urban form both promote narrow buffers that cannot, on their own, reduce noise to the satisfaction of all parties. Thus, sources of noise (such as industrial facilities) will remain vulnerable to encroaching incompatible

development, which may at times put them into non-compliance with MOE approvals. Noise conflicts between incompatible land uses will continue to require the attention of MOE district staff.

ECO COMMENT

Communities need consistent, agreed-upon rules for preventing noise-related land use conflicts and for resolving noise issues when they do occur. As cities become increasingly dense, especially in southern Ontario, noise guidelines become even more important in setting a fair and transparent playing field for all participants. Urban noise is not only a quality of life issue, it is also a public health issue, and some noise conflicts result in expensive legal disputes. Noise issues have also prompted many Ontario residents to seek reviews or investigations under the *Environmental Bill of Rights, 1993* (*EBR*).

One of MOE's intentions was that this updated noise guideline should "promote new development that will facilitate urban intensification, while protecting the viability of existing industries in urban settings." This is a laudable goal. The ECO has often stressed how important a denser urban form will be to reducing a community's greenhouse gas emissions and to a sustainable future. However, intensification also brings challenges; to be successful and sustainable in the long term, dense urban areas must remain appealing and healthy for those who live and work there. Land use planners must find creative ways to prevent conflicts arising from potentially incompatible land uses placed in close proximity, and noise is a classic example.

MOE's noise guideline offers local planning authorities some tools to forge compromises on noise issues, including the concept of a new "Class 4" area, where higher ambient noise is presumably accepted by all parties, residential windows are assumed to be kept closed, balconies are glassed in and air conditioning is relied upon during hot weather. It remains unclear how municipalities will initiate or formalize a Class 4 designation, or how attractive this concept will be to local planning authorities.

Rather than simply accepting increased ambient urban noise and (in Class 4 areas) relying on closed windows to shield people from unwanted noise, there would be merit in placing the first priority on mitigating ambient noise to the extent possible through design innovations. Prevention of noise at the source would align more closely with the *EBR* purpose of "the prevention, reduction and elimination of pollutants that are an unreasonable threat to the integrity of the environment." Indeed, the ministry itself has committed to "a precautionary, science-based approach in its decision-making to protect human health and the environment," as part of its Statement of Environmental Values. In keeping with those values, MOE would be wise to make prevention the first priority in noise management.

For a more detailed review of this decision, please refer to Section 1.3.1 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

4.5 A Risky Gap in the Disposal of High-Sodium Brines as a Dust Suppressant

Various types of salts – including sodium chloride, calcium chloride and magnesium chloride – are commonly used on roads for both dust suppression in the summer and for melting ice and snow in the winter. However, the use of road salts can cause negative environmental effects. The application of all three types of salt can elevate the concentration of chlorides in soils, harm crops and other vegetation, contaminate ground and surface water, corrode vehicles and increase the uptake of mercury by aquatic organisms. Furthermore, sodium chloride also negatively affects soil structure, decreases soil permeability and fertility, and hinders plant growth.

Due to their effects on the environment, the federal government determined that road salts are considered to be "toxic" as defined under the *Canadian Environmental Protection Act, 1999* (*CEPA*) although they have never formally been added to the *CEPA* List of Toxic Substances. However, road salts used to keep roads clear of snow and ice for safety purposes are exempted from being treated as a "contaminant" by Regulation 339 (Classes of Contaminants – Exemptions) under the *Environmental Protection Act* (*EPA*). Given the potential harm to the environment by road salts, the ECO advocated for a review of this exemption in our 2006/2007 Annual Report (see Part 4, pages 136-139).

The Use of Dust Suppressants in Ontario

Dust from unpaved roads can cause air pollution, reduce visibility (causing a safety hazard for drivers and pedestrians), affect crops and vegetation, and contribute to human health problems, such as respiratory illnesses. Consequently, dust suppressants are applied on unpaved roads to minimize the release of airborne particles and to lessen road deterioration and associated maintenance requirements.

A variety of materials – such as water, certain wastes and wastewaters, and road salts – can be used for dust suppression. Calcium chloride and magnesium chloride are the most commonly used salt-based dust suppressants. These hygroscopic (water attracting) salts attract moisture from the atmosphere to help hold dust particles to the road surface. Sodium chloride is much less hygroscopic and must be applied in far greater quantities to achieve the same results as calcium or magnesium chloride. Therefore, sodium chloride generally is not used as a dust suppressant.

Waste materials, such as oil, have also been used for dust suppression purposes. Waste products can provide a low-cost, no-cost or even negative-cost option (where the owner of a waste would otherwise be required to pay for disposal).

Recently, ground-sourced brines – a waste by-product from the oil and gas extraction process – are starting to be used as a dust suppressant. Ground-source brines are a natural salt

solution found in underground geological formations and may be pumped out to create storage space for natural gas and oil. Brines are also produced as a by-product when extracting oil or gas from marginally productive wells. These multi-chloride brines can contain hygroscopic salts, such as magnesium and calcium chlorides, but are often rich in the less hygroscopic sodium chloride.

The Regulation of Dust Suppressants in Ontario

In general, anyone depositing a "waste" material on land, including for the purposes of dust suppression, must obtain an Environmental Compliance Approval (ECA) from the Ministry of the Environment (MOE) under the *EPA*. However, Regulation 341 (Deep Well Disposal) made under the *EPA*, specifically exempts oil and gas field brine from the definition of "waste" under the *EPA*. This exemption in Regulation 341 avoids regulatory duplication for the disposal of oil field brines in deep wells, which is already regulated under the *Oil, Gas and Salt Resources Act;* however, it also has the effect of leaving the disposal of oil field brines by other means largely unregulated. As a result, ground-sourced brine derived from oil or natural gas extraction can be used as a dust suppressant without requiring an ECA.

While MOE does not evaluate the relative benefits of different dust suppressant products, including magnesium chloride and calcium chloride, it has (on rare occasion) regulated or banned environmentally harmful dust suppressants, as it did with waste oil in 1989. MOE, the Ministry of Transportation (MTO) and non-provincial bodies, such as the Federation of Canadian Municipalities, also provide guidelines and standards for the application of dust suppressants.

The Need to Regulate the Use of High-Sodium Brines as Dust Suppressants

In July 2013, two applicants submitted an application under the *Environmental Bill of Rights, 1993* (*EBR*) requesting a review of the need for a new policy, act, regulation or instrument to address the use of ground-sourced brines for dust suppression. The applicants argued that, despite its poor performance, high-sodium ground-sourced brines from oil and gas wells are increasingly

used for dust suppression purposes in Ontario. Similar to waste oil, pumped-out ground-source brine is a waste by-product of the natural gas industry, which must be properly disposed. The applicants stated that applying ground-sourced brine as a dust suppressant costs less than disposing of it through other permitted means. Further, such brines are less expensive than other dust suppressants. As a result, the applicants contended that there is the potential for large amounts of ground-sourced brine to be disposed of as a dust suppressant and that there is a trend towards increased use.

The applicants noted that while ground-sourced brines may be exempted from being considered a "contaminant" under the *EPA* if used for melting snow and ice in winter, no such exemption exists for the use of brines as a dust suppressant. Furthermore, these high-sodium brines have been found to be toxic under *CEPA*. The applicants also noted that MOE and MTO's documents and guidelines do not address, or even refer to, the use of high-sodium brines or sodium chloride as dust suppressants.

The applicants requested that MOE consider this application in conjunction with the ministry's current *EBR* review of brines derived from the hydraulic fracturing process (see box, "The Use of Wastewater from Shale Gas Fracking").

The Use of Wastewater from Shale Gas Fracking

While conventional oil and natural gas extraction currently takes place in Ontario, several companies are examining the potential for obtaining natural gas through hydraulic fracturing ("fracking"). Shale gas, which is natural gas trapped in tiny spaces in impermeable rock, was previously inaccessible but, through improved cost-effective fracking techniques, can now be accessed.

However, fracking is also associated with environmental risks, including the issue of wastewater disposal. Fracking injects large amounts of highly pressurized fluid, normally water, into the shale to fracture the rock and access the gas. Chemicals, such as corrosion inhibitors, bactericides and acids, are also added to the water. After fracking, approximately 15 to 80 per cent of the water is recovered; this recovered water contains chemical additives and can also include naturally occurring materials from the rock, such as metals, radionuclides or sodium brine. Therefore, the disposal of fracking wastewater can involve significant environmental risks (see Part 6.1 of the ECO's 2010/2011 Annual Report). While there has been limited drilling for gas in Ontario's shale rock to date (see Part 4.7 of the ECO's 2012/2013 Annual Report), public concerns and an application for review under the *Environmental Bill of Rights, 1993* have prompted the Ministry of the Environment and the Ministry of Natural Resources to conduct a review of the definition and regulation of oil field brine in anticipation of the future development of fracking in Ontario (see Section 2.4 of the Supplement to the ECO's 2012/2013 Annual Report).

MINISTRY RESPONSE

In September 2013, MOE informed the applicants that a review of the issue was not warranted. The ministry explained that it already regulates the use of waste products as dust suppressants and that an ECA is required to use a waste as a dust suppressant. MOE also stated that several provincial and non-provincial guides outline appropriate application rates for calcium chloride. In relation to the applicants' concerns about the high volume of ground-sourced brine needed for effective dust suppression, MOE asserted that the Federation of Canadian Municipalities' guide provides a methodology for cost-benefit analysis based on the cost of the suppressant, application frequency and other considerations. The ministry concluded that, "because existing guidelines address dust suppressant use adequately," there is no potential harm to the environment if the review is not undertaken.

MOE also noted that unprocessed brines are not widely used as a dust suppressant because they are not effective. Accordingly, the ministry does not consider potential pollution from ground-sourced brines to be a high risk and stated that its resources would be better directed to higher priority pollution issues.

The ministry declined to consider the application under its joint review of brine derived from the fracking process (see box), stating that the brines that originate from "underground gas well storage are different from high-volume hydraulic fracturing brines." MOE did not specify how these brines differ.

For the full text of the ministry decision, see our website at www.eco.on.ca.

ECO COMMENT

The ECO is extremely disappointed with MOE's decision to deny this application for review. Inorganic chlorides, including sodium chloride, are a potentially harmful "contaminant" within the meaning of the *EPA*, and are also recognized as "toxic" under *CEPA*. Potential run-off can contaminate surface water and groundwater, and can harm animals and roadside plants. Therefore, the use of sodium chloride presents an environmental threat to terrestrial and aquatic ecosystems and poses a potential risk to clean, safe drinking water. It is discouraging that MOE did not take the opportunity to undertake a proactive review to ensure that the use of high-sodium brine as a dust suppressant is properly managed to minimize environmental contamination. This issue is especially relevant considering the history of harmful wastes disposed of as dust suppressants.

While MOE considers sodium chloride to be a substance worth exempting for its beneficial contribution to public safety in melting snow and ice, there is no equivalent *EPA* exemption for using sodium chloride as a dust suppressant. Despite MOE's assurance that an ECA is required to dispose of any waste as a dust suppressant, MOE failed to note that Regulation 341 explicitly exempts ground-sourced brine derived from oil or natural gas extraction from the definition of "waste" under the *EPA* and, hence, from requiring an ECA. Instead, the use of brine as a dust suppressant is only provincially managed by voluntary guidelines and best practices. As such, the application of high-sodium brines on roads is largely unregulated, unmonitored and untracked in Ontario.

The regulatory gap that this application highlights also sheds light on another area of concern: that without proper definition and control, fracking wastewater could be considered akin to conventional oil and gas field brine under Regulation 341 and could be similarly exempted from the *EPA*. This would allow brine that is not only high in sodium, but also other contaminants, to be disposed of on Ontario's country roads and flow into fields, forests and aquifers. Accordingly, the ECO has previously recommended that MOE and the Ministry of Natural Resources review the regulatory framework related to fracking to protect water resources and the natural environment.

In recent years, MOE and MTO have made efforts to minimize the environmental effects of winter road salt. The applicants contend that a market for ground-sourced high sodium brines is increasing in Ontario. If accurate, MOE should examine the growing use of an ineffective, polluting dust suppressant that can contaminate drinking water supplies, and could potentially offset the benefits achieved through reduced winter road salt use. Otherwise, the ministry will be allowing a substance deemed toxic under *CEPA* to be discharged into the environment with no provincial monitoring and with little benefit for Ontarians.

For a more detailed review of this application, please refer to Section 2.1.10 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

RECOMMENDATION 5:

The ECO recommends that MOE regulate the use and disposal of ground-sourced brine from oil and gas extraction activities for dust suppression.

PART 5
PLANNING MATTERS

The government's ability to effectively manage environmental challenges in the future can be greatly improved by anticipating obstacles and planning ahead today. By carefully considering the benefits, disadvantages and implications of various options, government can lay out a sound policy and regulatory framework to address unexpected issues and meet intended outcomes. Ontarians know far too well that poor planning can result in bad decisions that are costly, and sometimes impossible, to correct.

In this part of the Annual Report, the ECO examines several government initiatives that do not seem to be working as originally planned. First, the ECO looks at the *Environmental Assessment Act*, which laid out an admirable vision for anticipating and mitigating the environmental impacts of public infrastructure. Yet, the ECO reports that in the decades since the legislation was enacted in 1975, Ontario's environmental assessment process has been watered down with diminished ability to achieve this original vision. Likewise, the ECO examines the *Growth Plan for the Greater Golden Horseshoe* and finds that the province may not be on track to achieve its objectives of reducing sprawl and increasing intensification. The ECO also looks at the *Safe Drinking Water Act*'s requirement to prepare financial plans and concludes that this has not been enough to prompt municipalities to recover the full costs of maintaining and operating their drinking water systems.

This part of the Annual Report also reviews two recently updated planning policies: Ontario's Cycling Strategy and the *Provincial Policy Statement, 2014*. The ECO applauds the Ministry of Transportation for renewing its cycling strategy, but expresses concern with the strategy's lack of a firm, long-term commitment to fund cycling infrastructure and failure to require performance metrics or indicators to measure progress. The ECO reports on Ontario's newly updated *Provincial Policy Statement*, and questions whether the planning priorities and interests laid out by the government today will be sufficient to address the complex issues we face in the years ahead, including biodiversity loss, climate change, water quality and food security.

5.1 Restoring a Vision Lost: Reforming Ontario's *Environmental Assessment Act*

In 1975, the Ontario government enacted the *Environmental Assessment Act* (*EAA*) to provide for the protection, conservation and wise management of the environment. The Act generally requires public sector proponents (e.g., provincial ministries and agencies, public bodies and municipalities) to go through an environmental assessment (EA) process that considers a project's potential environmental effects *before* the project begins. Examples of projects (or "undertakings") subject to the Act include public roads and highways, transit projects, power generation projects and transmission lines, and waste management projects.

For large-scale, complex projects with the potential for significant environmental effects, proponents are required to undergo an individual EA process. This involves obtaining government approval of, first, a Terms of Reference and, then, an EA document that describes the proposed project, its purpose, rationale, possible alternatives, potential environmental effects, and actions necessary to prevent, change, mitigate or remedy these impacts.

By contrast, specific types of "routine projects that have predictable and manageable environmental effects" are covered under a variety of proponent-led, streamlined EA processes. Projects falling under one type of streamlined process – Class EAs – do not require individual approval by the Ministry of the Environment (MOE) provided that the proponent follows the requirements identified in the relevant ministry-approved Class EA (also referred to as a parent Class EA document). Ontario currently has 11 Class EAs in effect that cover frequently undertaken activities, including: municipal road, sewage and water infrastructure; highway construction and maintenance; conservation authority works; and transit projects. Under the *EAA*, Ontarians can ask the Minister of the Environment to elevate (or "bump up") the status of a Class EA project to an individual EA.

While the EA process plays a crucial role in the lives of Ontarians, many weaknesses have been identified since the *EAA* was first enacted. In 2005, an expert Environmental Assessment Advisory Panel (the "EA Advisory Panel"), created by the Minister of the Environment, made numerous recommendations to improve Ontario's EA process. In addition, the ECO laid out many criticisms of the EA process in our 2007/2008 Annual Report.

EBR Application for Review

In January 2014, two Ontarians submitted an application for review under the *Environmental Bill of Rights, 1993* (*EBR*) asking MOE to review and revise the *EAA* and six related regulations. The applicants argued that "the current legislative and regulatory regime governing EA in Ontario is incomplete, outdated and inadequate to protect the environment" and identified several high-priority candidates for EA reform.

Wholesale Exemptions from the EAA

The applicants argued that an excessive number of environmentally significant projects (and proponents) have been unjustifiably exempted from the *EAA*, undermining the scope and

effectiveness of the Act. Regulation 334 under the *EAA* exempts a variety of proponents and projects from all EA requirements, including: district school boards; 12 provincial ministries; numerous municipal projects; and certain undertakings by conservation authorities. Moreover, the Minister, with Cabinet's approval, can exempt specific municipal or provincial projects through either a Declaration Order or by regulation under the *EAA*.

