

Accountability Report

2016–2017

Department of Natural Resources
July 2017

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Accountability Statement

The Accountability Report of the Nova Scotia Department of Natural Resources for the year ended March 31, 2017 is prepared pursuant to the *Finance Act* and government policies and guidelines. These authorities require the reporting of outcomes against the Department of Natural Resources Business Plan for the fiscal year just ended. The reporting of the Department of Natural Resources outcomes necessarily includes estimates, judgments and opinions by Department of Natural Resources management.

We acknowledge that this Accountability Report is the responsibility of Nova Scotia Department of Natural Resources management. The report is, to the extent possible, a complete and accurate representation of outcomes relative to the goals and priorities set out in the Department of Natural Resources 2016-17 Business Plan.

Original signed by

Honourable Margaret Miller
Minister of Natural Resources

Original signed by

Julie Towers
Deputy Minister of Natural Resources

Message from the Minister and Deputy Minister

We are pleased to provide an overview of the work and accomplishments of the Department of Natural Resources for 2016-2017.

Our department's mandate is broad and diverse; charged with managing, developing, conserving, and protecting the province's biodiversity, forests, minerals, Crown lands, and provincial parks. The department and its employees are dedicated to balancing the economic, environmental and social values of our natural resources.

Over the past year, we celebrated many accomplishments that contributed to reaching that balance and to meeting our important mandate.

- We reported on five years of progress on the Path We Share – Nova Scotia's Natural Resources Strategy. Progress has been made and the province has benefited from our accomplishments including: Atlantic Canada's first community forest, a new Mineral Resources Act, implementing a guiding Code of Forest Practice on all Crown land, building stronger partnerships with the Mi'kmaq, and the continued implementation of Our Parks and Protected Areas Plan.
- Working with Nova Scotia Environment, the province has 15 new protected areas. 7,000 hectares designated in nine counties, bringing Nova Scotia to 12.39% of its land protection goal.
- In May 2016, the Legislature passed the province's new Mineral Resources Act. We anticipate regulations, and the modified internet-based mineral rights registry application, will be completed in the fall of 2017.
- DNR was successful in completing and coordinating final regulatory approvals of the Atlantic Gold/Moose River and Dufferin gold mines. Gold production from both mines is anticipated to occur in the fall of 2017.
- DNR continues to address mineral management recommendations from the May 2014 Auditor General report. Process improvements include: reviewing, tracking and reporting mine reclamation securities, addressing outstanding mineral lease issues, and updating mine-site visits.
- Efforts continue to identify alternative uses for Crown Lands, including working with industries involved with wild blueberries, maple syrup, Haskap berries, and grapes, among others.
- Through the use of process improvement in our Land Services branch, an online application and renewal process is providing simpler, more consistent processes, faster turnaround and greater client satisfaction.
- Our Provincial Parks introduced new camping incentives including Grade 4s Outdoors, a new website and enhanced reservation system. Capital funding of \$1 million was announced to improve parks and in response to increased demand extended the season for three camping parks.

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- With our partners, Emera and the Government of Canada, the Innovation Hub was launched. The I-Hub is an incubator that is working to make our forest sector a stronger competitor and attract investors, identify markets, and help government develop supportive regulation. The I-Hub made great progress in its first year, including a study showing Nova Scotia has strong potential to develop an innovative biorefinery that produces an alternative fuel from renewable sources of fibre.
- The Harvest Plan Map Viewer was launched to provide better access for Nova Scotians to view and comment on harvest plans for Crown lands. The viewer is part of our commitment to enhanced public consultation.
- DNR increased fines for illegally cutting timber on forested lands administered by the Crown and provincial parks to prevent illegal cutting.

We encourage you to read details on these successes and other DNR initiatives outlined in this report.

For further details on the Department of Natural Resource's many programs and services, please visit our website often at www.novascotia.ca/natr.

