Community Sontact Manitoba Aboriginal and Northern Affairs

How Will Climate Change Affect Manitoba?

Climate change may mean changes in the way weather affects the environment in Manitoba. The results could include more severe floodwaters in some areas and more severe droughts in other areas of the province.

Fall 2011

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This Issue Welcome to the Fall 2011 Community Contact newsletter.

Welcome to our first edition of *Community Contact* since we stopped publishing during the recent provincial election as mandated by Manitoba's *Election Finances Act*.

In this issue we catch up on a recent development with the Northern Healthy Foods Initiative (NHFI). Small livestock production, including chickens, geese and turkeys, has seen increased interest over the past few years. This issue visits the Bayline Regional Roundtable to find out about a unique approach to producing local milk and cheese. The NHFI has received national and international exposure and recognition and has been acknowledged for its unique communitydriven approach to increasing food security in northern Manitoba.

We feature a pictorial visit to Bissett, a Manitoba community celebrating 100 years since the first gold claim was staked in the region. Historically high gold prices and local mine ownership have made Bissett a rising star. There is no doubt they have great community spirit in Bissett and know how to throw a party!

We also touch on climate change in this issue, looking at some potential effects and examining the need for local governments to develop adaptation strategies. The common picture emerging includes the need for doing a risk assessment and modifying emergency plans. Adapting to climate change is a subject we expect we'll have more to say about in the future.

This will be our final issue for 2011, so we at Manitoba Aboriginal and Northern Affairs, Local Government Development Division take this opportunity to wish all communities a safe and happy holiday season.

How Will Climate It could include significant econom

M anitoba's central location in North America and our northerly latitude means we will face earlier and more severe changes to our climate than many other parts of the world.

Predictions suggest that we will see warmer and wetter winters along with longer, warmer and drier summers. Precipitation is likely to vary more from year to year. Extreme weather events such as heat waves, droughts, floods and intense storms are projected to increase in frequency. These conditions will have dramatic impacts on our ecozones, our lifestyles and our health.

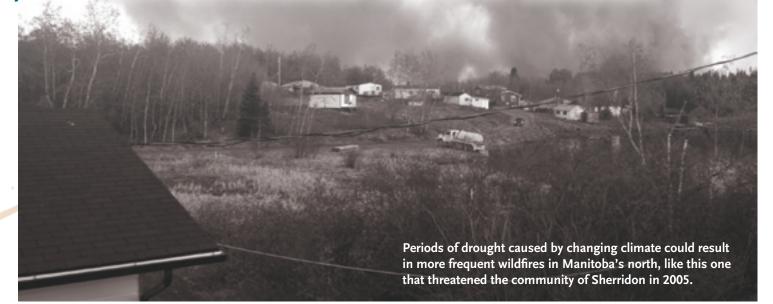
Human health and well-being

- While climate change is predicted to result in fewer deaths related to extreme cold events during the winter, warmer summer temperatures will likely increase the occurrence of heat-related illnesses such as heat exhaustion and heat stroke. Extreme weather events such as heat waves and floods can lead to higher incidences of sickness and loss of life.
- Increased wind erosion due to drought along with more frequent and intense forest fires would increase airborne particulates, exacerbating nasal, eye, throat and respiratory problems. Allergies and asthma may be aggravated by higher CO2 concentrations which can boost the production of ragweed.
- Drinking water supplies may become contaminated if heavy rainfall events and floods result in bacteria, sewage, fertilizers and other organic wastes being flushed into waterways and aquifers.
- Warmer weather could expand favourable habitats for disease and speed pathogen development rates. Mosquitoes, ticks and fleas may spread vector-borne illnesses such as West Nile and Lyme diseases to areas where they were not prevalent before.
- Increases in natural hazards and extreme weather events could lead to increased economic, health and social stress.