Conditional Exemptions from Individual EAs

The applicants also took issue with three *EAA* regulations that conditionally exempt broad classes of projects from requirements to conduct individual EAs:

- O. Reg. 116/01 (Electricity Projects) exempts proponents of certain electricity projects from carrying out full EAs as long as a streamlined Environmental Screening Process is followed;
- O. Reg. 101/07 (Waste Management Projects) designates and exempts public and private waste disposal projects (e.g., mid-sized municipal landfills, some small incinerators) from individual EA requirements, conditional upon the proponent's completion of an Environmental Screening Process; and
- O. Reg. 231/08 (Transit Projects and Metrolinx Undertakings) exempts certain public transit projects from the *EAA* and subjects others to a more streamlined planning process.

The applicants raised several concerns about these sector-exempting regulations, including:

- Few, if any, public requests to elevate (or "bump up") an electricity project to an individual EA have been granted;
- The regulations' screening processes eliminate the requirement to assess the rationale ("need") for the project and "alternatives" to the project; and
- O. Reg. 231/08 explicitly limits the grounds upon which public concerns will trigger the government to intervene (e.g., require further consideration or impose conditions), and adopts a "one size fits all" approach that subjects large transit projects to the same assessment process as much smaller projects with fewer potential impacts.

Extensive Use of Class EAs

Noting that the vast majority of undertakings are processed under Class EAs, rather than individual EAs, the applicants argued that the widespread use of approved Class EAs has raised concerns about the adequacy of the notification, documentation and consultation steps taken by proponents. These concerns include:

- the lack of meaningful mechanisms under Class EAs for effectively resolving differences of opinion between proponents and concerned stakeholders for specific projects;
- the lack of mechanisms to turn down projects under Class EA processes;
- MOE's tendency to turn down requests to "bump up" a project to the more rigorous review of an individual EA; and
- prescribed ministries repeatedly failing to adequately consult the public via the Environmental Registry on the development of (and revisions to) Class EAs.

Need for Improved EA Purposes and Policies

The applicants pointed out that a number of key environmental principles have emerged since the *EAA* was enacted in 1975, such as the ecosystem approach, the precautionary principle and the polluter-pays principle. However, none of these principles have been incorporated into the *EAA*. Noting that the Ontario government has failed to act on recommendations made by the EA

Advisory Panel on this concern, the applicants argued that there is an immediate need to update the purposes and principles underlying the *EAA*, as well as to develop appropriate sector-specific policies to direct EA decision making.

Exclusion of the Consideration of "Need" and "Alternatives"

Under the *EAA*, the Minister of the Environment has the power to restrict what must be included in an EA and to approve EA Terms of Reference that exclude matters such as: the rationale (or "need") for a project; alternative methods of carrying out the project; and the expected environmental impacts, advantages and disadvantages of the proposed project and alternatives. The applicants argued that the nature, scope and utility of individual EAs under the Act has been compromised by the overuse of "focused" Terms of Reference that wholly exclude key EA planning matters (e.g., need, alternatives to, and alternative sites) from the EA process.

Inadequate Consideration of Cumulative Effects

MOE's Statement of Environmental Values (SEV) requires the ministry to consider a number of important principles, including cumulative environmental effects, when making environmentally significant decisions. The applicants argued, however, that cumulative effects are not being adequately addressed in the ministry's EA program, and that the *EAA* should be amended to ensure that cumulative effects are duly considered by proponents and decision makers in the EA process.

Barriers to Meaningful Public Participation in the EA Process

The applicants raised concerns about the adequacy of public participation opportunities under the *EAA*. Although the *EAA* requires proponents to consult with "such persons as may be interested" when preparing Terms of Reference and EA documentation, the applicants pointed out that the Act fails to define or provide specific direction on what constitutes meaningful consultation or an "interested person."

The applicants also referred to concerns identified by the EA Advisory Panel and/or the ECO regarding public participation, including:

- Public consultation efforts are often too short, complex, opaque and superficial;
- Key documents and technical studies are often inaccessible and/or flawed;
- Intervenor funding is needed for the public to meaningfully participate in the EA process; and
- The EA consultation system seems to favour proponents, and MOE seems unable or unwilling to insist on fairness.

Barriers to the Public Participation Rights Afforded under the EBR

The *EBR* gives the public the right to know about, comment on and appeal many environmentally significant permits and approvals. However, section 32 of the *EBR* exempts permits and approvals for projects that have been approved under the *EAA* from the mandatory public participation rights afforded by the *EBR*. Moreover, section 32 shields even the very broad range of activities explicitly exempted under the *EAA* from *EBR* public participation requirements. The applicants argued that the EA exception under section 32 of the *EBR* has effectively blocked Ontarians from meaningfully reviewing or commenting on critically important details set out in ministry permits and approvals for projects that are subject to the *EAA*.

Lack of Public Hearings

Under the *EAA*, any person may request that the Minister of the Environment refer a proposed undertaking (or related matters) to the Environmental Review Tribunal (ERT) for a public hearing and decision. These hearings are considered important mechanisms for gathering information, testing evidence, weighing competing interests, and making informed decisions about particularly significant or controversial undertakings. The applicants noted, however, that since 1996, apparently only two matters have been referred to the ERT for public hearings, leaving virtually all EA applications to be decided by the Minister without any hearings. They argued that there has been "a persistent, inexplicable and unacceptable refusal" by the Minister to refer matters to public hearings even where the public has requested hearings in relation to controversial or large-scale undertakings that may cause adverse ecological, socio-economic or cultural impacts. The applicants, therefore, asserted that the *EAA*'s public hearing provisions must be reviewed and revised to ensure that public hearings actually occur under the Act.

Moreover, the applicants asked MOE to review and revise O. Reg. 206/97 under the *Environmental Protection Act*. This regulation exempts waste disposal sites, waste management systems and sewage works that are subject to the *EAA* from mandatory hearings under the *Environmental Protection Act*.

MINISTRY RESPONSE

In March 2014, MOE denied the request for review and concluded that a review is not warranted because of "related efforts underway." Instead of addressing each of the applicants' concerns in turn, the ministry responded with a broad description of the sufficiency and flexibility of its EA and approvals processes, and denied the request for review on the basis that: MOE's SEV already includes the consideration of environmental principles; the EA process is "robust"; the ministry consulted the public when developing the *EAA*, subsequent amendments and regulations; and the *EAA* was reviewed in 2005 – almost 10 years ago.

For the full text of the ministry decision, see our website at www.eco.on.ca.

ECO COMMENT

The ECO disagrees with MOE's decision to deny this request for review of the *Environmental Assessment Act* and several EA-related regulations. The applicants raised valid concerns with the existing EA process, many of which the EA Advisory Panel and the ECO brought to the ministry's attention years ago. Moreover, industry has complained for years about the costs and delays associated with EAs, and the ECO regularly hears from Ontarians who are frustrated with the EA process. The *EAA* has not been publicly reviewed in almost a decade and has not been significantly amended in almost 20 years. A review is overdue.

As the ECO once stated, the EA process "should be society's pre-eminent tool to carry out farsighted planning for public infrastructure in the name of the public good." Laudably, the *EAA* laid out a vision for anticipating and mitigating the potential impacts of public sector projects. Unfortunately, in the intervening decades since it was enacted, the process has been watered down and many shortcomings have been identified with its effectiveness in achieving this vision.

5.1.1 The High Costs of Not Doing a Full Environmental Assessment

The story of the costly cancellations of Ontario's gas plants is all too well known. In 2005 and 2009, the Ontario Power Authority, on behalf of the provincial government, signed contracts with two companies to build large, natural gas-fired power plants in Mississauga and Oakville, respectively, to meet electricity demand in the Greater Toronto Area. In both cases, local resistance to the plants arose almost immediately. Eventually, ceding to the mounting opposition, the government cancelled the construction of the Oakville plant in October 2010, and the Mississauga plant in September 2011. The cancelled Mississauga plant was relocated to Lambton, and the cancelled Oakville plant is being replaced with a plant in Napanee, both at great cost. According to the Auditor General of Ontario, the total cost of these cancellations was $1.1 billion.

Could this story have played out differently if the gas plants had been subject to a more rigorous environmental assessment process?

Under the *Environmental Assessment Act* (*EAA*), designated projects are required to undergo a full "individual" environmental assessment (EA). Under a full EA, proponents must, early in the project planning stage, consider: the purpose of the proposed project; the rationale (or need) for the project; possible alternatives to the project; potential environmental, social and economic impacts; and necessary actions to prevent, mitigate or remedy any negative impacts.

Over the years, however, the government has incrementally watered down the EA requirements for many projects, creating a "streamlined" process to be undertaken in lieu of a full EA. Ontario Regulation 116/01 (Electricity Projects), made under the *EAA*, exempts proponents of many large-scale electricity projects – including natural gas plants – from carrying out a full EA, as long as they fulfil the requirements of an "environmental screening process." This simplified process is intended to provide a more timely and predictable assessment process for electricity projects.

Environmental Screening Process for Gas Plants

Under the screening process, a proponent is not required to consider the need for the proposed project, or alternatives to the project (such as alternative methods to meet the purpose or alternate locations), or the advantages and disadvantages of different alternatives. Instead, the proponent is simply required to screen the project against a checklist of criteria to identify potential environmental impacts and, then, to determine appropriate mitigation measures to address those impacts. If issues cannot be resolved during the screening stage, the proponent must complete a more detailed environmental

review study of the unresolved issues. Proponents must also notify and consult with the public and relevant agencies at various stages.

The screening process is a completely proponent-driven, self-assessment process. Unlike an individual EA, the Ministry of the Environment (MOE) does not review or approve the proponent's report. In addition, proponents have discretion as to timing, and may commence the screening process after project planning is well underway.

The Value of a Full EA

The individual EA process, when implemented properly, can be an invaluable tool for anticipating and mitigating issues at an early project planning stage and, ultimately, can lead to more strategic planning and better-supported decisions. The decisions as to where to site new gas plants, however, have been made through a competitive bidding process, dictated largely by the developer's property holdings, rather than through a comprehensive assessment of alternative options to meet the region's electricity supply needs.

Over the years, the ECO has repeatedly lamented the erosion of two basic EA tenets: the up-front evaluation of the need for a project and the thorough consideration of alternative options. The ECO also has argued that the shift away from initiating EAs at the very earliest stage of project planning has further reduced the utility of the process (see Part 2.2 of the ECO's 2007/2008 Annual Report).

In 2010, MOE asserted that the questions of "need" and "alternatives" need not be addressed in the EA process for each new gas plant, as these fundamental questions were already considered during province-wide planning processes for electricity generation for Ontario. To the contrary, the government specifically exempted the *Integrated Power System Plan* (IPSP) from the *EAA* in 2006. By exempting the IPSP from the Act, Ontario lost the opportunity to subject the need for, and alternatives to, new natural gas plants to rigorous environmental assessment (see Part 2 of the ECO's 2006/2007 Annual Report, pages 81-86).

Had the government carried out a thorough EA of its energy project plans, might it have selected suitable, community-supported sites from the get-go? We'll never know the answer. But we can speculate that had the province embraced the spirit of the original *EAA* vision – and insisted on a full, transparent and consultative evaluation of the alternative options – the key contentious issues would have been aired far sooner and much of the costly damage would have been avoided.

In May 2013, in an effort to avoid future fiascos, the Minister of Energy asked the Ontario Power Authority and the Independent Electricity System Operator to provide recommendations for improving the planning and siting process for large energy projects in the province. In August 2013, these agencies made several recommendations relating to better consultation and consideration of broader criteria in the planning and decision-making process. To the ECO, these recommendations bore some striking similarities to the features of a full EA. Perhaps we've known how to do a better siting process all along.

The ECO has previously commented at length on the numerous EA issues raised by the applicants. For example, in our 2007/2008 Annual Report, the ECO expressed concern over the many environmentally significant decisions that are not being made under the *EAA*. The ECO also raised serious concerns about the failure of the EA process to consider the cumulative effects of individual projects. This failure arises not only in the context of numerous different projects, but also within single projects, particularly in the Class EA approach, which allows major regional infrastructure initiatives to be broken up into multiple small projects.

The ECO has also commented in the past on: the failure of EAs to consider a project's "need" and "alternatives"; the lack of mechanisms to turn down projects under Class EA processes; the poor integration between EA and land use planning processes; and the issuance of other approvals to proponents before obtaining EA approval, contributing to a *fait accompli* style of project planning (see Part 2.2 of the ECO's 2007/2008 Annual Report). Furthermore, the ECO has observed issues of non-compliance with EAs; the ECO recommended that MOE investigate the Ministry of Natural Resources for blatant non-compliance with the *EAA* related to its approval for forest management (see Part 2.6 of the ECO's 2011/12 Annual Report, Part 2).

None of these issues have been addressed. Moreover, the EA Advisory Panel made 41 recommendations in 2005 on how to improve Ontario's EA process, a number of which have never been implemented, including: establishing an independent advisory body to provide impartial expert advice on EA-related matters; amending the *EAA* to allow fees to be imposed to fund or undertake EA-related activities; and creating a formal adjudicative process for elevating the status of a Class EA project to an individual EA.

The ECO has also repeatedly expressed frustration with how ministries avoid public consultation by relying on section 32 of the *EBR* to avoid posting notices on the Environmental Registry for projects that have been approved or exempted under the *EAA*. Although, MOE is expected to consider this issue as part of its current review of the *EBR* (see Section 2.1.4 of the Supplement to

this Annual Report), this review has been ongoing for years. Meanwhile, ministries continue to use this loophole to inappropriately shroud environmentally significant decisions from public scrutiny (see Part 1.3 of the ECO's 2012/2013 Annual Report).

Given the unaddressed concerns and unfulfilled recommendations of the EA Advisory Panel, the ECO and many observers and stakeholders, the ECO believes a comprehensive and public review of the *EAA* is long overdue. The ECO also believes that MOE should conduct such a review with an open mind, listening to concerns from all sectors and utilizing the consultative power afforded by the Environmental Registry.

For a more detailed review of this application, please refer to Section 2.1.16 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

RECOMMENDATION 6:

The ECO recommends that MOE conduct a comprehensive public review of the Environmental Assessment Act *and related regulations.*

5.2 Provincial Disinterest in Tackling Environmental Issues: The *Provincial Policy Statement, 2014*

Land use planning influences nearly every aspect of daily life. It plays a part in determining: where new homes are built; how far people will travel to get to school and work; how Ontarians get around their communities; and where the province's food is produced. It also has a significant influence on the abundance and diversity of species and natural areas by directing what forms of development should be allowed where.

The *Provincial Policy Statement* (PPS), made under the *Planning Act*, is the foundation of Ontario's "policy-led" land use planning system. In 2010, the Ministry of Municipal Affairs and Housing (MMAH) commenced its review of the 2005 PPS. This four-year review process culminated in the 2014 PPS, which came into force in April 2014.

Ontario's planning system comprises a complex array of legislation, regulations, by-laws, plans and policies. The PPS provides overarching direction for the province, while other provincial plans, such as the *Growth Plan for the Greater Golden Horseshoe* and the *Niagara Escarpment Plan* provide regional guidance. Municipal official plans, along with zoning and development by-laws, are the primary mechanisms used to implement planning decisions at the local level.

The *Planning Act* requires all planning decisions to be "consistent with" the PPS, although direction in plans like the *Greenbelt Plan* may take precedence over the PPS in event of a conflict. Some PPS policies are mandatory and obligate planning authorities to take specific actions or comply with certain standards. The PPS also contains enabling or supportive policies that encourage planning authorities to apply specific considerations or take certain actions, but allow for discretion in their implementation.

The PPS provides policy direction on matters of "provincial interest" related to land use planning. In some cases, it is the PPS alone that sets the high-order direction or priority for an issue; in

other cases, the PPS mirrors the direction set by another ministry's regulatory framework. In other words, if something that affects land use planning is already extensively dealt with through another mechanism, such as the protection of species at risk under the *Endangered Species Act, 2007*, the PPS generally will not substantially deviate from that direction.

The *Provincial Policy Statement, 2014*

This overview highlights a selection of the most environmentally significant new or amended policies in the 2014 PPS, including policies addressing natural heritage, climate change, water and mineral aggregates. For full details on all new policies, refer directly to the PPS.

Natural Heritage

Natural features and areas are under constant threat of degradation and destruction from encroaching development, especially in southern Ontario. The destruction of natural areas has cascading negative effects, including the loss of biodiversity and the deterioration of ecosystem services. The protection of natural heritage is a critical component of sound land use planning. The 2014 PPS retains the general requirement that natural features and areas are "protected for the long term." However, it only *encourages* protecting the diversity and connectivity of natural heritage features, as well as the long-term ecological function and biodiversity of natural heritage systems.

One way in which the PPS seeks to protect natural heritage is by prohibiting "development" and "site alteration" in areas adjacent to or within specific natural heritage features (e.g., certain wetlands or significant wildlife habitat). However, the 2014 PPS retains the very narrow definition of "development" used in the 2005 PPS, which excludes such potentially intrusive projects as infrastructure (e.g., roads, oil and gas pipelines, and electricity generation facilities), drainage projects and certain mining activities. The PPS imposes an absolute prohibition on development and site alteration in some circumstances; in other cases, it only imposes a conditional prohibition that allows these activities to occur if there will be "no negative impacts" on the natural features or their ecological functions.