Original signed by

Honourable Margaret Miller
Minister of Natural Resources

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Julie Towers
Deputy Minister of Natural Resources

Financial Results

	2016-2017 Estimate	2016-2017 Actual Expense	2016-2017 Variance
Program & Service Area	(\$ thousands)	(\$ thousands)	(\$ thousands)
Gross Departmental Expenses:			
Senior Management	1,076	1,044	(32)
Renewable Resources	24,687	24,848	161
Geoscience and Mines	4,394	4,315	(79)
Regional Services	37,006	39,916	2,910
Policy, Planning and Support Services	4,980	5,253	273
Land Services	4,344	4,102	(242)
Total: Gross Departmental Expenses	76,487	79,478	2,991
Additional Information:			
Ordinary Revenue	13,469	14,054	585
Fees and Other Charges	1,964	2,097	133
Ordinary Recoveries	630	1,071	441
Total: Revenue, Fees & Recoveries	16,063	17,222	1,159
TCA Purchase Requirements	8,300	11,956	3,656
Provincial Funded Staff (FTEs)	631.0	605.1	(25.9)

Variance Explanation:

1. Gross Departmental Expenses were \$3 million above estimate due to \$3.5 million additional costs to fight the August 2016 wildfires, offset by \$500 thousand in net operational savings.
2. Ordinary Revenue was \$585 thousand above estimate, primarily from higher lease revenue.
3. Fees and Other Charges was \$133 thousand above estimate, mostly from increased camping parks utilization.
4. Ordinary Recoveries were \$441 thousand above estimate, mostly due to \$217 thousand of increased firewood and ice sales, and online reservations at camping parks, and \$118 thousand recovered by Geoscience and Mines from an external organization.
5. TCA Purchase Requirements were \$3.7 million higher than estimated, primarily due to increased costs relating to the helicopter fleet renewal project.
6. Provincial Funded Staff was 25.9 FTE below estimate, mostly from temporarily vacant positions.

Measuring Our Performance

The Department of Natural Resources (DNR) has broad responsibilities relative to the development, management, conservation and protection of forest, mineral, parks and wildlife resources and the administration of the province's Crown lands.

Building in the identified government priorities of people, innovation, and education highlighted in the Department of Natural Resources 2016-17 business plan; work in 2016-17 focused on four key areas:

- A long-term plan to sustainably transform Nova Scotia's forestry industry and maximize the use of high-value resources,
- An enhanced regulatory framework for mineral exploration in the province,
- Comprehensive Crown land-use planning informed by public and First nation's consultation, and
- Working with Department of Environment to achieve 13 per cent protected land across the province, provided there are not negative recreational or economic effects.

In 2016-17 DNR also reached the five-year mark in the implementation of *The Path We Share: A Natural Resources Strategy for Nova Scotia 2011-2020*. In August 2016, DNR released its five-year report on the achievements reached to date was released. Outlining the progress of work completed and ongoing for each of the 23 goals in the strategy, the five-year report provided Nova Scotians with a comprehensive look at what the province has been doing to ensure the environmental, economic and social sustainability of our natural resources.

The province, in collaboration with industry stakeholders and other environmental non-governmental organizations, continues to work towards completion of the Natural Resources Strategy goals including the overarching goals of: collaborative leadership, research and knowledge sharing, sustainable resource development, and good governance.

Government Priorities

In 2016-17 government identified three priority areas: people, innovation and education. These priority areas were to be the focus for all government activities within the context of fiscal sustainability and effective and efficient delivery of core services.

Within DNR the results of actions undertaken within each of these priority areas to support government's work are outlined below.

1. People

Government's priority was to provide an environment where Nova Scotia's population is growing, productive and thriving.

Indicator	Measure
Public awareness of geological health and safety risks	Increased number of unique webpage views of selected risk assessment maps produced by DNR
Efficient land services	Percentage increase in number of properties in East Preston, North Preston and Cherry Brook for which the land title has been clarified.

DNR Priorities and our Results:

In the 2016-17 business plan DNR committed to enhancing the health and well-being of Nova Scotians and their communities.

