



**Department of Environment
and Conservation**

2010-11 Annual Report

2011

REFERENCE PERIOD

This report covers the period April 1, 2010 through March 31, 2011,
the fiscal year of the Government of Newfoundland and Labrador

Copies of this report are available at
<http://www.env.gov.nl.ca/env/publications/index.html>

Cover Photo: *Local Marsh* photo credit unknown

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Message From the Minister



As Minister of Environment and Conservation, I am pleased to submit the department's annual report for fiscal year 2010-11. This report was prepared in accordance with requirements for a category one government entity under the *Transparency and Accountability Act*. The outcomes reported in this document detail the department's performance in addressing the strategic issues that were identified in the department's 2008-11 Strategic Plan. As Minister, I am accountable for preparation of this report and the achievement of the identified results.

The 2010-11 fiscal year was a significant one as it marks the final year for the 2008-11 strategic planning period. This annual report details outcomes for the department's mission, goals and achievements for the 2010-11 yearly objective as established in the 2008-11 Strategic Plan.

I would like to take this opportunity to thank all departmental staff for their hard work and dedication throughout the three-year strategic planning period. Our department has had many successes, as well as some challenges over the past three years, and our employees worked diligently to fulfill the goals and objectives towards achieving positive outcomes.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Terry French', written in a cursive style.

TERRY FRENCH, MHA
Conception Bay South
Minister

Departmental Overview

Vision

The vision of the Department of Environment and Conservation is a clean, sustainable environment and healthy, resilient ecosystems in perpetuity for the social, physical, cultural, biological and economic well-being of the province.

Mission

By March 31, 2011, the Department of Environment and Conservation will have reduced the adverse impacts of human activities on the environment to safeguard and improve the health of our ecosystems.

Mandate

The mandate of the Department of Environment and Conservation is derived from the *Department of Environment and Conservation Notice, 2008* under the *Executive Council Act* on matters related to:

- The protection, enhancement and conservation of the quality of the natural environment including water, air and soil quality; and the conservation, development, control, improvement and proper utilization of the water resource of the province;
- provincial lands;
- The management, preservation, control, protection and development of provincial parks as defined in the *Parks Act*; provincial interests in all national parks established in the province by the Government of Canada; and wilderness and ecological reserves as defined in the *Wilderness and Ecological Reserves Act*;
- matters related to the management, preservation, protection and development of wildlife and inland fisheries;
- The *Wildlife Act* on matters related to wildlife reserves and Salmonier Nature Park; and,
- The *Pippy Park Act* on matters related to Pippy Park.

Lines of Business

The Department of Environment and Conservation is engaged in the following lines of business:

- Crown Land Resources;
- Provincial parks, ecological and wilderness reserves, natural areas, and Canadian Heritage Rivers;
- Coordination of environmental assessments;
- Management and protection of wildlife and inland fish populations;
- Protection of air, soil and water quality;
- Management of water resources, water quality, and availability;

- Climate change; and,
- Sustainable development and supporting strategic environmental science.

Please refer to Appendix A for the department's Lines of Business in full detail.

Organization

The Department of Environment and Conservation is a category one government entity under the *Transparency and Accountability Act* and is responsible for the protection and enhancement of the environment, management of the province's wildlife, inland fish, water, parks, and Crown land resources. The department is also the lead on government sustainable development initiatives and is responsible for implementing programs with respect to government's response to climate change. The department has three branches:

Environment Branch:

This branch is responsible for the divisions of Environmental Assessment, Pollution Prevention, and Water Resources Management.

Lands Branch

This branch is responsible for the divisions of Crown Lands Administration, Land Management, and Surveys and Mapping.

Natural Heritage Branch:

This branch is responsible for the divisions of Parks and Natural Areas, and Wildlife.

The department also contains a Policy and Planning Division, a Communications Unit and a Sustainable Development and Strategic Science Division. The Institute of Biodiversity, Ecosystem Science and Sustainability (IBES), which is located at Memorial University's Grenfell Campus in Corner Brook, is an integral component of the Sustainable Development and Strategic Science Division.

Physical Location

The department's main offices are in Corner Brook, Deer Lake and at Confederation Building in St. John's. The department has other offices located in Clarenville, Gander, Grand Falls-Windsor, Happy Valley-Goose Bay, and St. John's. The department is also responsible for Salmonier Nature Park and several other provincial parks and reserves located throughout the province.

The Department of Environment and Conservation website is: www.env.gov.nl.ca/env/

Staffing

The department has a staff complement of 489 employees, which includes permanent, temporary, seasonal and contractual employees. Seventy-one percent of employees are male and twenty-nine percent are female. Division of staff according to region is indicated below:

Region	Staff
Avalon Peninsula	243
Central East	36
Central West	27
Labrador	17
West Coast / Northern Peninsula	151
Other/Undefined	15
Total Employees	489

Budget

The department's approved budget for 2010-11 was \$63,884,900, an increase of \$1,417,300 over 2009-10. Net expenditure for fiscal 2010-11, after revenue, is \$36,614,166, an increase of \$9,380,670 from 2009-10. For additional budget details, please see the Financial Statements section of the report.



Seagull perched on a sign in Bonavista

2010-11 Highlights

Stewardship Agreements

In July 2010, the department sought public input into the development of a provincial strategy for coastal and oceans management. This strategy formalizes the vision, goals and principles that will guide the sustainable development of ocean and coastal resources.

The Town of Burgeo signed a coastal stewardship agreement with the provincial government in July 2010 to protect the habitat of the Common Eider and the endangered Piping Plover. The Town of Cartwright also signed a coastal stewardship agreement with the provincial government in July to protect local Common Eider habitat.

Parks and Natural Areas

Provincial camping parks saw an increase of 7% in campsite nights sold in 2010 for a total of 63,060 nights. The 2010 season also saw a 25% increase in the use of the Campsite Reservation Service. The reservation service is available by calling a toll free number and online. In addition, campsites with electrical services were opened in five provincial parks; Dildo Run, Frenchman's Cove, J.T. Cheeseman, La Manche and Notre Dame, as a result of government investment through the Park Renewal Strategy.

The Wilderness and Ecological Reserves Advisory Council (WERAC) hosted public meetings in the Towns of Lamaline and St. Lawrence in September 2010 to assess the feasibility of establishing Lawn Islands Archipelago Provisional Ecological Reserve as a permanent ecological reserve. The reserve was granted provisional status by the Minister of Environment and Conservation in July of 2009. The proposed Lawn Islands Ecological Reserve contains the only known breeding colony of Manx Shearwater, a migratory seabird, in North America. In addition to Manx Shearwater, the islands host breeding habitat for a provincially significant colony of Leach's Storm-petrels, as well other sea bird species such as the Black Guillemot, Common Murre, Arctic Tern, Black-legged Kittiwake, Great Black-backed Gull and Herring Gull.

Thirty-one scientific research permits were issued to external researchers for new projects in provincial parks and wilderness and ecological reserves. Fifteen multi-year research projects are also ongoing.



Pond in Butter Pot Provincial Park

Conservation Measures for George River Woodland Caribou

Enhanced management of wildlife resources is a strategic direction of government. In 2010, biologists from both Newfoundland and Labrador and Quebec, completed census field work and data analysis for the George River Caribou herd. The census estimated the current herd population at 74,131 animals, which is a significant decline from the 2001 estimate of 385,000, and the 1993 estimate of 776,000 animals. Based on this result, the department enacted new conservation measures to help prevent further decline of the herd.



George River Caribou, Photo: Ted Pardy

Public consultations were held with stakeholders in October 2010, including Aboriginal governments and groups, outfitters and resident hunters. Conservation measures were announced on November 9, 2010 and as of that date, the commercial caribou hunt, non-resident caribou hunting via the use of outfitters, and the resident caribou license transfer system for Labrador residents were suspended. The allowable harvest was reduced to one caribou per licensed hunter from the former limit of two. Labrador hunters were reminded of participation in the George River caribou harvest survey by submitting both the lower jawbone and license return for any caribou killed during the 2011-12 hunting season. This will help researchers learn more about the overall health of the caribou. Plans to establish a committee to review additional conservation measures and long-term management strategies for the George River herd were also announced in November 2010.

Collars were also deployed on George River caribou throughout the winter. Collared caribou allow for the monitoring of survival rates and causes of mortality, herd distribution and movement patterns, and the habitat use of known-age individuals. These monitoring efforts provide important information on the herd's health and trends that are critical to the sound management of this valuable resource.

In 2010, the department also completed the second year of a research project assessing predator-prey dynamics in Southern Labrador. This project was designed to investigate interactions between moose, migratory and forest-dwelling caribou, and wolves within the ranges of the sedentary caribou populations in Labrador. Collared wolves in the Red Wine and Mealy Mountains areas were also monitored over the same time period.

Species at Risk

In September 2010, the department released an updated recovery plan for the Newfoundland population of American marten. The Newfoundland population of the American marten was first assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as at risk in 1986 and a national recovery plan was released in 1995. The marten was listed under the province's *Endangered Species Act* in 2002 as endangered, but its population distribution and stability improved and its status was downgraded to threatened in 2008. The updated recovery plan identifies habitat and actions that are critical to the survival of the species, including monitoring population size and distribution using hair snagging, studying the impact on habitat that is available for recovery, and updating habitat protection measures as required.

