



November 1, 2017

**Report of the Auditor General
to the Nova Scotia
House of Assembly**



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November 1, 2017

Honourable Kevin Murphy
Speaker
House of Assembly
Province of Nova Scotia

Dear Sir:

I have the honour to submit herewith my Report to the House of Assembly under Section 18(2) of the Auditor General Act, to be laid before the House in accordance with Section 18(4) of the Auditor General Act.

Respectfully,

MICHAEL A. PICKUP, CPA, CA

Auditor General of Nova Scotia


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Chapter 1: Accounting for Contaminated Sites



Key Messages:

- \$212 million liability for contaminated sites in the 2017 financial statements (93% for Boat Harbour and SYSCO)
- Environment collects data on contaminated sites throughout the province
- Environment expenses incurred not easily found in Province's financial statements
- Contaminated sites recorded in accordance with accounting standards
- Costs to remediate contaminated sites can be large: professional services, materials, equipment
- Liability includes uncertainty as assumptions are not fixed – could change
- Assumptions include: extent of contamination, time and cost to clean up
- Cleanup costs change as more information becomes known, like Boat Harbour

Key Observations:

Financial statement effect

- To record a liability:
 - environmental standard exceeded
 - Province accepts responsibility
 - Province plans to remediate
 - Province can estimate costs to clean up
- Liability is described in Notes of the Province's financial statements
- Department that owns contaminated site is responsible for cleanup and recording costs
- Boat Harbour:
 - \$130 million liability in 2017
 - Described in Note 9 to financial statements
 - \$45 million expensed in 2017
 - \$12 million liability in 2013 estimate
 - Liability keeps increasing
 - Final plan in three to four years
 - Estimated costs include cleanup strategy

Significant uncertainty in estimate

- Can take years to collect information required to finalize a cleanup plan
- Assumptions used to calculate estimates
- Boat Harbour: Amount of contamination still being determined
- Impact of uncertainty with Boat Harbour:
 - 2013 – \$12 million
 - 2014 – \$20 million
 - 2015 – \$52 million
 - 2016 – \$88 million
 - 2017 – \$130 million
 - 2018 and beyond – cleanup plan expected to be finalized in three to four years

Process to record contaminated sites

- Sites reported by polluter or found through inspection procedures
- Environment records contaminated sites in a database
- Environment records responsible party in database
- Remediation approach determined – limited or full remediation
- Use limited remediation when danger to health is not imminent – manage with physical barriers, etc.
- Full remediation required when health at risk – water contamination, etc.



1 Accounting for Contaminated Sites

Purpose

- 1.1 The purpose of this chapter is to provide Nova Scotians with information on the financial impact of environmental matters facing the Province, including the costs of remediating contaminated sites. The chapter is not intended to comment on Government's policy decisions relating to contaminated sites or any responsibility that the Province has or has not accepted for environmental cleanup.
- 1.2 This chapter is not the result of an audit and we are not commenting on the completeness or accuracy of the assumptions and related liabilities recorded in the Province's financial statements. We collected some details and background information about specific sites from news sources and the Department of Environment's website. We have not audited the accuracy of that background information, or any environmental programs and services. As we have not conducted an audit, we do not provide conclusions or recommendations related to the chapter content.
- 1.3 Some of the information used in the chapter comes from the Province's financial statements which have been audited by this Office. As part of our audit opinion on those financial statements, we stated that, in all material respects, the Province follows Canadian Public Sector Accounting Standards appropriately. The audit opinion is for the financial statements as a whole. We have not issued a separate opinion on accounting for contaminated sites.
- 1.4 The liability for contaminated sites recorded in the financial statements is an estimate which reflects both current economic conditions and future expectations, and some sites take years to clean up. The estimate can vary significantly depending on the assumptions used by management. By their nature, these estimates have a further degree of uncertainty because the actual extent of remediation activities, methods, and site contamination may differ significantly from the Province's original remediation plans.
- 1.5 This information should be of interest to all Nova Scotians, but may not be all the information Nova Scotians may want to know. Additional information is available in the financial statements (Public Accounts) of the Province of Nova Scotia (see excerpt in Appendix I), and the website of the Nova Scotia Department of Environment that promotes, monitors, and enforces the Nova Scotia Environment Act and its regulations.

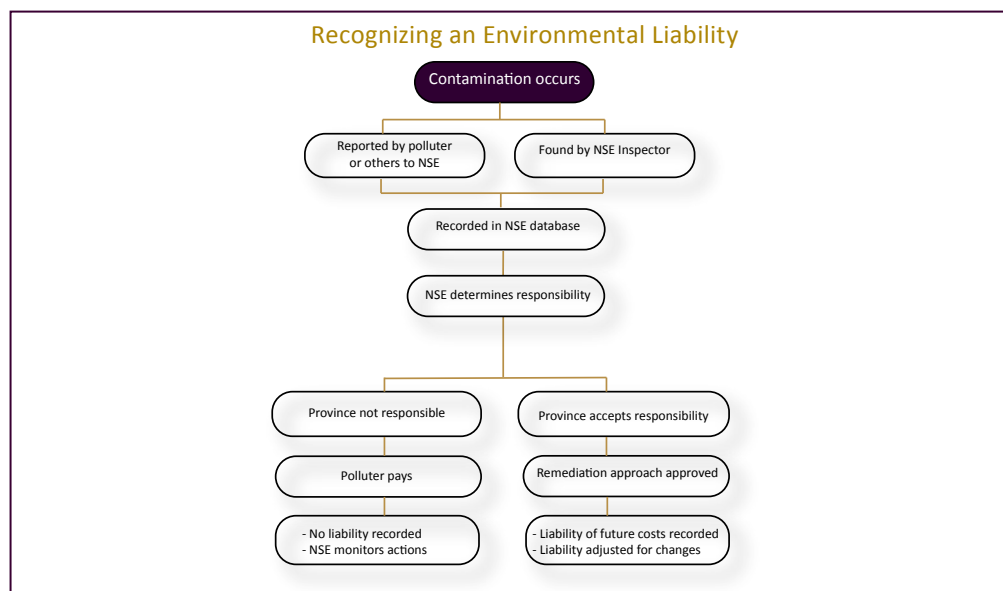


Environmental Matters in Nova Scotia

- 1.6 Environmental standards are needed to protect the environment and reduce risks to human health, and are required to be complied with as they are legally enforceable. Environmental standards specify the maximum amounts of potentially hazardous materials allowed to be in soil, air, and water, as set out in regulations, agreements, etc.
- 1.7 Environmental contamination can occur from spills, accidents, or industrial processes; and are a result of any chemical, organic, radioactive material, or live organism being released into the air, soil, water, or sediment. Contaminated sites are defined in the Environment Act as a site with contaminants that exceed an environmental standard, and may negatively affect human health.
- 1.8 In Nova Scotia, the polluter-pay principle is described in the Environment Act. The person or organization who owns the site on which the contamination is found, or who is responsible for causing the contamination, is responsible for the costs to remediate the site. Every Nova Scotian and every company operating in this province has a responsibility to know about, understand, and meet their responsibilities under the Environment Act.

Key Steps in Determining Responsibility

- 1.9 Environment inspectors have powers under the Environment Act that allow them to assess and determine responsibility for cleanup, including sites owned by the Province. These inspectors also have the power to enforce the Act.
- 1.10 The following chart illustrates the steps followed when determining whether the Province incurs an expense and recognizes a liability relating to an environmental contamination.





- 1.11 The Nova Scotia Department of Environment maintains a database of contaminated sites, indicating the responsible party; incidents; and complaints. The information recorded in this database is not disclosed publicly.

Accounting for Environmental Liabilities

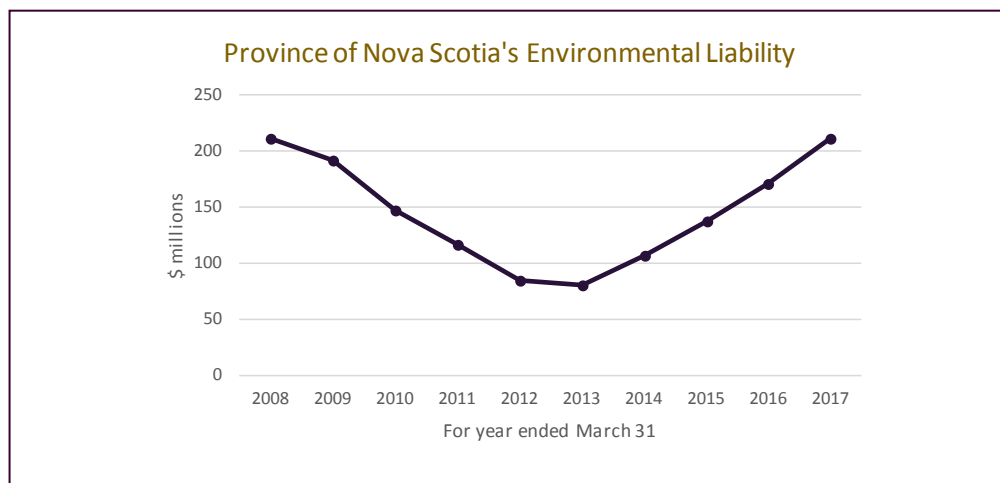
- 1.12 In accordance with Canadian Public Sector Accounting Standards, the Province recognizes a liability and records an expense for contaminated sites in its financial statements when:
- an existing environmental standard is exceeded,
 - the Province is responsible or accepts responsibility to clean up the site,
 - the Province plans to incur costs to remediate the site, using its own resources, and
 - the remediation costs can be reasonably estimated.
- 1.13 The cleanup expense is recorded in the department which owns the contaminated site. There are some situations in which the Province has accepted responsibility for a site owned by others. This might happen when a person or organization has abandoned responsibility for cleaning up the contamination or there is an immediate health risk.
- 1.14 The Government uses experts to help estimate a liability for remediation to bring the contaminated site back to the condition it was in prior to the contamination, or to the minimum environmental standard. Remediation refers to processes undertaken to remove, clean up, or prevent further harm to humans and the environment. Remediation costs could include payroll, equipment, materials, legal, engineering, maintenance, and monitoring costs that are an integral part of the remediation strategy.
- 1.15 A reader can find information on the Province's environmental liabilities and its expenses in the Public Accounts. The Province's accounting policy is detailed in Note 1 and more specific information is provided in Note 9. See Appendix I for relevant excerpts from the 2017 Public Accounts.
- 1.16 For example, the estimate of the obligation to clean up Boat Harbour was \$130 million at March 31, 2017, an increase of \$42 million from the previous year. This amount is included in the Accounts Payable and Accrued Liability amount on the Consolidated Statement of Financial Position, and in Note 9.
- 1.17 However, the \$45 million amount expensed during 2016-17 is not disclosed as clearly in the Province's financial statements. This \$45 million of expense directly affects the Province's surplus or deficit and is included in:



- the Transportation and Infrastructure Renewal line on the Consolidated Statement of Operations and Accumulated Deficits, and
- the Infrastructure and Public Work’s Operating Goods and Services line on the schedule of segment reporting.