2016-17 Priorities:

- Creating and sharing maps that help Nova Scotians to understand the public health and safety risks of sinkholes, landslides, radon, arsenic/uranium in drinking water, coastal flooding and erosion.
- Renewing the outreach and engagement programs at the Shubenacadie Wildlife Park and Greenwing Legacy Interpretive Centre to encourage healthy outdoor lifestyles that contribute to skills building and the overall well-being of Nova Scotians.
- Assisting residents of East Preston, North Preston and Cherry Brook through the land titles clarification process, in collaboration with African Nova Scotian Affairs, the Nova Scotia Barristers' Society and Nova Scotia Legal Aid.

Results:

- In May 2016, DNR, in partnership with federal and provincial health departments and other national associations and organizations, presented a workshop on radon exposures in Nova Scotia and what was being done to reduce them. A public outreach event was held in November 2016, as part of Radon Action Month. DNR continues to work on an interactive map to allow tracking of individual views, to date there is no information from 2016-17.
- Working in partnership with Ducks Unlimited, DNR built upon planning completed in 2015-16 and began identified infrastructure improvements to the Greenwing Legacy Centre and parts of the Shubenacadie Wildlife Park. Work will continue on these improvements during the 2017 summer season. DNR and Ducks Unlimited staff also formed a joint Education Committee to continue developing new education and outreach activities at the park.
- DNR's Land Services Branch helped to form an internal government working group tasked with researching opportunities for legislative and process changes to deal with land titles clarification issues.
- During the 2016-17 year DNR continued to work with affected land owners and were able to close two files in 2016, they continue to work on a third, expected completion in summer 2017. Another file was closed as a result of the application being withdrawn. A total of 17 new land title clarification applications were received during this period.

II. Innovation

Government priority was to have a strong and globally competitive economy and a sustainable and modern government in Nova Scotia.

Indicator	Measure
Sustainable wood supply	Percentage increase in the number and diversity of indicators used to calculate Crown land wood supply
Compliance with Silviculture Standard	Increased alignment between post-treatment silviculture inspections conducted by Crown land licensees and Crown technicians/foresters
Effective mining rules and practices	Industry response (via qualitative interviews) to new streamlined rules and processes for mining companies
Leveraged innovation in natural resources sectors	Ratio of total partner investment to departmental investment in projects that increase productivity, innovation and global competitiveness of natural resources sectors

DNR's Priorities and Our Results:

In 2016-17 DNR committed to facilitating the development and expansion of the natural resources sectors, through collaborative, partner-oriented public and private stakeholder long-term planning.

Forests:

2016-17 Priorities:

- Complete projects to assess the current state of Provincial fibre supply/cost and identify/qualify target markets for biorefinery products, in collaboration with provincial, federal and private sector partners.
- In collaboration with other government departments and agencies, engage with targeted companies to attract biorefinery investment to Nova Scotia.
- Implement a forest resource management policy for Crown lands using an ecosystem-based approach to landscape scale planning that will better link silviculture investment to provincial timber objectives. Implement a standardized approach for the monitoring of Crown land silviculture to ensure compliance with departmental standards.

Results:

- In September 2016, DNR implemented a standard program for monitoring forest operations on Crown land. During the remainder of the fiscal year DNR Crown technicians and foresters completed 391 post-treatment silviculture inspections and audits.
- DNR released a harvest plan map viewer on its website in April 2016. The map allows all Nova Scotians to see where harvesting on Crown lands is planned. Throughout the year staff monitored the website and determined that the map received an average of 1,100-1,200 visits per month. Changes are planned for 2017 based on user feedback.
- Completed strategic forest analysis work and drafted the analysis report. Work is ongoing to develop next steps to develop indicators for calculating wood supply.
- In partnership with Innovacorp, DNR continued to assist with infrastructure development and enhancement within the Port Mersey Commercial Park. The park has a demonstration facility focused on improving long-term forest product sector performance.
- DNR completed feedstock assessments (fibre supply) and development of a provincial portrait of the province's biomass availability. Work also continued with the province's business development agencies to attract and grow companies in the Bio refinery sector in Nova Scotia.

