

An aerial photograph of a vast, dense evergreen forest. The trees are tightly packed, creating a textured green surface. A yellow callout box with a torn bottom edge is positioned in the upper-middle section of the image. The text inside the box is white and reads: "IMAGINE 2.75 MILLION HECTARES." The overall scene is a lush, green expanse of forest stretching towards the horizon.

IMAGINE
2.75 MILLION
HECTARES.

FOOTHILLS MODEL FOREST ANNUAL REPORT 2004/2005



**“THERE WAS NO MAGIC
AND NO MIRACLE – ONLY THE
REALIZATION THAT PRACTICAL
AND SUSTAINED STEPS WERE
NEEDED TO ADDRESS MANY
OF THE WORLD’S MOST
PRESSING PROBLEMS”**

UNITED NATIONS PRESS RELEASE
JOHANNESBURG SUMMIT
SEPTEMBER 25, 2002.



**THIS IS THE STORY OF STEPS
WE’VE TAKEN IN 2004/2005.**



IMAGINE
A PLACE
WHERE
RESEARCH
GROWS INTO
PRACTICE.

**“SUSTAINABLE DEVELOPMENT IS
DEVELOPMENT THAT MEETS THE NEEDS
OF THE PRESENT WITHOUT COMPROMISING
THE ABILITY OF FUTURE GENERATIONS TO
MEET THEIR OWN NEEDS.”**

BRUNDTLAND REPORT, 1987.



Since 1992 the story remains unchanged.

Bring together partners with an interest in the land and its many values.

Identify practical land and forest management questions. Commit resources to find answers and develop solutions through credible, peer-reviewed research and development.

Engage the public and policy-makers to ensure land management decisions that result from our research are based on sound science and are understood, supported and reasonable to implement.

Work with foresters, biologists, GIS specialists, park wardens, planners, Aboriginal communities and oil and gas companies to better ensure knowledge and tools arising from the model forest research are reflected in improved on-the-ground practice.

This is our approach. This is what we've done for 13 years. These are stories of our contributions to sustainable development and a sustainable environment.

PRESIDENT'S MESSAGE

When reviewing Foothills Model Forest's 2004/2005 activities, our successes of the past and demands for the future, it is easy to be excited about what lies ahead.

Our Local Level Indicators Program, our Hardisty Creek Restoration Project and our Natural Disturbance Program are a few examples of our ability to work within international, national and provincial sustainability strategies and frameworks.

Alberta and Canada face ever-increasing demands on their forests and activities in the boreal forest are debated on a national and international stage. In the midst of this, Foothills Model Forest has an increasingly important role to play in ensuring that management of our forest and its resources are based on good science. As we look towards the future we will remain focused on those things that have ensured our past and present success.



REMAINING RELEVANT

Ongoing and effective identification of partners' needs, application of pertinent research and delivery of effective tools will remain the cornerstones of our success. Examples of our relevance include an expanding Aboriginal Involvement Program which is training Aboriginal people to conduct Traditional Cultural Studies. Coupling Traditional Cultural Studies with the development of a referral process better allows government and industry managers to ensure the respect of Aboriginal interests on the land. This Program and process provides Aboriginal communities with some comfort that their land-based values and special sites will be discussed before development occurs.

Our administrative and logistical facilitation of newly formed organizations such as the Caribou Landscape Management Association and the Foothills Stream Crossing Program are excellent examples of data management and extension services that allow diverse groups to address land and resource management issues in a collaborative and integrated manner. Our fall strategy session will explore many other resource management gaps and needs that the Foothills Model Forest is well poised to address.

Since assuming the role of President in 2005 and gaining a greater understanding of the needs of sustainable forest land managers in the future, I grow ever more committed to the vibrancy and success of Foothills Model Forest into the future.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jim LeLacheur'. The signature is fluid and cursive, written over a light-colored background.

Jim LeLacheur
President

EFFECTIVE GOVERNANCE AND PARTNERSHIPS

Our organization is built on robust and transparent governance. Our partnerships are based on transparency and interdependency.

A FORWARD-LOOKING ORGANIZATION

We continually review and adjust our organization and programs to align with emerging issues and challenges of our stakeholders and funding agencies. In the fall of 2005, we will be conducting a strategic review with our partners and stakeholders. The goal of this review is continued success and growth of our organization, its utility to our stakeholders, and our ongoing relationship with the Canadian Model Forest Network.

RESEARCH THAT DOES NOT SIT ON SHELVES

Our research is applied beyond the Foothills Model Forest land base. Models of extension well beyond our borders include:

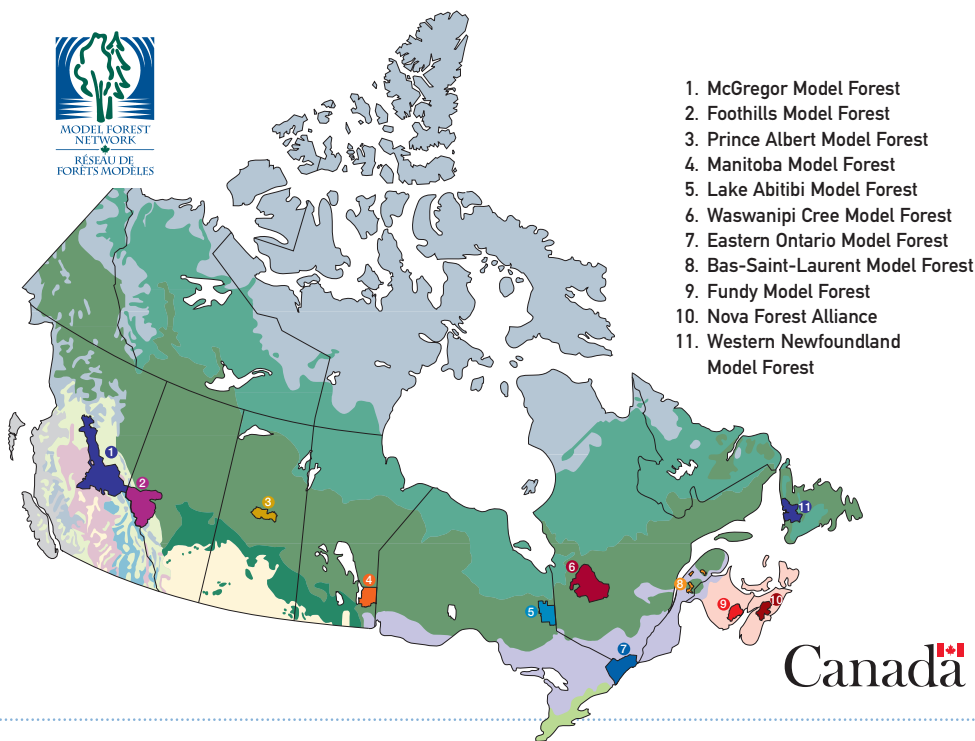
- The Grizzly Bear Research Program's development of resource selection function tools for industry and government managers.
- The Natural Disturbance Program's development of its short course that involves content experts and research from across Canada.

Our extension efforts will only increase. This Annual Report provides additional examples of knowledge transfer activities.

A GROWING INTERNATIONAL ENVIRONMENTAL CONSCIOUSNESS

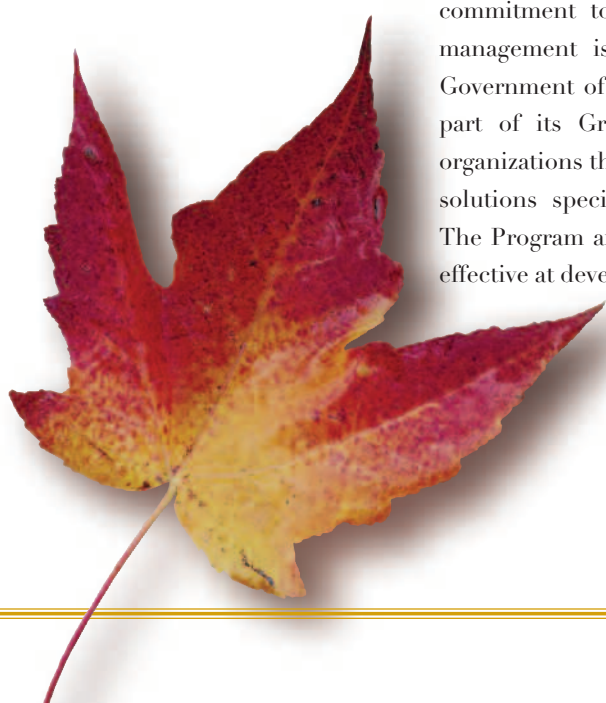
In the late 1980s and early 1990s the need for sustainable development and a sustainable environment gained international profile through the *Brundtland Report* (1987) and the *United Nations Earth Summit* (1992). These landmark events pointed to strategies and frameworks necessary to achieve sustainable economies, ecosystems and societies. Many eminent thinkers helped to develop these strategies, but the hard work had just begun – Realizing the goals of sustainable development and a sustainable environment requires substantial commitment and action at ground level.

CANADIAN MODEL FOREST NETWORK



CANADA'S EFFORTS

A notable program that demonstrates Canada's commitment to the advancement of sustainable forest management is Canada's Model Forest Program. The Government of Canada initiated the Program in 1992 as part of its Green Plan. Model forests are grassroots organizations that develop sustainable forest management solutions specific to local environments and cultures. The Program and its approach are highly successful and effective at developing local solutions to global challenges.



CRITERIA AND INDICATORS FOR SUSTAINABLE FOREST MANAGEMENT

A significant accomplishment of Canada's Model Forest Program is its ongoing commitment to the development, monitoring and reporting of local level indicators. Many international and national sustainable forest management agreements endorse the concept that sustainable forest management requires scientifically based goals and measures to track progress. Identifying these measurements, referred to as indicators, and collecting data to monitor indicators over time requires a sustained and collaborative effort at a local level where management happens. Canada's Model Forest Program has provided this vital connection to on-the-ground activities, along with the infrastructure, expertise and manpower to sustain these critical efforts. Through the Program, 11 Canadian model forests, totalling 19.8 million hectares, track and report on how their respective jurisdictions, are managed over time.