Northern communities

- In the north, warmer temperatures could enhance tourism opportunities and reduce operating costs. On the other hand, milder temperatures will shorten the winter road season that Northern communities depend on to transport food and other supplies. Moreover, runways and other infrastructure built on the permafrost are vulnerable to shifting because of melting permafrost from warmer temperatures.
- Sea-ice will likely change in extent, thickness and predictability. This could disrupt fish species, affect the length of the fishing season and put safety at risk for those who use the sea-ice as a hunting platform.
- The coastal zone along Hudson Bay is moderately sensitive to physical changes such as flooding, erosion, beach migration and coastal dune destabilization as a result of sea level rise. However, these effects would be lessened as the earth's crust continues to rebound from ancient glaciers in that region.
- Polar bears, seals and whales, which are significant tourist attractions and also contribute to the subsistence diets of many northerners, are particularly sensitive to climate change.

Change Affect Manitoba? ic, social and environmental effects for Canadians.



Manitoba wildlife: first to feel the heat

Over time, animal populations are capable of adapting to new conditions, but the current changes to our climate are happening too quickly for all wildlife to adjust.

Manitoba's north is a rich tapestry of animal life, including some of the world's most distinctive mammals, millions of migratory and resident birds, a vibrant ice-edge community, and some of the world's major fisheries. Even a small increase in average temperature could seriously affect these creatures.

- The health of polar bear populations is already declining due to earlier ice break-up on Hudson Bay. Because they have a shorter period on the ice, the bears have less opportunity to hunt their primary food source, seals, before their annual fast onshore.
- While seals may experience reduced predation, they will also be affected by habitat degradation or loss as a result of melting sea ice.
- Arctic cod eat phytoplankton. Reductions in the extent of sea ice could harm this food source, leaving the cod population without enough food. Phytoplankton also provides nutrition to narwhal and beluga whales. On the other hand, decreased ice cover could enhance primary production in open water and as a result, food supply might actually increase.
- Melting sea ice will open up marine shipping channels through the Arctic which would negatively impact marine ecosystems through increased noise and pollution.

Water

- In the winter, Manitoba will likely experience more flooding. This is because warmer temperatures would increase rainon-snow precipitation and the frequency of winter thaws.
- The risk of flooding in the spring is predicted to continue, while there also exists the possibility of greater flood risk with increasing climate variability.
- Summer river flows are expected to decrease as a result of the declining water supply from snowmelt and glacier runoff.

Forests

- While warmer temperatures, longer growing seasons, and higher CO2 concentrations could result in enhanced forest growth, these benefits could be offset by increases in the frequency and intensity of forest fires, insect outbreaks and extreme weather events.
- Our forest ecosystems will be affected as warmer temperatures are expected to gradually push the forest's ideal habitat northward. There are concerns that some species would be unable to keep up with the rate of climate change. Some limiting factors include soil conditions, methods of seed dispersal and habitat fragmentation.

Information provided in this article is from Manitoba Conservation web pages at www.gov.mb.ca/conservation/ climate/climate_effect.html and based on the Government of Canada report called *Climate Change Impacts and Adaptation: A Canadian Perspective*. The report may be found at http://adaptation.nrcan.gc.ca/perspective/index_e.php

Planning for Climate Chan

No single approach to climate change adaptation is appropriate for all communities. Each must contend with unique geography and specific climate-change issues. Legal systems, laws, institutions and cultural traditions differ by region. The resources a community can dedicate to adaptation planning also vary substantially. Large metropolitan areas may have many planners and policy-makers dedicating at least some of their time directly to adaptation-related issues, while smaller communities may not have any planners. Approaches should build on community land use and capital infrastructure plans. They should reflect the realities of the local situation.

The adaptation actions presently taken by communities across Canada are diverse. Most climate change adaptation actions are embedded in existing plans and strategies. In some communities, staff and community partners have developed plans, policies, regulations or programs specifically for climatechange adaptation. These plans may be single issue responses. They may also be wide-ranging, tackling numerous climate issues while including various departments and external organizations. Such planning can target private citizens, including home and business owners, or be focused on a community's internal operations and infrastructure.

Understanding vulnerability

Assessing vulnerability is integral to most adaptation planning processes. Vulnerability to climate change is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Understanding a community's climate vulnerability helps in establishing priorities.

Analysis starts with an assessment of a community's vulnerability to the current climate. This includes learning how climate events have affected the community in the past, how the community responded and how successful the response was. The next phase of analysis examines how climate risks are likely to change in future; these risks are informed by projections of future climate as well as social and economic conditions. Stakeholder input is critical at all stages of a vulnerability assessment.

