

ClimateNews is a snapshot of new and emerging climate change adaptation and mitigation activities in the Natural Resource Sector.

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Climate Action in B.C. (from B.C.'s Climate Leadership Plan)

Climate change is our new reality. Science tells us increasing greenhouse gas (GHG) emissions caused by humans are changing our climate, affecting every aspect of our lives. Science also tells us that we must continue to act to make a difference.

To lessen the severity of climate change, we must reduce our emissions. And by integrating climate change considerations into our everyday lives, we are reducing future costs to society. [Provincial indicators](#) show how this global issue is affecting our own climate here in B.C.

We can continue to transition to communities that use less energy and land and to an economy more reliant on clean energy sources

These actions have not only helped B.C. meet its 2012 GHG reduction target, but have created a foundation of low carbon and clean technology expertise that will help B.C. remain competitive in the changing global economy. Read more about some of the actions B.C. has taken within the built environment, transportation and industry sectors throughout the province.

[Cross-sector Action](#)
[Built Environment](#)
[Transportation](#)
[Industry](#)

B.C.'s climate indicators and action to date, read [Climate 101](#).

Climate Leadership Governance Structure

The Climate Leadership Team (CLT), comprised of leaders from business, academia, First Nations and environmental communities, produced its advisory report to government on Oct. 31, 2015. Government is now in a formal engagement process with stakeholders (industry, public etc.) to review the CLT report as part of Climate Leadership Plan (CLP) development.

To aid in CLP development, government has formally established some governance structures to guide the process including an ADM working group, Deputy Ministers' working group and ultimately a Cabinet working group on CLP. Tim Sheldon sits on the DM working group, and ADM Diane Nicholls and Director James Sandland help lead the ADM working group.

Our own governance structures to help lead the Ministry's climate change work have been in place for some time. The FLNRO Climate Change Steering Committee provides strategic oversight for climate change activities, including work within each region and branch. The Climate Action Plan team liaisons – including regional and divisional staff, climatologists, foresters, biologists, ecologists, engineers, and technicians – produced the climate action plans and currently are facilitating implementation of 440 actions on the ground. Both groups help support the ADM and DM level groups.

FLNRO Climate Change Strategy 2015-2020

[The 2015-2020 FLNRO Climate Change Strategy](#) extends climate action across the Ministry by integrating climate change into program areas, operations, resource management decisions and actions. Adapting to, and mitigating climate change in the natural resource and heritage sectors requires an understanding of the potential long-term impacts of climate change, variability and the significance of the actions we take or forego today. The strategy will be available April 2016.

Goals

FLNRO's goals for effectively responding to the impacts of climate change over the next five years and beyond are as follows:

1. **Manage climate change as a core part of FLNRO's business.**
2. **FLNRO will increase the use of climate relevant science, data and knowledge to better understand the environmental, social and economic implications of climate change on core business.**
3. **Climate change adaptation and mitigation is integrated into program areas, operations, resource management decisions, and actions.**

Implementing Climate Action Plans

Now that the FLNRO CAPs and the implementation plans have been completed the hard work of implementing the actions identified begins – in support of the FLNRO Climate Change Strategy's first goal: Manage climate change as a core part of FLNRO's business.

From the strategy:

The delivery of climate action will be integrated into daily activities of staff across the ministry by March 31, 2018. Climate change adaptation and/or mitigation will be considered or integrated:

- In statutory decision making, work planning and field assessment frameworks
- Into decision-making models
- With the cumulative effects framework
- By implementing B.C.'s Forest Carbon Strategy
- In a corporate approach to climate change science, long-term monitoring, extension and training that includes delegated decision makers
- In performance measures that track both progress of implementation and success of actions to address climate change impacts
- As part of Risk Assessment and Management Baselines for the ministry

Climate Action Performance Measure (Fiscal 2015/16; new)

There will be a new climate change performance measure for Fiscal Year 2016/17). The measure, currently in development, will likely be adapted from the United States Forest Service Climate Change Scorecard.

<http://www.fs.fed.us/climatechange/pdf/Scorecard.pdf>

Pan Canadian Framework

At the International Climate Summit in Paris 2016, Prime Minister Justin Trudeau announced he would meet with the premiers of each province, to draft a Pan-Canadian framework on Canada's emission reduction targets. British Columbia currently has emission target legislation and a climate carbon tax. The meeting with the premiers took place at Globe 2016 conference March 1-4, 2016. At this meeting:

The provinces set up working groups that would look into specific sources of emissions – including buildings, the energy sector and transportation – to come up with the policies that would ultimately form a new plan and potentially more ambitious targets.¹

Goals:

- Set a national target that we will work together to achieve
- Ensure that the provinces and territories have targeted federal funding and the flexibility to design their own carbon pricing policies

Investing in Clean Energy and Clean Technology

The Government of Canada will protect Canada's communities and grow our economy by making significant new investments in green infrastructure and clean technologies. As part of this commitment, they will:

- Endow a \$2-billion Low-Carbon Economy Trust to fund projects that reduce carbon
- Fulfill a G20 commitment to phase out subsidies for the fossil fuel industry
- Work with the provinces and territories to develop a Canadian energy strategy to protect Canada's energy security, encourage energy conservation, and bring cleaner renewable energy into the electricity grid²
- In September 2016 the working group will present their framework

¹ <http://www.theglobeandmail.com/news/politics/ottawa-to-give-cities-grants-for-new-green-projects/article28698200/>

² <http://www.climatechange.gc.ca/default.asp?lang=En&n=72F16A84-1>

Climate Change and First Nations

The Intergovernmental Panel on Climate Change (IPCC) has reported that the effects on the current and future physical environment include temperature, precipitation, sea level, global snow cover and polar ice extents. Future predictive models show there will be warmer winters, drier summers and extreme weather events.