The Canadian Model Forest Network is committed to other programs and tools that support and improve forest management in Canada. In 2004/2005 two new tools were introduced:

- www.modelforest.net
The Canadian Model Forest Network launched a new website. The website provides one window for knowledge and tools produced by Canada's 11 model forests. It highlights many advances and is tangible evidence of the Network's commitment to knowledge transfer of its research and development.
- Carbon Accounting Model
Under the Kyoto Protocol, Canada is required to account for changes in forest carbon stocks resulting from afforestation, reforestation and deforestation activities since 1990. To assist in this, the Canadian Forest Service, with the Canadian Model Forest Network, has developed a model that helps forest managers and analysts determine the amount of carbon stored in the nation's forests, as well as the impact of forest management on current and future carbon stocks.

Water:

**IMAGINE
WATER
FOR LIFE.**



RESEARCH GROWING INTO PRACTICE

Fish and Watersheds

In November 2003, the Province of Alberta released its water conservation strategy named, *Water for Life: Alberta's Strategy for Sustainability*. This strategy focuses actions and directions around:

- Knowledge and research
- Partnerships
- Water conservation

The strategy states that the long-term conservation of Alberta's water requires action and collaboration by many partners at regional, or more appropriately, the watershed level. The document emphasizes that citizens, communities, industries and governments alike require knowledge and tools to make good decisions.

The Foothills Model Forest Fish and Watershed Program and its many partners are taking critical steps, supportive of the *Water for Life Strategy*, to ensure the watersheds along the northeast slopes of Alberta's foothills and Rocky Mountains are managed in a responsible and sustainable manner. Using years of research and development, the Fish and Watershed Program is working with industry, governments, local citizens and a grassroots environmental organization to advance the way the area's water is managed. Two projects highlight the efforts and achievements of this Program.

Water for Life

"Therefore, citizens, communities, industries and governments all share responsibility for the wise use and sustainability of their watersheds..."

Because the people who are immediately affected by specific water issues can also more directly and effectively find solutions to address them the focus of *Water for Life* is to adopt a watershed approach to management. This allows focus to be placed on a geographic region." – Alberta's *Water for Life Strategy*

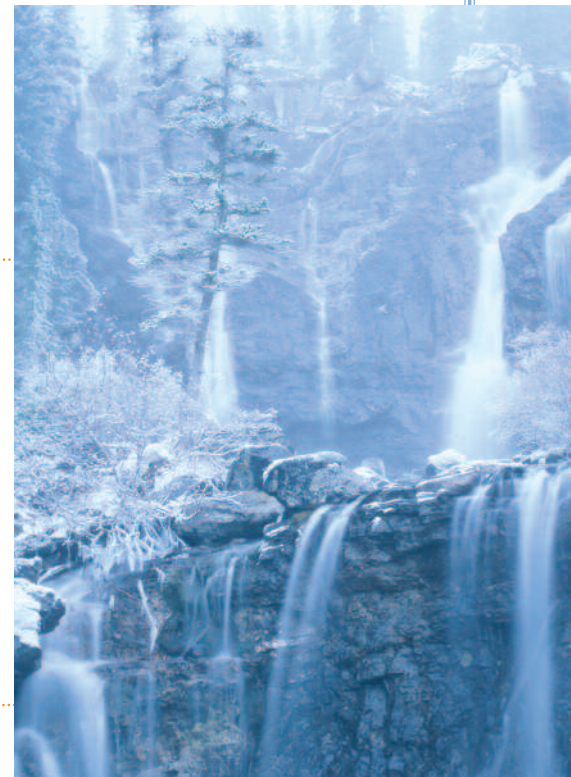


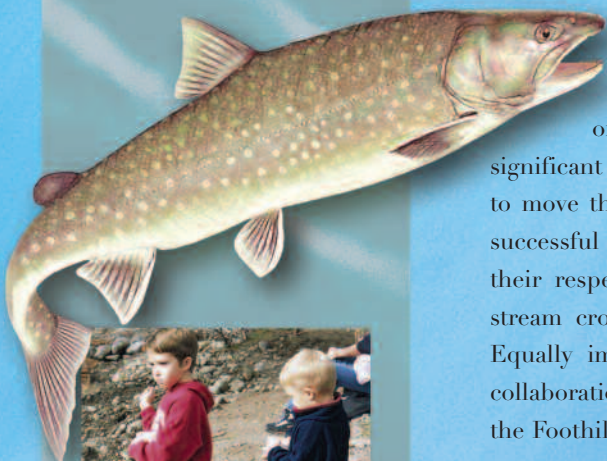
Photo credit: Lee Simmons

Advancing sustainable forest and land management involves communicating with and building understanding about knowledge and research among citizens, industry, government and other stakeholders. The Hardisty Creek Restoration Project partners include the Alberta Conservation Association, Alberta EcoTrust Foundation, Alberta Sustainable Resource Development, Alberta Transportation, Athabasca Bioregional Society, Canadian National Railway, Cows and Fish Program, Department of Fisheries and Oceans, Hinton Fish and Game Association, Town of Hinton, UNESCO's Wonder of Water Initiative and West Fraser Mills Ltd.

The Project involves the residents of Hinton in restoration efforts. This involvement raises the residents' commitment to the Project and ultimately the long-term health of Hardisty Creek and watershed.

"I thought it was important for kids to realize how important our creeks are... It's right here in our backyard and it's important that we take care of it"

Kim Duffe, resident of Hinton, participating in Hardisty Creek Restoration Celebration



THE HARDISTY CREEK RESTORATION PROJECT

Initiated in 2002/2003 by the Athabasca Bioregional Society, the momentum of Hardisty Creek Restoration Project continues to build. The goals of the Hardisty Creek Restoration Project are to:

1. Restore fish habitat;
2. Extend fish connectivity by repairing stream crossings;
3. Educate the citizens of Hinton and area to be more aware of their relationship to water and the greater ecosystem.