Three rare plants in Newfoundland and Labrador were listed as endangered under the provincial *Endangered Species Act* in October 2010 following assessments by the Species Status Advisory Committee (SSAC). These plants are: The Northern Bog Aster (*Symphyotrichum boreale*), Rattlesnake Root (*Prenanthes racemosa*) and Mackenzie's Sweetvetch (*Hedysarum boreale subsp. mackenzii*). The SSAC is recognized under the *Act* as the provincial body that provides scientific listing advice on species of concern in the province and listing these plant species is the first step toward their recovery. A total of 35 species, subspecies and populations are now listed under the province's *Endangered Species Act*; there are 13 endangered, 9 threatened and 13 vulnerable species.

Enhancements to Angling Regulations

In 2010, the department introduced changes to angling regulations. The new changes now allow anglers to pass the rod to another angler so that they may participate in "playing" the salmon. Whoever "hooked" the fish must still tag it or release it back into the water. As well, the definition of direct relative was expanded to include grandparents and grandchildren. This is intended to enable non-residents to angle with direct family members without having to hire licensed guides.



Sunset on the Main River, Photo: Unknown

The department also implemented the use of new salmon tags in 2010. The tags now require anglers to immediately affix and lock the tag and cut out the date. This format has been designed to reduce the illegal reuse of salmon tags. New regulations have also made it illegal to have in possession any altered or defaced tags while angling or hunting. Additional revisions allow the province to issue Variation Orders under the *Wild Life Act* that support the tag colour(s) and bag limit set for a specific class of river.

Drinking Water Safety Training Workshop Celebrates 10-Year Anniversary

In March 2011, the annual Clean and Safe Drinking Water Workshop celebrated 10 years of providing municipal operators of drinking water systems with an opportunity to come together and increase their knowledge of drinking water safety. These workshops are intended to provide water system operators and owners in the province with technical information on drinking water systems from water industry experts from across Canada and the US. The workshops are scheduled each year around the date World Water Day is celebrated which is March 22. The Minister presented the Operator of the Year and the Volunteer Operator of the year awards at the workshop. The recipient of the 2011 Operator of the Year Award is Tony Skiffington from the Town of Gambo. The 2011 Volunteer Operator of the Year Award was presented to two volunteer operators - John Braye and Edmond Fudge from the Town of Brighton.

Environmental Assessment

In 2010-11 the Environmental Assessment Division conducted approximately 90 screening reviews on projects submitted for environmental assessment. Most notable were undertakings such as cranberry farms and associated quarries throughout many regions of the province in addition to several mining exploration and development projects and cottage and recreational development areas. While there were no projects that triggered further assessment, there were many releases subject to terms and conditions to ensure adequate environmental protection.



Manuels River, Conception Bay South

Crown Lands Administration

The effective management of provincial Crown land demonstrates the department's commitment to government's strategic direction of comprehensive land use management. In the 2010-11 fiscal year, 3578 applications for Crown land were received at the Regional Offices. A total of 2116 Crown titles were issued for the fiscal year 2010-11. These applications and issued titles resulted in total revenues of \$8.5 million dollars.

Cottage Development Program

In August 2010, the department developed and allocated 25 cottage lots at Big Cook's Pond in Western Newfoundland.

Crown Land Grants

In 2010-11, the department issued grants for 2866.4 hectares of Crown land at a value of over \$5.67 million.

Interdepartmental Land Use Committee

In 2010-2011 there were 34 Crown land related projects registered with the Interdepartmental Land Use Committee (ILUC). As well in 2010-11 there was a meeting of all ILUC members concerning revitalizing of commitments and processes. From this meeting came the general consensus of the benefits of ILUC and the value of the committee in conflict management.

Conversion of Aerial Photo Library

The department initiated a new project to convert the aerial photo library from a film based library to a digital library. The project was initiated in 2009-10 and is expected to be a multi-year project as there are approximately 500,000 images in the library to be converted. From the time this project began to the end of the fiscal year 2010-2011, there have been approximately 8,661 aerial images converted.



Lighthouse in Trinity

Salmonier Nature Park

Summer 2010 was one of the busiest visitation seasons for Salmonier Nature Park. Approximately 45,000 people visited between June 1 and mid-October, representing a 25% increase over the 2009 season and the 5th highest visitation rate since the park opened in 1977.

In addition, Budget 2010 approved two-year funding of \$4.33 million for the construction of a visitor centre, technical services building and animal care building and other minor infrastructure improvements. This supports the department's commitment to fulfilling government's strategic direction of Park Renewal: enhanced visitor experience in provincial parks and campgrounds.



Student at Salmonier Nature Park

Shared Commitments

The Department of Environment and Conservation partners with other departments on Government's key commitments. These shared commitments reflect a desired outcome that requires action by multiple entities.

Infrastructure Renewal

The department is working towards improvements in provincial parks, including the T'Railway Provincial Park. Expenditures for the T'Railway Provincial Park in fiscal 2010-11 were approximately \$2,744,000. The majority of this expenditure (\$2,533,000) was directed towards the engineering, design, supply and installation of a replacement bridge for Crabbes River. In addition, government spent over \$1 million during the fall and winter of 2010-2011 to complete repairs to the T'Railway Provincial Park following the impacts of Hurricane Igor. These initiatives are inline with government's commitment to infrastructure renewal



T'Railway, Conception Bay South

Waste Management

Waste management was identified as a strategic direction in the Department of Environment and Conservation's 2008-11 Strategic Plan. The department participates on steering and technical committees, in partnership with the Departments of Municipal Affairs, Service NL, and the Multi Materials Stewardship Board. During 2010-11, the department continued work in this area by revising standards, working with regions to interpret the standards, and assessing compliance to standards and regulations. In addition, the department has drafted approvals for the operations of municipal waste management sites in Eastern, Central and Labrador West regions. Facilities under permit include Robin Hood Bay regional site, land fills, house hold hazardous waste, material recovery facilities and transfer station.

Safe Drinking Water

The department works closely with the Departments of Municipal Affairs, Service NL, Health and Community Services to achieve the goals of the Multi-Barrier Strategic Action Plan, and to enforce regulations and guidelines for drinking water safety. Their efforts are coordinated by an interdepartmental committee of deputy ministers, which is chaired by the Deputy Minister of the Department of Environment and Conservation. The committee's work is supported by the Interdepartmental Safe Drinking Water Technical Working Group. Medical Officers of Health and representatives from the Public Health Laboratory are also members of the working group.

Northern Strategic Plan

In support of Government's Northern Strategic Plan and its focus on Labrador, the department continued work in this region on climate change, wildlife management and conservation planning.

In February 2010, departmental officials met in Wabush with representatives of the Combined Council of Labrador to discuss climate change adaptation in the region.

In 2010-11, the department's Wildlife Division began a research project on assessing predator-prey dynamics in Southern Labrador. This project was designed to look at the interaction between predators, such as wolves and lynx, and their prey, such as moose and caribou.

The Wildlife Division also entered its third sampling year for the Northern Labrador Climate Change Study. Three lakes were sampled during this season. Archival tags were collected that had been implanted in lake trout the previous year. Fish species and their habitat were sampled throughout Northern Labrador to investigate the effects of climate change on distributions and health of northern fish populations. Wildlife also sampled four lakes along Phase III of the Labrador Highway and continued the Outfitters Logbook Program. This program is designed to monitor the health of sport fisheries in the Eagle River Watershed.

The Parks and Natural Areas Division entered its second year of partnership with the Nature Conservancy of Canada to consolidate biophysical data from Labrador in collaboration with numerous government and Aboriginal stakeholders. This partnership will guide the preparation of a Conservation Blueprint for Labrador and support conservation planning in Labrador as part of the Natural Areas System Plan.



Proposed National Park Reserve in the Mealy Mountains
Photo: Gary Pittman, Parks Canada

Report on the Mission

Mission Statement: By March 31, 2011, the Department of Environment and Conservation will have reduced the adverse impacts of human activities on the environment and improved the health of our ecosystems.

The mission statement identified the department's priority focus area over the 2006-11 mission period, ending March 31, 2011. As the 2010-11 fiscal year is the end of the planning period, the department must report on outcomes with respect to the mission in this Annual Report as per its responsibilities under the *Transparency and Accountability Act*. The department worked throughout the mission cycle towards achieving the mission indicators by implementing appropriate regulations, increasing enforcement practices and techniques, conducting monitoring activities, utilizing scientific measures, risk management, and regional cooperation. As noted in the following results section, much of the department's work was achieved as planned, with some variance. The department will continue work to achieve positive outcomes in these areas, as well as commence the new initiatives identified in the department's 2011-14 Strategic Plan.

The following details the measures and indicators of the mission statement and reports on the results of the department's work over past five fiscal years.

Measure: Reduced adverse impacts of human activities on the environment.