If flooding becomes more frequent, people will need better and more permanent solutions than building emergency dikes to protect property like this home near Red Deer Lake north of Manitoba's Porcupine Provincial Forest.



ge Impacts

Milder winters with more mixed rain and snow storms could make travel conditions more treacherous and could contribute to increased frequency of flooding.



Managing risk

Adaptation can be seen simply as a way to manage the risks presented by a changing climate. Climate-related risks can be treated similarly to other risks (ex: financial, political, demographic and engineering) communities face. Many local government decision-makers are familiar with risk management, which is a practical and credible approach to selecting the best course of action in uncertain situations. Risk management helps decision-makers determine, understand, analyze and communicate about risks.

Vulnerability assessments are a common element of risk management approaches. They help identify and classify potential risks to local government policies, programs, infrastructure and other assets. The process for selecting a community's adaptation plans and measures may be formal or informal. The advantages of a formal approach include its ability to provide clear and structured rationales while accommodating uncertainties inherent in projections of future climate, social and economic conditions.

For every climate impact, a range of possible responses will vary in time, complexity and cost. Adaptation can often be integrated effectively into existing processes, policies and mechanisms. Rather than developing new plans and strategies, it may be logistically easier and more financially prudent for communities to build long-term climate factors into a wide array of municipal operations and services, including infrastructure decisions, capital plans, land use plans and disaster emergency management frameworks.

Information provided in this article was excerpted from: Richardson, G.R.A. (2010). *Adapting to Climate Change: An Introduction for Canadian Municipalities*. Ottawa, Ont. Natural Resources Canada, 40p.



Bissett Mark

This past August 12 to 14, current and former of the first gold claim staked in the area ar

Aerial view (centre) looking north over modern-day Bisset, Manitoba; (clockwise from above) celebrating 100 years; Gabrielle Gold Camp, Big Rice Lake, 1912; Bissett mine, circa 1957; volunteers decorating the hall in 2011; staff from Wynne Drilling refurbish the old Bissett United Church; celebrants enjoy Bostrom's delicious supper; the Bissett and Area Historical Society museum display at the local school; San Gold organized tours of the Cohiba mine; the big tent sponsored by Wynne Drilling was the family hub for entertainment and activity.





s 100 Years

residents of Bissett celebrated the centennial nd the subsequent birth of the community.











Dairy Goats on the Bayl

Northern Healthy Foods Initiative takes a fresh approach





Charlie and Cecelia in their stall.

(Left to right) Louise May of Aurora Farm, Valerie Parker of Bayline Regional Roundtable, Paul Chorney of Heifer Canada, Heather de Groot of Bayline Regional Roundtable.

Wabowden, Manitoba welcomed some new residents to the community recently. Ms. Louise May, owner and operator of Aurora Farm, located in St. Norbert Manitoba, just south of Winnipeg, delivered two adult female dairy goats to their new owner, the Bayline Regional Roundtable (BRRT), and one male goat to its new owner, local Northern Healthy Foods Initiative (NHFI) co-ordinator Heather de Groot. All three goats are making themselves at home in a Wabowden barn.

Heather de Groot, along with Valerie Parker, both BRRT staffers, have worked with Louise May since March 2011, learning how to take care of goats. Heifer Canada's Re-visioning the Manitoba Harvest Project supported the BRRT initiative. The Heifer Canada project helps develop local food systems and restore food traditions by providing living resources and training. The objective of raising goats in the north is to provide an opportunity to learn more about a reliable, affordable,

ine to dairy production.

calcium-rich source of milk and other dairy products. Goat milk has many benefits, among them, reducing the risk of anaemia and helping to prevent bone demineralization, diabetes, heart disease, irritable bowel syndrome and psoriasis.

Another excellent benefit of goat milk is that it is naturally homogenized. This makes it easier to digest than cow milk, which must be mechanically homogenized. This also makes it a good choice for newborns with breastfeeding problems or problems digesting cow milk. Goat milk is closer in composition to human milk than either cow milk or synthetic baby formula. It is a good option for babies with a cow milk allergy or intolerance. Supplements must be added to the goat's milk to meet infant nutritional needs, so always ask a doctor or other qualified infant nutrition professional before feeding it to your infant.