The Project has many technical milestones; perhaps most important are repairs at two of the seven crossings within the Hardisty Creek watershed. The maintenance and repair of stream crossings is a challenge throughout the developed world. In the past, road and stream crossing construction placed relatively little emphasis on fish passage and connectivity of fish habitat. However, as knowledge advances and the values of society change, new crossings must preserve and protect these values. Along with this come increased efforts to fix existing stream crossings so they provide movement corridors for fish, as well as ensure safety for travel.

The Hardisty Creek Restoration Project Area is symbolic of the challenges in many watersheds. Within this 30-square kilometre watershed there are seven crossings owned by four different companies and government agencies – all partners in the project. In 2003 Canadian National Railway repaired its culvert which was originally installed in 1927 and over time became a barrier to fish passage. In 2004 repairs were initiated at one of the three crossings owned by the Town of Hinton. However, to make a significant and meaningful difference to conserve biodiversity, fish need to be able to move through all stream crossings within a watershed. The Project has been successful at building partnerships and all crossing owners have committed to fix their respective crossings with targeted completion of repairs by 2007. Fixing stream crossings along Hardisty Creek is an accomplishment in and of itself. Equally important is that the Project provides a model for cooperation and collaboration across much larger landscapes. This model is being pursued through the Foothills Stream Crossing Program established in 2004/2005.

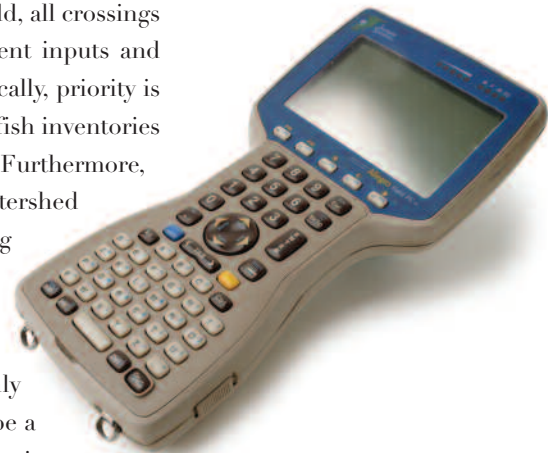


THE FOOTHILLS STREAM CROSSING PROGRAM

Repairing stream crossings to ensure fish passage within a single watershed is rewarding and worthwhile, setting the stage for a challenging expansion of this model over 2.75 million hectares with 208 watersheds, 2,500+ crossings and 30+ stream crossing owners.

In 2003, the Foothills Model Forest started working with Hinton Wood Products (West Fraser Mills Ltd.) and the Alberta Chamber of Resources on the Foothills Stream Crossing Program. The goal of the initiative is to develop a common approach to assess and fix stream crossings across the Foothills Model Forest's 2.75 million hectare land base. By working together, and using Foothills Model Forest science, tools and infrastructure, all crossing owners will adopt consistent standards to assess the quality of stream crossings to determine which ones will get fixed – the underpinnings of good watershed management. In the field, all crossings in a given area will be evaluated for fish passage, potential sediment inputs and structure condition. This approach is economical and effective. Logically, priority is to fix stream crossings in fish-bearing streams (years of model forest fish inventories are used to predict fish bearing and non-fish bearing streams). Furthermore, efforts are made to ensure that all stream crossings within a watershed provide fish passage. In summary, the resources of participating crossing owners will be strategically invested to maximize the benefits to the environment and transportation infrastructure.

The Foothills Stream Crossing Program is developing a highly valuable partnership approach that is attracting interest and could be a template used across Alberta. Through collaboration and cooperative stream crossing improvements, the approach is yielding maximum benefits for healthy and functioning watersheds, and the conservation of biodiversity of native fish species.



A Culture of Communication

The Foothills Model Forest is committed to communications and knowledge transfer. Each research area invests its time into communications and knowledge transfer. In 2004/2005, Rich McCleary, program lead of the Fish and Watershed Program, worked with Trout Unlimited to organize the Forest Land - Fish Conference II. This conference attracted 300 people to discuss challenges and opportunities of fish and watershed management. Conference Proceedings are available at <http://www.tucanada.org/forestlandfish2/cfp.htm>.



Natural

**IMAGINE
SUSTAINABLE
FOREST
MANAGEMENT.**



Disturbance Program

The Natural Disturbance Program is one of the longest running research programs at the Foothills Model Forest. It was initiated by industry and government partners as an important program in advancing the conservation of biodiversity. Milestone environmental events such as the Earth Summit emphasized the importance of conserving biodiversity as a critical element in the pursuit of sustainable development and a sustainable environment. Furthermore, the Canadian Council of Forest Ministers lists the conservation of biodiversity as the first criterion to achieve sustainable forest management. Many believe that before one can conserve or maintain biodiversity it is critical to understand how nature and past disturbances shaped the forests and landscapes managed today. The Natural Disturbance approach to biodiversity conservation is based on the premise that practices such as timber harvesting and prescribed burns that emulate natural disturbances are a fundamental step in conserving biodiversity. Hence the growing interest in natural disturbance research and knowledge generated from this research.