The degree to which natural heritage is protected generally depends on whether the feature in question is deemed by the Ministry of Natural Resources (MNR) or a local planning authority to be "significant." The level of protection also depends on where the natural feature is located in Ontario, based on ecoregion boundaries.

The 2005 PPS prohibited development and site alteration in significant wetlands in central and southern Ontario, as well as in all significant coastal wetlands. The 2014 PPS extends enhanced protection to all Great Lakes coastal wetlands in central and southern Ontario that are not already protected as significant wetlands. Development and site alteration are now prohibited in these features unless the "no negative impacts" standard is met. Development and site

alteration is permitted in significant wetlands in northern Ontario, provided that there will be no negative impacts on the wetlands or their ecological functions (Figure 5.2.1).

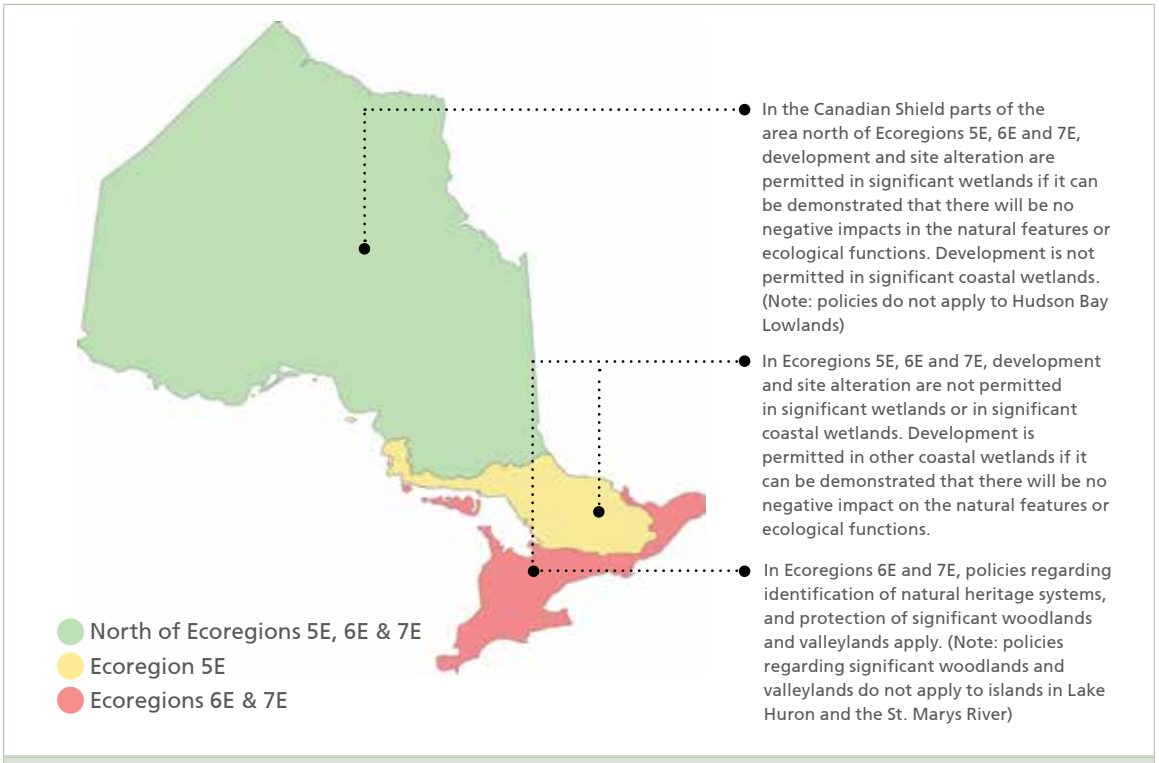


FIGURE 5.2.1. Natural heritage protection under the 2014 PPS. (Source: Adapted from *An Introduction to the Provincial Policy Statement, 2014: Rural Ontario (Draft),* Ministry of Municipal Affairs and Housing, 2014).

In addition, MMAH expanded the policy area that applies to the conditional prohibition on development and site alteration in significant woodlands and valleylands to encompass ecoregion areas in eastern Ontario that were previously excluded.

The 2005 PPS defined "natural heritage system" as a system of natural heritage features and areas linked by natural corridors necessary to maintain biological and geological diversity, natural functions and viable populations. Also included were restored lands or lands with the potential to be restored to a natural state. The 2014 PPS definition of natural heritage system has been expanded to include: linkages and connectivity; natural processes (including hydrological and ecological function); and protected areas. The 2014 PPS also contains a new requirement to identify natural heritage systems in southern Ontario, while recognizing that such systems will have a diversity of forms and sizes depending on where they occur (e.g., urban vs. rural settings). In addition, there are several new general statements regarding the importance of conserving biodiversity.

Climate Change

Climate change is a major challenge facing all municipalities in the province, which will have to deal with more frequent extreme weather events (e.g., drought, flooding), additional stresses on infrastructure, and the increased vulnerability of natural heritage systems. By proactively

addressing such impacts through land use planning, municipalities may be able to reduce their vulnerability and associated risks. The way development is planned also has a substantial impact on Ontario's greenhouse gas emissions, the primary cause of climate change.

The 2014 PPS retains the previous direction requiring land use patterns and densities within settlement areas that "minimize negative impacts to air quality and climate change, and promote energy efficiency." In addition, a series of new policies recognize the importance of resilience to climate change and require planning authorities to "consider" and "minimize" the impacts of climate change. These requirements have been incorporated into policies pertaining to: development and land use patterns; supporting long-term economic prosperity; natural hazards; and the provision of infrastructure and public service facilities. The pre-existing section of the PPS on energy and air quality has also been amended to include a greater emphasis on energy conservation, as well as on climate change mitigation and adaptation.

Protection of Water Quantity and Quality

Land use has a significant influence on the quantity and quality of water resources. For example, water consumption and groundwater recharge are highly dependent on the types and intensity of land uses in an area, as well as land cover. Similarly, agricultural, industrial, residential and commercial land uses can contribute to water pollution through wastewater, industrial effluent and runoff, including stormwater.

The PPS retains its previous direction supporting watershed-scale planning, but it now includes a new emphasis on watershed-based "integrated and long-term planning, which can be a foundation for considering the cumulative impacts of development."

Further, the 2005 PPS directed planning authorities to identify specific hydrological features and functions. The 2014 PPS now requires the identification of "water resource systems," a more comprehensive term that includes all the individual components listed under the 2005 PPS. In addition, shoreline areas are also now specifically recognized as surface water features that form part of a water resource system.

Finally, the 2014 PPS incorporates new stormwater considerations into the policy for sewage and water. The 2005 PPS simply stated that stormwater management practices should minimize volumes and contaminant loads and maintain or increase the extent of vegetative and pervious

surfaces (for further information on stormwater management, see Part 4.5 of the ECO's 2010/2011 Annual Report). Now, planning for stormwater management must:

- minimize or, where possible, prevent increases in contaminant loads;
- minimize changes in water balance and erosion;
- not increase risks to human health and safety and property damage;
- maximize the extent and function of vegetative and pervious surfaces; and
- promote stormwater management best practices, including stormwater attenuation and re-use, and low impact development.

The 2014 PPS also encourages the promotion of green infrastructure, which it defines as "natural and human-made elements that provide ecological and hydrological functions and processes." Previously, such systems were not included in the PPS definition of infrastructure (see Part 3.6 of the ECO's 2010/2011 Annual Report).

Mineral Aggregate Resources

The PPS provides direction for protecting aggregate resources for long-term use and for the rehabilitation of extraction areas. Aggregate is in high demand in Ontario for construction projects, including infrastructure such as roads. However, aggregate extraction may conflict with other land uses because aggregate deposits often underlie prime agricultural land, wetlands and significant woodlands.

The 2014 PPS has strengthened the protection of mineral aggregate resources for long-term use, including requirements to identify aggregate deposits if provincial information is available. In addition, the PPS now requires the conservation of aggregate resources and, as part of this requirement, encourages aggregate recycling facilities within operations.

The 2014 PPS modifies the previous requirements for the rehabilitation of aggregate extraction sites, including: mitigating negative impacts to the extent possible; encouraging comprehensive rehabilitation planning where there is a concentration of aggregate operations; and setting more stringent rehabilitation standards in specialty crop areas.

The 2014 PPS retains a policy stating that aggregates should be made available as close to markets as possible, and that "demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere."

IMPLICATIONS OF THE DECISION

Expanded but Inadequate Natural Heritage Protection

The 2014 PPS contains a number of enhancements to the protection of natural heritage, including: increased protection for coastal wetlands; the expansion of the policy area for the purposes of protecting significant woodlands and valleylands in southern Ontario; and the new mandatory identification of natural heritage systems in southern Ontario. However, these are almost negligible gains when measured against the enormous omissions and inconsistencies in natural heritage protection that remain throughout the PPS. Overall, the PPS is wholly inadequate to safeguard natural heritage against the irreparable damage and loss of biodiversity that inevitably accompany development.

There is a continuing lack of mandatory protection for natural heritage. This is exemplified by Policy 2.1.2 of the PPS, which only *encourages* the maintenance, restoration or improvement of the diversity and connectivity of natural features, as well as the ecological function and biodiversity of natural heritage systems. The discretionary wording of this policy effectively undermines the policy directly preceding it, which explicitly mandates the long-term protection of natural heritage features and areas.

The PPS protections for natural heritage are further weakened though exemptions. Specifically, the exclusion of a wide range of activities from the definitions of "site alteration" and "development," including infrastructure projects, continues to leave many of the province's most significant and vulnerable natural heritage features open to serious adverse impacts from a wide range of land uses.

The features and regions protected from site alteration are limited as well. For example, the 2014 PPS continues to protect only those inland wetlands that have been evaluated by the province and deemed "significant." The PPS still does not provide any protective measures specific to unevaluated wetlands or for those designated as locally (but not provincially) significant.

A central weakness of Ontario's wetland protection system is that wetlands remain completely vulnerable if they are unevaluated, and they are only examined when confronted with imminent threat of development. In 2006, the ECO urged the province to speed up wetland evaluations, as well as improve its regulatory framework for protecting wetlands (see pages 35-43 of the ECO's 2006/2007 Annual Report). However, the Ontario government still does not have a systematic process for determining which wetlands should be evaluated, nor does MNR devote sufficient resources for evaluating wetlands. Consequently, the responsibility for wetland evaluations often falls to third parties who may have a conflicting interest in developing the wetland.

Furthermore, the geographic disparity in wetland protection has been carried over into the 2014 PPS. Significant wetlands in northern Ontario are accorded less protection, despite growing development pressure in the north from forestry, mining, hydro-electric development and peat extraction.

Finally, one of the key actions in *Biodiversity: It's In Our Nature* (the Ontario government's plan to conserve biodiversity) is to "further integrate biodiversity into land use and resource management planning," specifically including the PPS. However, the new vague statements referring to the importance of conserving biodiversity fundamentally fail to make any substantive improvement to the protection of biodiversity under the 2014 PPS.

Vague Guidance on Climate Change Adaptation

The 2014 PPS makes reference to climate change in a number of policies; however, these policies are generally vague and discretionary. Most of the policies simply require decision makers to "consider" the impacts of climate change. The PPS does not offer any guidance as to what considering the impacts of climate change entails or how heavily those considerations should weigh in reaching a final decision. As a result, it is unclear how municipalities are expected to operationalize this guidance in their planning decisions.

Moreover, the 2014 PPS does not contain direction for municipalities to take any specific climate change adaptation actions – despite the fact that the Ontario government explicitly committed to integrating adaptation policies into the PPS in the province's climate adaptation strategy, *Climate Ready: Ontario's Adaptation Strategy and Action Plan 2011-2014*. For example, the absence of any

requirement to address the effects of climate change in the PPS stormwater management policies is a particularly glaring omission given the predicted effects of climate change in Ontario, which include more frequent extreme weather events.

In practical terms, municipalities that are voluntarily addressing issues involving climate change will continue to do so, while the remainder are unlikely to be spurred to take substantive steps by the 2014 PPS. The failure to require municipalities to prepare for the impacts of climate change not only leaves communities vulnerable, but may also contribute to a risk of municipal liability for damage associated with extreme weather.

Stronger Direction to Consider Water Issues

Generally, the policies respecting water quantity and quality in the 2014 PPS should encourage planning authorities to give greater consideration to water-related issues. In particular, the addition of "integrated and long-term planning" to the policy respecting watershed-scale planning is a positive development, as is the new language regarding consideration of cumulative effects. This direction may also be supported by the requirement to identify water resource systems. However, there is no obligation for planning authorities to prepare watershed- or subwatershed-scale plans or any requirement to consider and address watershed impacts in making planning decisions.

The 2014 PPS policies regarding planning for stormwater management provide significantly stronger and more specific direction than the 2005 PPS. Although the new policy encouraging planning authorities to promote green infrastructure is discretionary rather than mandatory, this policy could further empower municipalities in achieving the stormwater management objectives. However, the direction to "promote" stormwater management best practices, as opposed to a requirement to employ such practices, reduces the potential effectiveness of this policy.

Mineral Aggregates Retain Priority over Other Land Uses and Interests

The 2014 PPS offers slightly more stringent rehabilitation policies for specialty crop areas, as well as a stronger emphasis on comprehensive rehabilitation planning and mitigating the negative impacts of aggregate extraction "to the extent possible." However, prime agricultural areas, including specialty crop areas, remain open to aggregate extraction operations throughout the province as a so-called "interim use."

The aggregate policies remain largely unchanged in all other respects, including the continued inclusion of policies that require aggregates to be sourced close to market and that prohibit requiring demonstration of need. Aggregate operations will continue to be allowed in virtually all parts of the province, subject to certain conditions. Consequently, aggregate extraction remains a land use that effectively trumps all other land use priorities in the province.

ECO COMMENT

Ontario is facing many complex and urgent challenges that are inextricably tied to land use planning, including biodiversity loss, climate change, water quality and food security. The planning decisions made today will help dictate how and where Ontario develops in the years ahead. At the heart of our planning system is the *Provincial Policy Statement*, which reflects the priorities and interests laid out by the government.

MMAH's practice of postponing its review of the PPS until the eleventh hour is inadequate. The ministry's record of merely commencing – rather than completing – reviews on a five-year cycle is not sufficient to ensure that the PPS keeps pace with the rapidly evolving planning issues that need to be addressed. This is in stark contrast to the ministry's proactive approach to continually considering and addressing emerging issues under the province's *Building Code*, which allows the Code to stay current in a dynamic situation. The ECO strongly urges MMAH to engage in ongoing assessment of the PPS, including continual public engagement, in order to allow formal reviews to be completed in a reasonable amount of time.

It is encouraging that the 2014 PPS is beginning to expressly recognize a number of increasingly important environmental issues. The inclusion of new supportive policies on integrated watershed management, cumulative effects, climate change, green infrastructure and stormwater are welcome additions. Many of these new policies may empower forward-thinking municipalities to give greater consideration to these matters in their planning decisions. However, while these new policies are a step in the right direction, the majority are vague and leave broad discretion to municipalities to decide whether to actually take any sort of concrete action. Without strong, mandatory direction to municipalities, there is little likelihood of these problems being addressed in a meaningful and effective manner across Ontario. It is imperative that collective and consistent action is taken to tackle many of these challenges.

The 2014 PPS does little to resolve some of the heated conflicts in land use planning. Many of the policies carried forward from the 2005 PPS to the new edition are problematic, particularly the policies respecting aggregates and the protection (or lack thereof) of natural heritage. Moreover, there are simply too many instances in which environmental interests are framed as goals that should be "promoted" or "considered," or where action is only required where "feasible" or "possible." Conversely, the PPS uses mandatory directives and prohibitions for various other provincial interests, such as the protection of aggregate resources, infrastructure and transportation corridors, as well as the requirement that growth and development areas be identified.

This prioritization of development over the environment is not confined to the 2014 PPS; it is a broader reflection of government policy in general. The consequences of weak environmental protections are potentially enormous: continued loss of biodiversity, impaired water quality and vulnerability to the impacts of climate change, to name but a few. Weak provincial direction will also perpetuate land use conflicts within many local communities.

The protections provided by the PPS are only as strong as the government priorities and the regulatory frameworks they reflect. In the absence of the political will to enact stronger environmental protections, and the fortitude to implement such protections at the potential expense of some development, relying on Ontario's current land use planning system to protect the environment is ultimately a losing game.

For a more detailed review of this decision, please refer to Section 1.4.1 of the Supplement to this Annual Report. For ministry comments, please see Appendix C.

5.3 The Rocky Rollout of the *Growth Plan for the Greater Golden Horseshoe*

The Greater Golden Horseshoe (GGH) is one of the fastest growing regions in North America. It extends around the western end of Lake Ontario, roughly from Niagara Falls, north to Georgian Bay, and east to Peterborough (see Figure 5.3.1). It currently is home to approximately 9 million people, representing two-thirds of Ontario's population, and is expected to grow by an additional 4.4 million people by 2041 (see Figure 5.3.2), increasing the demand on transit, roads, sewers, drinking water, energy and other infrastructure and services.