Goat milk, yogurt and cheese have become very popular over the past few years in North America because they are highly nutritional and great tasting. Other popular goat products include soaps, bath milks, lotions and fertilizers. Workshops themed around goats and goat products were held in Wabowden during the weekend the goats arrived.

Another part of the goat project will include a breeding program. This will provide more dairy goats, and will keep the existing dairy goats producing milk. Wabowden will be distributing goats to community members who wish to learn how to be producers. The first set of new dairy goats is anticipated to be ready for their new

homes in fall, 2012. If you are interested in raising goats please contact the Bayline Regional Roundtable office at 204-689-2362 extension #4, for more information.

BRRT thanks Heifer Canada, the Northern Healthy Foods Initiative and the private citizens who have contributed material donations and made this project possible. Caroline Sanoffsky, Donna Chubb, Cindy Jonasson and Louise May make a batch of riccotta at a cheese-making workshop in Wabowden.

Schools Turn to Veggies Instead of Sweets

n recent years, school fundraising programs selling chocolate bars have grown less and less popular. Instead, Manitoba schools have been replacing candy using healthier choices like carrots and potatoes.

Last year, a program called Farm to School – Manitoba Healthy Choice Fundraiser was launched to promote a new trend in school fundraising. The Manitoba government, Peak of the Market and the Manitoba Association of Home Economists formed a partnership to make the program possible. Their collaboration is helping to bring local food choices to families across the province. They are supported by a program advisory committee that includes The Manitoba Association of Parent Councils, Food Matters Manitoba and The Child Nutrition Council of Manitoba. All of the organizations are committed to providing healthy, local options to schools.

The Farm to School – Manitoba Healthy Choice Fundraiser works by enlisting student volunteers to pre-sell bundles of Manitoba grown vegetables. The vegetables are then delivered to the schools with recyclable shopping bags where volunteers sort and bag standard-order bundles.



The \$10 bundle includes:

- 3 lb. Carrots
- 3 lb. Yellow Cooking Onions
- 5 lb. Red Potatoes

The \$20 bundle includes:

- 5 lb. Carrots
- I lb. Parsnips
- 3 lb. Yellow Cooking Onions
- 10 lb. Red Potatoes
- 1 Head Green Cabbage

The schools keep half the suggested selling price, making it an extremely effective fundraiser. The fundraiser is made available to all Manitoba schools, no matter where they are located. Peak of the Market covers all costs of delivering the vegetables to each school. Even though the cost to transport the vegetables is higher in the north, it is particularly noteworthy that the fundraiser does not exclude northern Manitoba schools — the price is the same and so is the fundraising potential.

Unlike some other fundraisers, the Farm to School — Manitoba Healthy Choice Fundraiser is providing a variety of spinoff benefits to children, schools and communities. Besides supporting Manitoba's school nutrition policies, it promotes healthy food choices, provides fresh vegetables at or below supermarket prices and supports Manitoba farmers. It also promotes physical, emotional and social health in school communities, while acknowledging that good health is important for learning.

Chronic disease and diet-related illnesses like diabetes, cancer and heart disease are at all-time highs in North America. It is important for people everywhere to understand that our food choices can directly affect our health. It is essential that we work together to empower our communities to make healthier food choices.

If you're interested in this fundraising idea for your local school, visit www.farmtoschoolmanitoba.ca or call 1-866-261-0707. Just a reminder, the 2011 Farm to School — Manitoba Healthy Choice Fundraiser will accept orders only until December 14, 2011. Happy Fundraising!

Community Nominated Service Awards of Excellence

Manitoba Aboriginal and Northern Affairs recognizes community councils, community council employees and community residents for their commitment to improve the lives of community residents. Each year, the department asks community members to nominate individuals in the community who make significant contributions.