In the North, thawing permafrost, retreating glaciers, changes in lakes and river ice and snow cover will affect vegetation and wildlife. (Koshida and Avis, 1997, ACIA 2004)¹

Climate change will affect First Nations and their ability to access traditional foods, medicine and wildlife. They will be impacted in their commercial enterprises, such as commercial hunting, fishing, forestry and ecotourism. First Nations in the northern parts of the province will see more changes based on their location and their reliance on the environment.

Adaptation will take time and resources. The federal government is funding limited adaptation in northern First Nations communities². The provincial and federal governments are working with First Nations to support climate change actions. As part of the Climate Change Strategy, FLNRO will be assessing risks and opportunities of climate change to First Nations over the coming years. In addition, the ministry will be initiating conversations with First Nations about how climate change is impacting them, their economies and the natural environment.

Mountain Resorts Branch Climate Action Plan

By Bill Hunter, Rajiv Lalla and Kelly Northcott

The Mountain Resorts Branch (MRB) is responsible for administering policy for mountain resort and ski area development on Crown land in the Province of British Columbia.



Alpine mountain resorts and ski areas are a cornerstone of provincial tourism, contributing \$1.3 billion in revenue during the 2012/13 season (approximately 9% of total provincial tourism revenue for that year). They are also an important element of the culture, tradition and identity of British Columbian life through the provision of health and wellness in the form of outdoor recreation.

These resorts and areas also provide important venues for winter sports events ranging from the 2010 Olympic Games and 2015 Canada Winter Games to local skiing, snowboarding and Nordic competitions, as well as annual educational and cultural activities, such as school programs, avalanche safety training, and music festivals.

The Pacific Climate Impacts Consortium (PCIC) regional modeling tool projects warmer temperatures, more extreme weather, winter rain events, summer droughts, and decreased snow accumulations for all regions of B.C.

A critical reliance on consistent snow and weather conditions makes mountain resorts and ski areas particularly susceptible to the effects of climate change in four main areas:

- i) Economics
- ii) Forest management and safety
- iii) Fish, wildlife and ecosystems
- iv) Water resources.

The MRB *Climate Action Plan* echoes the vision, goals and objectives of FLNRO's *Climate Change Strategy (2013 – 2018)*, and describes the branch's commitment to climate change actions. The plan is built upon four pillars:

- i) **Agency Capacity** - focuses on incorporating climate change planning and implementation within existing

¹ http://www.afn.ca/uploads/files/env/report_1_-_science_of_climate_change_final_draft_001.pdf

² http://www.afn.ca/uploads/files/env/ns_-_climate_change_general.pdf.

programs and developing efficiencies to target limited resources.

- ii) **Partnership and Education** - collaboration with internal FLNRO, and external stakeholders' resources and expertise.
- iii) **Adaptation** – identification of, and response to the vulnerabilities of biological systems and infrastructure to impacts of climate change.
- iv) **Mitigation and Sustainable Development** – implementation of measures to reduce greenhouse gas emissions and minimize environmental footprints in delivering products and services.

Each pillar has identified goals and objectives, as well as short-term (1-2 years) and long-term (3-5 years) actions to establish priorities and highlight adaptive measures for the future.



Tourism BC- <http://www.whistler.com/spring/>

Ski Resort Climate Trends

Warmer temperatures and changes in precipitation will affect ski resorts. If the projections forecasted by snow models and climate data are right with respect to warmer temperatures, some ski areas will see more snow and others will see much less. Dr. Michael Pidwirny, a researcher at the University of British Columbia, has been studying climate change impacts on recreational skiing and ski resorts in Western Canada in a study period from 1901 to 2013.

His research¹ included western ski resorts including Big White, Cypress, Hemlock, Sunshine, Mount Washington, Panorama, Whitewater and Whistler. In his study, climate

¹ Dr. Michael Pidwirny. [Historical Climate Trends and Future Climate Forecasts for Selected Ski Resorts in Western Canada](#). University of British Columbia 2012. p100.

databases, ClimateBC and ClimateNA, were used to generate site-specific climate data at the mid-elevation of ski resorts in western Canada, eastern Canada and the western USA to study the effects of climate change on ski resorts. The study examined factors of temperature, base elevation, mid-elevation historic winter snowfall, historic winter degree days under 0 Celsius, winter snowfall with elevation, and CO2 emission concentrations.

The summary findings were that:

- i) Projected average degree days under 0 Celsius, for December, January and February show a downward trend, meaning shorter future ski seasons.
- ii) If a resort is not at a sufficiently high elevation (for example from 500 to 1250 m), there is concern that warmer temperatures at higher elevations will shift snowfall to rainfall. Resorts that are above 1200 m would likely see snowfall. Those resorts located at higher elevation will not be impacted to the same extent.
- iii) On the west coast above 42 degree north latitude, ocean currents will continue to have a significant effect on winter snow fall.

For ski resorts in British Columbia, those closest to the Pacific Ocean and at lower elevations will see the most severe climate change in the coming decades.

Earth Day Friday April 22, 2016

What will you do for Earth Day? Perhaps plant some trees or join together and clean-up a nearby trail, if you live along the ocean how about a shoreline cleanup. In previous years, the BC Timber Sales Okanagan Columbia & Okanagan Shuswap District offices cleaned up paths in their districts.