- DNR completed internal and external consultation for the development of an ecosystem based forest resource management policy for Crown lands. Work on the policy is ongoing.
- DNR contributed \$900,000 to continue ongoing research projects with FPInnovations to maximize both productivity/competitiveness and help to diversify markets. Work this past year concentrated on assisting in assessing forest biomass/fibre supplies and identifying potential locations for biofuel production facilities.
- DNR worked with an independent consulting group to identify potential options for the underutilized Strathlorne Nursery. Results of their report will be released in 2017 and work will begin on developing an implementation plan for recommendations.

Minerals:

2016-17 Priorities:

- Engage with industry to identify and promote new and under-utilized exploration models in emerging mineral commodities, recognizing new technologies and changes in global commodity prices and demand.
- Develop and begin implementing a new Minerals Promotion Strategy to proactively support and promote Nova Scotia's mining industry.
- Renew the *Mineral Resources Act* and regulations to demonstrate a more client-centric focus that enables sector growth, cuts red tape and streamlines processes.

Results:

- In May 2016, a new Mineral Resources Act was passed and work began on the development of required regulations. Work is ongoing on the regulations with necessary work to update DNR's on-line mineral registry system, NovaROC. Changes to the mineral registry processes are required to allow for a seamless transition from the old legislative regime to the new in the fall of 2017. Industry has been supportive of the changes in the Act and proposed changes to regulations.
- Department geologists continued research into underappreciated gold exploration models and opportunities in the Cumberland highlands building towards the completion of a data library in 2017. The data library will be open for inspection by industry in the final quarter of 2017-18
- Work has been completed and a database constructed for the Annapolis Valley Stone Project. The project identifies and evaluates the aggregate, stone and clay resources of Hants, Kings, Annapolis, Digby and Yarmouth counties.
- DNR completed an inventory of geoheritage sites across the province. With the information collected an open file map and an interactive story map have been developed and will be launched in 2017.

- Information that supplies the Nova Scotia groundwater Atlas was enhanced in 2016-17 through the improvement of government data collection and storage processes and regular updating of the databases.
- DNR, in collaboration with Nova Scotia Business Inc (NSBI), promotes the exploration, infrastructure and mineral investment advantages of Nova Scotia at major, annual conferences including the Prospectors and Developers Association of Canada (PDAC) conference (Toronto) and the Mineral Exploration RoundUp (Vancouver).
- DNR and NSBI staff also participated in Canada's mission to China in September to promote the province as a place for mineral exploration at the Canada- Beijing Minerals Forum and the China Mining conference.

Crown Lands:

2016-17 Priorities:

- Strengthen land-use planning through sharing and linking of datasets that are made readily available for decision-making by communities, developers, industries and others.
- Support innovative governance structures to manage and operate Crown lands that more effectively contribute to rural economic development, such as the Mi'kmaw Forestry Initiative, Medway Community Forest Co-Op, and WestFor Consortium.

Results:

- DNR provided information to the province's Open Data Portal to allow increased accessibility to maps and information on Nova Scotia's natural resources.
- The Provincial Landscape Viewer was launched providing public access to data on land resource management (e.g. forest inventory and ecological landscape classifications). During the year, on-going enhancements were made to the viewer based on user feedback received.
- Negotiations continued on agreements with the Mi'kmaw Forestry Initiative pilot.
- The province extended their licence agreement with WestFor Consortium for 2016-17.
- Development of a management plan for the Medway Community Forest Co-Op is ongoing. Work began on development of an evaluation for work completed in the initial three-year agreement.

Parks:

2016-17 Priority:

- Streamline provincial camping parks operations so they respond to user preferences and align with other jurisdictions.

Result:

- Nova Scotia’s provincial parks initiated self-service camping at twenty of its provincial campgrounds. Self-service parks saw an estimated increase of 14% in number of camping nights¹. Feedback received on the initiative was positive overall, the program is scheduled to continue for the 2017 park season.