1.18 This \$3 million more in expenses than the associated increase in the liability indicates the Province incurred and paid \$3 million for remediation costs during 2016-17, and did not need to increase the liability.

1.19 As at March 31, 2017, the Province recognized \$212 million in liabilities to clean up contaminated sites. This is relatively the same amount as the liability recorded as at March 31, 2008; however, the composition of the liability has changed significantly since that time. Sydney Steel Corporation accounted for 94% of the 2008 liability while Boat Harbour accounts for more than 60% of the 2017 liability.



➡ **Environmental issues can be costly**

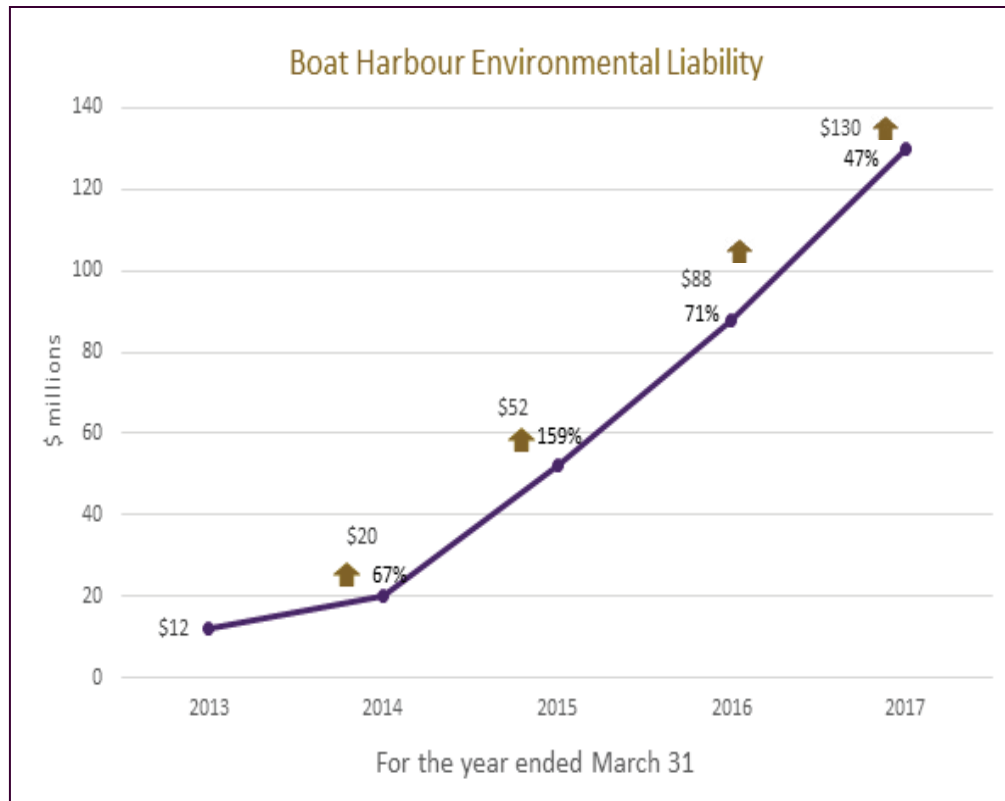
1.20 The liability for the cleanup at Boat Harbour and the current amount booked for Sydney Steel Corporation and the Tar Ponds site of \$68 million, accounts for 93% of the Province’s overall liability for contaminated sites at March 31, 2017.

1.21 In 1967, the Province took over the Sydney Steel plant after changing technologies and world market patterns resulted in the end of the steel industry in Nova Scotia. The Province discontinued operations of the Corporation in 2001 after several unsuccessful attempts in the 1990s to sell the plant. In 2000, it recognized a \$318 million liability to demolish the plant, clean up the contaminated property, and plan for its future development.



Costs to remediate environmental liabilities often uncertain

- 1.22 Known remediation costs are considered when determining the amount of the Province's liability for contaminated sites, but many remediation costs are not known. Each year, the Province evaluates its liability and considers:
- new environmental sites to include,
 - extent of contamination,
 - new cleanup technologies, and
 - whether changes in assumptions are needed (i.e., length of time for cleanup, inflation rate, labour costs, and contingency amount for unexpected costs).
- 1.23 These considerations require significant professional judgement and result in estimates that have a degree of uncertainty. A good example is Nova Scotia's current significant environmental issue – Boat Harbour.
- 1.24 In the 1960s, to induce Scott Paper (now Northern Pulp) to set up operations for a pulp and paper mill in Nova Scotia, the Government offered Scott Paper free disposal of liquid waste. A pipeline was constructed between the mill facility and a waste water treatment plant in Boat Harbour. Waste flows through the pipeline to settling ponds where it sits for roughly one day before moving to a larger stabilization basin where it sits for five days before being released into Boat Harbour. This waste has resulted in contamination of water and ground in the harbour and some of the surrounding area which is adjacent to the Pictou Landing First Nation Community. An agreement in principle was reached between the Province and Pictou Landing First Nation in June 2014 to close the waste water treatment plant and remediate Boat Harbour. The waste water treatment plant is expected to close in 2020 and remediation will bring the area back to its natural state.
- 1.25 The following chart shows the Boat Harbour liability since 2013. The liability of \$12 million in 2013 has increased over 900% to \$130 million in 2017. Changes to the liability are typical for cleanup projects like Boat Harbour. Information about the extent of the contamination and the options for cleanup processes continue to be collected. The comprehensive remediation plan is expected to be finalized in three to four years. Even though the costs can now be reasonably estimated, there is no guarantee that these will be the actual costs because they are based on the best information available at the time and the full extent of the remediation work may not be known.



Environmental Issues in Nova Scotia

1.26 The Province has also recorded \$14 million for contaminated sites for which it has accepted responsibility and plans to remediate. These sites are located throughout Nova Scotia and some are listed below.

Site	Year	Nature	Responsible Party
Highway Bases	Various	Oil, grease, and salt contamination at 30 bases	Province
Land next to Sutherland Harris Memorial Hospital	2009	Oil spill contamination	Province
Deluxe Dry Cleaners	2006	Contaminated soil	Province assumed
Chignecto-Central Regional School Board	Unknown	Oil spill contamination	Province
Arrow-Kurdistan – on protected land	1970's	Oily waste material from two oil spills	Province
DSME Trenton	2016	Hydrocarbons under building infrastructure	Province assumed
Truro Hospital	Unknown	Potential for contamination from building materials	Province



For certain contaminated sites the Province accepts responsibility, but no accounting liability recorded

- 1.27 In certain situations, the application of laws and accounting standards can result in the Province not recording a liability, or incurring cleanup costs, even though some level of contamination may exist. For example, the Province has not recorded a liability for over 60 abandoned gold mines throughout the province. Mining historically affects the surrounding environment and contamination can be expected. Even though environmental assessments may not have been completed to determine how much contamination exists, information on each site has been collected and assessed by members of the departments of Environment, Natural Resources, and Health. Examples of the results of some of these assessments follow.
- Site assessed and has no specific threat at this time - not expected to have remediation costs incurred in the near future.
 - Site deemed riskier due to proximity to people - may require additional testing and costs to be incurred for signage, physical barriers, and other risk management methods as necessary.
- 1.28 In the Remediation Levels Protocol, pursuant to the Contaminated Sites Regulations, risk management is accepted as an alternative to complete remediation when health is not compromised. This limited remediation means that actions have been taken to inform the public, as well as restrict access to the sites. No future cleanup costs are expected, so no liability is recorded.
- 1.29 The Province continues to monitor and assess abandoned gold mine sites throughout the province. When it is determined that standards have been exceeded, or risk management is no longer an appropriate option, it is expected that costs will be added to the liability.
- 1.30 Further information on abandoned mines can be found through the Nova Scotia Department of Natural Resources' website.



Appendix I

Highlights from 2017 Public Accounts Related to Contaminated Sites

Accounting policy: Liabilities

Liabilities for Contaminated Sites are recognized when an existing environmental standard is exceeded, the Province is directly responsible or accepts responsibility, the Province expects to remediate and give up future economic benefits, and a reasonable estimate of the amounts can be made. The liability is measured based on the best estimate of the expenditures required to complete the remediation, net of any expected recoveries. Contaminated sites are a result of any chemical, organic, radioactive material or live organism being introduced directly or via the air into soil, water, or sediment that exceeds an environmental standard.

Note 9 Contaminated Sites

Various provincially owned properties throughout the province are considered environmental or contaminated sites. Studies are ongoing to assess the nature and extent of damage to develop remediation plans. Provisions for these costs are recorded when it is determined a liability exists and a reasonable estimate of the remediation costs can be made. As at March 31, 2017, a total liability for contaminated sites of \$212.2 million (2016 – \$171.7 million) has been recorded in Accounts Payable and Accrued Liabilities.

Engineering and environmental studies generated estimates for the cost of remediation of the Sydney Steel Corporation (SYSCO) and adjacent sites as well as the Sydney Tar Ponds/Coke Ovens site. As a result, the Province recorded liabilities totaling \$318.5 million in 2000 for environmental site clean-up. At March 31, 2017, \$68.1 million (2016 – \$70.8 million) remains unspent. This provision will continue to be utilized for future decommissioning, demolition, and remediation of SYSCO’s and adjacent sites, including the long-term maintenance and monitoring of the Sydney Tar Ponds/Coke Ovens site. Based on currently available information, the provision, in aggregate, appears sufficient to cover the future estimated costs to remediate these sites.

Other remediation liabilities amounting to \$144.2 million (2016 – \$100.9 million) have also been recognized, and include \$130.2 million (2016 – \$88.5 million) for the remediation of Boat Harbour in Pictou County. The Province’s estimate for the removal of effluent is based on environmental studies, engineering reports, and extrapolation techniques similar to those that have been used at other contaminated sites with which the Province was involved. At this stage in the process, the Province continues to test and refine its current remediation strategy, and as a result there is still significant measurement uncertainty related to this estimate. A comprehensive remediation plan is expected to be finalized within the next three to four years.

The Province has identified various other sites where contamination is known or expected to exceed an environmental standard, and those which may contain certain levels of contamination but the extent is unknown. No liability for remediation of these sites has been recognized in these consolidated financial statements as there is either no basis for a reasonable estimate or the Province does not expect to give up any future economic benefits. In some cases, a risk-based remediation plan is being pursued to address any known safety hazards. Studies are ongoing to assess the nature and extent of damage and to develop remediation plans, if necessary. The Province may record a liability in the future if contamination at any of these sites is determined to exceed an environmental standard and a reasonable estimate of the related remediation costs can be made.