Nominations are open from February 1 to March 31, 2012

Eligible categories for award nomination:

- council members
- community administrative officers
- assistant community administrative officer
- public works employees, including water and waste workers
- recreation directors
- constables
- EMO members
- fire departments (chief, deputy and fire fighters)
- volunteers

Here are examples of attributes considered in reviewing nominations:

- contributes significantly to community achievement
- voluntarily introduces ideas that improve efficiency or productivity
- participates actively in community development
- continually exceeds expectations
- demonstrates and encourages continuous improvement
- promotes and demonstrates effective use of maintenance systems
- illustrates excellence in job performance
- participates in activities outside of normal job functions to promote a healthy living environment for residents
- shows excellence in terms of time volunteered to improve the quality of community life
- promotes human welfare or social reform

More information, including nomination forms will be available to communities as the date for nominations draws closer. Take the time to nominate a deserving individual!





Jaime Bertrand

In April 2011, Dauphin resident Jaime Bertrand joined Manitoba Aboriginal and Northern Affairs (ANA) as a technical consultant. Formerly employed with Manitoba Infrastructure and Transportation, Jaime brings to the job her experience as an office manager with a background in finance as well as workplace health and safety. She also brings with her a familiarity with the communities served by the staff of the ANA North Central Region office.



Devin Shtykalo

In September 2011, Devin Shtykalo joined ANA in Dauphin as a community economic development consultant for the North Central Region. Devin has a bachelor of arts in geography and planning, and is working toward an MBA degree. A Manitoba employee since 2007, he most recently worked as a GIS specialist with Manitoba Local Government. He is currently a director on the Dauphin Economic Development and Tourism Board.

Municipal Calendar Monthly Reminder for December 2011 and January 2012

December 2011

- Deadline for receipt of any property tax payments to dept to avoid penalties.
- 7 Send out tenders for 2011/12 financial audit contracts.
- 8 **MMS** Inspect heat trace & recirculation pumps for operation.
- 9 Deadline for application to the Community Wellness & Recreation Fund.
- 15 Deadline for receipt of payment to Receiver General to avoid penalty.
- 15 Deadline for receipt of CPP applications to MB HLYS regional office.

25 CHRISTMAS DAY

26 BOXING DAY

Community:

- Annual physical inventory count must be completed prior to 2012.
- Submit bi-weekly water samples and monthly sewer sample.
- Order T4 forms.

- Initiate pre-planning for capital projects that will be applied for at next year's Capital Approval Board (ex: cost-sharing possibilities).
- Council should continue to review and revise their Community Management Plan, due January 31.
- Submit MEBP form and payment **immediately** after the last pay period.
- If applicable, submit bi-weekly payrolls for the Building Independence Program to regional office.

WSH Reminders:

- Council to ensure fire extinguishers and first aid kits inspected.
- Council to act on items highlighted as corrective action from inspections.
- Does your bulletin board include: WSH policy, Harassment policy, Violence policy, Working Alone Plan, names of first aiders and WSH representatives (employee and management)?
- Are first aid kits available in every building?
- Is your Community Prevention Plan updated?

January 2012

1 NEW YEAR'S DAY

- 1 Prepare new TD 1 forms.
- 1 Deadline for receipt of any property tax payments to dept to avoid penalties.
- 2 Update tax tables in Simply Accounting.
- 2 Submit quarterly GST refund.
- 15 Deadline for receipt of payment to Receiver General to avoid penalty.
- 30 Submit third-quarter financial statements (Oct. to Dec.) and quarterly payroll report MEBP.
- 31 Submit Community Management Plan (includes budget) and minutes of public meeting.
- 31 Submit contract to department for financial auditor selection.

Event:

Jan. 9 and 10: Manitoba Water & Wastewater Annual Conference in Brandon

Community:

- Submit bi-weekly water samples and monthly sewer sample.
- Request technical assistance for capital project applications prior to March 31.

- Submit MEBP form and payment no later than seven working days after the last pay period.
- If applicable, submit bi-weekly payrolls for the Building Independence Program to regional office.

WSH Reminders:

- Council to ensure fire extinguishers and first aid kits inspected.
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- Does your bulletin board include: WSH policy, Harassment policy, Violence policy, Working Alone Plan, names of first aiders and WSH representatives (employee and management)?
- Are first aid kits available in every building?
- Is your Community Prevention Plan updated?

Departmental:

- Regional office will conduct an MCA review between January 1 and May 31.
- Final assessment roll sent at month-end.
- Submit MEBP Annual Report by January 15.



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Community council members, community residents and department staff are encouraged to submit comments, questions, suggestions, article ideas and photographs to the editor.