

Upcoming Events Climate Change and The Rooms

Until April 23 2007, The Rooms is featuring *Sila: Clue to Climate Change*. Sila is an Inuktitut word for climate. And the Arctic climate is changing. The exhibit explains the changes in the north and why we should care.

On Earth Day April 22 2007, The Rooms will be featuring the documentary “An Inconvenient Truth” and hosting a discussion on Global Warming. A panel of scientists - oceanographer Brad DeYoung, geographer Trevor Bell and biologist Bill Montevecchi - will provide highpoints of what climate change will mean for Newfoundland and Labrador, as well as answer questions.

Climate Change Action Plan

Update

2006



Message from the Minister

I am pleased to present the first annual update of the provincial *Climate Change Action Plan*. Since the release of the *Action Plan* in 2005, my department has been working hard to implement the many action items. Some of our work is outlined below.

My staff had the opportunity in December 2005 to attend the United Nations Climate Change Conference in Montreal as members of the Canadian delegation. This was a major international event that allowed staff to learn about climate change initiatives around the world and to share our local experiences with others.

In January 2006, a change in the federal government led to some setbacks in implementation of our provincial plan.

Under the previous administration, the province was in the process of negotiating various cost-shared projects. These have now been stalled or cancelled with the change in federal policy. It continues to be our hope, however, that new partnerships with the federal government will be possible on this file.

In the meantime, my department will continue to work towards independent implementation of the *Action Plan*.

I welcome feedback on the initiatives highlighted in this Update as well as any ideas for future implementation of the *Action Plan*.

A handwritten signature in black ink that reads "Clyde Jackman".

Minister

Award of Contract for Wind Power

Following government's commitment to renewable energy for the province, the development of the island's first wind farm was announced in October 2006. Newfoundland and Labrador Hydro awarded a contract to NeWind Group Inc. for the development of 25 megawatts (MW) of wind power for the island from the St. Lawrence Wind Project. The power purchase agreement is completed and the project is expected to be on stream in late 2008.

The project will be located near St. Lawrence on the Burin Peninsula. It will involve the installation of 14, 1.8 MW turbines supplied by Vestas Wind Systems. The project has the potential to provide annual energy for almost 7000 homes. The energy from this project could potentially

offset 165,000 barrels of fuel burned annually at the Holyrood Thermal Generating Station.

Newfoundland and Labrador has a world-class wind resource. At present, the island is isolated from the North American grid and depends on fossil fuel generation for approximately 25% of its electricity needs. The development of wind energy is consistent with Government's strategic approach to development of energy resources. Government is developing an Energy Plan to guide the development of the energy sector over the long term.

Ramea's wind power system has been in-service since 2004.

In this Issue

- Award of Contract for Wind Power2
- Environmental Science Curriculum Project3
- Climate Change Research at Parks and Natural Areas3
- Climate Change Education in Our Parks and Reserves4
- Marine Biodiesel Feedstock4
- Municipalities Workshops5
- Vehicle Idle-free Zones at Government Buildings6
- Idling Facts and Figures6
- Climate Change and Health Impacts Atlantic Conference 20067
- Natural Hazard Mapping Assessment7
- Upcoming Events8

Climate Change and Health Impacts Atlantic Conference 2006

The Departments of Environment and Conservation and Health and Community Services, in partnership with Memorial University of Newfoundland and Environment Canada, hosted a two-day conference on climate change and health impacts on March 23-24, 2006 at the Delta Hotel in St. John's. The conference included sessions and posters on a wide range of topics including temperature related morbidity and mortality, impacts of extreme weather events, air pollution related health impacts, water resources issues, adaptation of health sector to climate change, socio-economic

impacts on community health and well-being and the health impacts of climate change on Aboriginal communities. The interesting line up of speakers included Dr. Tom Kosatsky of Montreal Public Health, Dr. David Laplante of the Douglas Hospital Research Centre, Marcia Armstrong, Jacinthe Sequin and Marielou Verge of Health Canada and Dr. Hans-Martin Fuessel of the Potsdam Institute for Climate Impact Research.

