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Manitoba Model Forest E-News



The Manitoba Model Forest Inc. is a not-for-profit, non-government organization located in the Province of Manitoba, Canada. Our organization represents a diverse partnership of those with a vested interest in the wise management of natural resources and the sustainability of rural communities in forested regions of Manitoba. The Manitoba Model Forest assists these communities in developing the tools, approaches and strategies that they need to respond to the new challenges facing Canada's forest sector. *Learn more about us at <http://www.manitobamodelforest.net>.*

NATURAL RESOURCES EDUCATION A PRIORITY

Over the last decade, the Manitoba Model Forest (MBMF) has worked tirelessly to develop and promote education and outreach mechanisms to inform and explore the complexities of natural resource management with students, educators and the public at large. This has taken on numerous forms, including the development of natural resource focused curriculum supplements for middle years and high school, in-class presentations, and single day and week long field trips and outdoor programs in the boreal forest.

The standard curricula and textbooks used in schools tend to treat the topic of natural resources very broadly (for example, focused at a national level). Rarely do these include examples from our own province, and it is rare to find any mention of the management of natural resources such as wildlife. The MBMF curriculum supplements, which are widely used not only across Manitoba but also in other provinces, provide Manitoba-based examples on topics ranging from wildlife and species at risk management (e.g., moose, woodland caribou), boreal forest ecology and forest management, to glaciation and the use of glacial deposits (aggregates) in construction and building. The Manitoba focus provides teachers and students with local examples that they can easily identify with.

LEARNING BY DOING

One of the best ways for both educators and students to learn about the environment and natural resource management is through hands-on experience.



Students learn how to track radio-collared woodland caribou by telemetry with the help of caribou biologist Dennis Brannen at the KEY to the Forest program.



Teachers enjoy the view on a boreal forest ecology hike at Hiking on Ancient Mountains Trail in Nopiming Provincial Park at the Summer Institute for Teachers program.

For educators of all grade levels, the MBMF has developed and run our Summer Institute for Teachers program, which has been held in Nopiming Provincial Park for the last 8 years. This professional development program walks teachers through the MBMF curriculum supplements and their ready-made lesson plans. Topics covered at the Summer Institute include wildlife management (including the role of hunting and fishing in management), forest ecology and forest management, water quality, geology and mining and GPS and navigation in the forest. The theory is complemented with hands-on activities in the forest including wildlife research (e.g., telemetry tracking of wolves, moose and caribou, use of trail cameras, track and scat surveys), setting up and monitoring forest health research plots, and fisheries surveys and water quality testing. Of course there is also plenty of time for canoeing, swimming, fishing and relaxing around a campfire each night. Almost 70 educators have participated in the Summer Institute for Teachers. The MBMF hopes to run the program again in July 2017 (pending confirmation of funding).

For high school students with a passion for environmental sciences and a desire to explore career options in natural resource management, the MBMF developed the KEY (Knowledge, Environment, Youth) to the Forest Program. The program (usually 7 to 10 days in length) has been run for the past 3 years and, just like the Summer Institute for Teachers, is held in Nopiming Provincial Park. Students from grades 10 to 12 learn about the science and art of managing natural resources such as wildlife, fisheries, water quality, forests and minerals through presentations each morning. The remainder of each day is spent conducting environmental monitoring projects in the field. This includes tracking wildlife (moose, woodland caribou and wolves) that have been previously fitted with GPS collars, learning to identify wildlife tracks and scat, using trail cameras to investigate habitat use by various wildlife species, conducting fisheries surveys using gill nets and beach seine nets, conducting water quality assessments on lakes and rivers, monitoring forest health, and how to not get lost in the forest (i.e., map reading, and navigating with compass and GPS). Each evening, the students review and interpret the field data that they collected earlier in the day. Evenings are also a time for campfires, swimming, fishing and relaxing. The KEY to the Forest program provides a valuable mechanism to re-connect our youth to their natural environment. This has taken on even greater importance in a world where our children's life experiences are being lived out on-line, in a more virtual environment and where other demands on our youth compete with "nature time". Unfortunately, the MBMF has found it increasingly difficult to recruit high school students to the KEY to the Forest program due to the desire for most students to hold summer jobs. The days of "summer holidays" from school, where kids used to spend their time riding bikes, hanging out with their friends, playing in puddles or exploring the environment around them has been replaced with the need to be employed. Despite these challenges, students who have participated in the KEY to the Forest program have said that it was an extremely worthwhile and rewarding experience and opened their eyes to career paths.