In 2005, the Ontario government enacted the *Places to Grow Act*, *2005* in an effort to better manage population growth and curb urban sprawl. The purpose of the Act is to help government plan for growth "in a rational and strategic way" that will build stronger communities, protect natural and agricultural resources, promote a healthier environment and make efficient use of infrastructure.

A year later, the government released the *Growth Plan for the Greater Golden Horseshoe, 2006* (the "Growth Plan"). The Growth Plan provides an overarching framework that prescribes where and how growth is to occur within the GGH region. The Growth Plan lays out policies for growth and development for the 110 municipalities that make up the GGH. However, these policies differ slightly between those that apply to municipalities in the GGH's generally less urban, less dense and less populated "outer ring" beyond the Greenbelt and those for the faster growing, more urbanized "inner ring" (i.e., Hamilton, Toronto, Durham, Halton, Peel and York) (see Figure 5.3.1). The Growth Plan also contains policies that are specific to the 21 upper- and single-tier municipalities in the GGH.

FIGURE 5.3.1. The Greater Golden Horseshoe Growth Plan Area. (Source: *Places to Grow: Growth Plan for the Greater Golden Horseshoe, 2006. Office Consolidation, June 2013*, Ministry of Infrastructure).

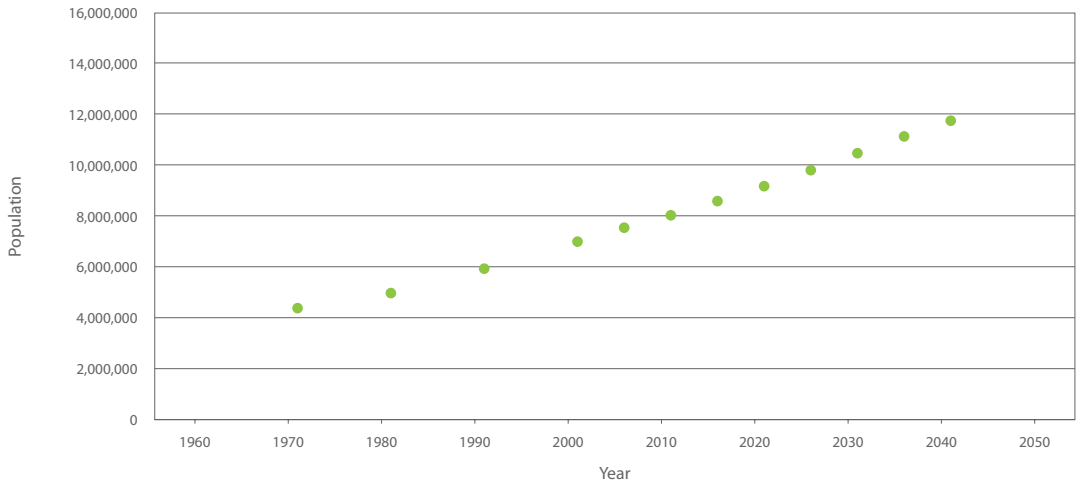


FIGURE 5.3.2. Historical (1971-2011) and projected (2016-2041) population estimates for the Greater Golden Horseshoe. (Sources: *The Growth Outlook for the Greater Golden Horseshoe, January 2005*, Hemson Consulting Ltd.; *Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report, November 2012*, Hemson Consulting Ltd.; and *Growth Plan for the Greater Golden Horseshoe, 2006, Office Consolidation, June 2013*, Ministry of Infrastructure).

The 2006 Growth Plan allocated population and employment forecasts to each of the GGH's upper- and single-tier municipalities up to the year 2031. These allocations were based on demographic, housing, economic and other social trends, as well as on the policy objectives set out in the Growth Plan to direct growth to existing urban areas. Upper-tier municipalities parcel out their total population and employment growth forecasts among their constituent lower-tier municipalities. Municipalities must use these forecasts to plan and manage for growth.

The 2006 Growth Plan also requires municipalities to meet several important quantitative targets.

> *Intensification Targets*: By 2015 and for each year thereafter, at least 40 per cent of all residential development occurring annually within each upper- or single-tier municipality must be within its "built-up areas" (although the Minister of Infrastructure may approve alternative minimum intensification targets for municipalities in the outer ring).
>
> *Density Targets for Urban Growth Centres:* By 2031, locations identified in the Growth Plan as "urban growth centres" must achieve a specific minimum gross density target, ranging from 150 to 400 residents and jobs combined per hectare depending on the centre.
>
> *Density Targets for Greenfield Areas:* Within the life of the Growth Plan, future development in the "designated greenfield areas" (i.e., undeveloped land slated for development) of each upper- or single-tier municipality must be planned to achieve a minimum density target of 50 residents and jobs combined per hectare (again, the Minister of Infrastructure may approve alternative density targets for certain municipalities in the outer ring).

To achieve the above targets, the Growth Plan requires upper-tier municipalities to identify intensification targets and greenfield density targets for its lower-tier municipalities. Although

the Growth Plan provides municipalities with only general direction on how to accommodate growth in their region, municipalities must develop and implement specific strategies and policies to achieve the Growth Plan's intensification and density targets based on the growth forecasts. To implement these policies, GGH municipalities were required to amend their official plans by June 2009 to conform with the Growth Plan's forecasts and targets.

As of April 2014, all 21 upper- and single-tier municipalities in the GGH had developed new official plans or official plan amendments to conform with the Growth Plan. Many of these official plans and amendments, however, have been appealed to the Ontario Municipal Board (OMB) for reasons related to Growth Plan conformity.

Following the Upward Curve

The Growth Plan states that the Minister of Infrastructure will review the population and employment forecasts at least every five years, in consultation with municipalities, and may revise the forecasts. The Ministry of Infrastructure (MOI) is also required to review the Growth Plan as a whole at least every 10 years. (In June 2014, the Ministry of Infrastructure merged with part of the Ministry of Economic Development, Trade and Employment to form the Ministry of Economic Development, Employment and Infrastructure.)

In January 2012, MOI made its first amendment to the Growth Plan to update directions for municipalities in the Simcoe Sub-area. It introduced a new schedule in the Growth Plan with specific population and employment forecasts for Barrie, Orillia, Simcoe County and each of Simcoe County's lower-tier municipalities through to 2031. The amendment also identified urban nodes in the Simcoe Sub-area to focus growth and intensification and "to help curb sprawl." (For the ECO's review of this Growth Plan amendment, see Part 3.5 of the ECO's 2011/2012 Annual Report, Part 2.)

In June 2013, MOI updated the Growth Plan again, extending the growth forecasts and planning horizon out to 2041. The forecasts added by Amendment 2 to the Growth Plan essentially continue the upward linear trajectory of population growth for an additional 10 years (see Figure 5.3.3). As the total forecasted populations and jobs for most municipalities increase, it is likely that, as a consequence, many municipalities will allocate more greenfield areas for development, even before all lands within built-up areas are fully developed.

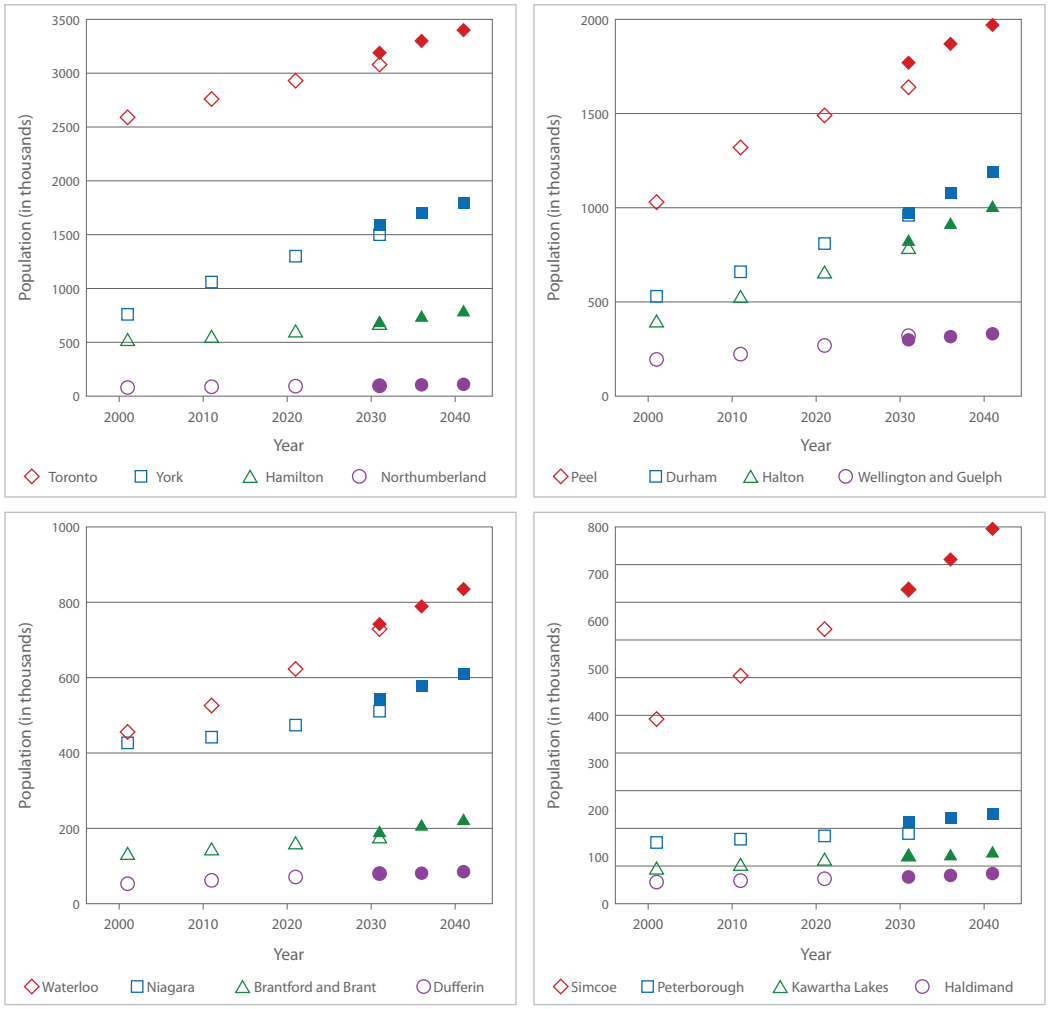


FIGURE 5.3.3. Population forecasts for upper- and single-tier Greater Golden Horseshoe municipalities, as set forth in the original *Growth Plan for the Greater Golden Horseshoe, 2006* (empty symbols) and as added by Amendment 2 (solid symbols). Note, the original Growth Plan combined forecasts for several municipalities, including: the County of Wellington and the City of Guelph; the City of Brantford and the County of Brant; the County of Peterborough and the City of Peterborough; and those in the Simcoe Sub-Area (the County of Simcoe, City of Barrie and City of Orillia). (Sources: *Places to Grow, Growth Plan for the Greater Golden Horseshoe, 2006*; *Places to Grow, Growth Plan for the Greater Golden Horseshoe, 2006, Office Consolidation, June 2013*, Ministry of Infrastructure).

A recent report by the Neptis Foundation observed that the new 2013 Growth Plan forecasts do not depart from historical trends in their distribution of total population between the GGH's inner and outer rings (see Figure 5.3.4). The report also observed that the actual population growth experienced for some municipalities between 2001 and 2011 differed significantly from the Growth Plan's forecasted estimates, raising questions about the reliability of the forecasts to inform planning decisions or the ability for the Growth Plan's targets to direct growth.

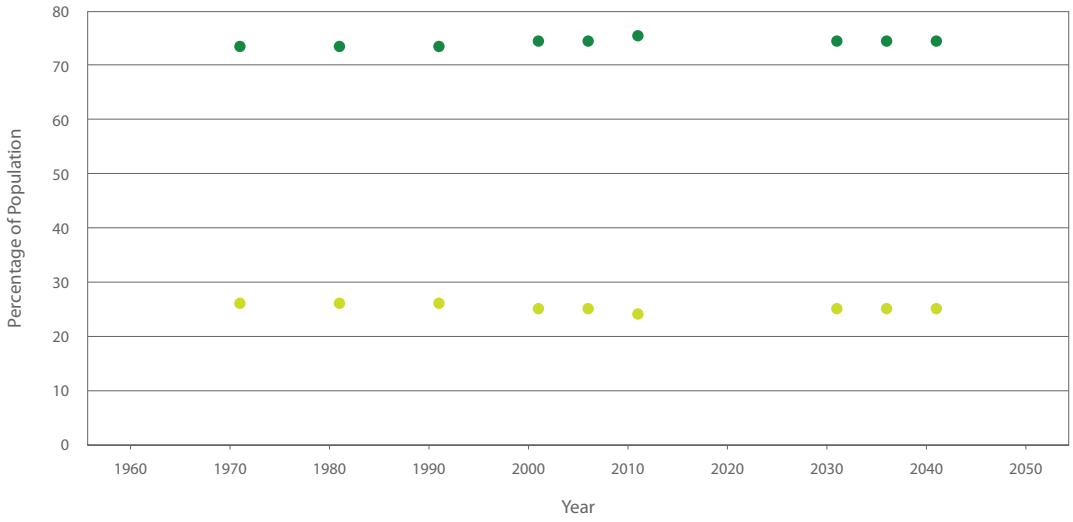


FIGURE 5.3.4. The percentage of the historical (1971-2011) and forecasted (2031-2041) population growth distributed between the Greater Golden Horseshoe's inner ring (dark green) and outer ring (light green). (Sources: *The Growth Outlook for the Greater Golden Horseshoe, January 2005*, Hemson Consulting Ltd.; *Greater Golden Horseshoe Growth Forecasts to 2041, Technical Report, November 2012*, Hemson Consulting Ltd.; and *Growth Plan for the Greater Golden Horseshoe, 2006, Office Consolidation, June 2013*, Ministry of Infrastructure).

Alternative Minimum Intensification and Greenfield Area Density Targets

When the Growth Plan was released in 2006, concerns were raised that its targets were insufficient to change historical land use patterns and curb sprawl. For example, it was argued that an intensification target of 40 per cent would do little to allocate more growth to the built-up areas. Likewise, some argued that the Growth Plan's greenfield area density target of 50 residents plus jobs per hectare was too low to support effective transit service.

Despite concerns that the default targets were themselves potentially insufficient to alter the *status quo* of low density development, as of November 2013, the Minister had approved alternative lower targets for 9 of the 15 (60 per cent) upper- and single-tier outer ring municipalities (see Table 5.3.1). For example, in 2011, the Minister approved an alternative intensification target for Brant County of just 15 per cent. Likewise, the ministry has approved alternative greenfield density targets for the majority of outer ring municipalities; these alternative density targets are below the level that the Ministry of Transportation suggests is needed to support "basic transit service."

TABLE 5.3.1.
Alternative Minimum Intensification and Greenfield Area Density Targets Approved by the Ministry of Infrastructure (Source: Ministry of Infrastructure, November 2013).

Municipality	Alternative Designated Greenfield Area Density Target (minimum # of residents and jobs per hectare)	Alternative Intensification Target (minimum percentage of total residential development that must be within built-up areas)
City of Kawartha Lakes	40	30%
City of Orillia	42	–
Brant County	35-40 by 2022*	15%
Dufferin County	44	–
Haldimand County	29	32%
Northumberland County	30	–
Peterborough County	35-40 by 2015**	–
Simcoe County	39	32%
Wellington County	40	20%
Target in Growth Plan	50	40%

**35 residents and jobs combined per hectare interim target from 2012 and 40 by 2022.*

***35 residents and jobs combined per hectare interim target increasing to 40 at next five-year review or 2015, whichever is sooner.*

How Much Growth?

Implementation of the Growth Plan has been delayed by numerous appeals of official plan amendments to the OMB. In fact, almost half of all upper- and single-tier GGH municipalities have had their official plan amendments appealed to the OMB for reasons related to the Growth Plan, including the cities of Barrie, Kawartha Lakes, Hamilton and Toronto, and the regions of Durham, Halton, Niagara, Peel, Simcoe and Waterloo. A lack of clear guidance about how the Growth Plan is to be implemented and what constitutes conformity has allowed appellants to successfully challenge official plan amendments at the OMB, undermining progressive municipal and provincial efforts to change growth patterns and build sustainable communities.

For example, the Region of Waterloo's official plan allocated approximately 85 hectares of greenfield land for new residential development, which was sufficient in the regional municipality's opinion to accommodate the Growth Plan's forecasted growth, while meeting its intensification and density targets. However, in January 2013 the OMB ruled against Waterloo's official plan and

agreed with appellants who had argued that over 12 times as much land (1,053 hectares) would be necessary to accommodate future growth. As of July 2014, the region was seeking a judicial review of the process behind the ruling, and the Ontario government had applied to become a party to help argue the municipality's case.