III. Education

Government’s priority was for Nova Scotia to have a skilled workforce that would drive a knowledgeable and innovative economy.

Indicator	Measure
Students well prepared for employment in natural resources sectors	High satisfaction scores from students involved in co-op/internship placement/employment placements for natural resource sectors

DNR’s Priorities and Our Results:

2016-17 Priority:

Expand skills development and networking opportunities for post-secondary students through co-op, summer employment and internship placements that foster future employment opportunities.

Results:

Students who worked at DNR during the spring/summer of 2016, a total of 47 students, were surveyed to gain a better understanding of their perspectives on working at DNR and how it may impact job prospects in the near term.

With an 81% response rate, the survey measured student satisfaction in areas such as skills development, networking opportunities, and the overall value of placements. It also asked students to identify opportunities for improvement to better prepare them to work in a public or private natural resources sector.

¹ Note: Overall Nova Scotia’s provincial camping parks experienced an estimated increase of 16% in camping nights in 2016 over the 2015 park season.

The results of the survey were reported to DNR hiring managers and senior leadership for consideration prior to hiring students for the spring/summer of 2017.

Core Services/Responsibilities

DNR has responsibility for creating conditions to enable natural resource businesses to grow sustainably so all Nova Scotians benefit from the province's natural resources. This results in DNR working on other initiatives and priorities beyond those which address the government's stated priorities.

Indicators	Measures
More effective programs and services	Increased number of staff trained and certified in yellow, green and black belt level Lean/Six Sigma
Effective public participation	Percentage increase in the number of public participation sessions that demonstrate high evaluation scores
Current and effect legislation	Percentage increase in the number of laws and regulations that have been reviewed and, where appropriate, repealed, revised, or updated.

DNR Priorities and Our Results:

Minerals:

2016-17 Priorities:

- Expand the Mineral Incentive Program to include funding for collaborative industry – university research on the Province's mineral deposits.

Results:

- The Mineral Incentive program was expanded to allow university-based researchers the opportunity to apply, no new funding was allocated to the program. A total of four university-based researchers received funding of \$49,700.
- In addition, 23 other projects (21 prospector and 2 advanced) were funded to a total of \$311,000.

Crown Land:

2016-17 Priorities:

- Unlock the maximum value of Crown lands by tendering available land for alternative uses such as maple syrup or wild blueberry cultivation.
- Work with Department of Environment to achieve 13 per cent protected land across the province, provided there are no negative recreational or economic effects.

Results:

- Building on the maple syrup initiative of 2015-16, parcels of land were identified and twice released to tender for blueberry cultivation. There were no successful applicants under the first release and no applications received for the second. This was the result of several factors including market conditions. Despite no resulting projects, industry was very supportive of DNR's work on this initiative.
- DNR collaborated with Nova Scotia Environment to designate an additional three wilderness areas and twelve nature reserves. This helped bring the total of protected land in Nova Scotia to 12.39 percent.

Forests:

2016-17 Priorities:

- Support the development of new innovative products and engineered wood products to diversify markets and increase competitiveness of Nova Scotia's forestry industry, while also providing fibre flow to a potential biorefinery industry.
- Work with industry and other government departments to improve performance of Nova Scotian forestry contractors through the Machine Operator Training program which will help prepare a new generation of operators for forestry industry and the emerging bio-economy.

Results:

- All tree harvesting on Crown land had a pre-treatment completed prior to work commencing. In total an estimated 5,000 assessment plots were completed.
- In partnership with the Mi'kmaq of Nova Scotia completed development of a recovery plan for Black Ash.
- Completed development of a Biodiversity Stewardship Guide for Forest Landowners, published in the spring 2017.
- In August 2016, a three phase Machine Operator Training education program aimed at preparing a new generation of forestry operators was launched. The program

incorporated in-class education and on-the-job training over a four-month period. A total of 10 people participated with 80% of participants successfully completing the program.