Indicators	Results
Five less contaminated sites.	Partially completed. The department completed remediation work in Come by Chance, Salmonier, and sites in Buchans. Work continues in New Harbour and Hopedale.
Increased treatment of septic tank waste by 50%.	Septic waste handlers in Central and Western Newfoundland are to be advised of a proposed future ban on septic waste disposal to landfill. Therefore, alternative treatment methods will be required. The volume of septic waste affected is approximately 50%
Increase from 15% to 40% in the percentage of the population being serviced by sewage treatment plants.	Achieved through the commission of the new sewage treatment plant in St. John's, one new treatment plant in Appleton/Glenwood, and one in Stephenville. As a result, approximately 40% of the province's population is now serviced by sewage treatment plants.
One hundred percent of residential oil tanks meeting regulated standards.	Completed on the island. 60,000 residential oil tanks, which accounts for 100% of the island's known residential oil tanks are registered with the department to meet upgraded standards. Work continues in Labrador. The Government Assistance Plan for the repair or replacement of oil tanks continues to provide residents of the Inuit communities of Nain, Hopedale, Postville, Makkovik and Rigolet with the means to make their tanks safer and more secure.

Increased number of standards for landfills.	Completed. The department released guidelines in 2009 and 2010 outlining the requirements for the closure of non-containment municipal solid waste landfill sites, and the operation and the construction of waste management facilities/systems that are apart of the Provincial Waste Management Strategy announced in May 2007. Guidance documents were released in 2010 to assist municipalities in applying for a Certificated of Approval from the department for the construction and operation of a Municipal Solid Waste Landfill. These guidelines supersede those released in 2007 and provide a high level of environmental protection. Standards include: • Siting requirements • Construction • Quality control • Reception of waste materials • Requirements for reporting and record keeping • Site safety and security • Environmental monitoring • Decommissioning The guidance documents are available to the public on the waste management page on the department's website.
Increased number of species-specific management plans.	The department implemented several species specific management plans during the 2008-11 planning period: • Annual management plans for all game species • Crowded Wormseed Mustard Recovery Plan 2009 • Red Knot Recovery Plan 2009 • American Marten Recovery Plan 2010 • Gray-cheeked Thrush Management Plan 2010 • Mountain Fern Management Plan 2011 • American Eel Management Plan 2011
Land management framework developed.	The department developed the framework during the mission period. The framework sets out management considerations for coordinating the provincial land resource between government departments, optimizing economic and social benefits. The department is currently working with OCIO to implement the final stage to make the land use atlas available to all government departments via the government intranet.

	When this is completed, departments can use this resource to inform the land use decision process. The department and OCIO engaged a consultant in 2011 to facilitate the assessment of this project to be completed by December 2011.
Promulgation of a <i>Sustainable Development Act</i> .	The promulgation of the <i>Sustainable Development Act</i> was delayed during the mission period. The delay stemmed from the department's need for further analysis and stakeholder consultation to ensure that all work in this area fulfills the needs of the province.
Improved enforcement practices	Implemented. Enforcement is important, especially given the department's mandate. Officials in the Lands Branch, Parks and Natural Areas Division and Pollution Prevention Division participated in a five day comprehensive course on enforcement. This training taught staff how to handle situations of non-compliance with legislation.
Better data management, specifically more comprehensive and more accessible databases.	During the mission period, the department improved data management by participating in the Conservation Areas Reporting and Tracking System (CARTS), a national initiative designed to track and report on the status of Canada's protected areas. In addition, the GIS shape files for all provincial parks and protected areas are now accessible to the public on the department's website. In 2010, the department launched the Water Resources Portal, an internet application that allows the public to access on the department's website a variety of water resources data, including the quality of drinking water and geographic based data. Developed with support from Geo-Connections, a national partnership program which promotes on-demand access to geographic information, this portal also enhances the sharing of information with municipalities, industry, provincial and federal departments.
Improved quality assurance and quality controls.	Completed. Interactive maps were added and other changes made to the Provincial Parks Campsite Reservation Service to improve ease of use and provide quality service delivery to the public. The department's Water Resources Portal also provides the public access to data on drinking water quality throughout the province, including ambient water quality data, watersheds, real-time water quantity and quality data.
Revised regulations.	The department completed revisions on the Fossil Ecological Reserve Regulations in March 2009.

Measure: Improved health of the ecosystem

Indicators	Results
Improved health of select wildlife populations	The department worked throughout the mission period to improve the health status of select wildlife populations: • Indications of decreased rate of decline/stabilization in caribou populations – continued monitoring required • A moose health monitoring program initiated to investigate cause of Northern Peninsula ‘sick’ moose. • Increased monitoring resulted in improved population estimates for the vulnerable boreal felt lichen (<i>Erioderma pedicellatum</i>). The global survival of this species depends on the health of the population present in Newfoundland and Labrador.
Increased percentage of the land base which is protected	The department increased the percentage of the land base that is protected by establishing parks and ecological reserves during the mission period: • Expansion of Mistaken Point Ecological Reserve in March 2009. • Establishment of Lawn Islands Archipelago Provisional Ecological Reserve in July 2009. • Establishment of Main River Waterway Provincial Park in July 2009. • Establishment of the Mealy Mountains National Park and the adjacent Eagle River Waterway Provincial Park in February 2010.
Increased monitoring of biodiversity	Achieved. The department conducted studies and supported related activities to increase biodiversity monitoring during the mission period : • Nocturnal owl surveys were conducted • Pollinator diversity study were conducted • Enhanced species-at-risk monitoring • Enhanced small mammal monitoring • Enhanced terrestrial land / bird monitoring • Newfoundland and Labrador Arthropod project continued in Provincial Parks and Ecological Reserves • Invasive plant surveys continued in Provincial Parks • Lichen surveys continued in collaboration with Department of Natural Resources • Mushroom foray continued with Foray NL • Labrador biodiversity surveys were initiated

Decrease the number of communities with elevated trihalomethane (THM) levels by 10%	The targeted indicators relating to THMs could not be achieved due to a number of administrative challenges with the implementation of the rural drinking water safety initiative. This indicator is closely linked to the operation and maintenance of water systems and water infrastructure, and the achievement depends on the cooperation and participation of owners and operators of water systems in government launched initiatives. We continue to work with communities to address drinking water quality issues that influence THM levels and promote the adaptation of sustainable corrective measures such as Potable Water Dispensing units and operator training.
Decrease the number of communities on boil water advisories by 25%.	The results indicated for boil water advisories could not be achieved due to a number of administrative challenges with the implementation of the rural drinking water safety initiative. Although rural drinking water safety initiative sunset on March 31, 2010, we continue to work with communities to address drinking water quality issues that lead to boil water advisories, and other issues, and promote the adaptation of sustainable corrective measures such as Potable Water Dispensing units and operator training.

Discussion of Results

As noted in the above mission indicators, there was some variance over the mission cycle between planned and actual results. The following provides details on the department's progress towards achieving these indicators in fulfilment of the department's mission.

Reduced adverse impacts of human activities on the environment

One Hundred percent of residential oil tanks meeting regulated standards

The department planned for one hundred percent of residential oil tanks to be registered during the mission period. This is an important initiative because when residential oil tanks go through the registration process, there is a decreased risk of environmental contamination due to heating oil spills and leaks and there has been a considerable decrease in incidents since new regulations have been introduced. Sixty thousand of the province's identified residential oil tanks are registered to meet standard regulations. However, the department is aware that some tanks in remote areas in Labrador are still unregistered. The Government Assistance Plan for the repair or replacement of oil tanks continues to provide residents of Nain, Hopedale, Postville, Makkovik and Rigolet with the means to make their tanks safer and more secure. Under the plan, a recent series of pre-inspections were carried out at no cost to homeowners and resulted in 73 tanks being registered.

Five less contaminated sites

The department worked throughout the mission period in remediation and cleanup activities at contaminated sites. The department originally indicated the achievement of five fewer contaminated sites. The department completed work on four sites: Come by Chance, Salmonier, and in the former mine site and Mucky Ditch areas of Buchans, while remediation work continues in New Harbour and Hopedale. Although this work will continue beyond the end of the 2008-11 mission, the department's efforts will result in the eventual clean up of seven sites.

The department neared completion of site assessments in Hopedale during 2011. The department retained a consultant to complete an environmental assessment and human health and ecological risk assessment at the former US Military Site and subdivision in Hopedale and following the assessment phase, a remedial action plan will be developed to guide work on the site. The department invested \$1 million for the environmental clean up in Budget 2010-11 and Budget 2011-12 committed, a further \$2.2 million, with an allocation of \$2.1 million and \$2 million in each of the following years, for a total of \$6.3 million for the remediation of the Hopedale site.

The New Harbour site is no longer being used as a waste disposal site. The department is in the process of closing it down. The assessment and design of a closure plan is underway with a complete closure within the next 5 years. This site will continue to have on going monitoring and maintenance as required.

The department successfully remediated areas of concern in Buchans in 2010. Budget 2010 committed \$9 million for projects to address major sources of contamination in the town after testing in 2009 identified elevated levels of heavy metals in some samples. In 2010, the Provincial Government committed \$9 million for projects to address the two main source areas that continued to contribute to the lead in soil levels in Buchans. The department completed the capping of the tailings spill area and remediation of the Mucky Ditch and placed a mobile air quality monitoring trailer near the remediation site to monitor total and fine particulate during the project. This information was made available on the department's website to keep residents informed. The rehabilitation of the tailings dams and capping of exposed tailings was completed by the Department of Natural Resources.