ECO COMMENT

Concerns have been voiced that the *Growth Plan for the Greater Golden Horseshoe* is not on track to achieve its long-term objectives. The government's recent extension of the Growth Plan's population and employment forecasts from 2031 to 2041 essentially pushes out *status quo* growth an additional 10 years.

The Growth Plan's forecasts do not appear to depart from historical trends in their distribution of total population between the Greater Golden Horseshoe's inner and outer rings. As a result, the amended Growth Plan allows growth to continue outwards at low densities to the less urbanized parts of the region beyond the Greenbelt, rather than concentrating on the more urbanized inner ring. Compounding this concern is a number of recent OMB cases centering on interpretations of future growth and levels of intensification.

If the Growth Plan is not on track to curb sprawl and significantly increase intensification, then the new population forecasts only aggravate the existing problems, putting increased pressure on municipalities to open more land for development. Unless intensification occurs at greater rates than in the past, development patterns will undoubtedly be unsustainable. Good land use planning necessitates that all the components of complete communities exist, including a variety of modes of transit, which in turn requires sufficiently high density and projected levels of use. Conversely, continued sprawl creates pressure on municipalities to finance and construct servicing infrastructure that may ultimately be unnecessary and costly; this problem may be exacerbated by the Growth Plan's forecasts as some municipalities direct growth to areas that may never in fact grow to predicted levels.

The government will be carrying out a review of the Growth Plan – and other related provincial plans, covering the Greenbelt, the Niagara Escarpment and the Oak Ridges Moraine – within the next few years. This opportunity necessitates a review of whether the population forecasts, or some other tools, should be used to achieve the Growth Plan's goals of reducing sprawl and building complete communities.

A comprehensive review and allocation of growth targets ideally would be based on reviewing indicators that measure the implementation of the Growth Plan and its policies. MOI, however, only started consulting on indicators to inform the Growth Plan's required review in March 2014. As the ECO commented in our 2012/2013 Annual Report, "the introduction of amendments to the Growth Plan in the absence of any comprehensive information on how the overall planning system is functioning is seriously disconcerting." It seems backward to develop performance indicators several years after targets have been mandated, allowing for a delay in data collection and a too-late realization that progress towards the targets cannot be easily measured.

These issues all return to one central issue that the government has yet to address: at what point has there been enough growth for a particular city or region? Limits to growth are based on an array of factors, ranging from natural constraints such as water supply to the preservation of the character and aesthetics of an area. This fundamental failure to acknowledge the "limits to growth" calls into question the Growth Plan's vision to build sustainable communities in Ontario. In our 2006/2007 Annual Report, the ECO raised this very concern about the Growth Plan forcing municipalities to plan for population increases without being able to set limits. The current approach gives little, if any, weight to the fact that significant population growth may simply be inappropriate and ultimately unsustainable in some communities. Accepting the reality that there are limits to growth – and planning for that fact – is a basic tenet of sound land use planning.

5.4 Ontario's Cycling Strategy: Some Assembly Now Required

Each day, Ontarians must decide how they are going to travel to school, commute to work and run errands. Car, bus, walk, cycle? These decisions are based largely on the availability and perceived viability of the various transportation options. For many, cycling is not seen as a realistic choice due to concerns about personal safety, in part, due to a lack of cycling infrastructure (such as separated bike lanes). From an environmental perspective, this is unfortunate as cycling represents an emissions-free mode of transportation. By contrast, passenger vehicles – the most widely chosen option – contribute significantly to local and regional air pollution and are responsible for 71 per cent of Ontario's on-road greenhouse gas emissions.

In August 2013, the Ministry of Transportation (MTO) took a step in improving cycling conditions across the province by releasing *#CycleON: Ontario's Cycling Strategy* (the "Strategy"). The Strategy presents an ambitious 20-year vision in which cycling is valued and respected as a core mode of transportation. The document identifies the numerous social, economic and environmental benefits that cycling provides, while recognizing that barriers can limit the number of people who use bikes for transportation. To achieve the Strategy's vision for 2033, the government identified five broad strategic directions:

1. Design healthy, active and prosperous communities;
2. Improve cycling infrastructure;
3. Make highways and streets safer;
4. Promote awareness and behavioural shifts; and
5. Increase cycling tourism opportunities.

Within each of these five categories, the Strategy contains several areas for action, including:

- Enhancing cycling provisions when reviewing planning-related policies, guidelines and legislation;
- Partnering with municipalities to develop cycling or active transportation plans and implement complete streets policies (under a complete streets approach, roads are planned and designed to be safe for all ages, all abilities and all modes of travel);
- Developing a funding partnership with municipalities and the federal government to build provincial and municipal cycling routes;
- Encouraging more cycling education in schools and at the community level; and
- Identifying a province-wide cycling network and using it to prioritize future infrastructure investments on provincial highways.

Each of the action areas articulated in the Strategy is to be more fully elaborated in future, multi-year action plans. These plans will outline the specific projects and initiatives to be undertaken, as well as include specific performance metrics and indicators. In April 2014, MTO released the first action plan.

IMPLICATIONS OF THE DECISION

Resetting the Cycling Agenda?

The Strategy comprehensively identifies the barriers that need to be addressed for cycling to become more prevalent in Ontario. It is not the first time, however, that the province has articulated these hurdles and crafted policy direction to address them. In 1992, MTO released a brief bicycle policy that acknowledged the multiple benefits of cycling, recognizing that a concerted effort was necessary to increase the number of people biking. At the time, MTO indicated it would assume a leadership role to help integrate bicycles into the overall transportation system. The ministry identified several measures and made broad commitments to take action in a number of areas; however, over the years, cycling waned as a priority for the ministry. With the release of the Strategy, the government has pressed the "reset" button on provincial plans to address this issue. Whether the new Strategy actually leads to improved cycling conditions will depend upon future action plans, the concrete action items that are identified in those plans, and how committed and aggressive the government will be in implementing them.

No Dedicated Funding for Cycling Infrastructure

Although the Strategy identifies funding for cycling infrastructure as a critical area, it fails to provide a firm funding commitment or establish a dedicated funding mechanism. Instead, the government states that it will work to develop a funding partnership with the other levels of government. In this regard, the Strategy effectively reiterates the 1992 *Bicycle Policy*, which also spoke of the role of funding partnerships without making any firm funding commitments.

Quebec serves as an important contrast. The provincial Ministère des Transports has made a long-term funding commitment, which has been critical for the development of the 5,000-kilometre Route Verte cycling network, as well as numerous municipal cycling infrastructure projects. The ministry has also earmarked approximately 1 per cent of its highway budget for the provincial cycling network.

While the Strategy itself did not contain a funding commitment, the first action plan announced the launch of a three-year program to build municipal and provincial cycling infrastructure. According to MTO, $15 million would be made available over three years to improve cycling facilities on provincial highways, and a further $10 million would be provided to municipalities to expand local cycling routes. The ministry plans to hold consultations to determine how to allocate these monies among Ontario's 444 municipalities.

No Requirement for Municipal Complete Street Policies

In March 2014, the government completed its review of the 2005 *Provincial Policy Statement* (PPS), which provides direction on land use planning and development for the province (for more information, see Part 5.2 of this Annual Report). The 2014 PPS places increased emphasis on promoting and supporting active transportation, such as cycling. What remains unchanged from the previous version, however, is the use of discretionary language with regard to planning public streets; the 2014 PPS still only states that public streets "should be" planned to facilitate cycling and other forms of human-powered travel, rather than requiring them to be planned in such a manner. Therefore, while the Strategy recognizes the importance of a complete streets approach, neither it, nor the revised PPS, makes it a requirement to plan streets that are supportive of active transportation.

No Measurable Targets

While the Strategy contains several broad aspirational goals, it does not provide any quantifiable targets against which progress can be measured. For example, one goal is to have interconnected networks of safe cycling routes across the province; however, the Strategy provides no indication how progress toward this goal will be monitored or measured. Although the Strategy indicates that specific performance metrics and indicators would be included in each multi-year action plan, no such metrics were contained in the first action plan. While some actions have a specified year by which they are to be completed, many others are broad and open-ended, with no firm timeline attached. In comparison, Quebec's bicycle policy contains several quantitative targets, such as a 30 per cent increase in bikeway kilometres, with a date by which they are to be achieved.

ECO COMMENT

The ECO applauds the government for releasing a renewed Strategy and for moving forward with the first action plan. Combined, these documents articulate a laudable vision for the future and reflect an understanding of the challenges that need to be overcome. Climate change, rising fuel costs, increased traffic congestion in large cities, poor air quality and growing public health concerns all point to the importance of making cycling a more viable mode of transportation. Over 20 years ago, MTO identified numerous barriers that prevented cycling from being a widely used option; disappointingly, many of these remain today.

A transportation and land use planning system that incorporates cycling as a key element is central to the success of the Strategy. As such, the ECO is encouraged that the Strategy recognizes the need for complete streets policies across municipalities, and that the Ontario government intends to partner with municipalities to implement them. To date, the official plans of 17 of Ontario's largest municipalities contain many elements of complete streets policies. Unfortunately, the language used in these official plans is often weak or ambiguous, and the implementation of sustainable transportation policies at the local level often results in a watered down, transportation-as-usual approach.

On a more fundamental level, the ECO is concerned that the government's promise to improve cycling infrastructure rings hollow in the absence of a firm, long-term commitment to fund improvements. A significant portion of provincial transportation funding is typically devoted to expanding, upgrading or maintaining roads for motor vehicles. By contrast, the amount that would be required for cycling infrastructure would constitute a very small fraction of the provincial road program, yet could achieve major progress toward fulfilling the Strategy's vision

for cycling. While the ECO is pleased to see the promise of some infrastructure funding in the first action plan, the amount is both limited and short term in nature; a much stronger commitment to funding is required.

While the Strategy properly identifies the broad areas for action, the action plans will translate the strategic directions into specific projects and initiatives. The first action plan presents a fairly comprehensive overview of the various efforts currently underway to enhance cycling at the provincial level. Yet, it fails to include specific performance metrics or indicators by which progress will be measured. For example, the improvement in cycling infrastructure contemplated in the Strategy will require, among other things, more kilometres of bike paths, cycling routes and highways with paved shoulders. In order to assess progress, it is imperative to know how many kilometres currently exist, as well as how many more are to be added over time. In the absence of such metrics, progress will be a slippery concept to measure. Once these measurable indicators have been established, it will be incumbent upon the government to take the next step and establish future targets and timelines.

One of the Strategy's goals is for an Ontario city to rank among the 10 most bike-friendly in the world by 2033. Given that not one city in the province currently ranks in the top 100, the enormity of the task ahead is clear. Similar to a shiny new bike, the Strategy holds much promise. Some assembly is now required.

For a more detailed review of this decision, please refer to Section 1.6.1 of the Supplement to this Annual Report. For ministry comments, see Appendix C.

5.5 Fourteen Years after Walkerton: Drinking Water Systems Not at Cost Recovery

In May 2000, a combination of unfortunate circumstances, negligence and incompetence led to the contamination of Walkerton, Ontario's drinking water, sickening more than 2,300 people and leaving seven dead. Following this tragedy, the Ontario government appointed Justice Dennis O'Connor to lead an inquiry into its causes and make recommendations to ensure a similar incident never happens again. Among its many recommendations, the Walkerton Commission made two that focused on ensuring that drinking water providers can adequately finance the total costs of their systems, including regular maintenance and repair costs. These two

recommendations recognized that the underfunding of Ontario's water and wastewater systems has been a chronic problem; in 2005, the average capital investment shortfall was estimated to be $1.2 billion per year across the province.

To address this funding gap, the Walkerton Commission recommended that owners of municipal drinking water systems (usually municipalities themselves) be required to submit a financial plan to the province that lays out the full costs of running and sustaining their drinking water system, as well as how those costs will be recovered. The Commission noted that "the plan would depend on two components: full-cost *accounting* and full-cost *recovery*" and should include a sustainable asset management plan. Justice O'Connor also recommended that "municipalities should plan to raise adequate resources for their water systems from local revenue sources," which could include water rates, user charges, development charges, property taxes, accumulated reserves and loans.

Now, well over a decade after the Walkerton Commission made its recommendations, the ECO believes it is time to examine the progress municipalities have made in asset management planning, full-cost accounting and full-cost recovery.

Asset Management Planning, Full-Cost Accounting and Full-Cost Recovery

The first step toward financial viability is to become aware of the components of a drinking water system's infrastructure: itemizing assets; evaluating their lifespans (based on forecasted usage and maintenance); and estimating when assets will need to be repaired or replaced. Accordingly, the Walkerton Commission argued that municipalities need to prepare an *asset management plan* to ensure that they fully plan for the maintenance and replacement costs of their drinking water infrastructure. Such a plan should include information on the size and location of system components, their anticipated lifespan and their replacement value.

Once an asset management plan has been developed, the next logical step is to estimate and report on the full costs of implementing that plan. *Full-cost accounting* involves assessing the full cost of drinking water services, including operation, maintenance, administration, research and development expenditures, and capital investments in facilities. Knowing the full costs of operating and maintaining a system – and the revenue sources available to finance those costs – allows municipalities to identify opportunities to improve performance and cost-efficiency, as well as funding gaps and options for making their drinking water systems financially self-sustaining.

The final step is working toward *full-cost recovery* (i.e., generating sufficient local revenues to cover the full cost of providing drinking water services). Because subsidies from senior levels of government can be unpredictable, a municipality that can self-sufficiently recuperate the full costs of its drinking water system can more reliably provide clean, safe drinking water to its residents into the future. In arguing that municipalities should fully recover their drinking water costs, the Commission also asserted that it is inappropriate for senior governments to subsidize municipalities that have underinvested in their systems or failed to plan effectively for these costs. Moreover, Justice O'Connor encouraged municipalities to adopt full-cost pricing (i.e., require water users to pay the full cost of their water use), noting that doing so would encourage water conservation. Since the release of Justice O'Connor's report, the government-commissioned Water Strategy Expert Panel (2005) and the Drummond Commission on the Reform of Ontario's Public Services (2012) have also recommended that municipalities transition toward full-cost recovery of their water systems.

Repeated Attempts to Regulate the Financial Sustainability of Ontario's Drinking Water Systems

The Sustainable Water and Sewage Systems Act, 2002

In response to O'Connor's two financially related recommendations, the Ontario government passed the *Sustainable Water and Sewage Systems Act, 2002 (SWSSA)* in December 2002. The Act was intended to address the financial sustainability of Ontario's municipal water systems by requiring municipalities to:

- prepare a "Report on Full Cost of Water Services" (including an inventory of, and management plan for, the infrastructure needed to provide water services, and an assessment of the full cost of providing those services and the revenue obtained to provide them); and
- develop a "Cost Recovery Plan" describing how the municipality intends to pay the full cost of providing drinking water services.

The Act received Royal Assent in 2002. However, it was never proclaimed in force; ultimately, after languishing for a decade, the *SWSSA* was repealed in December 2012. (For a review of the *SWSSA*, see pages 105-107 of the ECO's 2002/2003 Annual Report.)

The Financial Plans Regulation (O. Reg. 453/07)

In August 2007, with the *SWSSA* still unproclaimed, the Ministry of the Environment (MOE) took a different tack and developed O. Reg. 453/07 (Financial Plans) under the *Safe Drinking Water Act, 2002* (*SDWA*). This regulation requires every owner of a licensed municipal drinking water system to prepare, and publish on their website, a financial plan that details the system's proposed or projected: financial position (e.g., assets, liability, debt); financial operations (e.g., revenues, expenses, surplus or deficit); and gross cash receipts and payments for at least six years. MOE concurrently published a guidance document, *Toward Financially Sustainable Drinking-Water and Wastewater Systems*, outlining a number of broad principles and possible approaches to help municipalities prepare financial plans. MOE's guidance document encourages municipalities to collect sufficient revenues to achieve full-cost recovery of their drinking water systems. However, the guidance is not required practice and implementation is voluntary.

The ECO reviewed O. Reg. 453/07 in our 2007/2008 Annual Report, concluding that financial plans should help municipalities make the fundamental link between asset management and financial

planning, hopefully resulting in better long-term planning for capital renewal and replacement. However, given the *SDWA*'s more flexible and permissive approach to financial planning, and given that full-cost recovery may be politically unpopular with some municipalities, the ECO expressed skepticism that O. Reg. 453/07 alone would push most municipal systems toward financial sustainability. We also expressed concern that the *SDWA* does not require financial plans to be approved by the province, leaving little provincial control over the quality or sufficiency of individual plans. Furthermore, financial plans under the *SDWA* are not required to include an asset management plan or be based on full-cost accounting or recovery, as was recommended by Justice O'Connor.

The Water Opportunities Act, 2010

Taking yet another approach, the government passed the *Water Opportunities Act, 2010* in November 2010, enabling Cabinet to make regulations requiring municipalities to submit sustainability plans (including financial plans and asset management plans) for their drinking water services. However, no regulations have been developed to date to put this requirement into effect.

The net result is that, as of 2014, a municipality's only legal requirement to address the financial sustainability of its drinking water system is the obligation in O. Reg. 453/07 to prepare and post financial plans online (see Table 5.5.1).