For more information, please go to <http://www.gov.nl.ca/env/conference.htm>

Natural Hazard Mapping and Assessment

The Department of Environment and Conservation provided \$40,000 to a group of researchers at Memorial University of Newfoundland (MUN) to carry out a comprehensive assessment of climate change related natural hazards in selected communities in the province. Most mapping and assessment to date has concentrated on a single hazard approach, mapping only one type of hazard - i.e. flood risk or coastal erosion - at a time. Comprehensive mapping and assessment which considers the interplay between all natural hazards is not available for any community in Newfoundland and Labrador. It is precisely this type of assessment that is vital for reducing risk and effective emergency planning under current and

future climate conditions. The information gathered from this project will provide a comprehensive analysis of climate change related natural hazards facing residents. It will also provide for the development of strategies and municipal plans to reduce risk and vulnerability.



September 2001 Flooding at Symes Bridge on the Waterford River in St. John's. Photo courtesy D. Liverman.

Vehicle Idle-free Zones at Government Buildings

Environment and Conservation Minister, Clyde Jackman, launched government's idle-free zone campaign on June 5, 2006 to encourage motorists to turn off their vehicles while waiting. This initiative is in partnership with the Department of Transportation and Works and the Newfoundland and Labrador Lung Association.

The transportation sector is the single largest source of greenhouse gas emissions in the province accounting for 38% of total emissions. In addition, vehicle idling contributes to air pollution, which causes difficulty for children, the elderly and people with respiratory problems, such as asthma, emphysema and bronchitis.



Minister Jackman (centre) chats with John Drover (left), Director of Policy and Planning and Paul Thomey (right), Director of the Newfoundland and Labrador Lung Association. Photo courtesy T. Coffey.

Phase 1 of the idle-free zone campaign is complete with signs placed in front of targeted government buildings. Phase 2 will begin this spring with more signs being installed around provincial buildings, a media campaign and action toward idle-free zones around schools and hospitals.

The Government of Newfoundland and Labrador asks all of its employees and visitors to respect the idle-free zones by eliminating unnecessary vehicle idling.

Idling Facts and Figures

An idling vehicle emits nearly 20 times more air pollution than one travelling at 50 km/h.

An idling gasoline vehicle with an average size engine uses an estimated 2.2 litres of fuel per hour and an idling diesel truck engine uses about 3 litres of fuel per hour.

Vehicle manufacturers report that turning off and starting an engine uses less fuel than letting an engine run for more than 10 seconds.

Engine wear is greater with prolonged idling than during normal operation.

Modern vehicles only need 30 seconds of idling at start up even in cold weather. The best way to warm up a vehicle is to drive it!

Environmental Science Curriculum Project

The Environmental Science Curriculum Project (ESCP) is a unique science partnership between the Department of Education and the Department of Environment and Conservation and nine other federal and provincial partners. The objective is to develop a new high school environmental science curriculum and its resources, specifically a curriculum guide, student textbook and teacher resource package. This resource package will profile current environmental issues, including climate change, using Newfoundland and Labrador case studies. This project will enable students and teachers to explore environmental challenges within a relevant local context. The project offers insights for developing solutions that are appropriate to our own province. The partnership approach ensures that the course content is current and relevant to sustainable



resource management, policy and research initiatives of the province.

In September 2005, a field test of text materials was implemented in four schools across the Island. In September 2006, a pilot program began in 13 schools across the province representing 337 students. The pilot units included: Unit 1 - Introduction to Environmental Science, Protected Spaces and Species; Unit 2 - Land Based Issues (Forestry, Mining, Recreation and Agriculture); Unit 3 - Hydrosphere (Fresh water and Marine) and Unit 4 - Atmosphere (Air Quality and Climate Change). An

important component of the pilot was a teacher in-service completed last Fall (see inset photo, Courtesy of Sharon Porter-Trask).