Buchans site before and after remediation work

Increased treatment of Septic Tank Waste by 50%

The department has been working towards increasing treatment of septic waste throughout the mission period. Septic tank waste requires specialized management facilities. As such, it is not accepted at the province's waste management facilities, including the new Central Waste Management site, scheduled to open in 2011, or the Western Waste Management Site scheduled to open in 2016. The septic tank waste in the Central and Western Regions represents approximately 50% of the septic waste in the province that will now be diverted into industry treatment facilities, such as the industry treatment facility located on the Avalon. The department is also considering additional solutions for the treatment of septic tank waste.

Promulgation of the *Sustainable Development Act*

The department indicated that the promulgation of the *Sustainable Development Act* would occur during the 2008-11 mission period. Although the *Act* was not proclaimed during the indicated time, the department did move forward with addressing issues pertinent to sustainable development initiatives. Sustainable development continues to be an important area for focus for the department and work continues on sustainable development initiatives

Improved health of the ecosystem

Throughout the planning period, the department worked to improve the health of selected wildlife populations through monitoring, research and conservation activities.

Improved health of select wildlife populations

The department indicated improved health of select wildlife populations and the department worked throughout the mission cycle to study and implement management strategies for wildlife. A management strategy for populations of Woodland Caribou on the island commenced in 2008 and sought to understand the reasons behind the dramatic decline of caribou numbers, from an estimated peak of over 90,000 caribou in 1996, to an estimated 37,000 in 2008. This included research in to predator-prey dynamics and hunter education. In addition, the department announced conservation measures for the George Caribou Herd after a survey indicated a drop in the population from 385,000 animals in 2001 to 74,131 in 2010. The department is also monitoring the province's population of *Erioderma pedicellatum* (Boreal Felt Lichen), which is listed as Vulnerable under the provincial Endangered Species Act. This species has vanished or significantly declined in other parts of the world where it was previously found. Newfoundland is home to 95% of the world's population, making the province's population of Boreal Felt Lichen crucial to the global survival of the species.



Endangered Boreal Felt Lichen

Increased percentage of the land base which is protected

Protected areas are vital to preserve the province's biodiversity, maintain healthy ecosystems and provide benefits to society such as scientific research and education, traditional outdoor activities, and ecotourism and adventure tourism.

Throughout the mission period, Government established two new protected areas and expanded Mistaken Point Ecological Reserve. In 2010, the provincial and federal governments announced an agreement to establish a new national park reserve in the Mealy Mountains area of Labrador. The park reserve protects roughly 10,700 square kilometres, which will make it the largest national park in eastern Canada. The Provincial Government recently announced its intent to establish a waterway provincial park to protect the Eagle River, adjacent to the proposed Mealy Mountains national park reserve. The combined protected area resulting will be over 13,000 square kilometres.

Water Resources

Over the course of the Mission period, the department has developed tools, built capacity and established education and training in consultation with communities on water management. Since 2001, the department has employed the Multi-Barrier Strategic Action Plan (MBSAP) consisting of an integrated system of procedures, processes and tools that collectively prevent or reduce the contamination of drinking water from source to tap in order to reduce risks to public health.

Provincial guidelines require that drinking water supplies be disinfected and maintain a disinfectant residual in the water distribution system in order to ensure the destruction of potentially harmful pathogens. Chlorine is the most commonly used form of disinfectant in the province. Disinfection by-products (DBP), such as trihalomethanes (THMs), are chemical compounds formed by the reaction of a water disinfectant with organic matter that can be naturally present in a water supply system. The department tests for DBPs regularly and in 2009, the department released the report *Best Management Practices for the Control of Disinfection by-Products in Drinking Water Systems in Newfoundland and Labrador*, which presented a framework and broad based corrective measures for dealing with DBP and THM issues within the MBSAP. This includes: policy measures, source based control measures, chlorine demand management, water demand management, Source water treatment, point of use/point of entry measures, water system design measures, and operator education and training.

The department has been diligent in creating the present level of competence within communities through operator education and training, so they may be informed and make decisions on how to proceed with the necessary scientific and engineering solutions to the water management issues they face. This approach can also help identify issues that lead to boil orders, elevated trihalomethane levels and other issues. Which is important as these tend to fluctuate over time, changing in relation to the resources, contacts, reasons, and capital investments allocated to them.



Butter Pot Provincial Park

Report on Performance 2010-11

Climate Change Mitigation and Adaptation

During the 2008-11 planning period, the department's responsibilities shifted focus towards the implementation of climate mitigation and adaptation programs. The Office of Climate Change, Energy Efficiency and Emissions Trading (OCCEET) was introduced in 2009 and given responsibility for policy and strategic planning with respect to climate change. The department continued to work toward achieving results for the 2011 goal and 2010-11 objectives. The department funded emissions reductions projects through the NL Green Fund and worked to increase adaptive capacity in the province through participation in the Regional Adaptation Collaborative multi-year program. These initiatives demonstrate the department's commitment to government's strategic direction of Climate Change: reduced greenhouse gas emissions.

Goal: By March 31, 2011, the Department of Environment and Conservation will have facilitated the reduction of greenhouse gas emissions and increased adaptive capacity to respond to climate change.

Measure 1: Facilitated reduction of greenhouse gas emissions.

Indicator	Results
Carbon dioxide equivalent reduced or averted.	The department successfully facilitated the reduction of green house emissions throughout the planning period. The carbon dioxide equivalent reduced or averted because of projects supported by the NL Green Fund has reduced a potential 192,954 tonnes of green houses gases per annum.
Number of projects approved for funding through NL Green Fund.	The NL Green Fund funded 49 projects throughout the 2008-11 planning period. These projects include renewable energy initiatives, research and energy efficiency projects, projects in the transportation sector, and methane gas capture and utilization. Each project helped reduce greenhouse gas emissions or educated about the impacts of climate change. As a result, this initiative contributed to the achievement of the goal by directly contributing to reduced greenhouse gas emissions.
Number of seminars held.	243 seminars were held throughout the planning period because of projects supported by the NL Green Fund. These seminars promoted energy efficiency and climate change awareness amongst schools, special interest groups and the public.

Measure 2: Increased adaptative capacity

Indicator	Results
Number of impacts and adaptation workshops held.	Over the planning period (2008-11) the department successfully held workshops to help communities increase adaptive capacity to climate change. These comprised three regional workshops, six community workshops, and one Atlantic workshop. As a result, more stakeholders have a better understanding of the impacts of climate change and what to do about it.
Number of adaptation initiatives with specific communities.	Throughout the 2008-11 planning period, the department worked with six communities to increase awareness around possible impacts of climate change specific to the communities and their region. These workshops helped communities identify adaptation initiatives and recognized actions already taken by communities to reduce vulnerabilities. A total of ten communities throughout the province participated in adaptation initiatives. : • Logy Bay- Outer Cove – Middle Cove • Ferryland • Irishtown-Summerside • Fortune • Indian Bay • Corner Brook The department is working on Flood Risk Mapping in two communities with mapping completed and final reports are due in September 2011. • Bay Roberts • Stephenville Crossing-Black Duck Siding Community Engagement workshops were held in two Labrador communities: • Nain • Forteau

2010-2011 Objective:

By March 31, 2011, the Department of Environment and Conservation will have begun implementation of the adaptation strategy.

Measure: Implementation of adaptation projects.

Indicator	Results
Adaptation projects funded for community vulnerability assessments and climate forecasting.	Achieved. In 2010-11, the department funded and prepared six reports for distribution to communities to help in municipal planning and prepared two flood risk reports. These will be provided to the communities in 2011-12.
Draft flood risk model prepared.	Completed and the model is to be implemented. The flood risk reports also acted as a pilot project that will help the department secure additional funding to continue this initiative.
Professional associations engaged.	In 2010-11, the department worked with various professional associations to identify and further elaborate on adaptation issues: Municipalities Newfoundland and Labrador (MNL), Professional Municipal Administrators (PMA), Canadian Institute of Planners (CIP), and Professional Engineers and Geoscientists Newfoundland and Labrador (PEG-NL).
Community meetings held related to assessing climate change vulnerabilities.	Workshops and community meetings were held in 2010. Memorial University, in partnership with the Department of Environment and Conservation, led the workshops. The department's adaptation coordinator attended these sessions.

Discussion of Results

The reduction of green house gases

The NL Green Fund is a \$25,000,000 fund created with provincial and federal support to fund innovative local initiatives that reduce greenhouse gas emissions (GHG) in the province and increase environmental sustainability. The fund directly supports the Minister's strategic direction related to climate change mitigation. As of March 31, 2011, the department approved 49 projects, totalling over \$20 million in support, with additional project applications in various stages of assessment. It is estimated that because of the NL Green Fund, approximately 192,954 tonnes per annum of GHG have been reduced or averted.