TABLE 5.5.1.
Regulatory Requirements to Address the Walkerton Commission's Recommendations related to the Financial Sustainability of Municipal Drinking Water Systems.

	Provincial Legislation		
Walkerton Commission Recommendation	*Sustainable Water and Sewage Systems Act, 2002*	*Safe Drinking Water Act, 2002*	*Water Opportunities Act, 2010*
Financial Plan	Yes, but the Act was repealed in 2012	Yes	Yes, but no implementing regulations passed yet
Asset Management Plan	Yes, but the Act was repealed in 2012	No	Yes, but no implementing regulations passed yet
Full-cost Accounting	Yes, but the Act was repealed in 2012	No	No
Full-cost Recovery	Yes, but the Act was repealed in 2012	No	No

Municipal Progress toward Asset Management Planning, Full-Cost Accounting and Full-Cost Recovery

In November 2013, the ECO asked MOE for the owner contact information for municipal residential drinking water systems in Ontario. Using this list, the ECO contacted all 293 Ontario municipalities that hold municipal drinking water licences and asked each one:

1. Whether the municipality had an approved asset management plan in place that covered its drinking water system;
2. Where on the municipality's website the financial plan for its drinking water system could be found; and
3. Whether the municipality's drinking water system had achieved full-cost recovery.

Of the 293 municipalities the ECO contacted, 153 (52 per cent) answered the ECO's questions.

Asset Management Plans

Only 30 per cent of responding municipalities indicated that they had a comprehensive asset management plan in place. However, an additional 68 per cent stated that a plan was in development, with many expecting it to be approved by their municipal council by early 2014. Many responses suggested that the municipalities' motivation for completing asset management plans at this time was funding deadlines set by the Ministry of Infrastructure (MOI); in August 2012, MOI announced that its new Municipal Infrastructure Strategy would require municipalities that apply for provincial infrastructure funding to show how projects fit within a comprehensive asset management plan. The ministry also allocated $8.25 million to help small and rural communities prepare the asset management plans required to receive infrastructure funding.

Financial Plans

Of those municipalities that responded, 79 per cent indicated where their financial plan is posted on their website, as is legally required if a website is maintained. Fourteen per cent did not have their financial plan online, but did forward a copy to the ECO. Five per cent (eight respondents) admitted that their municipality did not yet have a council-approved financial plan, and about two per cent (four municipalities) stated that a financial plan existed but failed to provide the ECO a copy. With respect to those municipalities that did not respond to the ECO's information request, the ECO could find financial plans online for only 42 per cent of them. As the ECO was unable to find financial plans online for 76 municipalities, there could be many more municipal drinking water systems operating in Ontario without one. Upon reviewing located plans, a few appeared deficient in some of the requirements of O. Reg. 453/07, including requirements to itemize revenues and expenses, and to forecast financial information into the future for at least six years.

Most financial plans stated that plan components were influenced by new municipal financial accounting and reporting standards approved by the Canadian Institute of Chartered Accountants (CICA). These standards require that financial statements indicate not only the amount of money spent on tangible capital assets (including water and wastewater systems), but also how much assets have depreciated. According to the CICA, this approach can help managers better assess the full costs of current services, the viability of existing programs, revenue requirements, and the likely cost and affordability of proposed future activities and services. Indeed, the new standards seem to have made municipalities more mindful of their investment in physical infrastructure and the lifecycle costs of using an asset to provide services. As one municipality explained in its financial plan, these standards provide for "a sharper focus on the depreciation of the capital asset base of the water and wastewater systems and the need to plan for renewal and replacement on a timely basis."

Full-Cost Recovery

Fifty-nine per cent of the responding municipalities stated that their drinking water system is operating at full-cost recovery. However, there seemed to be differing understandings amongst municipalities of what it means to have achieved full-cost recovery: some municipalities indicated that they do not rely on provincial/federal funding but use it if available; some stated that they had received provincial funding until recently, but this revenue stream had ended; and others explained that they still rely on senior-level funding for mid- and large-sized capital projects.

Municipalities attributed their achievement of full-cost recovery to several factors, including: long-term planning; prudent financial management; implementation of their financial plan; and rate studies undertaken to determine appropriate water rates. Indeed, many financial plans suggest that the expectation of full-cost recovery requirements under the *Sustainable Water and Sewage Systems Act, 2002* prompted municipalities to prepare Full Cost of Services Reports, water rate studies, and Cost Recovery Plans to advance full-cost recovery. Furthermore, even though full-cost recovery is not currently mandated by the province, a few municipalities attributed their motivation for achieving full-cost recovery to their belief that it actually is provincially required.

Of those municipalities that stated that they have not yet achieved full-cost recovery, 50 per cent indicated that they are raising water rates and taking other measures to move toward full-cost recovery. A handful of municipalities, however, indicated they are unable to achieve full-cost recovery as it is unrealistic for municipalities with small populations to support a full-cost replacement approach.

ECO COMMENT

Fourteen years after the Walkerton tragedy killed seven people and sickened thousands more, many municipalities are still not assessing and recovering the full costs of their drinking water systems, putting the financial sustainability of these systems at risk. As Justice O'Connor argued, "over the long term, safety depends on stable and adequate financing to maintain the water system's infrastructure and its operational capacity to supply high-quality water consistently. Without adequate resources, corners will inevitably be cut, whether in the day-to-day operation of the facility, or in its long-term capital infrastructure. Ultimately, safety will be jeopardized." Even though the Walkerton Commission identified full-cost recovery as crucial, Justice O'Connor's recommendations on this issue have not been implemented; the province's hollow promises for mandating full-cost recovery have been diluted over successive pieces of legislation. Currently, MOE requires municipalities just to submit and post their balance sheets online.

In our 2007/2008 Annual Report, the ECO expressed doubt that the financial plan requirements found in O. Reg. 453/07 would be enough to push municipal systems toward financial sustainability. Sadly, this concern was well-founded. Worse still, some municipalities are not even complying with the *SDWA*'s nominal financial reporting requirements. And even if a municipality does have a financial plan, the provincial government does not verify – or even require – that a plan actually presents a drinking water system's full costs. As Justice O'Connor warned, if the full costs of providing drinking water are not accounted for, "municipalities could have a financial plan, in accordance with provincial standards, and still fail to provide adequate resources. This would be a most unfortunate result."

To pre-empt this from becoming a problem, Justice O'Connor expected that municipalities' financial plans would include a sustainable asset management plan that assesses the component parts, longevity and costs of a drinking water system. Although MOE likewise considers an asset management plan a "key input" to a financial plan, the government fails to actually require one under any legislation. Instead, the province relies on the carrot of capital funding to encourage municipalities to collect this essential information.

The government is long overdue in pushing all municipalities to achieve full-cost recovery for their drinking water systems. This will require helping small municipalities address the challenges they face. Historically, most municipalities in Ontario have charged artificially low water rates, hampering their capacity to cover costs. To advance full-cost recovery and create the sense of urgency needed, MOE should require municipalities to submit to the ministry regular cost recovery plans that identify options for recuperating the full costs of their systems. With this requirement in place, MOE could finally move toward mandating full-cost recovery, as was envisioned by the Walkerton Commission and the *SWSSA* over a decade ago.

The government is clearly aware of the necessity of full-cost recovery for drinking water systems; it was recommended by three separate government commissions and panels, encouraged in MOE's financial plan guidance document and other provincial plans, and was promised as a requirement of the *SWSSA*. While the government has taken some steps to nudge municipalities in this direction, MOE must be more assertive in moving all municipalities to meet Justice O'Connor's recommendations for financial sustainability. The longer the province takes in requiring municipalities to assess and recover the full costs of their drinking water systems, the more likely existing infrastructure deficits will grow – potentially threatening the safety of Ontario's drinking water.

RECOMMENDATION 7:

The ECO recommends that MOE require municipalities to recover the full costs of their drinking water systems.

For ministry comments, please see Appendix C.

APPENDIX A

2013/2014 ANNUAL REPORT RECOMMENDATIONS

RECOMMENDATION 1:
(Part 2.2 – Plight of the Pollinators)
The ECO recommends that the Ministry of Agriculture and Food and the Ministry of the Environment undertake monitoring to determine the prevalence and effects of neonicotinoids in soil, waterways and wild plants.

RECOMMENDATION 2:
(Part 2.4 – Healthy Soils Yield Benefits for Ontario's Farmers)
The ECO recommends that the Ministry of Agriculture and Food identify Ontario's leaders in soil health and systematically integrate their key success factors in the ministry's farm educational materials and research priorities.

RECOMMENDATION 3:
(Part 3.4 – Cutting into Ecological Integrity: Commercial Logging in Algonquin Provincial Park)
The ECO recommends that the Ministry of Natural Resources publicly commit to the end of commercial logging in Algonquin Provincial Park.

RECOMMENDATION 4:
(Part 4.2 – MOE Continues to Fail the Aamjiwnaang First Nation)
The ECO recommends that the Ministry of the Environment enhance its efforts to eliminate the adverse effects of the industrial facilities within Chemical Valley on the Aamjiwnaang community and the environment.

RECOMMENDATION 5:
(Part 4.5 – A Risky Gap in the Disposal of High-Sodium Brines as a Dust Suppressant)
The ECO recommends that MOE regulate the use and disposal of ground-sourced brine from oil and gas extraction activities for dust suppression.

RECOMMENDATION 6:
(Part 5.1 – Restoring A Vision Lost: Reforming Ontario's *Environmental Assessment Act*)
The ECO recommends that MOE conduct a comprehensive public review of the *Environmental Assessment Act* and related regulations.

RECOMMENDATION 7:
(Part 5.5 – Fourteen Years After Walkerton: Drinking Water Systems Not at Cost Recovery)
The ECO recommends that MOE require municipalities to recover the full costs of their drinking water systems.

APPENDIX B

FINANCIAL STATEMENT

Environmental Commissioner of Ontario

Commissaire à l'environnement de l'Ontario

Gord Miller, B.Sc., M.Sc.
Commissioner

Gord Miller, B.Sc., M.Sc.
Commissaire

Responsibility for Financial Reporting

The accompanying financial statements of the Office of the Environmental Commissioner have been prepared in accordance with the accounting policies described in Note 2 of the financial statements, and are the responsibility of management. The financial statements have been properly prepared within reasonable limits of materiality and in light of information available up to August 22, 2014.

Management is responsible for the integrity of the financial statements and maintains a system of internal controls designed to provide reasonable assurance that the assets are safeguarded and that reliable financial information is available on a timely basis. The system includes formal policies and procedures and an organizational structure that provides for appropriate delegation of authority and segregation of responsibilities.

The financial statements have been audited by the Office of the Auditor General of Ontario. The Auditor General's responsibility is to express an opinion on whether the financial statements are prepared in accordance with the accounting principles described in Note 2 to the financial statements. The Independent Auditor's Report, which appears on the following page, outlines the scope of the Auditor's examination and opinion.

On behalf of Management:

Jo-Anne MacKinnon
Co-ordinator, HR/Finance/Administration
August 22, 2014

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Statement of Expenditure

For the Year Ended March 31, 2014

	Budget (Note 6) $	2014 $	2013 $
Salaries and wages	2,152,100	2,045,697	2,011,196
Employee benefits (Note 4)	495,000	461,520	404,727
Transportation and communication	107,900	97,373	94,659
Services	1,005,700	1,053,155	1,030,188
Supplies	70,500	51,265	173,277
	3,831,200	**3,709,010**	**3,714,047**

Commitments (Note 5)

See accompanying notes to financial statement.

Approved by:

Environmental Commissioner

Notes to Financial Statement

March 31, 2014

1. Background

The Office of the Environmental Commissioner (Office) commenced operation May 30, 1994. The Environmental Commissioner is an independent officer of the Legislative Assembly of Ontario, and promotes the values, goals and purposes of the *Environmental Bill of Rights, 1993* (*EBR*) to improve the quality of Ontario's natural environment. The Environmental Commissioner also monitors and reports on the application of the *EBR*, participation in the *EBR*, and reviews government accountability for environmental decision making.

2. Significant Accounting Policies

BASIS OF ACCOUNTING

The Office follows the basis of accounting adopted for the Office of the Assembly as required by the *Legislative Assembly Act* and accordingly uses a modified cash basis of accounting that allows an additional 30 days to pay for expenditures incurred during the year just ended. This differs from Canadian generally accepted accounting principles in that for example liabilities incurred but unpaid within 30 days of the year end are not recorded until paid, and expenditures for assets such as computers and office furnishings are expensed in the year of acquisition rather than recorded as capital assets and amortized over their useful lives.

3. Expenditures

Expenditures are paid out of monies appropriated by the Legislative Assembly of Ontario. Expenditures are reported net of recoverable sales tax which is recovered by the Office of the Assembly on the Office's behalf.

Certain administrative services are provided by the Office of the Assembly without charge.

4. Pension Plan and Post-retirement Benefits

The Office's permanent employees (and non-permanent employees who elect to participate) participate in the Public Service Pension Fund (PSPF) which is a defined benefit pension plan for employees of the Province and many provincial agencies. The Province of Ontario, which is the sole sponsor of the PSPF, determines the Office's annual payments to the fund. As the sponsor is responsible for ensuring that the pension funds are financially viable, any surpluses or unfunded liabilities arising from statutory actuarial funding valuations are not assets or obligations of the Office. The Office's required annual payments of $149,000 (2013 - $150,000), are included in employee benefits expense.

The cost of post-retirement non-pension benefits were paid by the Ministry of Government Services and are not included in the statement of expenditure.

5. Lease Commitments

The Office has a lease agreement with its landlord for its current premises expiring on February 28, 2018. The minimum lease payments for the remaining term of the lease are as follows:

	$
2014/15	141,800
2015/16	141,800
2016/17	141,800
2017/18	130,000
	555,400

The Office is committed to pay its proportionate share of realty taxes and operating expenses for the premises amounting to approximately $113,000 during 2013.

6. Budgeted Figures

Budgeted figures were prepared by the Office and approved by the Board of Internal Economy, an all-party legislative committee.

APPENDIX C

MINISTRY COMMENTS ON THE ANNUAL REPORT

In this Appendix, ministries provide feedback to the Environmental Commissioner on articles contained in the main part of the Annual Report.

Part 1 – The *Environmental Bill of Rights, 1993*

1.2 – Use and Misuse of the Environmental Registry

Ministry of the Environment:

The ministry recognizes the importance of consultation in environmental decision-making and uses the Environmental Registry as a key channel to receive public input on its initiatives. The ministry is committed to considering all comments it receives on proposal notices during the decision-making process. When information notices are used to seek public input, all comments received are treated in the same manner as those that are submitted on proposal notices.

We also strive to provide the public with the most up-to-date and accurate information possible. For example, in December 2013, we implemented technical enhancements to the Environmental Registry to improve and clarify the information available to the public on notices for Renewable Energy Approvals and to clarify the requirements for seeking leave to appeal on a ministry decision on an instrument.

Ministry staff work to ensure that notices are up-to-date, accurate, and are posted in a timely manner. We are also currently reviewing outstanding decision notices and working to keep ministry notices current going forward.

Ministry of Municipal Affairs and Housing:

MMAH determined that the proposed minister's regulations under the *Planning Act* would not have a significant effect on the environment since they affect planning authority, not land use or how decisions are made.

Ministry of Natural Resources:

Section 27 of the *Environmental Bill of Rights* (*EBR*) requires that a "brief description of the proposal" be included in a regulation proposal notice posted to the Environmental Registry. The proposal notice for regulatory amendments under the *Fish and Wildlife Conservation Act* (Registry #011-9826) met the requirements of Section 27 of the *EBR* by providing a brief description of the proposal. There is no explicit requirement in the *EBR* to post draft regulations and MNRF is of the opinion that using plain language wording in notices facilitates public consultation and can inform the development of regulations. MNRF provides links to relevant information, such as copies of draft documents, to support consultation on proposals when practical and appropriate, and assesses the need to do so on a case by case basis.

1.2.1 What is a Policy?

Ministry of the Environment:

The ministry is committed to an open, transparent, and inclusive policy development process that considers whether there is potential for significant harm to the environment. Should potential exist, notices are posted on the Environmental Registry to ensure that the public and other stakeholders are consulted accordingly.

Ministry of Northern Development and Mines:

As reflected in our letter to you of July 2013, MNDM had considered the NIERP program renewal predominantly financial in nature, and so we did not post on the Environmental Registry but did consult extensively with industry stakeholders. MNDM will carefully assess the balance of financial and environmental components of future proposals on a case by case basis, and post them as appropriate.

1.3 Ministry Co-operation

Ministry of the Environment:

The ministry continually works to improve the application of its Statement of Environmental Values (SEV). Most recently, we updated business processes to advance documentation of SEV considerations in approvals and permitting decisions. Staff are regularly trained on SEV requirements and business processes to ensure that our SEV consideration is documented for key environmental decisions.