Chapter 2: Previous Audits Related to the Environment



Key Messages:

- Too many OAG recommendations which Government agreed to implement have not been completed, including nearly half of those directed to the Department of Environment
- Increased risk that weaknesses identified continue to exist in important government systems, processes, and controls
- Department and overall government attention is needed to ensure oversight and accountability for timely completion of commitments made by departments in accepting previous OAG recommendations

Key Observations:

- 20 of 43 recommendations which Government agreed to implement from 2007 through 2016 were not complete the last time we followed up
- 11 of 17 recommendations from our 2010 work on Contaminated Sites were not complete as of May 2014
- Environment had not completed 8 of the 19 recommendations from our 2014 audit of Public Drinking Water Safety, as noted in our early 2017 review. We will review this again in early 2018.
- Our 2008 audit of Environmental Monitoring and Compliance had only one of seven recommendations not completed as of our 2013 follow-up
- Other audits such as our work on Aquaculture (2015), Species at Risk (2016), and Critical Infrastructure (2016) include references to roles involving Environment, such as monitoring or enforcement
- We also completed work on Disaster Preparedness (2011) and Business Continuity Management (2015) that would be impacted by environmental events



2 Previous Audits Related to the Environment

Government Plays an Important Role in a Healthy Environment

- 2.1 The importance of a healthy environment is well known. An unhealthy environment can negatively impact our quality of life in many ways, including public health and safety, the economy, and the use and enjoyment of our natural resources. Government plays an important role both directly and indirectly in ensuring a healthy environment. In our role as the auditors of government, we have conducted several audits focused on Government's performance in fulfilling this important responsibility. When we identified weaknesses, we made recommendations in our reports to help management be more effective. It is very important that department management, and government in their oversight role, have processes to ensure that appropriate action has been taken to implement the corrective actions covered by our recommendations. This chapter is intended to provide information to Nova Scotians on audits we have conducted in the past related to this important area. All our audit reports can be found on our website at www.oag-ns.ca.

OAG Audits at Department of Environment – 2007 to 2016

- 2.2 Over the ten years from 2007 to 2016, our Office completed three audits at the Department of Environment. We made 43 recommendations from those audits, of which 20 (47%) were not implemented at the time of our last follow-up review. The following paragraphs provide further details on the audits and status of recommendations.
- 2.3 Our February 2008 chapter – Environmental Monitoring and Compliance – included seven recommendations to improve Environment's processes. Our last follow-up review for this audit was reported in May 2013 and found one recommendation remained incomplete.
- 2.4 Our June 2010 chapter – Management of Contaminated Sites – included 17 recommendations to improve how Environment carried out their responsibilities in this area. Our final follow-up review for this audit was reported in May 2014 and noted 11 incomplete recommendations.
- 2.5 Our May 2014 chapter – Public Drinking Water Supply Program – included 19 recommendations to improve Environment's management of the program. Our most recent follow-up review for this audit was reported in February 2017, and found eight recommendations were incomplete, including one the Department did not intend to implement. We do not agree with the Department's position regarding recommendation 5.8 so we still consider it not complete. Our final follow-up review on this chapter will be reported in the winter of 2018.



- 2.6 See Appendix I for a list of the recommendations from the three audits discussed above.

Other Audit Areas Which Can Impact or be Affected by the Environment

- 2.7 Over the past few years our Office completed audits at certain other departments which have a connection with the environment. None of these audits included recommendations directed at the Department of Environment, but the Department may have a role or be impacted by events. The reports from these audits can be found on our website, including the specific recommendations for improvements. The following paragraphs provide a summary of the nature of the audits and number of recommendations to management.
- 2.8 Our June 2015 Report included the results from our audit on aquaculture. The nine recommendations from the audit were addressed to the Department of Fisheries and Aquaculture. The chapter notes that enforcement responsibilities, including for aquaculture, became part of the mandate of the Department of Environment after our work was complete. This requires coordination between the two departments. We are following up on this audit for our winter 2018 report.
- 2.9 Our June 2016 Report included the results from our audit on species at risk. The five recommendations from the audit were addressed to the Department of Natural Resources as the department responsible for the Endangered Species Act. The chapter also noted species protection is impacted by other legislation and involvement of other government departments and stakeholders. This includes the Department of Environment which is responsible for protected areas (Special Places Protection Act, Wilderness Areas Protection Act, and the Nova Scotia Wetland Conservation Policy), as well as environmental assessment and other responsibilities under the Environment Act. We will follow up on this audit next year.
- 2.10 Our November 2016 Report included results from our audit on critical infrastructure. The four recommendations were addressed to Executive Council and the Emergency Management Office. Within the chapter, we noted, as an example, the Department of Environment would be expected, under a National Strategy, to develop partnerships with water and wastewater treatment facilities to promote critical infrastructure planning and information sharing. Environment was also one of the nine departments we interviewed that was not familiar with the requirements of the National Strategy and Action Plan for Critical Infrastructure and not actively planning within its sector. We will follow up on this audit next year.
- 2.11 Beyond these audits, we also reported on matters that, while not the direct responsibility of the Department of Environment, can be impacted by



significant weather events. Both our November 2011 Disaster Preparedness – Major Government Information Systems audit (14 recommendations remain applicable of which only 4 were complete at time of last follow-up) and November 2015 Business Continuity Management audit (9 recommendations, no follow-up completed yet) identified areas of improvement that, if implemented, will help to mitigate the impact of large storms or other environmental disasters.

Pan-Canadian Collaborative Climate Change Report

- 2.12 Recognizing that climate change requires action by all governments, Canada's provincial, territorial, and federal legislative audit offices partnered to examine and report on progress on climate change action within their governments. This is the first time that all audit offices in Canada have coordinated their work on climate change in this way.
- 2.13 While each audit office performed its work independently, the overall objective of the collaborative project was to assess whether the federal, provincial, and territorial governments met their commitments to reduce greenhouse gas emissions and adapt to climate change. The offices worked together to develop a set of common questions to be addressed in their individual reports. Our audit on climate change management is presented in Chapter 3 of this report.
- 2.14 A summary report, expected in early 2018, will present the audit findings from the original audit work tabled by each office. It will provide an independent review of government actions on climate change commitments across the country, as well as a snapshot of key issues and trends that are common across governments.



Appendix I

OAG Audits at Department of Environment (2007-2016)

February 2008 Chapter 3 – Environment and Labour – Environmental Monitoring and Compliance	Follow-up Status
3.1 The Division should ensure that proof of ownership or right to use a site and all other documents are obtained, required financial security is in place, and all requirements are met before an approval is issued.	Complete
3.2 The Division should establish procedures to obtain objective evidence to validate the accuracy of monitoring reports received from approval holders.	Not Complete (as of May 2013 assessment)
3.3 The Division should ensure risk assessments are completed and inspections carried out as frequently as required. Further, the Division should completely document inspections, including obtaining signatures or providing an explanation why they were not obtained.	Complete
3.4 The Division should implement the quality assurance process across all its compliance programs as soon as possible.	Complete
3.5 District management should monitor the work of the inspectors to ensure they follow up on noncompliance in a timely manner and use appropriate enforcement measures.	Complete
3.6 Management should ensure that information entered into the complaints tracking systems is complete and accurate and that policies and procedures for handling complaints are followed.	Complete
3.7 The Division should ensure compliance activities and other data are consistently and accurately captured in the information management system.	Complete
No further follow-up planned	

June 2010 Chapter 3 – Environment – Management of Contaminated Sites	Follow-up Status
3.1 The Department of Environment should ensure sites which are known to be or likely to be contaminated are appropriately assessed and any unacceptable risk to human health and the environment are addressed by the responsible party.	Not Complete (as of May 2014 assessment)
3.2 The Department of Environment should report to Cabinet those contaminated sites where unacceptable risks have not been adequately addressed to ensure Cabinet has appropriate information for policy decisions.	Not Complete (as of May 2014 assessment)
3.3 The Department of Environment should implement timeframes to follow up receipt of site professional reports and ensure timeframes are being followed.	Not Complete (as of May 2014 assessment)
3.4 The Department of Environment should ensure that site professional reports and other information are reviewed in a timely manner based on timeframes established.	Not Complete (as of May 2014 assessment)
3.5 The Department of Environment should develop a formal prioritization process to identify higher-risk contaminated sites. Inspector monitoring activities should ensure priority is given to higher-risk sites.	Not Complete (as of May 2014 assessment)
3.6 The Department of Environment should conduct periodic site visits on certain sites, taking into consideration the level of risk involved, to verify key information reported by site professionals.	Not Complete (as of May 2014 assessment)



June 2010 (continued)	
Chapter 3 – Environment – Management of Contaminated Sites	Follow-up Status
3.7 The Department of Environment should complete background checks to ensure site professionals have the education and work experience required under Departmental guidelines.	Action No Longer Required (OAG agreed with status)
3.8 The Department of Environment should develop standardized cleanup submission requirements as well as standard report formats.	Complete
3.9 The Department of Environment should ensure consultation with the Compliance and Inspection Coordinator and notification to the coordinator and district manager occurs prior to enforcement action being taken.	Complete
3.10 The Department of Environment should ensure closed complaint and notification files are reviewed by management as required. Evidence of review, including the date, should be documented in the file.	Complete
3.11 The Department of Environment should implement time standards for the inspection of a complaint or notification by inspectors and for district manager review of closed files.	Not Complete (as of May 2014 assessment)
3.12 All information related to a complaint and notification file should be accurately reflected in the activity tracking system.	Not Complete (as of May 2014 assessment)
3.13 The Department of Environment should implement the quality assurance program for contaminated site files.	Not Complete (as of May 2014 assessment)
3.14 Management should closely supervise all new inspectors to ensure they are receiving appropriate training and sites assigned to them are properly monitored.	Complete
3.15 Training on the use of the Development Accountability Model should be completed as soon as possible.	Complete
3.16 The Department of Environment should clearly define and communicate the objectives of the contaminated site program as well as establish outcome measures including reporting on program performance.	Not Complete (as of May 2014 assessment)
3.17 An inventory of known contaminated sites should be established and maintained for management purposes. This should include information on the stage of cleanup and risks involved for each site.	Not Complete (as of May 2014 assessment)
No further follow-up planned	

May 2014	
Chapter 5 – Environment – Public Drinking Water Supply Program	Follow-up Status
5.1 The Department of Environment should conduct registered facility audits at the required frequency.	Complete
5.2 The Department of Environment should investigate why errors exist with scheduled audit dates in the activity tracking system and take the necessary action to address the problem.	Complete
5.3 The Department of Environment should require inspectors to determine if appropriate contingency plans exist when auditing registered facilities.	Complete
5.4 The Department of Environment should develop and implement clear guidance supporting the areas covered during facility audits, including the nature and extent of water testing.	Complete
5.5 The Department of Environment should evaluate whether the current requirement for water testing by inspectors at registered facilities is appropriate and implement changes where required.	Not Complete (as of February 2017 assessment)