Parks:

Results:

- Parks Implemented a permit discount at provincial camping parks for veterans in 2016. Response was positive with 406 veterans requesting the discount.
- Initiated the Grade 4s Outdoors program to promote provincial camping parks to young families. A total of 8,500 park passports were distributed to grade fours across Nova Scotia, with 879 redeemed for 1,758 camping nights. An estimated 60% of those who redeemed the park passports were first time campers.
- In partnership with Scouts Canada, DNR reintroduced the Learn2Camp program. The program helps new campers learn to set up a campsite and cook a meal outdoors. A total of 25 people from 7 families participated. The program is being offered again in 2017.

Forest Health:

2016-17 Priority:

- Monitor spruce budworm levels in Nova Scotia and proactively review management options for the province.

Result:

- Formed a collaborative team to monitor and plan for potential Spruce Budworm outbreak.

Wildlife:

2016-17 Priority:

- Respond to threats from invasive species and support biodiversity in collaboration with other departments.

Results:

- Completed a multi-year work plan to enhance department's approach to species at risk. Work has begun on prioritizing activities of the risk-based management approach.

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- Work is ongoing on the report of surveys completed on the beach and dune ecosystems of Nova Scotia. A final report is expected in 2017.
- Modules 1-3 of the State of Biodiversity Report are complete and were released in early 2017-18.
- In the fall 2016, DNR began delivering a biodiversity education program, through the Shubenacadie Wildlife Park, to over 3,500 HRM students in the EXCEL program.

Cross Department:

2016-17 Priorities:

- Release the five-year progress report on the Natural Resources Strategy.
- Apply principles of process improvement models (e.g., Lean) to develop simpler, more consistent processes, faster turnaround and greater employee and client satisfaction in areas such as Crown lands administration, risk management assessment, and occupational health and safety.
- Review data collection methods, management and analysis across DNR and implement new streamlined processes and technology.
- Collaborate with other resource departments to formalize the public participation process.
- Develop a predictable, risk-appropriate and modern regulatory regime through legislation review.

Results:

- Released a five-year progress report on all goals of the Natural Resources Strategy.
- Trained an additional 15 staff in the Lean Six/Sigma program, four at the green belt level and 11 at the yellow belt level. This increased capacity (total of 29 trained staff) allowed DNR to undertake three projects that resulted in increased client satisfaction for DNR.
- In partnership with other resources departments, government developed a framework for public participation. This framework is currently being tested by the participating departments, including DNR, with a total of four public participation processes being developed in 2016-17 to establish benchmark data.
- During 2016-17 DNR reviewed an additional eight pieces of legislation as part of DNR's ongoing priority. This brings the total to 33%, up from 11% in 2015-16, of DNR's legislation reviewed to date.
- Conducted eight risk assessments across DNR, including: silviculture monitoring after a budget reduction; potential changes and best practices for the Integrated Resources Management process; and an overall assessment of DNR occupational health and safety program.

Annual Report under Section 18 of the Public Interest Disclosure of Wrongdoing Act

The Public Interest Disclosure of Wrongdoing Act was proclaimed into law on December 20, 2011.

The Act provides for government employees to be able to come forward if they reasonably believe that a wrongdoing has been committed or is about to be committed and they are acting in good faith.

The Act also protects employees who do disclose from reprisals, by enabling them to lay a complaint of reprisal with the Labor Board.

A Wrongdoing for the purposes of the Act is:

- a) a contravention of provincial or federal laws or regulations
- b) a misuse or gross mismanagement of public funds or assets
- c) an act or omission that creates an imminent risk of a substantial and specific danger to the life, health or safety of persons or the environment, or
- d) directing or counselling someone to commit a wrongdoing

The following is a summary of disclosures received by the Department of Natural Resources.

Information Required under Section 18 of the Act Fiscal Year 2016-2017	
The number of disclosures received	0
The number of findings of wrongdoing	0
Details of each wrongdoing	
Recommendations and actions taken on each wrongdoing	