1.5 Keeping the *EBR* in Sync with Government Changes and New Laws

Ministry of the Environment:

The ministry strives to ensure that the *EBR* and its regulations are kept up-to-date to reflect current government environmental programs, initiatives, and laws. This includes canvassing ministries annually for suggested amendments to the regulations. We appreciate the Commissioner's comments and will continue to work with the other ministries to determine if any regulation amendments are required.

Ministry of Municipal Affairs and Housing:

Provisions of the *Building Code Act, 1992* and of the *Ontario Building Code* related to sewage systems are prescribed under the *EBR*. The balance of the *Ontario Building Code* regulation covers a wide range of topics, such as fire protection, occupant safety, structural requirements, and administrative provisions governing local enforcement.

1.6 New Statements of Environmental Values Maintain the Status Quo

Ministry of the Environment:

The ministry recognizes the value of having a strong Statement of Environmental Values (SEV) to guide its environmental decisions. The ministry's SEV, with its cornerstones of strong environmental management, pollution reduction, strategic management, and public consultation will continue to guide the work that we do.

Part 2 – The Environmental Impacts of Agriculture

2.1 Building a Sustainable Food System from the Ground Up: Ontario's New *Local Food Act, 2013*

Ministry of Agriculture and Food:

OMAFRA strongly supports government, agri-food sector and educational initiatives that address the environmental, economic and social sustainability of Ontario's agri-food systems, and we welcome ECO's interest in our work.

We have a comprehensive strategy to address and foster the public's heightened interest in local food, which includes implementation of the *Local Food Act, 2013*. Increasing agri-food literacy is a key part of the strategy, as the *Local Food Act, 2013* requires the setting of goals and targets related to literacy. This work will build on provincial initiatives such as: the Ontario school curriculum's content on local food, agriculture and environment; funding Ontario Agri-Food Education Inc. to provide curriculum-linked agriculture and food learning materials to Ontario educators; and support for the Ontario Public Health Association's Community Food Advisor Program, offering food literacy and food skills training information to Ontario consumers. OMAFRA works closely with other ministries to help build local food objectives into their programs, such as technical support to the Ministry of Health and Long-Term Care in the delivery of the Northern Fruit and Vegetable Program.

Sustainability is a key focus for OMAFRA and is built into our programs whether they focus on soil health initiatives, support for the Environmental Farm Plan Program, or promoting energy and water conservation and efficiency to farmers and food processors.

2.2 Plight of the Pollinators

Ministry of the Environment:

The province recognizes the vital role that pollinators and beekeepers play in maintaining a healthy and productive agri-food sector. We encourage the federal government to continue its work in re-evaluating the risks of neonicotinoid pesticides to pollinators and assessing the value of neonicotinoid pesticides for use in agriculture.

The Ministry of the Environment and Climate Change and the Ministry of Agriculture, Food and Rural Affairs are committed to working with stakeholders to develop a system that targets the use of neonicotinoid-treated seed only to areas or circumstances where there is demonstrated need.

As noted by the Commissioner, Ontario has been taking steps to find science-based solutions to ensure a healthy bee population. The ministry continues to support OMAFRA as they transition to a broader pollinator health strategy for Ontario.

The ministry has carried out environmental monitoring programs since 2012 looking at neonicotinoid pesticides in surface and groundwater in agricultural areas. The ministry will continue to monitor surface water and has enhanced its monitoring to include food/foraging flowers, bee water sources and soil from twelve sites in Southwestern Ontario from locations of both high bee mortality and low bee mortality.

We are continuing this enhanced monitoring to better understand the presence of neonicotinoid pesticides in Ontario's natural environment. The ministry will also continue to promote integrated pest management through an updated Grower Pesticide Safety Course for farmers.

Ministry of Agriculture and Food:
Pollinators play an important role in maintaining a healthy and productive agri-food sector and healthy ecosystems. There is no question the issue of pesticide use and pollinator health is very important. Ontario is committed to finding a balanced approach that addresses the important role both pollinators and growers play in Ontario's agri-food industry. The Ontario government promised to work with stakeholders to develop a system that targets use of neonicotinoid-treated seed to areas or circumstances where there is demonstrated need. Ontario will consult with stakeholders on options that are practical and achieve measurable results which are evidence based.

Ontario created the Ontario Bee Health Working Group and has already implemented the majority of its recommendations putting into place several measures to protect bees. This includes improvements to growing practices and communications, technology advancements and training including:

- Improving and promoting Best Management Practices — The BMPs also incorporate additional protective measures for corn and soybean production.
- Promoting the use of a new fluency agent that the federal Pest Management Regulatory Agency has mandated.
- Promoting adoption of deflector technology.
- Promoting the use of non-neonicotinoid treated seed.
- Updating the Ontario Pesticide Education Program to increase understanding of potential impacts of treated seed on pollinators and mitigation strategies.
- Increasing focus on integrated pest management (IPM).

Other actions underway include:
- Developing a bee yard/field identifier application for smart phones.
- Funding research into factors that affect bee health and related best management practices in field crop production.

We continue to look to the federal government, as regulator of pesticides in Canada, to provide evidence-based direction on a national approach to neonicotinoid use. New interim federal measures for 2014 are being monitored for effectiveness. A National Bee Health Committee was also created.

By establishing the Ontario Pollinator Health Working Group, Ontario is expanding our focus beyond honeybees and neonicotinoids, to address the broad range of factors affecting the health of managed and wild pollinators in the province.

Ministry of Natural Resources:
No response provided.

2.2.1 Habitat Regulation for the Endangered Rusty-patched Bumble Bee

Ministry of Agriculture and Food:
No response provided.

Ministry of the Environment:
No response provided.

Ministry of Natural Resources:
Over 90% of known nests and over-wintering sites for the Rusty-patched Bumble Bee in North America have been found in old rodent burrows, hollow tree stumps and fallen dead wood. It was therefore desirable to scope the regulation to these naturally-occurring areas in order to focus habitat protection efforts on areas most likely to sustain a population over time. The Rusty-patched Bumble Bee habitat regulation does not protect agricultural areas since evidence suggests that they are unlikely to support healthy, reproducing populations and may in fact increase the risk of declines for the species due to the use of pesticides. However, species protection under the *Endangered Species Act, 2007* remains in place regardless of where the individual bee occurs.

2.3 Introducing Genetically Engineered Alfalfa without Ecological Assessment

Ministry of the Environment:
The ministry acknowledges the ECO's agreement that the public interest would not be served by duplicating the federal approval process for genetically modified alfalfa. We thank the Commissioner for his comments.

The province and the Canadian Food Inspection Agency (CFIA) have a strong working relationship. The provincial ministries' programs and activities complement CFIA regulatory and technical expertise. Plants with GM traits cannot enter the marketplace unless the CFIA and Health Canada's assessment determines whether seeds and plants are safe for use as food, feed and release into the environment as other conventional plant varieties already being grown.

Ministry of Agriculture and Food:
The regulation of plants with novel traits is a federal responsibility. All federal regulatory approvals for glyphosate-tolerant GE alfalfa have been in place since 2005 through Health Canada and the Canadian Food Inspection Agency (CFIA). The CFIA's environmental safety assessment considers the plant's potential to become a weed and to create a weed by cross-pollinating with another plant, plus potential impacts on biodiversity. A GE plant cannot be marketed unless the federal assessment determines that it is as safe for use as food, feed and release into the environment as conventional plant varieties already being grown.

Organic farmers are concerned about potential transfer of GE traits into non-GE alfalfa crops through pollen flow. In addressing that issue, the CFIA concluded that there was no indication of altered pest potential of GE alfalfa. Significant benefits of alfalfa as a perennial forage crop include reduced herbicide use (since typically used only at establishment), reduced soil erosion, increased carbon sequestration, soil organic matter and biodiversity. It should be noted that alfalfa is difficult to improve through conventional breeding.

2.3.1 Agricultural Activities and Environmental Assessment

Ministry of the Environment:
The ministry's existing environmental science, research and standard setting programs support the Ministry of Agriculture, Food and Rural Affairs in its management of the environmental impacts of agriculture.

Ministry of Agriculture and Food:
Promoting, cost-sharing and evaluating farmers' implementation of environmental best practices is well established at OMAFRA. Many farmers have Environmental Farm Plans to assess risks and guide action.

2.4 Healthy Soils Yield Benefits for Ontario Farmers

Ministry of Agriculture and Food:

Soil health, including biology, is essential to the prosperity and sustainability of Ontario agriculture. OMAFRA agrees with the ECO on the importance of building soil biology into soil management. Soil biology has been an ongoing part of OMAFRA soil health activities and is a growing and emerging area of study. As an emerging area, scientists can have divergent opinions on the key factors and best indicators. OMAFRA follows developments in other jurisdictions, including work at the US Natural Resource Conservation Service, in developing approaches for Ontario.

The farmers profiled by the ECO provide good examples of leaders in different sectors. Many farmers in Ontario are innovative and committed in their approach to soil health, with use of no-till, reduced tillage, strip till, incorporating cover crops in crop rotations and judicious use of organic amendments.

Profiling innovative and progressive soil management by individual farmers is an excellent way to build support for adoption of practices to improve soil health. The farm of Dean Glenney is a good example of how such true life examples are integrated into the soil health and management programming of OMAFRA. Annually, an educational Soil Management Day is hosted by one or two farmers—profiling their operation and approach to soil management. Dean Glenney's farm was featured a few years ago. In addition, our major annual crops conferences feature a number of farmer panels focusing on soil management. OMAFRA appreciates ECO support for these initiatives.

Part 3 – MNR: Big Picture, Little Capacity

3.1 A Broad View Without Perspective: MNR's Landscape Approach

Ministry of Natural Resources:

Natural resource managers in Ontario and across North America face complex resource management challenges due to stressors such as climate change, habitat loss and invasive species, as well as increased and often competing demands for resources from a growing population. Effectively meeting these challenges requires approaches that encompass broader landscapes and ecosystems and are risk-informed, aligning efforts with resource management priorities.

The use of an ecological and landscape-based approach is not new to Ontario and there is a desire to expand and enhance resource management programs using such an approach. It is recognized that finer and multi-scale management efforts are still necessary and appropriate within a broader framework. Ontario is building on knowledge and experience from within the province and from other jurisdictions that are also pursuing landscape-based approaches to resource management.

Over the coming years the Ministry will continue to seek opportunities to implement broader landscape approaches, using the guidance set out in the *Taking a Broader Landscape Approach* policy framework. Appropriate scales of management will be discussed and determined in the context of specific resource management initiatives where the elements of the framework are applied, with opportunities for public comment on any proposed changes. The need for information that supports managing Ontario's natural resources at a landscape scale and for

improved integration and coordination across the organization will be key considerations as MNRF reviews and prioritizes its research and monitoring efforts.

MNRF remains firmly committed to its core mandate of protecting and sustainably managing Ontario's natural resources for the ecological, social, cultural and economic benefit of present and future generations.

3.2 *Public Lands Act* Changes Create Threat of Uncontrolled Cumulative Impacts

Ministry of Natural Resources:

MNRF will continue to maintain oversight for shore lands activities; for example, new dredging and filling will still require MNRF work permits. Anyone who is unable to follow the new rules, including the registration requirement, will have to obtain a work permit from MNRF. People undertaking these activities without following the rules or without a work permit could be charged.

Plain language versions of the rules within the regulation, along with additional information, (e.g. list of other approval agencies) are posted on the Ontario government website for people to access. In addition, MNRF has been working with interested stakeholder groups (such as municipalities and conservation authorities) to deliver online information sessions, and has prepared communication materials for stakeholder groups to distribute to their membership, such as cottagers' associations.

3.3. Outdated Priorities for a Changing Lake: The *Fish Community Objectives for Lake Ontario*

Ministry of Natural Resources:

The Great Lakes Fishery Commission (GLFC) is recognized internationally as a leader in bi-national fisheries management including fostering collaborative and integrated policy, planning and science. The GLFC management framework and by association MNRF, has kept pace with modern management approaches. The *Joint Strategic Plan for Great Lakes Fisheries* was updated in 1997 and a renewed Vision Statement was published in 2011.

The Fish Communities Objectives (FCOs) are focused on the fish community and fisheries. The content and structure of the document reflect input from Ontario and New York State stakeholders. FCOs in concert with a wide variety of policies and management plans contribute to a balanced, comprehensive, systems-wide management effort.

MNRF disagrees that maintaining non-native sport fish receives a higher priority than native species restoration in the FCOs. It is not an "either/or" situation. By explicitly acknowledging the potential conflict between objectives (native vs. non-native species), the FCOs reflect the complicated reality of managing Lake Ontario fisheries. Non-native salmonids were originally stocked to control non-native alewife. They continue to provide this essential function, while also supporting a valuable fishery.

3.4 Cutting into Ecological Integrity: Commercial Logging in Algonquin Provincial Park

Ministry of Natural Resources:

Algonquin Provincial Park is unique in that it is the only provincial park in Ontario that permits commercial logging, where it has occurred for well over 100 years.

This important economic driver for central Ontario is permitted through the *Provincial Parks and Conservation Reserves Act* (2006), the *Algonquin Park Management Plan*, the *Crown Forest Sustainability Act* (1994) and the *Algonquin Forestry Authority Act* (1990).

The amendment to the *Algonquin Park Management* Plan entitled "Lightening the Ecological Footprint of Logging" significantly enhanced the ecological integrity of Algonquin Park by increasing protection for important park values such as habitat connectivity, brook trout waters, species at risk, and under-represented ecosystems.

Although the plan amendment differed from the original recommendation from the Ontario Parks Board of Directors, the approved amendment included extensive public, aboriginal and stakeholder consultation and permanently added an area larger than the city of Toronto to protection zoning in Algonquin Park (over 96,000 hectares).

Forest management planning and operations in the park are subject to the requirements of the *Crown Forest Sustainability Act*, which ensures that Crown Forests are managed for the maintenance of long term health and sustainability.

This management plan amendment is intended to balance protection of Algonquin Provincial Park's natural, cultural, social and economic values.

3.5 The *Crown Forest Sustainability Act*: 20 Years Later

Ministry of the Environment:

No response provided.

Ministry of Natural Resources:

MNRF appreciates the ECO comments and recognition of major improvements to forest management effected by the *Crown Forest Sustainability Act* (*CFSA*). The *CFSA* is flexible and enables forest management for broad purposes, including sustainable use of forests for biodiversity, habitat, natural heritage conservation, recreation, wood supplies and communities. The Forest Management Declaration Order under the *Environmental Assessment Act* (*EA Act*) also includes legally binding conditions that MNRF must comply with in forest management including planning, harvesting, roads and forest renewal requirements.

MNRF monitors and maintains the forest management system in order to meet the objectives of the *CFSA*. MNRF has made many program improvements to address evolving social, economic and environmental pressures and to incorporate new science.

Both the *CFSA* and *EA Act* approval enable the development and maintenance of manuals such as the Forest Management Planning Manual (FMPM) and Forest Information Manual (FIM), as well as a number of forest management guides. These key policy documents provide the specific direction and guidance for practitioners on planning and implementing forest operations. By design, these documents are reviewed and revised as required to accommodate new science, changing public expectations and lessons learned through implementation. There have been several revisions of these documents since the *CFSA* was first passed. For example, there have been three versions of the FMPM since the *CFSA* came into effect.

The effectiveness of forest management is assessed through Independent Forest Audits, State of Forest reporting, Auditor General Reports, Annual Reports on Forest Management and Five-Year

Environmental Assessment Reports. These assessments do provide necessary feedback and MNRF has taken action to incorporate needed changes to ensure programs are efficient and effective. These reports are signalling the *CFSA* is still current, effective and robust to enable necessary program changes to occur.

MNRF remains committed to ensuring that the *CFSA* is relevant and has successfully undertaken a number of amendments to the Act since it was first passed. MNRF will continue to do so as appropriate.

Part 4 – MOE: Weak Responses to Increasing Challenges

4.1 MOE Compliance: Spare the Rod, Spoil the Environment

Ministry of the Environment:

A top priority for the ministry is ensuring that prompt and appropriate compliance action is taken when needed to protect public health and the environment. We want to ensure that our response to incidents matches their severity and we thank the Commissioner for recognizing the procedures we have put in place to do this.

The ministry uses a mix of voluntary and mandatory compliance and enforcement to protect the public and the environment. The ministry works to educate the regulated community and encourages compliance through timely reporting of incidents.

Follow-up and monitoring of corrective actions are also a priority. We also appreciate the Commissioner acknowledging the ministry procedures that have been put in place to ensure that required follow-up is undertaken to promptly bring facilities back into compliance.

It is imperative that corrective actions are taken within required timeframes. Automated alerts and regular reminders are sent to staff and supervisors so that we can ensure that voluntary or mandatory actions are being taken. If we are unsatisfied with voluntary actions being taken to achieve compliance, the ministry either elevates the item, or extends the due date based on site specific considerations. Our top priority is environmental protection and the inspection is not closed until all corrective actions are complete to the satisfaction of the environmental officer and supervisor.

We are committed to continuous improvement in our approach to compliance and are undertaking a review of our compliance policy and guidance. Additional training will be done in 2014-15 to guide front-line staff on the use of extension and escalation processes.