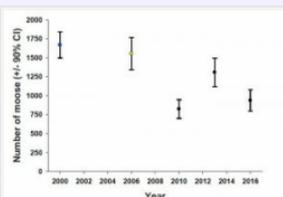
Both the Summer Institute for Teachers and the KEY to the Forest programs would not be possible without the support and participation of other agencies and groups. For example, Manitoba Sustainable Development has provided the use of their cabins at Shoe Lake in Nopiming Provincial Park as an in-kind contribution to the programs. In addition, wildlife and fisheries staff, as well as Natural Resource Officers have come out and provided presentations and participated in some of the field work. Financial support is also crucial, and in 2016 this was provided by grants from the Manitoba Wildlife Enhancement Fund and the Hunters and Anglers Preservation Fund of the Manitoba Lodges and Outfitters Association. We are grateful for this support.

Education and outreach regarding Manitoba's natural resources and their wise management remains a cornerstone and one of our strongest programs in our 25-year history as an organization. In the last 7 years, we have engaged over 4500 students and teachers through in-class presentations and our outdoor programs. We are helping to build a society that is knowledgeable and values our natural resources and the role that wise management plays in ensuring a sustainable environment and economy for the future.

MOOSE POPULATION IN EASTERN MANITOBA STILL NEEDS HELP

The moose population in Game Hunting Area (GHA 26) of eastern Manitoba has been in serious decline over the last decade. The Committee for Cooperative Moose Management (CCMM), a committee of the MBMF, has been busy working with government, communities and stakeholders in the region to reverse this population trend. Management actions which were initiated in 2010, including a complete closure to hunting in the GHA by licensed hunters and a closure to hunting for Indigenous peoples in strategic parts of the GHA, as well as road and access decommissioning and other actions appear to have stopped the decline. However, the most recent aerial survey (in January 2016) indicates that there is still more work to be done. Despite this, there is reason for optimism.

There are a number of trends that point to a moose population that is on the mend. Firstly, the 2013 and 2016 survey results clearly indicate that the moose population has not dropped below its recent low of 823 moose in the year 2010. In addition, the 2016 calf to cow ratio of 44 calves to 100 cows indicates that recruitment (the survival of calves in their first year of life) is sufficient to permit the moose population to grow. This ratio has been steadily improving since 2010. Similarly, the ratio of bulls to cows in 2016 (59 bulls per 100 cows), is more than sufficient to ensure that all cows of reproductive age are bred.



Moose population trend in Game Hunting Area 26. Vertical bars on the graph are the 90% confidence intervals of the population estimate for each year.



Bull moose observed during aerial survey. (Photo credit: Daniel Dupont)

The CCMM is in the final stages of completing a comprehensive report on the status of the moose population in GHA 26 (including what is known about the factors affecting the moose population, such as hunting, predation, disease, etc.). As part of the status report, the CCMM will also be submitting an extensive list of recommendations to the provincial government that the committee would like to see implemented in order to continue to assist in the recovery of the moose population. The report and its associated recommendations will be available later this spring.

The recommendations provide a clear framework for how the CCMM and its member communities and organizations can work together to create a brighter future for the moose population in GHA 26. What is less clear is the future of the CCMM itself. For more than 20 years, the operations of the CCMM has been financially supported largely by the MBMF and occasionally through funding provided by the provincial government and other partners. Dwindling (and since 2014, completely absent) base funding to the MBMF has put the future of this

valuable multi-stakeholder committee in jeopardy. The MBMF will continue to explore avenues to keep the committee going. With a priority of the current provincial government on moose sustainability and the co-management of wildlife resources between government, Indigenous peoples and hunters in Manitoba, we hope that the CCMM can continue play an important and integral role, and that the provincial government will financially support this role.