Select examples of projects include:

- \$85,396 for the St. John's Transportation Commission to install mini hybrid devices on six buses, resulting in a potential reduction of GHG of 67 tonnes annually.
- \$400,000 to the Basilica of St. John the Baptist to replace the 105-year-old piping system and inefficient furnace with a new heat pump system for an estimated 63 per cent reduction in energy needs, fuel savings of approximately \$50,000, and potential annual GHG reductions of 427 tonnes.
- \$1.5 million to the City of Mount Pearl for energy reduction and environmentally friendly initiatives at the Glacier Arena expansion and the Pearlgate Recreation Multiplex project. Incorporating energy efficient measures to the facility has the potential to reduce greenhouse gas emissions by 2700 tonnes.
- \$169,250 for Icewater Seafoods of Arnolds Cove to recover waste heat from its current refrigeration system for an estimated annual fuel reduction of approximately 160,000 to 180,000 litres and an estimated reduction of GHG of 500 tonnes per year.
- Educational initiatives and school infrastructure:
 - \$1.8 million to install geothermal heat pump systems at three new schools: Paradise Elementary and Elizabeth Park Elementary in Paradise, and Holy Trinity Elementary in Torbay.
 - \$190,000 for the Brother Brennan Environmental Education Center to replace its diesel generator with a wind powered energy system.
 - \$10,000 for the Lower Trinity South Regional Development Association to implement a water conservation, climate change and global warming educational program.



Glacier Arena expansion and the Pearlgate Recreation Multiplex project

Increased adaptive capacity

Throughout the planning period, the department has been working toward increasing the province's adaptive capacity to climate change through the development of an Atlantic regional adaptation plan. The regional adaptation initiative stems from the Atlantic Adaptation Strategy that was agreed to by the Council of Atlantic Environment Ministers in 2008. A joint Letter of Intent and a proposal was submitted by the four Atlantic provinces to Natural Resources Canada for cost-shared funding under the federal Regional Adaptation Collaborative (RAC) Program. Environment and Conservation is the lead provincial department on this initiative with input from Municipal Affairs, Natural Resources, Transportation and Works, and the Rural Secretariat.

Indeed, success toward the goal of increased adaptive capacity to climate change stemmed from work completed in the 2010-11 fiscal year. On April 23, 2010, the governments of Canada, Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick officially announced the joint funding effort for the Atlantic Climate Adaptation Solutions (ACAS), a series of projects to help communities adapt to climate change by targeting local issues such as coastal erosion, flooding and groundwater resource management; and help communities integrate climate change adaptation considerations into community plans, engineering practices, and water and resource decisions. Newfoundland and Labrador's contribution is \$850,000 over the life of the program. The department implemented several projects under ACAS during the 2010-11 fiscal year, as noted above in the objective indicators. This initiative engaged municipalities, professional organizations and other stakeholders with the department in an effort to enact measures that will minimize the impacts of climate change on the province.



Field work for flood risk mapping in Shearstown, Bay Roberts

Sustainable Development

The Sustainable Development Initiative was initiated in the department's 2006-08 Strategic Plan and continued in the 2008-11 Strategic Plan. Through this strategic direction, the department sought and continues to seek an agile, adaptive management approach to sustainability and the proclamation of the *Sustainable Development Act*. However, due to the complex nature of sustainable development and the overlapping interests of stakeholders associated with sustainability, Government opted to delay proclamation of the *Sustainable Development Act* during the 2008-11 planning period. As such, the department's work on the sustainable development initiative did not progress as originally envisioned. While the department cannot report on the indicators as specified, work continued on sustainable development, particularly in the areas of research and policy. Current and future work towards achievement is in line with government's strategic direction of Sustainable Development: Responsible and sustainable development of our natural resources.

Goal: By March 31, 2011, the Department of Environment and Conservation will have assessed the Province's status in relation to sustainable development to set the foundation for future progress on key areas.

Measure: Sustainability report produced.

Indicators	Results
Sustainability report document released.	Not completed. The <i>Sustainable Development Act</i> was not proclaimed during the 2008-11 planning period. The proclamation of the act was a necessary step in the process of developing and releasing the sustainability report that was originally indicated in the 2008-11 Strategic Plan. However, activities, work plans and liaison initiatives to achieve the goals of sustainability and sustainable development remain on going in anticipation of the proclamation of the <i>Sustainable Development Act</i> .
Procurement goals developed.	Not completed. Procurement goals were also a component of the sustainability initiative that depended upon the proclamation of the <i>Sustainable Development Act</i> and so were not developed by the department during the planning period. As with other aspects of sustainable development,, the department is working towards activities and liaison initiatives in support of the goal.

2010-11 Objective

By March 31, 2011, the Department of Environment and Conservation will have developed sustainability indicators for the province.

Measure: Implementation of integrated sustainability model.

Indicators	Results
Utilization of Integrated Sustainability Model and engagement of Internal Working Groups.	During the 2008-11 planning period, the division increased work efforts towards the establishment of an international partnership that would enable engagement and interaction in a global sustainability network. As such, the Integrated Sustainability Model was not utilized and the engagement of working groups as originally indicated. However, with the establishment of the partnership in a global information and research network, comes access to international sustainability research, experiences, and programs to assist in moving forward on integrated sustainability.
Draft Statement of Sustainability Issues and Concerns prepared.	The division worked during the planning period to establish a resolution mechanism that would be used to coordinate multiple departments. This along with the application of established sustainability principles and approaches to informed decision making will aid in the resolution of sustainability issues and concerns.
Internal Workshops on Sustainability and the Integrated Sustainability Model conducted.	The division conducted a series of meetings with responsible departments during the planning period wherein movement on implementing aspects of the <i>Sustainable Development Act</i> were moved forward for cross-governmental use. These meetings focused on specific sustainability and sustainable development issues and conflicts.

Discussion of Results

The achievement of the goal, yearly objectives and indicators as stated in the 2008-11 Strategic Plan were fundamentally linked to the proclamation of the *Sustainable Development Act*. The act received royal assent in 2007 but was not proclaimed during the 2008-11 planning period. Proclamation of the *Act* would have granted the department authority to put the necessary mechanisms in place for the development of sustainability indicators, a Strategic Environmental Management Plan and ultimately a sustainability report.

Even though the development on this strategic issue did not proceed as originally planned, the department continued to work on research and policy initiatives in support of the principals of sustainable development that contributed to sustainable development work in the province. Work towards these goals included:

- Consulted with relevant stakeholders and participated in various planning and strategy process to instill sustainability and sustainable development approaches and principles where applicable.
- The department encouraged the provision and application of science based decision making regarding the use and development of natural resources through sector based engagements.
- The department continued to engage with international experts and organizations on sustainability and sustainable development issues. These activities included meetings, conferences and presentations. Through these initiatives, the department brought awareness of specific sustainability issues important to our province to the international stage.
- The department continued to conduct research on specific science and policy issues as evidenced through the submission and publication of work in peer reviewed international magazines and journals. The department also supported student science and sustainability research through the Institute for Biodiversity, Ecosystem Science & Sustainability (IBES). These research programs are conducted by honors and graduate students through defined academic supervisory protocols with formalized input from all partnering organizations.



Pitcher Plant, Butter Pot Provincial Park

Caribou Science and Management Strategy

The Caribou Science and Management Strategy began in 2008 as a response to the drastic decline of the caribou resource on the Island, from an estimated peak of over 90,000 caribou in 1996, to an estimated 37,000 in 2008, a decrease of approximately 60 percent. The Strategy's objectives are to improve scientific understanding of caribou ecology and assess the feasibility and efficacy of predator reduction as a management tool for caribou recovery, including improved calf survival. The Strategy encompasses wildlife research from across the Island but is primarily focused on three study areas: Northern Peninsula, La Poile and Middle Ridge and included efforts to encourage enhanced harvest of predators through the initiation of predator reduction in an ethically responsible and scientifically controlled manner. The department also focused on improved knowledge of the socio-economic value of caribou and of caribou and predator ecology, both of which are required to develop long-term recovery and management strategies. Addressing this issue demonstrates the department's commitment to government's strategic direction of Wildlife Management: enhanced management of wildlife resources.

Goal: By March 31, 2011, the Department of Environment and Conservation will have initiated the implementation of science and wildlife management activities designed to assist in long-term sustainability of the caribou resource.

Measure: Initiated the implementation of science and wildlife management activities.

Indicators	Results
Appropriate scientific predator reduction activities commenced in two study areas.	Completed. The department conducted appropriate predator reduction activities in three areas. Experimental diversionary feeding (predator reduction tactics) were conducted in 2010-11 in one study area; two other areas were left non-manipulated to act as controls for this scientific research..
Education provided to hunters/trappers with an aim to enhancing participation in legal, safe and ethical predator harvest strategies.	Over 3200 residents in 20 communities have participated in 70 predator harvest (black bears and coyotes) training workshops and seminars for hunters and trappers sponsored by the department.
Calf mortality studies initiated in three study areas.	The department initiated calf mortality studies in three areas in 2008 and are currently ongoing. From 2008-09 to 2010-11, approximately 500 caribou calves were radio-collared and approximately 380 mortality sites were investigated.