Wildfire was the primary natural agent of change and renewal in the Foothills Model Forest. Fire created a mosaic of forest stands and age classes across this landscape that provided habitat for a diversity of forest species. In an effort to understand these patterns and processes, the Natural Disturbance Program asks a series of research questions designed to increase our partners understanding of how fire shaped this landscape. Questions such as:

- What is the distribution of forest age classes over time for the Foothills Model Forest area?
- Do fire regimes differ between natural sub-regions?
- Following wildfire in the forest, what are the resulting structure, size and arrangement of individual trees, clumps and stands in the forest?

By implementing a research program that examines natural disturbance from the landscape-level to stand-level, program partners are better positioned to integrate natural disturbance research into long-term Detailed Forest Management Plans, as well as at the operational level.

A Culture of Communication

A Natural Disturbance Short-Course is under development. Partner Saskatchewan Institute of Applied Science and Technology is developing the course using its tried, tested and true course development and delivery system. Acclaimed forest ecologists and experienced foresters from across Canada are involved in advising and reviewing course curriculum. This approach best ensures that the course and its content are relevant, accurate and applicable to forestry and resource management professionals across Canada.

BEYOND THE BOUNDARIES

Foothills Model Forest is developing a reputation for its extensive natural disturbance research. Each year requests for our reports and extension work increase from many sources such as forest companies, government agencies and environmental groups such as the Canadian Parks and Wilderness Society. Thumbnails of these findings published in Quicknotes (available at http://www.fmf.ca/ND/ND_QnC1.pdf) are widely read and stimulate additional inquiries. Millar Western's use of our research findings is typical of how it guides forest and land management decisions.

"Millar Western is currently developing its next ten-year Detailed Forest Management Plan. As one part of our effort to develop enhanced harvest designs that emulate natural disturbance and result in less fragmented forested landscapes, we are reviewing the scientific literature that can serve to guide the size and shape of harvested areas, and are very interested in the Foothills Model Forest Natural Disturbance research."

*Ray Hiltz, Planning Supervisor,
Millar Western*





Photo credit: Bob Pisko

RESEARCH GROWING INTO PRACTICE



Hinton Wood Products (West Fraser Mills Ltd.) is a founding partner in the Foothills Model Forest and a driver behind the creation of the Natural Disturbance Program at the Foothills Model Forest. Logically, Hinton Wood Products integrates much of the Natural Disturbance Program's research findings into its business.

One of the first tools developed by the Program was an upgraded stand origin map of the Foothills Model Forest landbase. The stand origin map illustrates how fires burnt prior to active fire suppression. The map shows the mix of young, pole, mature and old forest that would naturally occur across the Foothills Model Forest landbase. This first tool was a critical step for industry and government to integrate natural disturbance research into land management policies, planning and practices.

Hinton Wood Products first integrated natural disturbance research into their business through their Detailed Forest Management Plan for the period of 1998-2008. Furthermore, the stand origin map, and the rationale for the natural disturbance research, drives Hinton Wood Product's Natural Forest Management Strategy. The guiding principle of this Natural Forest Management Strategy is for the company to maintain natural forest patterns and ages across its forest management area.

Similarly, Jasper National Park uses this knowledge to set forest age-class targets for the National Park to be achieved through a combination of wildfire and prescribed burning. This was the first step in Hinton Wood Product's and Jasper National Park's evolution towards the natural disturbance management approach. The natural disturbance paradigm manages forests as dynamic systems, as compared to managing forests as if they are static. Foothills Model Forest research and tools guide the policies, planning and practices of these two partners.

The year 2004/2005 provides examples of additional steps that Jasper National Park and Hinton Wood Products have taken towards the adoption of the natural disturbance management approach.

- Since June 2004 all new planning and harvesting in the Hinton Wood Products' forest management area is based on approximating natural forest dynamics, as defined by natural disturbance research. An example of how this approach differs from more traditional practices is that harvested areas are irregular sizes, have feathered edges and retention (trees scattered and clumped throughout the harvested area). Forest harvesting more closely emulates how wildfires burn.
- Since 2003, Jasper National Park has burned, through its prescribed burn program, over 30 000 hectares of forest. Prior to 2003, the prescribed burn program had burnt approximately 1 000 hectares of forests.

AN UPDATE ON HIGHWAY 40 NORTH DEMONSTRATION PROJECT

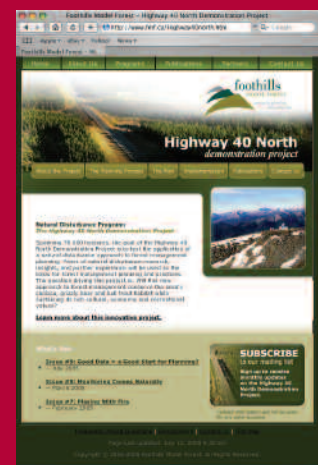
Since 2002, the Foothills Model Forest Natural Disturbance Program has been working with partners Alberta Community Development, Alberta Newsprint Company, Alberta Sustainable Resource Development, Foothills Forest Products and Hinton Wood Products, West Fraser Mills Ltd. on the Highway 40 North Demonstration Project. Spanning 70 000 hectares, the goal of the Project is to test the application of a natural disturbance approach to forest management planning. Years of natural disturbance research, insights, and partner experience are used as the basis for forest management planning and practices. The question driving this project is: Will this new approach to forest management conserve the area's caribou, grizzly bear and bull trout habitat while sustaining its rich cultural, economic and recreational values?