May 2014 (continued) Chapter 5 – Environment – Public Drinking Water Supply Program	Follow-up Status
5.6 The Department of Environment should complete all required procedures when conducting registered facility audits.	Complete
5.7 The Department of Environment should record all deficiencies in the activity tracking system as required.	Not Complete (as of February 2017 assessment)
5.8 The Department of Environment should obtain documented acknowledgement from facilities that they have received the audit report. Department indicated they do not intend to implement this recommendation.	Not Complete (as of February 2017 assessment)
5.9 The Department of Environment should establish time frames indicating when inspectors should issue audit reports. The Department should monitor compliance with these time frames.	Not Complete (as of February 2017 assessment)
5.10 The Department of Environment should develop and implement a policy regarding the timing and nature of deficiency follow-up required by inspectors.	Complete
5.11 The Department of Environment should ensure all annual reports are received and reviewed in a timely manner, and that they contain all required information.	Complete
5.12 The Department of Environment should conduct all boil water advisory confirmatory samples within the 30-day requirement.	Complete
5.13 The Department of Environment should develop and implement guidelines for contacting facilities when a boil water advisory is issued.	Complete
5.14 The Department of Environment should establish a policy clarifying the time frame in which newly registered facilities should have an initial audit.	Complete
5.15 The Department of Environment should utilize information available in the activity tracking system for trend analyses and identification of risks.	Not Complete (as of February 2017 assessment)
5.16 The Department of Environment should track time for key inspector activities for use by management in operational planning and monitoring.	Complete
5.17 The Department of Environment should conduct its planned review of the quality assurance process and implement changes as required.	Not Complete (as of February 2017 assessment)
5.18 The Department of Environment should complete management file reviews as required.	Not Complete (as of February 2017 assessment)
5.19 The Department of Environment should review management reports from the activity tracking system in a timely manner and take appropriate action to address issues identified.	Not Complete (as of February 2017 assessment)
Our final follow-up review on this chapter to be reported in winter of 2018	

Chapter 3: Environment – Climate Change Management



Overall conclusion:

- Province is using strategic plans and legislated requirements to manage climate change
- Nova Scotia met the 2020 greenhouse gas reduction target
- Some departments are not involved in coordinated climate change planning
- Public reporting on climate change is limited

Why we did this audit:

- Climate change is one of the biggest threats to how we live
- Our work is part of a Canada-wide look by Auditors General at government response to climate change
- Government response to climate change needs to be coordinated
- Climate change is not confined within provincial borders

What we found in our audit:

- Province has a greenhouse gas reduction target and a climate change action plan
- Nova Scotia reduced greenhouse gas emissions in 2015 to 18% below 1990 levels; this exceeded the minimum 10% reduction required by 2020
- Nova Scotia's average of 17.2 tonnes per person of greenhouse gas emissions falls in the middle among all Canadian provinces
- Nova Scotia Environment works with departments on climate change planning, but not all departments are involved
- Province did not include 57 of 68 promised actions in its public reports
- New action plan is needed as existing plan is mostly complete
- Nova Scotia Environment has not re-evaluated climate change risks in over a decade
- Province helped all municipalities develop climate change plans



Recommendations at a Glance

Recommendation 3.1

Environment should publicly report on progress in addressing climate change, including actions to adapt to expected impacts.

Recommendation 3.2

Environment should develop and publicly update plans for targeting future impacts of climate change.

Recommendation 3.3

Environment should regularly review its rating of climate change risks to determine if the ratings have changed and identify any new actions required to address the changes.



3 Environment: Climate Change Management

Significant Audit Observations

Developing Targets and Strategies

➤ Province has targets and strategies for climate change

- 3.1 Several goals in the Environmental Goals and Sustainable Prosperity Act target climate change. These goals include reducing greenhouse gas emissions to a minimum of 10% below the Province's 1990 levels by 2020 and increasing the use of renewable energy sources. Under the Environment Act, the Greenhouse Gas Emissions Regulations set maximum allowable emissions for power plants that emit greater than 10,000 tonnes of greenhouse gases each year.

- 3.2 In January 2009, the Province released *Toward a Greener Future – Nova Scotia's Climate Change Action Plan* to meet the greenhouse gas emissions target and prepare for climate change. The action plan includes 68 actions covering eight key areas.
 - Cleaner energy
 - Energy efficiency
 - Renewable energy
 - Transportation
 - Air quality
 - Government leadership
 - Public engagement and education
 - Adapting to climate change

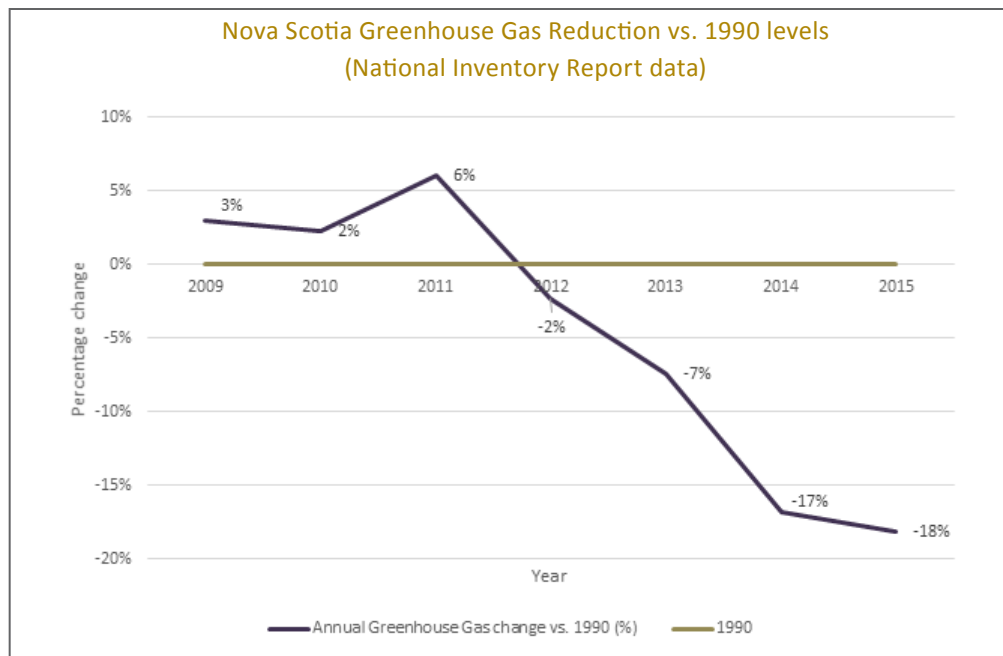
- 3.3 In 2014, Nova Scotia Environment developed a five-year plan to support and increase the skills of departments to include adapting to climate change in their policy and planning processes. The phases of the adaptation plan outlined the following steps:
 - Environment to identify and work with key departments with significant responsibilities affected by climate change.
 - Departments to select a representative to champion and promote planning for climate change.



- Departments to assign project leaders to focus on specific climate change projects.
- Environment to assist in training and coaching the representatives and project leaders as they develop and fulfill their roles.

▶ **Province met 2020 emissions target**

3.4 The Province, using 2013 data, reported it was on track to meet its 2020 goal of lowering greenhouse gas emissions a minimum of 10% below 1990 levels. Based on 2015 emissions, the following graph shows an 18% reduction, exceeding the minimum 2020 target. This result may be revised, as discussed in the following paragraph. Some of the success is due to government actions, such as setting targets to reduce emissions and increase use of renewable energy sources. The Province also reported other events, such as the shutdown of two mills in 2012 and increase in oil prices, likely contributed to lower emissions. Analysis of greenhouse gas emissions based on population, detailed in Appendix I, shows Nova Scotia’s 2015 emissions rate per person was fifth highest among all provinces.



Prepared by OAG Nova Scotia based on National Inventory Report emissions

3.5 Environment and Climate Change Canada publishes reports each year on Canada’s greenhouse gas emissions. The emissions reported are based on estimates rather than specific measurements. This means they may be updated if information or ways to calculate the emissions change. The reports break down emissions by province and type of activity, such as electricity generation and transportation. Provincial emissions may be affected by economic downturns, or significant weather events like longer and colder, or



shorter and milder, winters. Nova Scotia Environment uses the reports to determine the Province's progress in meeting the greenhouse gas reduction target.

- 3.6 We did not audit the national emissions reports. Environment and Climate Change Canada states it has quality assurance and control practices for preparing the reports, including reviews by independent experts. The reports are submitted to the United Nations where they are reviewed by international experts. Emissions reports take two years to complete, with the most recent report released in 2017 for the 2015 emissions year.

Coordinating Climate Change Initiatives



Climate change roles and responsibilities are in place

- 3.7 Roles and responsibilities for climate change actions are defined in legislation and through consultation among departments. For example, the Environment Act's greenhouse gas regulations require power plants emitting above a certain limit to report their emissions annually to Environment. To carry out the 2009 action plan, Environment and other departments determined which department had the best mandate to carry out each action.
- 3.8 The first phase of Environment's 2014 adaptation plan involved six organizations – the Departments of Agriculture, Fisheries and Aquaculture, Internal Services, Municipal Affairs, Transportation and Infrastructure Renewal, and the Office of Planning and Priorities. Each selected a representative to promote planning for climate change within their organization.
- 3.9 The first phase of Environment's plan was not completed as intended. At the time of our audit only two departments still had representatives. In the other departments, the representative left or took on a different role. Environment is continuing to work with the organizations to include climate change planning in their operations.



Not all departments involved in adaptation planning process

- 3.10 Environment's goal to have all departments consider climate change in their planning processes is a good way to target and coordinate the wide-reaching effects of climate change. While Environment's original plan and approach may need to be adjusted, having all departments consider climate change is worth pursuing. Staff told us they are looking at other departments to involve in the adaptation planning process. Environment's coordinating of climate change work is less effective if all departments do not participate.
- 3.11 The following paragraph is an example which shows Environment had limited knowledge in one area of significant risk. It shows there are gaps



in the Department’s coordinating and understanding of actions targeting climate change impacts.

➡ **Environment has limited knowledge of health risk actions**

3.12 The climate change action plan did not include actions targeting health risks identified in a 2005 risk assessment discussed later in this chapter. Management at Environment told us they are generally aware of what the Department of Health and Wellness is doing. However, staff at Environment did not know what was being done to address the health impacts from expected increases in levels of ultraviolet rays, outbreaks of West Nile virus, and incidents of respiratory problems.

Reporting on Progress Toward Goals

➡ **Limited public reporting on climate change**

3.13 The Minister of Environment reports annually to the House of Assembly on progress and adequacy of the goals of the Environmental Goals and Sustainable Prosperity Act. The Minister’s annual report does not include progress toward completing the climate change action plan. Eleven of the 68 actions in the plan are included in the goals of the Act. The 11 actions mainly involve energy efficiency initiatives and greenhouse gas emissions reductions. Actions in the plan that focus on adapting to climate change are not part of the annual report. A 2015 Environment report – *Taking Action on Climate Change* – provided limited information on adaptation efforts underway.

3.14 It is difficult for Nova Scotians to know the range of activity or assess how well the Province is doing in addressing climate change without complete reports. Public reporting on all activities could explain what has been done. For incomplete actions, there may be valid reasons why they are not done, which can be outlined in the report. Public reporting is also a way to hold the Province accountable for actions which it should have, but has not yet, undertaken.

Recommendation 3.1

Environment should publicly report on progress in addressing climate change, including actions to adapt to expected impacts.