MBMF PROMOTES CAREERS IN THE FOREST PRODUCTS SECTOR

The MBMF just completed a nation-wide project with the Canadian Model Forest Network and the Forest Products Association of Canada (FPAC) to promote careers in the forest products sector. In addition to the MBMF, model forest organizations in Newfoundland and Labrador, New Brunswick, Ontario and Saskatchewan participated in the project. The project included presentations on several aspects of the industry, including environmental sustainability, forest certification, reductions in greenhouse gases and the production of green energy, innovation in forest products (e.g., cross laminated timber, bio-fuels and other bio-products from wood waste, etc.) and of course, the diverse career opportunities in the sector.



Brian Kotak (MBMF General Manager) and Bob Austman (MBMF Education Coordinator) attend career fair open house at Manitoba Institute of Trades and Technology.



The Greenest Workforce website, a wealth of information on careers in the forest products sector, and the Job Match Tool.

As part of the presentations and engagement process, a new Job Match Tool, which was developed by FPAC and which is found on thegreenestworkforce.ca

website, was showcased to participants. The Job Match Tool provides a one-stop location for job opportunities across Canada in the forest products sector, provides a mechanism for forest sector employers to advertise their employment opportunities, and allows job seekers to create a profile on-line and instantly get matched to current (and future) job postings, which meet their career aspirations and criteria. The Job

Match Tool is a relatively new addition to thegreenestworkforce.ca website, which also showcases an incredible amount of information about the industry and career paths.

Over the course of the 6-month outreach project, the participating model forest organizations of the Canadian Model Forest Network gave presentations to and engaged more than 1800 students (high school, university, college, skilled trades), career counsellors and forest product industry employers.

Below are some interesting facts about Canadian forests and the Canadian forest products industry that many people may not be aware of:

CANADA'S FORESTS – MUCH TO BE PROUD OF

- Canada has 10% of the world's forests and 30% of the world's boreal forest
- Canada still has most of its original forests and has the highest amount of protected forest in the world
- There is no illegal logging in Canada
- Only a fraction of 1% of forests in Canada are harvested annually. This is much less than the amount lost to fires, insects and disease each year.
- Canada has the most advanced, science-based and strict forest management regulations
- All forest areas that are harvested, are reforested back to the original tree species

CANADA'S FOREST INDUSTRY – THE GREEN ECONOMY

- Has eliminated the use of coal and has reduced its use of oil by 90%
- Has reduced its greenhouse gas (GHG) emissions by 70% below 1990 levels
- Will be carbon neutral in the next few years (the only industry in the world)
- Generates enough green energy to power the City of Calgary each year
- Provides high paying jobs to more than 235,000 Canadians, in over 650 communities
- Generates more than \$58 billion in economic activity for Canada
- Is a global exporter to more than 180 countries
- **The Canadian Forest Products Industry is looking to hire 60,000 skilled workers by the year 2020!**

THE FOREST INDUSTRY: MORE THAN LUMBER AND PAPER

The forest products industry has undergone a dramatic evolution over the last 10 years. While traditional wood products such as lumber and flooring will always be needed, you would be surprised to know just how many products you use on a daily basis contain materials from trees!

Bio-chemicals and bio-materials used in:

- Automotive components (e.g., dashboards)
- Ultra high definition (4K) TVs
- Cosmetics
- Solvents

3-D Printing

Gasoline, diesel and aviation fuel derived from wood waste

MBMF AND HYDRO TEAM UP TO HOST INDIGENOUS YOUTH CAMP

In 2016, Manitoba Hydro approached the MBMF with the idea of developing a pilot program for an outdoor environmental camp for Indigenous youth. The camp had four objectives:

1. To provide an opportunity for youth to learn about trapping and traditional plant use and identification
2. To educate youth on safety around power lines and MH career opportunities
3. To provide knowledge transfer of trapping and traditional practices through participation of Elders
4. To educate and train youth on environmental monitoring activities

The week long Fur, Feathers, Fins and Transmission Line Camp was held in late August 2016 with 8 youth attending from Swan Lake First Nation, Dakota Tipi First Nation, Roseau River First Nation and the Manitoba Metis Federation. The camp was held at the Sandilands Forest Discovery Centre, located near Hadashville, MB. The MBMFs role in the program was to develop and deliver the training program for Manitoba Hydro and to be on-site 24/7 during the camp.