A single operational plan for this Project is nearing completion.

The plan will go through the public involvement and review processes of each partner. Targets and indicators, such as monitoring the response of caribou to harvesting and roads, will be used to assess the effectiveness of this new land management approach.

For more information about the Highway 40 North Demonstration Project visit

<http://www.fmf.ca/Highway40north.htm>





BEYOND BOUNDARIES

The Foothills Model Forest Grizzly Bear Research Program is successful at building partnerships. To date over 50 partners have contributed to the research program. Their support is credited for the breadth and depth of our grizzly bear research. Research is one step towards grizzly bear conservation; equally important is partners integrating knowledge and tools into their decisions and operations. The Program's established relationship with industry and government will contribute to achieving this goal.

In 2004/2005 Foothills Model Forest delivered resource selection function models to all Program partners including Shell Canada. Shell Canada primarily operates outside of the Foothills Model Forest land base, but will certainly use the information contained in the expanded scope of the resource selection function models. Through these tools the company better understands how bears use the landscape.

"Ecological maps and resource selection function models produced by the Foothills Model Forest Grizzly Bear Research Program help Shell Canada understand the big picture relative to how grizzly bears use Alberta's landscape."

Lisa Fischer, Ecologist, Shell Canada.



Grizzly Bear Research Program

In 1999, the Foothills Model Forest and its partners initiated the Grizzly Bear Research Program. The original program goal was to provide resource managers with the necessary knowledge and planning tools to ensure the long-term conservation of grizzly bears in west-central Alberta. The Program goal remains the same but the Program has expanded its study area to include all grizzly bear habitat in Alberta. Doing research of this nature and developing management tools of this complexity over a large-scale is unprecedented in wildlife research.



In June 2004, the Foothills Model Forest Grizzly Bear Research Program won an Emerald Award for Research and Innovation. The Alberta Foundation for Environmental Excellence recognizes best practices in Alberta by celebrating and advancing environmental excellence. Gordon Stenhouse and Jim LeLacheur accept the award on behalf of the Foothills Model Forest.

HUMAN-CAUSED MORTALITY: A THREAT TO THE REGION'S GRIZZLY BEARS

Foothills Model Forest research has found that human-caused mortality is the biggest threat to the conservation of the area's grizzly bears. Building on research and development done by the Eastern Slopes Grizzly Bear Research Project, the Foothills Model Forest has developed a resource selection function model that quantifies the risk of grizzly bear mortality. This

model shows that the risk of human-caused mortalities rises along roads. Therefore, the risk of a grizzly bear being killed by humans increases if access is built in good grizzly bear habitat. Alternately (and logically) grizzly bears are at less risk if access occurs in poor grizzly bear habitat. Another consideration is the management of human and grizzly bear interface. Land and resource managers can use – some are using – these tools when developing long-term access plans. This is an important step towards grizzly bear conservation.

THE RUBBER MUST HIT THE ROAD

The Foothills Model Forest Grizzly Bear Research Program has developed innovative tools for grizzly bear research and conservation. However, achieving the long-term conservation of grizzly bears requires the Program to shift its attention to a knowledge transfer program that facilitates the integration of these tools into practice by industry and government. In 2004/2005, grizzly bear resource selection function models were introduced to the forestry and oil and gas sectors, as well as Alberta Sustainable Resource Development. Workshops and meetings provided opportunities for researchers to interact with end-users. Next steps in the technology transfer process include introducing other stakeholders to the suite of available tools as well as developing and delivering formal training.



Foothills Model Forest grizzly bear research involves capturing grizzly bears and equipping them with global positioning system collars. These collars collect several locations over a 24-hour period and are the basis of the innovative management tools developed through the Grizzly Bear Research Program and its

university partners. Also essential to our work are the habitat cover maps created from satellite imagery for Alberta's grizzly bear range. The location data and habitat cover maps combined with information on roads, watersheds, topography and other pertinent landscape attributes are put together into a resource selection function model to produce a map that illustrates the likelihood of bears using different areas of the landscape at different times of the year. Industry and government can use these maps in their planning to minimize disturbance to important grizzly bear habitats.

◀ In 2004, the Foothills Model Forest Grizzly Bear Research Program expanded its study area south to the Montana border. The ultimate goal of the Program is to produce resource selection function models and other tools for Alberta's entire grizzly bear habitat.

“WISE LAND MANAGEMENT IS CRUCIAL TO ENSURE THE SUSTAINABILITY OF THESE SECTORS (ENERGY, FORESTRY, AND TOURISM), AND CONTINUED PROSPERITY FOR ALBERTANS.”

THE HONOURABLE NORMAN L. KWONG,
ALBERTA SPEECH FROM THE THRONE, MARCH 2, 2005.

As landscapes change so do the needs of Foothills Model Forest partners and society at large. The Foothills Model Forest has the infrastructure, flexibility and expertise to support new initiatives. The Foothills Model Forest facilitates and supports Associations that address emerging land and forest management needs. Each Association seeks collaborative solutions to land management questions, often resulting in small steps that contribute to integrated land management. Interested parties focusing their efforts to address single issues are using a realistic and practical approach to wise and integrated land management.