***Environment Response:** Agree. NSE will continue to report on the progress toward meeting its greenhouse gas emissions reduction target by 2020 through the annual Environmental Goals and Sustainable Prosperity Act (EGSPA) reporting process. NSE will commit to publish progress updates similar to the 2015 “Taking Action on Climate Change” report on a regular basis, with the next scheduled for 2019. NSE is about to embark on a significant new approach to*



addressing climate change impacts in the future through a cap and trade program. This program will inform future reporting requirements. Timing: ongoing

➡ **Progress on action plan monitored, further plans and actions needed**

3.15 The Province needs to continue planning for and adapting to climate change since it is expected to affect Nova Scotia into the future. Environment last updated the status of the actions in the climate change action plan in 2015. By then, most actions were complete. The Province has an opportunity to build on work already done and possibly establish higher or wider-ranging targets. Management told us recent federal government climate change initiatives are expected to influence the Province’s future work. This should not prevent the Province from developing plans and taking action to reduce climate change impacts.

Recommendation 3.2

Environment should develop and publicly update plans for targeting future impacts of climate change.

***Environment Response:** Agree. NS Environment will select key focus areas for work planning through our risk assessment process noted in Recommendation 3 and is committed to develop and update plans outlining these key areas of priority focus every two years. Timing: 2018*

➡ **Most actions complete; long-term progress not tracked**

3.16 Environment accurately assessed the status of the actions we examined from the climate change action plan – 36 actions were complete and 11 were ongoing. One action assessed as complete was still ongoing, but we did not consider it a significant difference. The actions from the climate change action plan, including the 47 we examined, are shown in Appendix II.

3.17 The departments responsible for two ongoing actions did not know if they were on track to achieve their 2020 targets. The targets are to:

- reduce energy consumption by 30% for all government buildings built before 2001 (Department of Transportation and Infrastructure Renewal), and
- improve energy efficiency in the province by 20% (Department of Energy).

3.18 Staff in the departments told us they focused on actions to reduce energy use and improve efficiency, rather than ways to measure the actions. These examples further support our recommendation for public reporting which could explain why progress was not tracked and ways to determine progress.



Assessing Climate Change Risks

► Strategies target major climate change risks

3.19 The 2009 climate change action plan targeted electricity generation and heating, and transportation – Nova Scotia’s most significant sources of greenhouse gas emissions. Actions to reduce emissions include:

- reducing the maximum allowable emissions from electricity generation;
- by 2020, increasing overall provincial energy efficiency by 20% over 2008 levels;
- increasing the use of cleaner and renewable energy sources; and
- developing a sustainable transportation strategy.

3.20 Climate change impacts, such as flooding and coastal erosion, that require adjusting to the harmful effects were targeted in the action plan or other work by Environment. Initiatives in the action plan aimed at adapting to the changing climate include:

- creating a fund to encourage research and development;
- creating advisory committees to coordinate efforts and provide policy advice; and
- developing a water resource management strategy and wetland conservation policy.

► Climate change risk ratings not periodically reviewed

3.21 In 2005, the Province assessed how likely and severe climate change effects could be to determine those of high, medium, or low risk. Environment does not periodically review the 2005 assessment to see if changes to the risk ratings are needed. Staff told us, although the risks would not change over time, their likelihood and harmful effects may have changed over the 12 years since the assessment was done. Lower-rated risks, such as impacts on domestic water supplies, may now be a greater risk for Nova Scotia and need more attention. Good risk assessment practice includes periodic review of risks and ratings to determine if anything has changed and needs to be addressed.

Recommendation 3.3

Environment should regularly review its rating of climate change risks to determine if the ratings have changed and identify any new actions required to address the changes.



Environment Response: *Agree. NS Environment commits to reviewing its ranking of climate change risks and validating this information based on the latest science every 5 years. Timing: 2019*

▶ Province working with municipalities on climate change

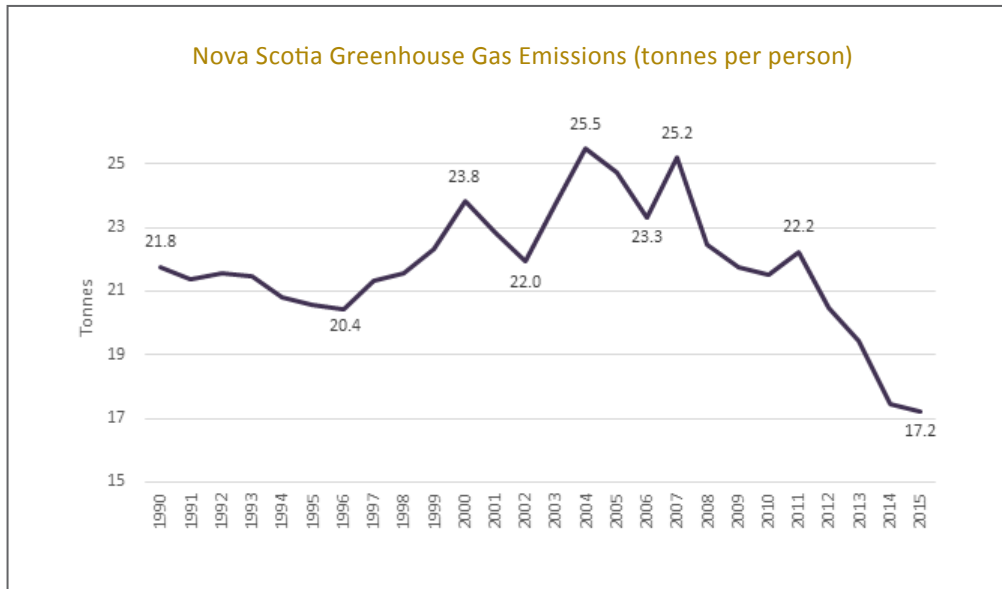
- 3.22 In 2013, the Department of Municipal Affairs required municipalities to submit climate change action plans. The Province recognized municipal governments need to be involved in climate change planning since they have significant responsibilities for buildings, roads, and services that will be impacted. Environment worked with Municipal Affairs to support municipalities in developing their plans. All municipalities submitted the required plans.
- 3.23 We examined the plans for the following five municipalities:
- Halifax Regional Municipality
 - Cape Breton Regional Municipality
 - Town of Amherst
 - District of Digby and Town of Digby (joint plan)
 - County of Colchester and Town of Truro (joint plan)
- 3.24 The plans aligned well with the significant risks identified in the Province's 2005 risk assessment and contained actions to reduce the impacts. Land use planning, road upgrading, inspecting and monitoring, and working with other levels of government were common actions noted.
- 3.25 The Department of Municipal Affairs prepared a report which identified common risks, such as flooding, in the municipal plans. The report noted climate change is already impacting municipalities and gives a detailed picture of the way it is expected to affect them in the future. It noted the plans outline a variety of actions proposed or underway to make communities better prepared for climate change. The report also provides useful information for the Province to consider when planning for ongoing climate change. The report was in draft status when we completed our work.



Appendix I

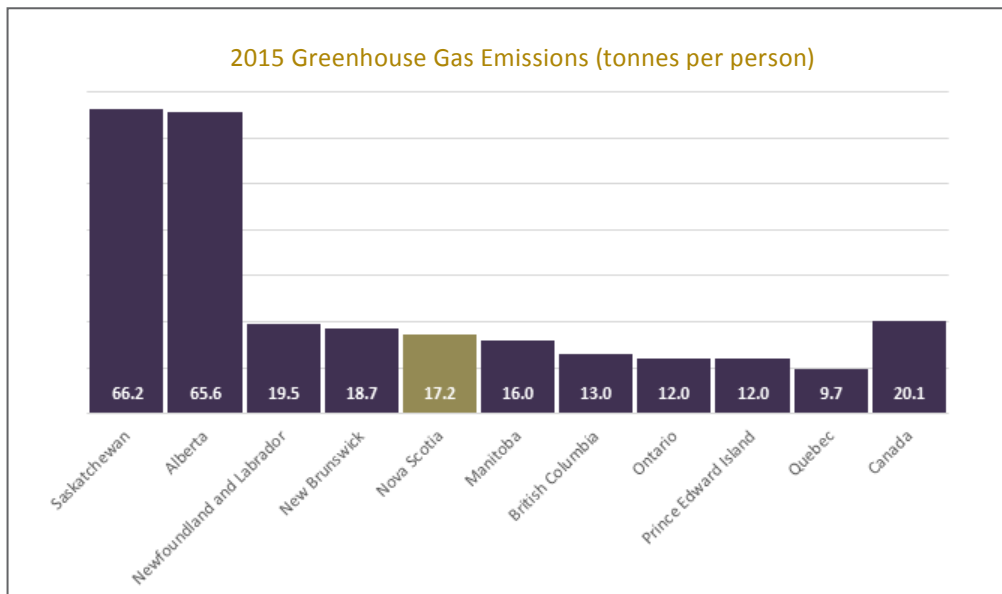
Emissions By Population

Greenhouse gas emissions ratios based on population measure how much is emitted in the province for every Nova Scotian. In 2015, the emissions rate was 17.2 tonnes per person. In 1990, it was 21.8 tonnes. The graph below shows Nova Scotia has achieved significant emissions reductions per person over the last several years.



Prepared by OAG Nova Scotia based on National Inventory Report emissions and Statistics Canada population values.

Emissions per person can be used to compare Nova Scotia to other provinces and the national average. The chart below shows Nova Scotia was the 5th highest emitter on a per person basis among all provinces – just under the Canadian average of 20.1 tonnes.



Prepared by OAG Nova Scotia based on National Inventory Report emissions and Statistics Canada population values.