Climate Change Research in Parks and Natural Areas

Dr. Norm Catto of Memorial University of Newfoundland and the Department of Environment and Conservation have partnered to create a technical report discussing the impacts of climate change on provincial parks and natural areas. The department provided the funding necessary for the compilation of the report.

The impacts of climate change, including changes to coastlines, river systems, slope failures and erosional processes, are outlined for each provincial park. A follow-up report, including discussion on recommendations for future monitoring and research, along with adaptation and coping strategies, is planned.

Climate Change Education in Our Parks and Reserves

Through a partnership between the Policy and Planning Division and the Parks and Natural Areas Division of the Department of Environment and Conservation, provincial park and reserve interpreters launched the theme of climate change as part of their repertoire of educational kits for provincial parks and reserves.

The kit, released in August 2006, was a huge success with the travelling public and campers. The kit was designed to educate about energy efficiency, recycling and other issues that impact greenhouse gas emissions. It included educational activities to teach people how to lower their own individual greenhouse gas emissions. This kit will be updated and added to the program again next year.



Children in Park Interpretation Program.
Photo courtesy of Parks and Natural Areas

Marine Biodiesel Feedstock

Biodiesel is a clean-burning renewable fuel made from vegetable oil or animal fats. It contains no petroleum and can be used alone as fuel. Generally, it is blended with petroleum diesel. A B5 blend is 5 percent biodiesel and with 95 percent petroleum diesel. Biodiesel can be used in diesel engines with no major modifications. It is easy to use, biodegradable, non-toxic and essentially free of sulphur and aromatics.

The use of alternative fuels such as biodiesel can play an important role in reducing greenhouse gas emissions and addressing climate change.

There is increased interest in converting marine feedstock into biodiesel fuel to be

used in Newfoundland and Labrador. It has been demonstrated that marine based biodiesel can be used as a substitute for petroleum diesel.

The Centre for Aquaculture and Seafood Development (CASD) of the Marine Institute conducted a biodiesel marine feedstock inventory assessment for Newfoundland and Labrador. Environment Canada, the Department of Fisheries and Aquaculture and the Department of Environment and Conservation provided funding for this project. The report is available at the Marine Institute library.

Municipalities Workshops

Climate change Impacts and Adaptions

The Departments of Environment and Conservation and Municipal Affairs, along with the Newfoundland and Labrador Federation of Municipalities, hosted a Climate Change Workshop for Municipalities on December 19, 2005 in St. John's. The goal of the workshop was to educate municipal leaders on the impacts of climate change and the importance of adapting and planning now for potential adverse events.

Speakers addressed: climate change impacts and adaptation strategies necessary for communities in Newfoundland and Labrador; the New Brunswick Coastal Protection Policy and how it may apply to coastal communities in Newfoundland and Labrador; the Annapolis Royal Tidal Surge Project as a community response to climate change; examples of municipalities using climate change as an economic development mechanism and funding opportunities available from the Green Municipal Fund (Federation of Canadian Municipalities).

Planning for Disasters: Adapting to Climate & Geological Hazards

Communities in Newfoundland and Labrador have experienced significant property loss and damage from natural disasters. Flooding, ice damming, landslides, and storm surges have all taken their toll. Climate change is predicted to increase the frequency and severity of these events.

The Department of Environment and Conservation and the Newfoundland and Labrador Branch of the Atlantic Planners Institute hosted workshops on disaster avoidance in Steady Brook and St. John's in November 2006. Speakers from the government, Memorial University of Newfoundland, and the Institute for Catastrophic Loss Reduction addressed geological disasters in the province, climate change impacts on municipal infrastructure, provincial land use policy on flood risk, emergency planning and local government policy-making in emergency management and disaster mitigation.

Workshops participants gained knowledge on minimizing disaster impacts in their community; making informed decisions to reduce vulnerability to natural disasters; planning for long-term sustainability in the face of climate and geological hazards; and utilizing proper land use planning and proactive measures to reduce the impacts of similar events in the future.