Select herd population estimates completed for all herds at maximum 5 year intervals.	All caribou herd population surveys and fall classifications have been completed as scheduled with the exception of the Avalon Peninsula Herd survey. This survey was not completed as weather conditions were not suitable for completion of a good winter survey. All population and demographic information has been compiled, reports generated, and the information is used in the Wildlife Division Annual Game Management Planning process
New data incorporated and analyzed in the Caribou Data Synthesis.	Data generated from Caribou Science and Management Strategy incorporated into ongoing analyses of Caribou Data Synthesis.
Enhanced departmental knowledge of social and economic parameters.	Completed. The department sponsored an M.Sc project on Newfoundland urban and rural resident attitudes and values associated with caribou and predators, and initiated economic evaluation of caribou in collaboration with Department of Tourism, Culture and Recreation and Newfoundland and Labrador Outfitters Association. As a result, the department has enhanced knowledge of social and economic parameters and can incorporate this perspective into caribou management strategies.
Activities implemented to determine habitat use, requirements and availability for caribou and their predators.	Implemented. Radio-collars deployed on calf and adult caribou and on predators. Radio-collars deployed on calf (~ 500) and adult (~ 425) caribou, sub-adult and adult black bear (73), adult coyote (91), adult lynx (17). SPOT5 satellite imagery was purchased and used to classify vegetative habitat. Caribou calving area descriptions completed. Caribou food habits and predator food habits assessments in progress. Analyses to support availability metrics for caribou habitat in progress. The department supported three PhD projects describing habitat use for black bear, coyote, and caribou in progress and an M.Sc project describing habitat requirements for calving/post-calving caribou in progress. The Caribou Health Monitoring Program—a M.Sc. and an Honours project was completed examining aspects of disease in caribou caused by the nematode <i>Elaphostrongylus rangiferi</i> or brainworm. The Caribou Management Strategy is a 5-year initiative, beginning in 2008. The department will continue to implement these activities through to 2013.

Initiatives implemented to determine the impact of human-land use patterns and activities on caribou and their predators.	Initiatives were implemented during the 2008-11 planning period to determine the impact of human-land use and activities on caribou and predators. The department conducted an assessment of predator-specific calf mortality relative to human-influenced landscape . The department also supported three M.Sc. Projects investigating the role of human activity and human influenced landscape on caribou.
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2010-2011 Objective:

By March 31, 2011, the Department of Environment and Conservation will have initiated the implementation of science and wildlife management activities designed to assist in the long-term sustainability of the caribou resource.

Measure: Implementation of science and wildlife management activities initiated.

Indicator	Results
Diversionsary feeding of predators during calving season evaluated.	Evaluated year one of diversionsary feeding for the 2011 field season and prepared a draft report detailing the results. Data collection continues for year two of the program.
Public engagement and information sessions planned.	The department's Caribou Resource Committee initiated meetings and planning for open public information sessions The department also conducted some public engagement activities. Enhanced publications and website material on woodland caribou, predators, predator hunting and conflicts with predators. Community and school information sessions were initiated to address human/coyote conflicts.
Continued evaluation of relative predator density estimates.	The department calculated preliminary estimates and the evaluation is ongoing. Data collection continues and new data has been incorporated into analyses to improve accuracy and reliability.
Completion of report on caribou abundance, age structure and harvest patterns.	The department compiles this information annually and provided during the Game Management Planning Process which is conducted in the fall. This report is used to determine quotas.

Completion of calf mortality summary report.	Completed in 2010-11 from data collected throughout the 2008-11 strategic planning period. Printing and release of the report will be in 2011-12.
Preparation of status update on Caribou Strategy.	Report completed.

Discussion of Results

The department worked throughout the planning period to investigate factors that contributed to the decline of Island caribou. This included population and classification surveys to determine caribou numbers, sex ratio, calf survival and mortality, habitat and predation. In addition, the department worked towards increasing understanding of human activities on the island caribou populations.

During the first year of the 2008-11 planning period, the department focused on studying caribou, predators, and habitat to establish base-line data necessary to determine effective predator reduction strategies and subsequent outcomes in mitigating the caribou population decline. In 2008-09, the department worked to establish baseline data to finalize science based predator reduction strategies in two study areas. In 2009-10, predator reduction strategies were implemented and evaluation studies were undertaken to investigate the effects.

The 2010-11 objective represents the culmination of the work to achieve the goal of initiating the implementation of science and wildlife management activities based on the results of the previous two years. This included an evaluation of diversionary feeding of predators, public engagement activities, and reports on caribou abundance and calf mortality. As indicated, the department continues to evaluate relative predator abundance. While the department is reporting that preliminary estimates have been calculated and data collection continues, this continuation is important to provide accurate and current data for the management strategy.



Island Caribou Photo: Chris Callahan

The department also worked to enhance hunter outreach and education programs, which is also an important part of the caribou strategy. This initiative aimed to increase hunter's understanding of the dynamic relationship between woodland caribou, black bears and coyotes and promote responsible hunting and trapping of predators. This supports the department's goal of increasing public understanding and awareness of wildlife conservation and management issues, responsible and legal harvesting of wildlife, and the use of hunting and trapping as effective tools in wildlife management. Some of the primary goals and objectives of this component are to increase and promote knowledgeable, responsible and effective legal hunting and trapping of wildlife, including predators, that impact Newfoundland caribou through the following objectives:

- Increased and enhanced delivery of hunter and trapper education outreach programs that specifically addressed legal harvest of predators including black bears and coyote;
- Enhanced public knowledge and awareness of Newfoundland caribou and predator biology, predator-prey relationships, predator management involving hunting and trapping and other management initiatives identified as part of the overall Caribou Strategy; and,
- Increased and promoted the mentoring of youth and other non-traditional groups in hunting and trapping activities to help support future and long term wildlife conservation and management objectives.

Furthermore, each year since 2008 annual deliverables have included:

- Minimum of four How to Hunt Black Bear Workshops
- Minimum of six How to Hunt Coyote Workshops
- Minimum of three of How to Trap Coyote Workshops
- Minimum of three Youth Hunter Skills Workshops (Rod and Gun Club Events)
- Minimum of two Post Secondary/University Student Practical Field Events
- Minimum of four public information sessions "Coyotes in Newfoundland"
- Production & development of publications, DVD's and website content for hunting techniques, biology and ecology of caribou, black bears & coyotes.

To date 3200 residents have participated in 70 workshops sponsored by the department.



Island Caribou Photo: Chris Callahan

Safe Drinking Water

The Department of Environment and Conservation worked diligently with other government departments and municipalities throughout the planning period to ensure delivery of clean and safe drinking water in public water supply systems. Since 2001, the department has utilized the Multi-Barrier Strategic Action Plan (MBSAP) to ensure drinking water safety in the province. Since that time, substantial progress has been made and the province has been nationally and internationally lauded for its drinking water monitoring and reporting program. However, there were many concerns in small communities in rural areas of the province regarding high numbers of boil water advisories, as well as other drinking water quality challenges. As such, efforts to ensure clean and safe drinking water in these communities comprised both a key strategic issue in the department's 2008-11 Strategic Plan and government's strategic direction of Safe Drinking Water: improved protection and delivery of drinking water in communities.

In May 2008, the provincial government announced its Rural Drinking Water Safety Initiative to develop a comprehensive overview of drinking water quality issues in municipalities and communities in parts of the province, and develop a sustainable plan of action to deal with those issues. Analyses done by the department demonstrated that potable water dispensing units (PWDUs) were an appropriate technology to deliver high quality drinking water in small communities lacking the resources to operate and maintain conventional water treatment plants. In communities with PWDU systems, residents fill containers with potable water as needed, while non-potable water for use in activities such as laundry and toilet flushing is provided via municipal water systems. Based on this, the objective indicators for the safe drinking water strategic issue of the 2008-11 Strategic Plan included the installation of PWDUs in small communities. In addition, the department conducted numerous training seminars for operators, continued to test water quality and released policy documents throughout the planning period.

Goal: By March 31, 2011, the Department of Environment and Conservation will have improved drinking water available in rural communities.

Indicators	Results
Total number of potable drinking water units installed.	The department did not achieve this indicator as originally planned as only one PWDU was constructed in the Town of Gaultois during 2008-09. Although none were installed during 2009-10, an external engineering consultant was engaged to evaluate applications and develop concept design and terms of reference for Requests for Proposals. In 2010-11, tenders were called for the construction of PWDUs and by the end of the 2008-11 planning period work commenced to install 22 units in communities throughout the province.

Other corrective measures taken.	The department prepared a comprehensive report, Sustainable Options for the Management of Drinking Water Quality in Small Water Systems, in 2008. The report highlighted “corrective measures” as an important new component of the Multi-Barrier Strategic Action Plan. Corrective measures include initiatives to improve drinking water beyond infrastructure requirements such as PWDUs including: • Operator education: training held on an ongoing basis throughout the 2008-11 planning period. This ensures that communities have the technical knowledge necessary for safe drinking water. • Technical studies: conducted throughout 2008-11 to identify issues and respond with appropriate corrective measures.
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2010-2011 Objective:

By March 31, 2011, the Department of Environment and Conservation will have improved drinking water available in the remaining communities with populations less than 500.