Nova Scotia Climate Change Action Plan

Status of Actions			
Action	Target Date	Status	OAG Comment
Action 1: Impose increasingly stringent absolute caps on NSPI's GHG emissions for 2010, 2015, and 2020.	2010	Complete	Agree – complete
Action 2: Target GHG and air pollutant emissions from sources other than coal-generated electricity, by working with stakeholders to develop policies and regulations.	No date	On track/ ongoing	Agree – ongoing
Action 3: Create a new, independent administrator for the electrical efficiency program established by the Utility and Review Board.	2009	Complete	Agree – complete
Action 4: Commit to increasing overall energy efficiency in the province by 20 per cent over 2008 levels by 2020, and strive to implement all cost-effective steps toward energy efficiency.	2020	On track/ ongoing	Agree – ongoing
Action 5: Expand energy efficiency and conservation programs for homeowners and businesses, and develop new ones. Spending in the current fiscal year will exceed \$17 million.	No date	Complete	Not assessed
Action 6: Study rate structures and metering systems that encourage electricity conservation and efficiency, beginning in 2009, to see what will work best in Nova Scotia.	2009	On track/ ongoing	Agree – ongoing
Action 7: Create a Chair in Farm Energy Conservation at the Nova Scotia Agricultural College.	2009	Complete	Agree – complete
Action 8: Effective in 2011, amend the Nova Scotia Building Code Act to require all new commercial buildings of more than 600 m ² to exceed the 1997 Model National Energy Code for Buildings by at least 25 per cent, or to adopt the updated version of the 1997 Model National Energy Code for Buildings expected in 2011. This is only a start. The province will work with its partners to strengthen standards on a continuing basis as innovative and cost-effective technologies come to the market.	2011	Complete	Agree – complete
Action 9: Require, by December 31, 2009, all new residential dwellings, and all commercial buildings under 600 m ² , to meet prescriptive or performance requirements that are equivalent to an EnerGuide for New Homes rating of 80 under the Nova Scotia Building Code Act.	2009	Complete	Agree – complete
Action 10: Require low-flush toilets and permit the use of water-free technologies and the re-use of grey water by December 31, 2009, under the Nova Scotia Building Code Act.	2009	Complete	Agree – complete



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 11: Implement stricter energy-efficiency regulations for appliances. The new rules, which will also increase the number of appliance categories that are regulated, will be updated every three years to the highest regulatory standards.	2012	On track/ ongoing	Agree – ongoing
Action 12: Produce the 2009 Energy Strategy, a companion piece to this document [the Climate Change Action Plan]. Developed by the Department of Energy, it will lead the transformation of Nova Scotia's electricity system to achieve a green energy future where at least 25 per cent of our electricity needs will come from renewable energy sources by 2020.	2009	Complete	Agree – complete
Action 13: Begin studies on regional electricity integration, known as the Green Grid Initiative, to diversify our energy sources. These studies, led by the Department of Energy, will begin in 2009.	2009	On track/ ongoing	Agree – ongoing
Action 14: Armed with the better understanding of costs and capacity that will result from Action 13, require greater use of renewable energy after 2013.	2013	Complete	Agree – complete
Action 15: Develop regulations to allow greater use of two-way electric meters after 2009. Two-way meters (net metering) let small producers of intermittent renewable power transmit electricity to NSPI when their generators are operating and receive power from the grid when they are not.	2009	Complete	Agree – complete
Action 16: Develop a bio-resource strategy by 2011 to determine the best potential uses and the best policies to encourage the use of bio-energy-based fuels. The strategy will take account of GHGs and other air emissions produced throughout the life cycle of various bio-fuels.	2011	No progress	Not assessed
Action 17: To support the development of biomass for electrical generation, provide the forest industry with funds from the Community Development Trust to study the feasibility of potential biomass generation projects.	No date	Complete	Not assessed
Action 18: To support development of other uses for forest biomass, provide funds from the Community Development Trust to improve our understanding of forest biomass availability and the potential of forest biomass projects to improve site productivity.	No date	Complete	Not assessed
Action 19: Produce a Sustainable Transportation Strategy by 2010 that will build on existing work. A task force headed by Transportation and Infrastructure Renewal, with members from Conserve Nova Scotia, Service Nova Scotia and Municipal Relations, Nova Scotia Environment, and municipal governments, will consult with the public and interested groups. The task force, to be created by March 31, 2009, will consider all aspects of transportation, including public transit, active transportation, funding, and land-use planning.	2010	Complete	Agree – complete



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 20: While the Nova Scotia Sustainable Transportation Strategy is being developed, continue to fund public and alternative transportation and expand innovative transportation projects.	2009-2011	Complete	Agree – complete
Action 21: Following consultation and co-operation with other jurisdictions, introduce regulations by 2010 setting fuel consumption and emissions standards for new vehicles.	2010	Complete	Agree – complete
Action 22: Develop a program in 2009 to encourage – and support – consumers to choose greener cars and trucks that are more fuel efficient and produce less air pollution.	2009	On track/ongoing	Not assessed
Action 23: Review the province’s park-and-ride lots with the intention of increasing their capacity. There are now about 30 park-and-ride lots at intersections of major highways.	No date	Complete	Agree – complete
Action 24: Over the next five years, expand the weigh-in-motion program at scale houses throughout the province. These systems save idling time by reducing stops and starts for heavy trucks. The first such system has already been installed at the Canso Causeway.	2009-2014	Complete	Agree – complete
Action 25: Begin a pilot project to allow double 53-foot semi-trailers to be hauled by a single tractor on four-lane, divided highways between Halifax and the New Brunswick border at speeds of 90 km/h or slower. These trucks reduce emissions and save fuel by allowing one engine to haul two loads.	2009	Complete	Agree – complete
Action 26: Develop an anti-idling policy for government vehicles and employee vehicles on government business by 2009. A model anti-idling bylaw for use by municipalities will also be developed.	2009	Complete	Agree – complete
Action 27: Introduce a pilot project to provide incentives for equipment that will improve the energy efficiency of heavy truck fleets and encourage the use of efficient light-duty vehicles in commercial fleets, such as taxis.	No date	Complete	Not assessed
Action 28: Use an airshed approach to manage Nova Scotia’s air quality, and consider the combined impact of local and out-of-province emissions. Nova Scotia Environment will lead this effort. The province will work with industry, and others, to reduce local emissions, and with the Canadian government and other provinces to curb out-of- province pollution.	No date	Complete	Not assessed
Action 29: To give Nova Scotians better information about the quality of our air, continue its long-term air monitoring and begin to implement the Air Quality Health Index. The system will produce up-to-the-hour information about air quality.	No date	Complete	Agree – complete



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 30: In addition to the cap already in place for 2010, set new, tighter limits on NSPI's sulphur dioxide emissions for 2015 and 2020.	No date	Complete	Agree – complete
Action 31: Assess the effectiveness of our sulphur reduction efforts by 2011.	2011	Complete	Agree – complete
Action 32: In addition to the cap already in place for 2009, set new, tighter limits on NSPI's nitrogen oxide emissions for 2015 and 2020.	No date	Complete	Agree – complete
Action 33: Continue to require that all utility and industrial boilers install low-NO _x burner technology during upgrades. A clearer definition of "low-NO _x " will strengthen this requirement.	No date	Started	Not assessed
Action 34: Complete its plan for complying with the Canada-wide standard for particulate matter and ground-level ozone by the end of 2009.	2009	Complete	Not assessed
Action 35: Achieve the 2010 cap on mercury emissions, and comply with further strengthening of the Canada-wide standard for mercury emissions. These efforts may include capturing 80 per cent or more of the emissions from coal-fired plants by 2018.	No date	Complete	Not assessed
Action 36: By the end of 2009, include an assessment of greenhouse gas and air pollutant emissions as part of a "green filter" applied to projects requiring government approval.	2009	On track/ongoing	Not assessed
Action 37: Require that all new government-owned buildings achieve LEED Silver certification after 2008; achieve LEED Gold certification or equivalent after 2010; and be carbon neutral after 2020. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a widely used set of standards for sustainable construction.	2010	Complete	Not complete – work ongoing
Action 38: Require any organization seeking government funds for building projects to adopt the LEED Silver standard, or an acceptable equivalent, for energy efficiency and water consumption.	No date	Complete	Agree – complete
Action 39: By 2015, construct a building that demonstrates a leading standard for energy efficiency and sustainability.	2015	Complete	Agree – complete
Action 40: Achieve an overall 30 per cent reduction by 2020 in energy consumption for all government-owned buildings constructed before 2001.	2020	On track/ongoing	Agree – ongoing
Action 41: In support of Action 40, begin a program in 2009 to achieve BOMA BEST* [Building Owners and Managers Association of Canada – Building Environmental Standards] certification, or equivalent, for all of the Department of Transportation and Infrastructure Renewal's major owned and operated buildings by 2015.	2009	Complete	Agree – complete



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 42: Demonstrate leadership and a commitment to sustainable prosperity by choosing vehicles that are fuel efficient and environmentally responsible after 2008. A policy guiding this commitment will apply to certain types of vehicles and will result in the acquisition by lease or purchase of vehicles in the top 20 per cent of their class for energy efficiency and GHG and air pollutant emissions.	2009	Complete	Agree – complete
Action 43: Expand the E-Pass employee bus pass program as quickly as possible to all government employees.	No date	No progress	Not assessed
Action 44: As part of a broader sustainable procurement policy being developed by 2009, require that all new information and communications equipment bought or leased by the province have Electronic Product Environmental Assessment Tool (EPEAT) silver certification or equivalent. Where EPEAT criteria have not been developed, equipment must meet the applicable ENERGY STAR standard.	2009	Complete	Agree – complete
Action 45: Using funds from the federal Gas Tax Agreement continue to fund a sustainability coordinator for the Union of Nova Scotia Municipalities.	No date	Complete	Agree – complete
Action 46: Using funds from the federal Gas Tax Agreement provide funding in 2009 to help municipal governments plan for climate change. A key focus will be the impacts of sea-level rise on land-use planning and on the design of wastewater treatment plants.	2009	Complete	Agree – complete
Action 47: In 2009, work with the Union of Nova Scotia Municipalities on a memorandum of understanding that will address climate change mitigation and adaptation.	2009	Complete	Agree – complete
Action 48: Amend funding agreements with municipalities by 2010 to require climate change strategies in municipal Integrated Community Sustainability Plans.	2010	Complete	Agree – complete
Action 49: Encourage the Government of Canada to support further GHG and air pollutant reductions by funding programs like ecoNova Scotia II and the Greening the Grid project to upgrade transmission capacity. The ecoNova Scotia fund for Clean Air and Climate Change, which currently supports innovative projects that reduce emissions, is in place only until March 2011.	No date	On track/ ongoing	Not assessed



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 50: Participate in national and international discussions on climate change and clean air, including those taking a North American approach. This will continue to include participation in the Canadian Council of Ministers of the Environment, the Council of Atlantic Environment Ministers, and the Conference of New England Governors and Eastern Canadian Premiers. Nova Scotia will seek observer status at discussions of the Western Climate Initiative.	No date	On track/ ongoing	Agree – ongoing
Action 51: Embark on a public awareness and education program, led by Nova Scotia Environment, to give citizens the knowledge and insight to lead more sustainable lifestyles.	No date	On track/ ongoing	Not assessed
Action 52: Incorporate climate change, sustainability, and complex decision making into the school curriculum. This builds on learning and teaching of these concepts that is already integrated into the curriculum.	No date	On track/ ongoing	Not assessed
Action 53: Create an Adaptation Fund within Nova Scotia Environment to encourage adaptation research and development starting in 2009.	2009	Complete	Agree – complete
Action 54: Develop statements of provincial interest on adaptation by 2010 to provide guidance on land-use planning. This is a formal tool, established under the Municipal Government Act, to protect the province's interest in such areas as land use, water resources, and community planning.	2010	Behind schedule	Not assessed
Action 55: Incorporate climate change impacts and adaptation response plans into the strategies and initiatives of all provincial departments by 2012.	2012	On track/ ongoing	Agree – ongoing
Action 56: Establish criteria in 2009 for the consideration of climate change during Nova Scotia Environment's environmental assessment process and develop a guide to climate change for project proponents.	2009	Complete	Not assessed
Action 57: Launch a web-based clearinghouse of information and tools to support adaptation to climate change in Nova Scotia in 2009.	2009	Complete	Agree – complete
Action 58: Begin work on a provincial vulnerability assessment and progress report on adaptation to climate change in Nova Scotia. This report, which will be updated biannually, will provide updates on the latest climate research, review critical information gaps, and provide policy direction for the province.	No date	On track/ ongoing	Agree – ongoing
Action 59: Continue to work with the other Atlantic provinces on common adaptation goals.	No date	On track/ ongoing	Not assessed
Action 60: Create an interdepartmental steering committee and external advisory committee responsible for coordinating adaptation efforts and providing adaptation policy advice, in 2009.	2009	Complete	Agree – complete