Youth, Elders, MBMF staff and Manitoba Hydro personnel at the youth camp at Sandilands Forest Discovery Centre.

Over the course of the 5-day program, the youth participated in a number of activities. These included:

- Taking the provincial trapper education course and learning how to skin a muskrat
- Learning about the importance of cultural practices from Elders
- Archery
- GPS navigation and geo-caching
- Wilderness survival
- Environmental monitoring (including wildlife and plants) and safety along hydro transmission lines
- Swimming and fishing at Falcon Lake
- Forest health monitoring
- Careers at Manitoba Hydro



Youth learn archery skills with the help of the Archers and Bowhunters Association of Manitoba.

Plenty of time was also provided to relaxing in this boreal forest setting. Favourite past-times were blueberry picking, playing hide and seek, and catching frogs and snakes.

In addition to the above, all were entertained by Ray "Coco" Stevenson (a member of the music band Eagle and Hawk), through his talents of drumming and singing. A traditional feast was also held and the program ended with an official graduation ceremony. Judging by the comments received from the youth on their evaluation forms at the end of the program, all enjoyed the experience and learned a lot. For many, it was their first time away from home. Many new friends were made over the short time they were together. Manitoba Hydro and the MBMF are currently evaluating the potential for hosting one or more similar camps in 2017.



CANADIAN MODEL FOREST NETWORK ANNOUNCES ITS DISSOLUTION

It is with a heavy sense of sadness that the board of the Canadian Model Forest Network (CMFN) passed a motion to dissolve the organisation.

There have been many strategic efforts pursued in the last few years to keep the Canadian Model Forest Network functioning, but due to the absence of core funding, project funding, the inability of member organisations to contribute financially and the weight of on-going costs, a decision was made to dissolve the Canadian Model Forest Network, a not-for-profit organisation. The dissolution will occur during the summer of 2017.

The Canadian Model Forest Network as an organization was born out of Canada's Model Forest program. The Model Forest approach was first developed and implemented by the Government of Canada in the early 1990s in 10 sites across the country. It was a response to a period of intense conflict in Canada's forest sector at a time when environmentalists, governments, indigenous peoples, communities and forest workers were struggling over forest resources and how to manage them in a sustainable manner. The approach showed immediate promise as people came to the table to find common solutions to the issues they faced, including logging practices, biodiversity conservation and economic stability among others.

The development of an International Model Forest Network was launched in 1992 and continues to grow into a global network aimed at sharing knowledge and implementing a participatory, landscape-level approach to the sustainable management of natural resources.

Governed by a unique partnership of local stakeholders, and concentrated on issues and challenges within a landscape, the member Model Forests of the Canadian Model Forest Network strived toward a common goal of developing and sharing innovative solutions for managing Canada's forests in a sustainable manner.

The CMFN and its members are proud of their many successes and achievements. For example, the document ***Pathways to Climate Change Resilience – a Guidebook for Canadian Forest-based Communities***, released in 2011, provides a process for communities and municipalities to conduct climate change risk and vulnerability assessments, identifies actions that can be taken to reduce existing risks, and incorporates climate change mitigation into planning, including climate resilient and green infrastructure. This guidebook has been piloted successfully in two Indigenous communities in Canadian Model Forest areas, as well as in the city of Revelstoke, B.C. and in the Vilhelmina Model Forest, Sweden.

The Canadian Model Forest Network facilitated discussions among governments and stakeholders, including Indigenous communities, around species at risk and the development of recovery strategies and management plans. Over the years, the Canadian Model Forest Network also provided support for growth in the Forest Products Sector, and promoted Indigenous youth career training in the natural resources sectors.

"It is important to note that the seven current Model Forests, located in the provinces of Newfoundland and Labrador, New Brunswick, Québec, Ontario, Manitoba, Saskatchewan and Alberta, representing 12,418,075 hectares, will continue to work together as an informal network and as members of the International Model Forest Network, sharing best practices and experiences in areas of mutual interests such as climate change resilience and landscape restoration", said Dr. Brian G. Kotak, General Manager of the Canadian Model Forest Network



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