Measure: Improved drinking water available.

Indicators	Results
Permits issued to construct and operate new PWDUs (or equivalent technologies).	Not achieved during 2010-11. It is anticipated that 20-25 permits will be issued once appropriate papers have been received from towns or respective consultants.
Drinking water quality monitored and analyzed.	Achieved. Drinking water quality is continually monitored and analyzed through the Multi-Barrier Strategic Action Plan.
Training delivered to PWDU operators.	Not achieved during 2010-11. Training will be delivered once the new units are operational.
Policy and education documents prepared on PWDUs.	Achieved. Two studies, <i>Study on Performance Evaluation of Existing Potable Water Dispensing Units and Recommendations for Design and Operational Guidelines</i> and <i>Study on Operation and Maintenance of Drinking Water Infrastructure in Newfoundland and Labrador</i> , commissioned by the department were released and made available to the public on the department's website.

Discussion of Results

Potable Drinking Water Dispensing Units

The Drinking Water Safety Initiative (DWSI) was announced in 2008 as a joint effort of Environment and Conservation and Municipal Affairs. The initiative was tasked to develop a comprehensive overview of drinking water quality issues in order to develop a sustainable plan of action primarily for communities with less than 500 residents and whose current water systems have demonstrated multiple high risk drinking water quality issues .

The department did not achieve the 2010-11 objective as specified, as the planned number of PWDUs were not installed in rural communities. Government requires that communities be active participants in the process to improve their drinking water systems and the department received 52 applications for funding for the units. The department originally envisioned PWDUs as a cost effective solution for communities and the department's pre-tender estimates averaged between \$150,000 and \$200,000. However, construction within the planning period was delayed when the actual cost of units rose to double the original estimate once the projects went to tender.

The department did make progress in this area by arranging for the installation of PWDUs in an anticipated 23 communities. Although the actual installation of units will take place beyond the planning period, the department's efforts will ultimately result in improved drinking water quality for these small communities. Training for PWDU operators was not offered during the 2010-11 fiscal year as this was tied to the operation of the PWDUs. This will be achieved when the units become operational. Even though the 2008-11 planning cycle has concluded, the department continues to work closely with small communities to determine the most appropriate drinking quality water technologies.

Other Corrective Measures

The department was successful in implementing corrective measures, such as operator training, technical studies and evaluations, water quality analysis, and policy documents towards a safe drinking water outcome. These initiatives are important components of drinking water safety.

Operator training and education is a very important aspect of drinking water safety. In the department commissioned study, *Study on Operation and Maintenance of Drinking Water Infrastructure in Newfoundland and Labrador*, boil water advisories in a given municipality or local service district were found to correlate with poor operation and maintenance practices for infrastructure and lack of operator training. In 2009-10, the department conducted 36 operator training seminars and 207 hands-on training sessions were delivered as a part of the Operator Training Program. In 2010-11, approximately 35 classroom seminars were conducted and approximately 177 hands-on training sessions using the department's Mobile Training Unit were delivered.

The department has organized an annual drinking water safety workshop since 2001, and this annual event has provided an excellent forum for operators to meet their peer and explore solutions to issues relating to their water systems. Training will also be delivered to operators in the 22 communities where PWDUs will be installed.

Furthermore, two documents on PWDUs were released in 2010-11. The *Study on Operation and Maintenance of Drinking Water Infrastructure in Newfoundland and Labrador* provided an overview of how the operation and maintenance of drinking water systems is affecting the state of drinking water infrastructure and contributing to drinking water quality issues in the province and provides recommendations for improvements in the operation and maintenance of drinking water systems. The *Study on Performance Evaluation of Existing Potable Water Dispensing Units and Recommendations for Design and Operational Guidelines* evaluated the performance, operation and maintenance of existing PWDUs and provides recommendations for improvements for future PWDU systems.



Pond, Butter Pot Provincial Park

Natural Areas System Plan

The development of a Natural Areas System Plan progressed throughout the 2008-11 planning period. The stated purpose of the Natural Areas System Plan was to establish a comprehensive system of publicly supported parks and protected areas that protects the province's rich biodiversity and natural heritage for both the present and future citizens of the province. The original goal was to have a draft plan in place for public consultation by 2010. However, the department had to focus its efforts almost entirely on determining the most suitable study areas for candidate reserves. While the department continued the development of the Natural Areas System Plan throughout the planning period, it was unable to meet the 2010-11 objective as stated in the 2008-11 Strategic Plan. Work towards the development of the Natural Systems Area Plan is representative of government's strategic direction of Natural Areas System Plan: protection of representative areas of the province's ecoregions.

Goal: By March 31, 2011, the Department of Environment and Conservation will have released a Natural Areas System Plan and an Implementation Strategy.

Indicators	Results
Natural Areas System Plan document released.	As the study areas for candidate reserves were not finalized during the 2008-11 planning period, the Natural Areas System Plan document was not completed.
Implementation Strategy document released.	As the study areas for candidate reserves were not finalized during the 2008-11 planning period, the Implementation Strategy could not be prepared.

Measure: Natural Areas System Plan released.

2010-2011 Objective:

By March 31, 2011, the Department of Environment and Conservation will have released a final Natural Areas System Plan and Implementation Strategy.

Indicators	Results
Draft Natural Areas System Plan document for internal review.	As the study areas for candidate reserves were not finalized during the 2008-11 planning period, the draft Natural Areas System Plan document could not be prepared for internal review.

Draft public discussion document prepared.	As the study areas for candidate reserves were not finalized during the 2008-11 planning period, the draft public discussion document could not be prepared.
Communications plan developed	As the study areas for candidate reserves were not finalized during the 2008-11 planning period, the communications plan could not be developed.

Discussion of Results

The purpose of the Natural Areas System Plan is to establish a comprehensive system of publicly supported parks and wilderness and ecological reserves for citizens, both present and future, that protects the province's rich biodiversity and natural heritage, helps support a vibrant culture and sustainable economy, and enhances public understanding, appreciation, and enjoyment of our natural environment. The release of the Plan and Implementation Strategy are necessary steps towards a carefully planned and managed system of protected areas that will be essential for achieving biodiversity conservation and sustainable development objectives. Protected areas are an important

element of climate change mitigation and adaptation strategies. Protecting natural areas is an important step towards maintaining the total land base available for the capture and storage of atmospheric carbon dioxide, helping to offset green house emissions. Natural areas also preserve the integrity of the natural landscape to help protect against flooding and soil erosion.

The identification of candidate reserves is a fundamental step in the process to establish a comprehensive system of parks and protected areas, and must be completed before public consultations can be initiated. Consultations in turn are also a vital component in the development of the Natural Areas Systems Plan and will lay the foundation for future work in this area.



Butter Pot Provincial Park

Locations for the Island were identified in 2008-09 and the process of finalizing candidate areas commenced in consultation with the Department of Natural Resources during 2009-10. The Parks and Natural Areas Division worked in partnership during 2009-10 and 2010-11 with the Nature Conservancy of Canada and in collaboration with numerous government and Aboriginal stakeholders to consolidate biophysical data from Labrador.

Like the process that identified reserves on the Island portion of the province, identifying candidate reserves in Labrador, constitutes a necessary step towards finalizing conservation areas in Labrador. Work towards cementing partnerships with identified stakeholders will guide the preparation of a Conservation Blueprint for Labrador and support conservation planning in Labrador as part of the Natural Areas System Plan.

Although the goal and objective were not achieved as specified during the 2008-11 planning period, the department did work towards identifying and delineating candidate reserves that are representative of the province's natural regions. This work progressed in anticipation of further developments towards the implementation of the Natural Areas System Plan.



Sunny day near Bonavista

Appendix A – Lines of Business

The Department of Environment and Conservation provides the following lines of business:

Crown Land Resources

The Department of Environment and Conservation is responsible for the administration and management of the province's Crown land resources. In particular, the department:

- maintains a map and air photo library services;
- maintains the Provincial Crown Lands Registry;
- investigates adverse land claims;
- reviews and inspects legal land surveys;
- prepares legal documents of title for all dispositions of Crown Land;
- produces and distributes topographic base maps for provincial departments and agencies;
- provides the geodetic reference system for legal and engineering surveys and topographic mapping;
- provides new aerial photography; a repository/archive of provincial aerial photography; and scanning/printing services;
- facilitates the official naming of geographical features and place names and maintains the joint federal/provincial data base;
- provides the central data-store and on-line base layers for GIS applications;
- provides standards and consultation services in geomatics;
- facilitates federal/provincial collaboration in geomatics (Building the Canadian Geospatial Data Infrastructure (CGDI) under the Canadian Geomatics Accord);
- produces Crown title maps;
- develops land use management plans;
- maintains the Land Use Atlas;
- enforces lands legislation and addresses incidents of unauthorized occupation of Crown land;
- coordinates within government the inter-departmental review of crown land development through the interdepartmental land use committee (ILUC);
- develops land use policy, and;
- administers the leasing, sales and transfers of Crown land.