Status of Actions			
Action	Target Date	Status	OAG Comment
Action 61: Ensure that design standards and plans for new provincial construction, and for the renewal of existing provincial infrastructure, reflect projected climate trends, not historical records, by 2010.	2010	On track/ ongoing	Not assessed
Action 62: Release a Sustainable Coastal Development Strategy by 2010. A major part of the strategy will focus on strengthening our resiliency to climate change impacts along our coast.	2010	No progress	Not assessed
Action 63: Take sea-level rise into consideration and place priority on conserving coastal wetlands in preparing a policy to prevent net loss of wetlands. The Environmental Goals and Sustainable Prosperity Act requires that this policy be developed by 2009.	2009	Complete	Agree – complete
Action 64: Develop a strategy to ensure the sustainability of the province's natural capital in forests (forestry), minerals (mining), parks, and biodiversity by 2010. This strategy will be led by the Department of Natural Resources.	2010	Complete	Agree – complete
Action 65: Develop a comprehensive water resource management strategy by 2010. As a key priority, the strategy will consider climate change impacts on water quality and quantity.	2010	Complete	Agree – complete
Action 66: Lead, through the Department of Natural Resources, an interdepartmental and forest industry working group on forest carbon management and forest adaptation to climate change.	No date	No progress	Not assessed
Action 67: With advice from the Nova Scotia Round Table on Environment and Sustainable Prosperity, assess progress toward meeting our GHG reduction target as part of the Environmental Goals and Sustainable Prosperity Act annual progress report. The effectiveness of the target will be assessed every five years through a public review by the Round Table.	No date	On track/ ongoing	Agree – ongoing
Action 68: Establish a Climate Change Directorate within Nova Scotia Environment. This office will work with provincial departments and municipalities, agencies, schools, and hospitals to reduce GHG emissions and ensure that effective adaptation measures are being implemented.	No date	Complete	Agree – complete

Mitigation Action* – intervention to reduce the sources or enhance the storage of greenhouse gases

Adaptation Action* – activity that reduces the negative impacts, or takes advantage of beneficial impacts, of climate change

* Classification determined by OAG Nova Scotia



Appendix III

Audit Objectives and Scope

In winter 2017, we completed a performance audit at Nova Scotia Environment on the Province's plans for addressing climate change. The audit was conducted in accordance with sections 18 and 21 of the Auditor General Act, and auditing standards of the Chartered Professional Accountants of Canada.

The purpose of the audit was to determine whether the Province is meeting its commitments to reduce greenhouse gas emissions and preparing for climate change.

The objectives of the audit were to determine whether the Province:

- has developed and implemented strategies to address climate change;
- is making progress in meeting its commitments to reduce greenhouse gas emissions; and
- effectively coordinates efforts to achieve emissions reduction targets and implement its strategies.

This audit is part of a collaborative project undertaken with federal, provincial, and territorial legislative auditors across Canada. Each participating office agreed to examine mitigation and adaptation initiatives, to provide a look at how effectively Canada is meeting commitments to reduce greenhouse gas emissions and adapting to climate change. Each participating office determined their own audit objectives and date for reporting their results. A summary report on all the audits is scheduled for release in early 2018.

Generally accepted criteria consistent with the objectives of the audit did not exist. Audit criteria were developed specifically for this engagement. Criteria were accepted as appropriate by senior management of Nova Scotia Environment.

Our audit approach included an examination of relevant legislation, regulations, guidelines, and processes. We interviewed management and staff at Nova Scotia Environment, as well as other departments as required. We reviewed action plans; examined agreements, strategies, meeting minutes, and other documentation as necessary; and tested compliance with legislation, strategies, policies, and other related processes. Our audit period included provincial action on climate change between January 2009 to June 2016.

Our audit did not include organizations outside of government who may be responding to climate change, such as Nova Scotia Power Incorporated.

Chapter 4: Environment – Environmental Assessments



Overall Conclusion:

- Poor monitoring of projects increases risks to the environment
- Monitoring of terms and conditions of project approvals is weak
- Department not evaluating whether terms and conditions are working
- Department meeting legislative requirements for issuing approvals

Why we did this audit:

- Protecting the environment is important to Nova Scotians
- Environmental impacts should be known before a project begins
- Steps should be taken to limit environmental impacts of projects
- Projects should be monitored to ensure the environment is protected

What we found in our audit:

Monitoring of approved projects

- Monitoring not done for almost half the project terms and conditions we tested
- Department not appropriately recording all approved projects in tracking system
- Department hasn't assessed if terms and conditions have decreased environmental risks
- Department taking steps to improve monitoring

Setting terms and conditions for project approval

- Some terms and conditions lack details such as deadlines and reporting requirements
- Approvals issued without consulting inspectors who know risks

- Lack of discussion with project owners on understanding terms and conditions
- Department doesn't follow up with project reviewers to ensure responses provided

Approving project applications

- Applications for approvals contained information required by legislation
- Minister given all required information to make project approval decision
- Terms and conditions of approvals can reduce risks, but are less useful because of poor monitoring



Recommendations at a Glance

Recommendation 4.1

Environment should develop and implement a process for entering approved projects and the associated terms and conditions into the Department's tracking system to help ensure regular monitoring is completed.

Recommendation 4.2

Environment should regularly review whether standard terms and conditions of approved projects are effective at addressing identified risks.

Recommendation 4.3

Environment should develop terms and conditions for approved projects in consultation with the inspectors responsible for ensuring they are met. Terms and conditions should include clear timeframes for completion and requirements to provide documentation to confirm terms and conditions have been satisfied.

Recommendation 4.4

Environment should provide relevant draft terms and conditions of approved projects that involve other departments to the respective departments for review and confirmation of their responsibility under the terms and conditions.

Recommendation 4.5

Environment should meet with project owners to discuss the terms and conditions once projects are approved. There should also be regular meetings between Nova Scotia Environment and project owners to discuss the status of terms and conditions of approved projects.

Recommendation 4.6

Environment should document and implement a process for using government reviewers on environmental assessment applications. The process should include how reviewers are selected, the Department's expectations of reviewers and a follow-up process if responses are not provided by the deadline.

Recommendation 4.7

Environment should complete and document a review of information sent to the Minister of Environment for deciding on whether to approve or reject a project.



4 Environment: Environmental Assessments

Background

- 4.1 Nova Scotia Environment uses environmental assessments to identify potential negative environmental impacts of proposed projects before they begin. The goal is to approve sustainable projects while also promoting the protection and appropriate use of the environment. The Minister of Environment decides whether a project can proceed if the results of the assessment determine the potential impacts can be properly managed.
- 4.2 An environmental assessment is not required for every proposed project. In Nova Scotia, the Environmental Assessment Regulations list the types of projects that require an environmental assessment. Projects requiring an environmental assessment can include wind farms, quarries, pipelines and energy facilities. From 2013 to 2016, 53 of 54 environmental assessments conducted were approved.
- 4.3 Terms and conditions that project owners must meet are attached to project approvals. The purpose of these is to address environmental risks identified through the assessment process and ensure steps are taken to reduce the impact of the project on the environment. A typical approval includes approximately 30 terms and conditions such as monitoring programs for wildlife, habitat and groundwater well surveys. Nova Scotia Environment is responsible for ensuring project owners are complying with the terms and conditions of the approval and determining whether risks to the environment are being reduced.
- 4.4 An environmental assessment approval allows a project owner to proceed with the proposed project. However, projects may not immediately start when the approval is received and for some types of projects, additional approvals, such as industrial approval or wetland approval issued by Nova Scotia Environment, are needed before the project can begin.

Significant Audit Observations

Monitoring of Environmental Assessment Approvals

➡ Terms and conditions are not monitored

- 4.5 Nova Scotia Environment is not monitoring terms and conditions attached to approved projects. Terms and conditions are future actions added to



approved projects to address risks projects pose to the environment. These can include various wildlife and habit monitoring programs, or restricting construction during animal breeding seasons. Failure to properly monitor compliance with these requirements increases the risk that project owners are not protecting the environment. Without monitoring, Nova Scotia Environment does not know if the terms and conditions of approved projects are effective in reducing impacts on the environment.

- 4.6 We reviewed a sample of 22 approved projects which contained 672 terms and conditions. We then selected two to three terms and conditions from each approved project to determine if Nova Scotia Environment had evidence to confirm the term and condition had been satisfied. In total, we examined 53 of the 672 terms and conditions identified. For 23, the Department did not confirm the term and condition had been satisfied. For example, Nova Scotia Environment did not have evidence to confirm requirements such as groundwater well and wildlife surveys were completed by the project owner or work was completed outside of animal breeding seasons.

► **List of approved projects and terms and conditions not complete**

- 4.7 Nova Scotia Environment did not record approved projects and their associated terms and conditions in its electronic tracking system. This meant inspectors were not assigned responsibility for monitoring terms and conditions of approved projects and were unable to take advantage of system features that help in monitoring. Features include reminders of when inspections and audits are due, and allows managers to monitor the work of inspectors.
- 4.8 Management uses the information included in the tracking system to ensure the required monitoring is completed. If approved projects are not in the tracking system, managers do not have access to complete information and may not know if terms and conditions are properly monitored.
- 4.9 Other approvals, such as industrial and wetland approvals issued by the Department, are automatically loaded into the Department's tracking system and assigned to an inspector. One division within Nova Scotia Environment is responsible for approving projects while another division oversees whether project owners are satisfying the terms and conditions of approved projects. Once the approval is issued, it must be manually entered by the division responsible for monitoring project owners for compliance with the terms and conditions. However, this did not happen.
- 4.10 Nova Scotia Environment conducted an internal review in 2015, finding that only 75 of the 276 environmental assessment approvals issued between 1989 and 2015 had been recorded in the tracking system. They also concluded for almost all the approved projects entered in the tracking system, the terms and conditions of the approval were not included. Until the Department identified



this issue there was nearly no monitoring of the terms and conditions attached to approved projects.

- 4.11 Nova Scotia Environment has worked to address these issues, but our work found that there are still problems. Four of the 22 approved projects we examined were not recorded in the tracking system. For 15 of the remaining 18 approvals, the terms and conditions were not added to the tracking system in a way which allowed the inspectors to use the system features for monitoring.
- 4.12 Information on terms and conditions was not stored in a single file for each approved project, making it difficult to confirm if terms and conditions had been met. When completing our work, we often had to look in several different locations to determine if terms and conditions had been satisfied.
- 4.13 For example, we identified several cases in which the project owner provided requirements such as wildlife surveys and confirmation of site restoration insurance to staff at Nova Scotia Environment or other government departments, but it was not passed on to the inspectors responsible for monitoring the approval. Inspectors did not know the information was provided nor did they follow up with the project owners to request the information.
- 4.14 All information related to the terms and conditions of approved projects should be kept in a central location so it can be quickly determined which ones have been satisfied and those that still require monitoring.