Rachelle McDonald, Foothills Model Forest Board of Director, with son Gabriel recognized for her contributions to Aboriginal communities.

The Foothills Model Forest Aboriginal Involvement Program is unique because it involves multiple Aboriginal communities who plan to store their data in a central database housed at the Foothills Model Forest. Currently, two Aboriginal communities are conducting Traditional Cultural Studies, with another three poised to start. Each community conducts their own Traditional Cultural Study and owns their respective data. However storing

and managing the traditional knowledge of all involved communities in a central database provides the foundation for industry and government to properly interact with Aboriginal communities. Industry representatives coin this approach as “one-stop shopping” for referrals that may lead to effective Aboriginal consultation. This approach better enables Aboriginal communities, industry and government to discuss land management decisions in a fair and open environment.

2. REFERRAL PROCESS

Foothills Model Forest is committed to the integration of knowledge into land management. This is critical to advancing sustainable forest management. Therefore, the second cornerstone of the Aboriginal Involvement Program is a referral process. The referral process identifies which Aboriginal communities industry and government should consult prior to natural resource development or allocation. In 2004/2005, natural resource industries, Aboriginal communities and the provincial government continued to engage in regular and productive dialogue to develop a referral process that is practical, yet fair.

The Foothills Model Forest Geographic Information System (GIS) Program plays an instrumental role in the Aboriginal Involvement Program and the referral process. The Foothills Model Forest GIS professionals are data management experts

ABORIGINAL INVOLVEMENT PROGRAM

Since January 2002, the Foothills Model Forest has been working with Aboriginal communities, resource-based industry and the Province of Alberta to develop a process that better involves Aboriginal communities in land management decisions within the Foothills Model Forest land base. The cornerstones of the Program are:

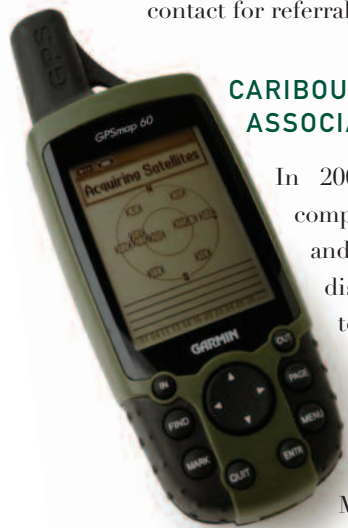
1. Traditional Cultural Studies,
2. Referral Process.

1. TRADITIONAL CULTURAL STUDIES

Historically, 17 Aboriginal communities used the Foothills Model Forest land base for travel or habitation. Through Traditional Cultural Studies Aboriginal communities document sites that are of social, cultural and spiritual importance. Aboriginal community sustainability involves the ongoing documentation, storage and use of this knowledge. This approach is integral to the future health, success and progress of each community. Furthermore, by providing a greater understanding of how Aboriginal communities used and continue to use the forest, positive and innovative relations between government, communities and industry can occur.

and adept at developing practical land and resource management tools. GIS professionals work closely with Program partners to develop tools that meet the needs of all. For example, a database stores the actual GPS point of sensitive and significant sites – this information is proprietary and is only available to the Aboriginal community to which it belongs. Prior to resource development or allocation, industry and government can approach the Foothills Model Forest to determine if planned activities will impact Aboriginal sites. A database query determines which Aboriginal communities need to be contacted for potential consultation and provide that information to industry and government. This approach is a huge improvement over current land management and development notification processes for Aboriginal communities.

Traditional Cultural Studies are the foundation of a referral process. Once this information is collected and captured in a data management system, the impact of new resource developments on Aboriginal sites can be quickly determined – without disclosing the site location or its nature. If planned resource development impacts Aboriginal sites, industry and government will be given the name of the Aboriginal community of which they can contact for referral information and follow-up.



CARIBOU LANDSCAPE MANAGEMENT ASSOCIATION

In 2004/2005, forestry and oil and gas companies who operate in the Little Smoky and A La Peche caribou ranges began discussions on how they can work together towards the long-term conservation of these two caribou herds. These discussions resulted in the formation of the Caribou Landscape Management Association. Members in the Association will work together and pool resources to achieve integrated land management between the industrial operators through:

- Reducing their future industrial footprint on the home ranges of the above two herds;
- Restoring existing industrial footprint to improve caribou habitat;
- Working with the Alberta government to recover the Little Smoky caribou population;
- Contributing funds to caribou monitoring and research.

On-the-ground caribou conservation work will begin in the winter of 2006.

FOOTHILLS GROWTH AND YIELD ASSOCIATION

Scientific assessment of growth and yield, always fundamental to the practice of sustainable forestry, is particularly crucial given recent policy initiatives by the Alberta government for linking reforestation standards to management objectives.

The Foothills Growth and Yield Association completed its first five-year term in 2004/2005, and successfully established the projects, partnerships, and funding base for a second term.

Results of research into post-harvest stand development were presented at a major international forestry conference in 2004. The study demonstrated that reforestation practices are capable of increasing timber production relative to that of natural stands, and are producing other changes with important implications.

The Association's research is literally growing into practice. One of its six projects is a comprehensive trial assessing the regeneration of lodgepole pine under a range of controlled conditions following harvesting. The trial is a key tool to developing, over the next five years, regeneration standards and practices that are linked to growth and yield.