The ministry will consider the Commissioner's comments as it further develops its evidence base around the effectiveness of our compliance and enforcement response.

4.2 MOE Continues to Fail the Aamjiwnaang First Nation

Ministry of the Environment:

The ministry is investigating the incidents identified by the Commissioner.

Consistent with our compliance policy, we also encourage compliance by conducting proactive inspections, air monitoring, spill and incident response and reviewing emission information. In addition, community outreach is conducted following major incidents and the ministry

reaches out to the Aamjiwnaang First Nation on a regular basis. To further ensure that communities are notified of incidents, the ministry has undertaken a pilot to assess industrial air monitoring capabilities and has met with emergency coordinators to discuss methods of enhancing notification.

The ministry also proactively inspects facilities in Sarnia to review Spill Prevention and Contingency Plans. When a spill occurs, the ministry confirms whether the company's plan is current and assesses whether actions were consistent with the plan. If not, the ministry can order corrective action to be taken.

The ministry is also committed to assessing cumulative effects. We have established an air monitoring station on the First Nation and are assessing cumulative impacts through multisource modelling. We are also developing proposed technical standards for the petroleum refining and petrochemical sectors under our stringent O. Reg. 419/05 (Air Pollution – Local Air Quality). This work is currently being shared with the First Nation.

4.3 Dust and Noise from Mining Operations

Ministry of the Environment:

The ministry conducted several inspections and issued two Provincial Officer Orders in 2013 to ensure that the dust issues associated with Unimin were being resolved. Since mid-July 2013 there have been no confirmed dust events. We are requiring Unimin to continue the dust abatement and monitoring programs throughout 2014 and to report the results to the ministry. We will audit the results in the Summer of 2014.

With respect to a taking a firmer approach in our regulation of fine particulate matter, the ministry has recently completed an application for review under the *EBR* examining whether there was a need to revise the approach to $PM_{2.5}$. We found that Ontario has a comprehensive framework that has resulted in measured reductions in emissions leading to significant improvements in air quality.

4.4 A Review of the New Noise Guideline

Ministry of the Environment:

The ministry recognizes that urban areas are increasing in density. To address potential noise issues consistent with density growth, we have updated our noise guideline to facilitate urban intensification while simultaneously protecting residents from noise and preserving the viability of existing industry.

The guideline has a strong focus on preventing noise at the source, and it recommends that the preferred and normally most economical and practical solutions are the use of control measures on the property of the source.

The ministry's consolidated guideline also aligns with the *Provincial Policy Statement*'s focus on residential intensification and redevelopment and provides important guidance to developers and planners on innovative approaches for mitigating noise.

We recognize that the public, municipalities, developers, industry and others have an interest in strong, healthy communities. That is why the ministry's new consolidated guideline encourages these parties to come together, cooperate and establish agreements to move development forward while protecting human health and the environment.

4.5 A Risky Gap in the disposal of High-Sodium Brines as a Dust Suppressant

Ministry of the Environment:

All dust suppressants must be applied in an environmentally sound manner that does not contravene the provisions of the *Environmental Protection Act* (*EPA*), (i.e. no adverse impacts). If waste, as defined under Ontario Regulation 347 (Waste Management), is used for dust suppression, an Environmental Compliance Approval is required.

Brine extracted as a primary product for use as either dust suppression or winter road maintenance is not considered a waste. Existing guidelines, such as the Ontario Ministry of Transportation's "Maintenance Best Practice for Gravel Surfaces" and the Federation of Canadian Municipalities' guide "Dust Control for Unpaved Roads", provides information regarding best practices for dust suppressant use including high sodium ground-sourced brines.

With respect to brines that are a by-product of oil or gas extraction process, the ministries of the Environment and Natural Resources are reviewing the following definitions: "oil field fluid" under the *Oil, Gas and Salt Resources Act*; "oil field brine" under Ontario Regulation 341 (Deep Well Disposal) sections 2 and 3 under the *EPA*; and, "liquid industrial waste" under Ontario Regulation 347 section 1 under the *EPA* in relation to hydraulic fracturing.

Ministry of Natural Resources:

Where Part 4.5 pertains primarily to an earlier decision made by the Ministry of Environment (MOE) regarding an application for review regarding dust suppressants, the MNRF defers to MOE to respond in regard to that subject.

With regard to hydraulic fracturing, an examination of potential for regulatory gaps is underway in a review by the ministries of the Environment and Natural Resources of the definitions of "oil field fluid" under the *Oil, Gas and Salt Resources Act*, and "oil field brine" under Ontario Regulation 341 sections 2 and 3 under the *EPA* and "liquid industrial waste" under Ontario Regulation 347 section 1 under the *EPA* in relation to hydraulic fracturing.

Ministry of Transportation

No response provided.

Part 5 – Planning Matters

5.1 Restoring a Vision Lost: Reforming Ontario's *Environmental Assessment Act*

Ministry of the Environment:

Ontario's Environmental Assessment (EA) process is continually changing to ensure that decisions are made that protect, conserve and wisely manage the environment. Since 2007 we have implemented an auditing and compliance program to ensure the integrity of the EA process and to continuously improve.

We have also made improvements to enhance the effectiveness and transparency of the program. For example, regulations for the energy, waste management and transit sectors provide streamlined processes, supported by guidance, without compromising the environment.
In January of 2014, the ministry updated several codes of practice and guides to reflect current

environmental policies and clarify requirements and expectations in various areas including source water protection, climate change, coordination of EA and planning, consideration of the Statement of Environmental Values, and cumulative effects. With respect to public consultation, we ensure that, where appropriate, additional consultation is carried out before a decision is made on an instrument, such as an Environmental Compliance Approval. The ministry has also reviewed and approved two new Class EAs for waterpower projects and certain activities and decisions made by the Minister of Northern Development and Mines under the *Mining Act*.

EA is a planning process that seeks to ensure that significant development proposals can take place in an environmentally responsible way. If the ministry is aware that a project would cause irreparable harm to the environment, we would not recommend EA approval.

5.1.1 The High Costs of Not doing a Full Environmental Assessment

Ministry of Energy:

No response provided.

Ministry of the Environment:

No response provided.

5.2 Provincial Disinterest in Tackling Environmental Issues: The *Provincial Policy Statement, 2014*

Ministry of the Environment:

Climate change policies encourage land use and development patterns that reduce greenhouse gas emissions and support climate-resilient communities. These policies also complement the existing provincial framework by encouraging planning authorities to make informed development and infrastructure decisions that consider climate change.

The PPS includes specific policies requiring consideration of climate change impacts in infrastructure and natural hazards planning. Additionally, development and land use patterns promoting the consideration of climate change are encouraged. The PPS also includes complementary policies such as those promoting transit and active transportation.

We recognize the comments of the Commissioner with respect to stormwater policies. While stormwater policies themselves do not explicitly mention climate change, planning authorities must take climate change into consideration when implementing the stormwater policies as a whole. There is existing guidance to support climate change consideration in infrastructure decisions and the development of additional guidance is planned. The PPS policy on stormwater best practices also allows municipalities to implement the most appropriate stormwater practice for their needs, to learn from collective experiences and for best practices to evolve.

With respect to the protection of natural heritage features and areas, the PPS takes an approach that balances protection with the importance of infrastructure in building strong, healthy communities. The ministry also supports the PPS with its robust Environmental Assessment program that requires proponents to consider impacts of infrastructure projects to the environment. Environmental Assessment balances engineering, economic, social, cultural and natural environmental needs. The PPS also includes a new policy enhancing protection of Great Lakes coastal wetlands.

The ministry recognizes that the PPS does not explicitly require the completion of watershed plans; however, it contains strong direction to protect, improve or restore water quality and quantity. This includes direction to use the watershed as the ecologically meaningful scale for integrated, long-term planning and consideration of the cumulative impacts of development. The PPS also enhances protection of surface water by ensuring consideration of environmental lake capacity and the identification of shoreline areas.

Ministry of Natural Resources:
While MMAH has responsibility for the *Provincial Policy Statement* (PPS), many of the provincial interests addressed pertain to MNRF's mandate.

The PPS 2014 policies require consideration of social, economic and environmental provincial interests including the consideration of aggregate resources in land use planning decisions. The aggregate resource policies promote the long-term availability of these resources to support significant infrastructure development and maintenance needs of the province. These policies are not intended to be considered in isolation, they must be read in the context of all relevant policies in the PPS, and other relevant legal requirements.

Previous versions of the PPS gave strong protection to significant wetlands, including prohibitions concerning significant wetlands in southern Ontario and along the Great Lakes coast. Wetlands are also being restored. Nevertheless, between 1982 and 2002, 3.5 per cent of the wetlands in southern Ontario Ecoregions 6E (Lake Simcoe and Rideau River system) and 7E (Lake Ontario and Lake Erie) were lost through conversion to other land uses. In response, the PPS (2014) has new protections for non-provincially significant coastal wetlands in southern Ontario and clarifies that evaluations may be required to determine significance of features. Further, the Ontario government has committed to reviewing Ontario's wetland conservation policy framework, which includes development of guidance for prioritizing wetland evaluations (*Biodiversity it's in Our Nature: Ontario Government Plan to Conserve Biodiversity 2012-2020*).

The PPS, which is to be read in its entirety, sets the foundation for planning authorities to regulate development and use of land. Planning authorities make use of planning decisions, e.g. zoning, on development applications and other tools to implement the PPS and thus help to ensure the sustainable use and protection of the province's natural resources. MNRF provides available information on its interests to support planning authorities. Municipal regulatory powers, such as tree by-laws, and conservation approaches, such as landowner participation in the Managed Forest Tax Incentive Program augment land use planning protection for natural heritage.

Ministry of Municipal Affairs and Housing:
The PPS 2005 provided strong policies protecting provincially significant features, and recognized the importance of maintaining connectivity among features. The PPS 2014 builds on this by also requiring identification of natural heritage systems in southern Ontario, where development pressures and fragmentation issues are most prevalent.

The PPS 2014 includes protections for natural heritage features and areas, while recognizing the importance of infrastructure in building strong, healthy communities.

In addition to the PPS, Ontario has an environmental assessment program that requires proponents to consider impacts to the environment, including natural features. Environmental

assessment balances engineering, economic, social, cultural and natural environmental needs so that projects benefit Ontarians.

PPS Policy 4.7 clarifies that natural heritage features (i.e., unevaluated wetlands) may need to be evaluated by proponents to determine their significance prior to planning approvals being granted. MNR's Ontario Wetland Evaluation System (OWES) provides a standardized evaluation methodology for use by any qualified professional.

Planning authorities may go beyond the PPS to protect wetlands, provided doing so does not conflict with other PPS policies.

Although the words "climate change" may not appear in the stormwater management policies, the PPS 2014 policies are to be read together, and many support outcomes of climate change adaptation and mitigation. Stormwater policies require "the extent and function of vegetative and pervious surfaces" to be maximized, and promote "low impact development", which directly supports these outcomes.

There is existing guidance to support the PPS climate change policies and the development of additional guidance is planned.

The PPS 2014 works in conjunction with a wide range of legislation, policies and plans to support Ontario's Biodiversity Strategy and conserve biodiversity. Provincial plans build on the PPS to provide more specific direction, and legislation addresses key environmental concerns (provincial *Endangered Species Act, 2007* and federal *Species at Risk Act* protect threatened and endangered species). This wide array of legislation, policies and plans works together to help safeguard Ontario's natural heritage.

5.4 Ontario's Cycling Strategy: Some Assembly Now Required

Ministry of Municipal Affairs and Housing:

New policy direction is provided in PPS policy 1.1.3.2, which states that land use patterns within settlement areas shall be based on densities and a mix of land uses which support active transportation. As the PPS applies to planning matters province-wide, the policy framework needs to reflect the diversity of communities and circumstances across the province, and its policies are outcome-focused to provide flexibility for planning authorities to determine the most appropriate way to achieve desired outcomes.

Recognizing that it may not be appropriate to require every public street to be planned to accommodate active transportation and that municipalities may face barriers to implementing active transportation policies, the Strategy focuses efforts on working with municipalities to strengthen local implementation of provincial policies and address barriers.

Ministry of Transportation:

The Strategy establishes a longer-term, aspirational vision and goals to guide and inspire work of provincial and municipal partners. The Action Plans support the Strategy by documenting and establishing specific actions to work toward this vision. The status of these specific actions will be tracked and MTO has committed to meeting with stakeholders each year to share progress. MTO will be working with partners to develop longer-term performance measures for the Strategy and a process for tracking progress on Action Plans.

The Cycling Strategy and *Action Plan 1.0* have benefited from and respond to public input obtained through a number of processes, including the Environmental Registry posting for the draft Strategy and the Coroner's investigation of cycling deaths. Several of the actions respond directly to public comments requesting specific initiatives. Many actions are existing initiatives; others (e.g., province-wide cycling network) will have individual public consultation processes and Environmental Registry postings.

5.5 Fourteen Years After Walkerton: Drinking Water Systems Not at Cost Recovery

Ministry of the Environment:

The province has brought in strong legislation and innovative programs to protect Ontario's drinking water and to support municipalities in assessing the financial sustainability of their drinking-water systems. Municipalities have varied approaches to managing their drinking-water systems and it is up to each municipality to determine the best approach to achieve financial sustainability for their systems.

A number of major initiatives have taken place since the *Sustainable Water and Sewage Systems Act* passed and these initiatives are moving municipalities towards overall sustainability. For example, the municipal licensing program requires municipalities to consider the financial viability of their system by creating a six-year financial plan, to implement a quality management system that conforms to provincial standards, to implement operational processes that meet regulatory requirements, and to obtain approvals for design and construction.

The ministry works with municipalities to ensure that they understand and adhere to the requirements of the financial plans regulation. For new systems, the plans must be prepared and approved by a resolution of municipal council before a drinking water licence will be issued. Likewise for existing systems, the plans must be prepared and approved before a licence will be renewed.

Additionally, the *Water Opportunities Act* provides a framework for integrated municipal water sustainability planning that addresses both financial and environmental aspects. Progress is being made in assisting municipalities with long-term water infrastructure planning through capacity building, knowledge transfer, and incentive funding. Further, the non-regulatory infrastructure funding approach requiring municipal asset management plans has been successful in encouraging municipalities to develop asset management plans.

ABBREVIATIONS

AFA	Algonquin Forestry Authority
BMP	Best Management Practice
CFIA	Canadian Food Inspection Agency
CFSA	*Crown Forest Sustainability Act, 1994*
CICA	Canadian Institute of Chartered Accountants
Class EA	Class Environmental Assessment
dB	decibels
EA	environmental assessment
EAA	*Environmental Assessment Act*
EBR	*Environmental Bill of Rights, 1993*
ECA	Environmental Compliance Approval
ECO	Environmental Commissioner of Ontario
EDU	Ministry of Education
ENG	Ministry of Energy
EPA	*Environmental Protection Act*
ERT	Environmental Review Tribunal
ESA	*Endangered Species Act, 2007*
FRL	Forest Resource Licence
GE	genetically engineered
GGH	Greater Golden Horseshoe
GHG	greenhouse gas
IEB	Investigations and Enforcement Branch, Ministry of the Environment
kg	kilograms
km	kilometres
LFMC	Local Forest Management Corporation
LTA	leave to appeal
m	metres
MCS	Ministry of Consumer Services
MEDTE	Ministry of Economic Development, Trade and Employment
MGS	Ministry of Government Services
MOE	Ministry of the Environment
MOHLTC	Ministry of Health and Long-Term Care
MOI	Ministry of Infrastructure
MOL	Ministry of Labour
MMAH	Ministry of Municipal Affairs and Housing
MNDM	Ministry of Northern Development and Mines
MNR	Ministry of Natural Resources
MRA	Ministry of Rural Affairs
MTCS	Ministry of Tourism, Culture and Sport
MTO	Ministry of Transportation
NPC-300	Noise Pollution Control Guide
NPRI	National Pollution Release Inventory
NRCS	Natural Resources Conservation Service
NYSDEC	New York State Department of Environmental Conservation
OMAF	Ontario Ministry of Agriculture and Food
OMB	Ontario Municipal Board
O. Reg.	Ontario Regulation
OWRA	*Ontario Water Resources Act*
OWES	Ontario Wetland Evaluation System
PCBs	polychlorinated biphenyls
PCPA	*Pest Control Products Act*
PM	particulate matter
$PM_{2.5}$	particulate matter 2.5 microns or less in size
PMRA	Pest Management Regulatory Agency
PNTs	plants with novel traits
PPCRA	*Provincial Parks and Conservation Reserves Act, 2006*
PPS	*Provincial Policy Statement*
PSW	Provincially Significant Wetland
PTTW	Permit to Take Water
REA	Renewable Energy Approval
SDWA	*Safe Drinking Water Act, 2002*
SFL	Sustainable Forest Licence
SEV	Statement of Environmental Values
SWSSA	*Sustainable Water and Sewage Systems Act, 2002*
TSP	Total Suspended Particulate
TSSA	Technical Standards and Safety Authority
WHO	World Health Organization

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ISSN: 1205-6928 (Print)
ISSN: 1927-0747 (Online)