Recommendation 4.1

Environment should develop and implement a process for entering approved projects and the associated terms and conditions into the Department’s tracking system to help ensure regular monitoring is completed.

Environment Response: *Agree. In February 2017, NSE implemented a System of Notification and Approval Processing (SNAP). Going forward, approvals will be captured in the system to enable terms and conditions to be tracked. Timing: Currently underway*



Regular assessments of terms and conditions not completed

- 4.15 Neither the Department nor project owners completed the required assessments for any of the projects we examined. Without this reporting, Nova Scotia Environment does not have the necessary information to ensure terms and conditions of approved projects were satisfied and environmental risks were properly managed.



- 4.16 Nova Scotia Environment’s documented process for monitoring the terms and conditions of approved projects includes:
- a Department assessment of whether terms and conditions are met and effective at reducing risk; and
 - a review of the project owner’s assessment of whether terms and conditions are met along with comments or suggestions for future environmental assessments.
- 4.17 Nova Scotia Environment’s evaluation of the effectiveness of the terms and conditions of approved projects for reducing risks to the environment is especially important. This evaluation considers things such as the results of water or wildlife monitoring completed by the project owner, results of Departmental inspections, and complaints received against the project. Without this information, the Department may not be aware of the need for additional monitoring or changes to the terms and conditions. This process also provides information that can be used by the Department when approving future projects.
- 4.18 Nova Scotia Environment staff acknowledged this process is not followed and noted it needs to be updated since it was developed and implemented in 2002. While we recognize the process is old and there have been changes within the Department since 2002, regularly assessing the status and effectiveness of the terms and conditions of approved projects is an important practice that should be completed.

Recommendation 4.2

Environment should regularly review whether standard terms and conditions of approved projects are effective at addressing identified risks.

Environment Response: *Agree. We have committed to reviewing and updating the Internal Guide to EA Follow-up Procedures. This guide will establish procedures for reviewing Environmental Assessment terms and conditions to ensure enforceability leading to better compliance. Timing: 2017-18*

Approval of Projects



Wording of terms and conditions attached to approvals not clear

- 4.19 Applications are reviewed by Nova Scotia Environment to identify risks to the environment posed by the project. Approvals are subject to owners satisfying the terms and conditions included with it. If terms and conditions are not properly developed it is possible risks to the environment may go unaddressed.



- 4.20 The terms and conditions attached to approved projects were not always clear and well defined. We found problems with 11 of the 53 terms and conditions we examined. Specific issues included no established timelines for when the project owner must comply, no requirement to submit documentation to confirm a term and condition has been satisfied, and no indication of who the supporting documentation must be submitted to.
- 4.21 For example, one term and condition stated “*The Approval Holder must develop a turbine lighting plan in consultation with CWS [Canadian Wildlife Services] and Transport Canada*”. There was no deadline for the development of the plan and no requirement for the plan to be submitted to Nova Scotia Environment. The Department did not know this was completed until we asked about it as part of the audit.
- 4.22 Nova Scotia Environment’s ability to hold project owners accountable is limited when terms and conditions of approved projects are not clear. This increases risk to the environment. For example, if a project owner is not required to provide documentation to confirm a term and condition has been satisfied, it is difficult for the Department to act against the project owner if nothing is submitted. Inspectors told us they had concerns related to the enforceability of some terms and conditions. Inspectors believed their lack of involvement in the development of the terms and conditions contributed to this issue.
- 4.23 The Department’s process states draft terms and conditions are to be given to inspectors for review and feedback before final approval. However, based on our work, this did not always happen. For 11 of the 22 approved projects we examined, the terms and conditions were not given to inspectors for review before the approval was issued. Inspector input on terms and conditions is an important step in setting clear and enforceable expectations for project owners and limiting impacts on the environment.

Recommendation 4.3

Environment should develop terms and conditions for approved projects in consultation with the inspectors responsible for ensuring they are met. Terms and conditions should include clear timeframes for completion and requirements to provide documentation to confirm terms and conditions have been satisfied.

Environment Response: *Agree. NSE is undertaking a larger project to review terms and conditions of its approvals including EA authorizations. The project is intended to update/review existing terms and conditions to ensure requirements are relevant, clear, consistent and enforceable. Timing: 2018-19*



Responsibility for some terms and conditions not established

4.24 Nova Scotia Environment did not review terms and conditions of approved projects with other departments before approval. Departments other than Nova Scotia Environment are often responsible for receiving information from project owners and confirming if terms and conditions have been satisfied. However, Nova Scotia Environment did not consult with other departments on the terms and conditions before issuing the approval. For example, the project owner might have to develop a moose monitoring program that is to the satisfaction of the Department of Natural Resources. If Nova Scotia Environment does not discuss terms and conditions assigned to other departments with those departments, those other departments may not be aware of their responsibility or understand of what is expected of them. This could result in terms and conditions not being properly monitored or information not passed on to Nova Scotia Environment.

Recommendation 4.4

Environment should provide relevant draft terms and conditions of approved projects that involve other departments to the respective departments for review and confirmation of their responsibility under the terms and conditions.

Environment Response: *Agree. The review and update of the EA Checklists will ensure a record of communication with other departments is clear and a record is maintained. Timing: June 2017*

Review of terms and conditions with project owners not done

4.25 The Department did not review terms and conditions of approved projects with the project owners as required. These meetings help ensure project owners fully understand what is required of them and the expectations of Nova Scotia Environment. For example, meetings can provide an opportunity to discuss periods during the year when project owners are not allowed to clear land or steps that must be taken to monitor wildlife within the project area.

4.26 The Department's process is to meet with the project owner within four weeks of the project being approved to review the terms and conditions. This meeting did not occur for three of the 22 approved projects we examined. For another seven projects, the meeting was not held within four weeks of the approval being granted. In two of these, approximately a year had passed before Nova Scotia Environment met with the project owner.

Recommendation 4.5

Environment should meet with project owners to discuss the terms and conditions once projects are approved. There should also be regular meetings between Nova Scotia Environment and project owners to discuss the status of terms and conditions of approved projects.



Environment Response: *Agree. The Internal Guide to EA Follow-up Procedures will be updated to ensure the initial meeting with the approval holder is completed. Subsequent meetings with the approval holder to review terms and conditions will be captured during an audit or inspection process. Timing: 2017-18*

➡ **Better processes needed for reviewers of environmental assessment applications**

- 4.27 Government reviewers were used to assess each of the 22 approved projects we examined. As an example, applications were sent to divisions within Nova Scotia Environment to assess a proposed project’s impact on groundwater, while the Department of Natural Resources was used to identify risks to wildlife. Comments from reviewers were considered in developing terms and conditions for approved projects.
- 4.28 While the use of reviewers provides valuable feedback on proposed projects, improvements are needed. Currently, applications are sent to a broad list of reviewers. For some of the environmental assessment applications we examined, the documentation was provided to over 40 individuals. The Department does not have a process to identify the specific reviewers that should be used. Furthermore, no guidance is provided to reviewers on what Nova Scotia Environment’s expectations are for the review. For example, it isn’t clear whether the individuals are to review the entire application or just sections.
- 4.29 Also, Nova Scotia Environment does not have a process to follow up with reviewers if a response is not received. While comments from some reviewers were provided for each of the applications we examined, not all reviewers responded. The Department did not know if a reviewer did not respond because the request was not received, not enough time was given to review the application, or if the reviewer had no comments to provide.

Recommendation 4.6

Environment should document and implement a process for using government reviewers on environmental assessment applications. The process should include how reviewers are selected, the Department’s expectations of reviewers and a follow-up process if responses are not provided by the deadline.

Environment Response: *Agree. The review and update of the EA Checklists will ensure interactions with reviewers are identified, carried out and documented. Timing: June 2017*

➡ **Project owners are submitting required information**

- 4.30 The Environmental Assessment Regulations outline the minimum information project owners are to include with their application for an approval and what



the Minister of Environment must consider in making the decision to approve or reject the project. For example, project owners are to provide information on the purpose and need for the project, along with details on the potential effects on groundwater, vegetation, and wildlife in the area. Factors the Minister is to consider in making a decision include the nature and sensitivity of the project area, along with any potential or known environmental impacts on species at risk and their habitats.

- 4.31 For each of the 22 approved projects selected we examined whether project owners provided the required information and whether the summary of the project included all factors to be considered by the Minister in making a decision. We did not find any significant instances in which the legislative requirements were not met for the applications we examined. In all cases, the information provided by the project owners met the legislative requirements and the Minister was provided with all required information to be used in deciding to approve the project.
- 4.32 Terms and conditions to manage the risks of the project identified during the application process were attached to each of the approved projects we examined. However, the lack of monitoring of the terms and conditions of approved projects previously discussed weakens the work done by Nova Scotia Environment in deciding to approve a project. The value of the terms and conditions can only be achieved if there is regular monitoring to ensure project owners comply.
- 4.33 One area in which Nova Scotia Environment can improve its process is the review of an application before it goes to the Minister for a decision. When staff within the Department complete their review, a summary of the project and associated risks is compiled and forwarded to the Minister. However, there is no review of the summary to ensure the details and risks of the project are accurately and completely captured.

Recommendation 4.7

Environment should complete and document a review of information sent to the Minister of Environment for deciding on whether to approve or reject a project.

Environment Response: *Agree. A routing sheet will be instituted to ensure a review of information is in place before it is sent to the Minister. Timing: June 2017*



Appendix I

Audit Objectives and Scope

In winter 2017, we completed a performance audit at Nova Scotia Environment on the Environmental Assessment program. The audit was conducted in accordance with sections 18 and 21 of the Auditor General Act, and auditing standards of the Chartered Professional Accountants of Canada.

The purpose of the audit was to determine whether Nova Scotia Environment is appropriately reviewing environmental assessments to ensure potential impacts to the environment are avoided or reduced, monitoring the risks identified, and taking action when necessary.

The objectives of the audit were to determine whether Nova Scotia Environment:

- conducted environmental assessments that are consistent with relevant legislation, policies and procedures;
- has processes to monitor compliance with terms and conditions of environmental assessment approvals;
- has a process to evaluate the effectiveness of the environmental assessment program in reducing the impact of adverse effects or significant environmental effects.

Generally accepted criteria consistent with the objectives of the audit did not exist. Audit criteria were developed specifically for this engagement. Criteria were accepted as appropriate by senior management of Nova Scotia Environment.

Our audit approach included an examination of documentation of systems and processes; examination of legislation, policies, guidelines, standards, and other documentation; and testing compliance with legislation, policies, guidelines, and standards. We interviewed management and staff at Nova Scotia Environment. Our main audit period included activities between January 2013 to August 2016. However, we examined activities outside of this period when necessary.

We did not comment on the accuracy of the information provided by project owners included in environmental assessment applications, nor did we comment on the technical feedback provided on applications by government reviewers. Our work focused on whether the required steps were followed in issuing environmental assessment approvals and whether the Department ensured project owners met the terms and conditions of the approvals.


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