Provincial parks, ecological and wilderness reserves, natural areas, and Canadian Heritage rivers

The department is responsible for:

- the management and administration of provincial parks (the Newfoundland T'Railway Provincial Park is jointly managed by a special T'Railway Council) under the *Provincial Parks Act*;
- designation and management of wilderness and ecological reserves under the *Wilderness and Ecological Reserves Act*;

- development and implementation of environmental education programs within select provincial parks and wilderness/ecological reserves;
- implementation of protection measures for Canadian Heritage Rivers in the province; negotiation of the land transfer to the federal government for National Parks, and; issuance of various permits for provincial parks, ecological and wilderness reserves

Wildlife and inland fish

The department protects, manages and conserves the province's biodiversity, wildlife resources and wildlife habitat. This includes:

- determining the status of species in the province according to the national Accord for the Conservation of Species at Risk to which the province is a signatory;
- developing and implementing stewardship agreements to support the recovery of species at risk;
- identifying, designating and developing recovery strategies for species at risk according to the *Endangered Species Act*;
- developing and implementing strategies for the conservation of biodiversity;
- designating and managing wildlife areas;
- administering the Salmonier Nature Park - a wildlife rehabilitation, interpretation and research facility;
- developing management plans for consumptive species which are then published in the annual hunting and trapping guide;
- issuing hunting and trapping licenses;
- developing policies and guidelines regarding wildlife utilization;
- issuing Newfoundland and Labrador Guide licenses;
- providing education, awareness and training programs such as firearm safety, hunter and trapper education courses;
- implementing the North American Waterfowl Management Plan, including providing assistance in the development of agreements to support wetland and coastal stewardship initiatives;
- developing long term landscape level planning to minimize conflicts between wildlife and other land uses;
- permitting for the non consumptive use, possession, importation and export of wildlife and parts thereof;
- collecting scientific information to provide input into the sustainable management of wildlife, including inland fish populations, and habitat, and;
- utilizing education, awareness and stewardship programs and initiatives to foster appropriate attitudes, respect, behaviour and appreciation towards our wildlife and habitat.

Environmental assessments

The department coordinates the provincial environmental assessment process for new development, which includes:

- reviewing proposed undertakings;
- gathering background information concerning the environmental impacts of the proposals;
- analyzing information according to a well-defined set of environmental assessment procedures;
- providing recommendations to the minister as to whether a project can proceed in an environmentally-acceptable manner, and;
- conducting select surveillance on projects released from the environmental assessment process.

Air, soil and water pollution

The department is responsible for prevention of pollution of the province's air, water and soil ecosystems. Responsibilities include:

- preparing and issuing Certificates of Approval and licenses for:
 - industrial operations;
 - waste management systems (in collaboration with Government Services Centre);
 - waste dangerous goods transporters;
 - pesticide vendors, operators and applicators; and
 - heating oil storage tank inspectors;
- developing policies, guidelines, protocols, and regulations;
- developing training material and providing training;
- enforcing Certificates of Approval, license conditions and legislation through:
 - inspections, other than those done by Government Services Centre;
 - the development of environmental monitoring programs in collaboration with industry;
 - audits of the environmental monitoring programs;
 - audits of environmental laboratories; and,
 - the monitoring of criteria air contaminants;
- designating contaminated sites and auditing risk assessments based on environmental site assessments;
- providing technical advice and outreach;

- managing remediation of industrial and military contaminated sites that are the
- responsibility of government, and;
- maintaining a registry of contaminated sites.

Water resources

The department ensures that the province's water resources are protected, conserved and enhanced to provide the greatest possible sustainable benefits to the province. Responsibilities include:

- designation of protected water supply areas and protected wellheads;
- monitoring and analysis of chemical water quality of community water supplies;
- issuance of well driller licenses;
- inspection of water well structures in accordance with requirements of the *Well Drilling Regulations*;
- comprehensive training for municipal water operators of community water and wastewater systems;
- hydrologic modeling;
- investigation of water-related problems and complaints;
- overseeing inspections of dams;
- granting of water rights;
- maintenance of a water rights registry;
- issuance of permits for community water and sewage systems, extensions and alterations;
- monitoring and inspection of community water and wastewater systems;
- provision of technical assistance on community water and sewage, hydrology, hydraulics, and environmental design of water related structures;
- maintenance of various online water quality and quantity databases and GIS resources, and;
- conducting studies on groundwater resources, flooding, water resource impacts and water use.

Horizontal Initiatives

The Department of Environment and Conservation is lead department in two key government-wide initiatives: Government's response to climate change, and sustainable development. These are evolving files and thus the programs and services offered by this department in these areas are also evolving. The programs and services that the public can expect from the department on these two initiatives are outlined below:

Climate Change

The department is responsible for:

- Implementation of the provincial Climate Change Action Plan; Atlantic Climate Adaptation Solutions (ACAS) Program;

- Administration of the Newfoundland and Labrador Green Fund; and Administration of RAC, and;
- Creation of stakeholder awareness on greenhouse gas reduction strategies and climate change impacts and adaptation.

Sustainable Development

The department is responsible for:

- strategic research on wildlife species, notably the Caribou Strategy in support of the sustainable development initiative;
- provision of support for the Sustainable Development Round Table;
- the development of indicators and a provincial sustainability report as directed by the *Sustainable Development Act* (not yet proclaimed);
- development of public education and outreach information related to sustainable development;
- development and coordination of graduate research projects through the Institute of Biodiversity and Ecosystem Science; and
- general promotion of sustainable development within Government and the larger community.



Looking at Trinity East from Trinity

Financial Statements

Expenditure and Revenue figures included in this document are based on public information provided in the Report and the Program Expenditures and Revenues of the Consolidated Revenue Fund for Fiscal Year Ended 31 March, 2011.

<i>Executive and Support Services</i>	Estimates		
	Actual \$	Amended \$	Original \$
Minister's Office	267,989	288,400	288,400
<i>General Administration</i>			
Executive Support	1,423,953	1,438,800	1,060,500
Administrative Support	1,040,205	1,064,600	937,400
Revenue—Provincial	(5,811)	-	-
Policy Development and Planning	2,867,722	13,024,700	13,092,900
Revenue—Federal	-	(500,000)	(500,000)
Revenue—Provincial	(108,219)	-	-
Sustainable Development and Strategic Science	3,302,006	3,494,800	3,145,000
Institute for Biodiversity and Ecosystem Science	721,507	800,200	831,800
Administrative Support—Capital	2,427,134	5,324,600	5,196,100
Total: General Administration	11,936,486	24,936,100	24,052,100
<i>Environmental Management and Control</i>			
Pollution Prevention	6,869,588	8,215,300	8,949,900
Revenue—Provincial	(127,994)	(273,500)	(273,500)
Water Resources	4,202,145	4,373,400	4,366,200
Revenue—Federal	-	(120,000)	(120,000)
Revenue—Provincial	(549,028)	(558,200)	(558,200)
Water Quality Agreement	953,978	1,011,300	971,300
Revenue—Federal	(132,033)	(71,000)	(71,000)
Revenue—Provincial	(486,653)	(528,200)	(528,200)
Environmental Assessment	1,622,498	2,491,000	2,301,600
Revenue—Federal	(126,836)	-	-
Revenue—Provincial	(51,185)	(1,685,000)	(1,685,000)
Aboriginal Participant Funding	125,000	330,000	500,000
Total: Environmental Management and Control	12,299,480	13,185,100	13,853,100

<i>Lands</i>	Estimates		
	Actual \$	Amended \$	Original \$
Crown Land	4,232,357	4,419,300	4,670,000
Revenue—Provincial	(98,731)	(150,000)	(150,000)
Land Management and Development	924,639	1,069,200	1,089,500
Revenue—Provincial	(6,372,139)	(6,656,000)	(6,656,000)
Surveying and Mapping	826,359	841,300	939,800
Revenue—Provincial	(21,116)	(80,000)	(80,000)
Geomatics Agreements	53,313	100,000	500,000
Revenue—Federal	-	(115,000)	(115,000)
Revenue—Provincial	-	(85,000)	(85,000)
Total: Lands	(455,318)	(656,200)	113,300
<i>Parks and Natural Areas</i>			
Parks and Natural Areas	5,097,189	5,156,100	4,574,000
Revenue—Federal	-	(2,500)	(2,500)
Revenue—Provincial	(8,848)	(5,000)	(5,000)
Park Development	221,975	305,600	277,300
Total: Parks and Natural Areas	5,310,316	5,454,200	4,843,800
<i>Wildlife</i>			
Administration, Licensing and Operations	1,671,549	1,714,000	1,630,000
Endangered Species and Biodiversity	452,451	475,400	568,200
Stewardship and Education	1,850,717	2,351,600	2,179,600
Habitat, Game and Fur Management	2,032,427	2,169,100	2,229,500
Research	2,616,782	2,767,100	2,821,800
Cooperative Wildlife Projects	717,125	764,100	764,100
Revenue—Federal	(221,069)	(279,000)	(279,000)
Total: Wildlife	9,119,982	9,962,300	9,914,200
Total Department:	38,210,946	52,881,500	52,776,500



Environment and Conservation