FOOTHILLS STREAM CROSSING PROGRAM

In 2004/2005, the Foothills Stream Crossing Program was formed. The members represent companies or organizations that own stream crossings in the Foothills Model Forest. Stream crossings provide a resource management challenge throughout the developed world. With time, crossings often deteriorate and require maintenance. Furthermore, many older crossings were not constructed to facilitate fish passage. The Foothills Stream Crossing Program has 11 members who pool resources to:

- a) Develop a common protocol to assess stream crossings
- b) Pool funding to conduct stream crossing assessments
- c) Together, prioritize stream crossings that should be repaired
- d) Pool resources to fix stream crossings.

If successful, this model will result in a sound monitoring program for ensuring stream crossings meet environmental and safety standards. This approach will be most effective through a coordinated effort.



Program Updates

ADVANCING SUSTAINABLE FOREST MANAGEMENT

Foothills Model Forest supports programs that advance the way the forests of Alberta and Canada are managed. We are a flexible organization that offers world-class data management and GIS support; these are the fundamental underpinnings of good research and development. As an organization we are committed to knowledge transfer and provide opportunities for researchers to communicate their findings to the public, policy-makers and forest and land managers. Our infrastructure provides support for innovative integrated land and resource management partnerships to bring their ideas and solutions to fruition.

ADAPTIVE FOREST MANAGEMENT/HISTORY

In 2004/2005, the team of Peter Murphy, Bob Udell, Bob Stevenson and new addition historian Tom Peterson completed the main body of the highly anticipated book “A Hard Road to Travel” – the story of the land, the forests, the early exploration and development in the Athabasca River valley from prehistoric times to 1955. This is the fifth major project in the Adaptive Forest Management Program of Foothills Model Forest. Professor Ian McLaren, in the foreword to the book, notes that it “places on view impressive evidence that, in the upper Athabasca at least, the character of the country and the souls of its residents are living in tune with one another. Whether waterway, trail, railway, highway, or logging road, the road has been hard won.” Publication is planned for 2005, in collaboration with the Alberta’s Forest History Society.

CHISHOLM, DOGRIB AND LOST CREEK POST-FIRE RESEARCH

The post-fire research group, which consists of 11 researchers led by Dennis Quintilio, delivered a workshop

summarizing research projects conducted by the University of Alberta, the Canadian Forest Service, Parks Canada and the Foothills Model Forest. The workshop had outstanding attendance by many key stakeholders. Ninety-six percent of the attendees stated the workshop met or exceeded their expectations and many noted that the information presented had management implications. An immediate management application is the incorporation of research findings into six Community Protection Plans in Alberta.

COMMUNICATIONS AND EXTENSION

The Foothills Model Forest places a high importance on the communications and knowledge transfer of its research and development. In 2004/2005, Foothills Model Forest saw an increase in its communications and knowledge transfer efforts. These efforts resulted in:

- Foothills Model Forest researchers communicating with 50% more resource managers (foresters, biologists, etc.) in 2004/2005 over 2003/2004.
- Hits to the Foothills Model Forest website exceeded 950,000, an increase of 25% over 2003/2004 levels.
- The Foothills Model Forest interpreter delivering programs to over 2,300 students, a 40% increase over the prior year.
- A November workshop where, over two days, staff from Public Lands and Forest Division, Alberta Sustainable Resource Development interacted with and questioned Foothills Model Forest researchers.

Knowledge transfer and communications efforts will continue to expand resulting in sound science guiding land and resource management decisions.



◀ Tyler Duffe at Hardisty Creek.
Photo credit: Bradley Fehr, Hinton Parklander

GEOGRAPHIC INFORMATION SYSTEMS

Foothills Model Forest research programs are heavily reliant on the Geographic Information System (GIS) Program. The GIS Program provides technical support to ensure that data are managed efficiently and effectively. Foothills Model Forest GIS specialists work closely with researchers to develop practical land management tools. The data management systems of this Program will provide the Foothills Model Forest and its partners with information and tools that can track landscape change and how these changes impact the overall sustainability of the forest and the communities it supports.

LOCAL LEVEL INDICATORS FOR SUSTAINABLE FOREST MANAGEMENT

The Foothills Model Forest remains committed to its Local Level Indicators Program. All model forest programs must link to the organization's local level indicators.

In October 2004 the Montréal Process Working Group toured the Foothills Model Forest to see firsthand how Criteria and Indicators for Sustainable Forest Management are implemented on-the-ground, where it truly matters. The Montréal Process Working Group, initiated in response to resolutions made at the 1992 Earth Summit, is comprised of twelve member countries representing the world's temperate and boreal forests. The Working Group was interested in touring the Foothills Model Forest because we are recognized as being one of few organizations who make concerted and consistent efforts to adopt the criteria and indicator approach to sustainable forest management on-the-ground. This international group of experts saluted the work being done in the model forest and noted its relevance and importance to their own work as well as sustainable forest management in practice.

A second milestone of 2004/2005 was the release of revised goals and indicators. These goals and indicators were recommended by Foothills Model Forest Board of Directors, program leads and external experts. The release of this

report underscores the ongoing commitment to criteria and indicators for sustainable forest management. Funds were provided to support a project coordinator for the Local Level Indicators Program.

The report that outlines the revised goals and indicators is available at http://www.fmf.ca/LLI/LLI_report4.pdf.

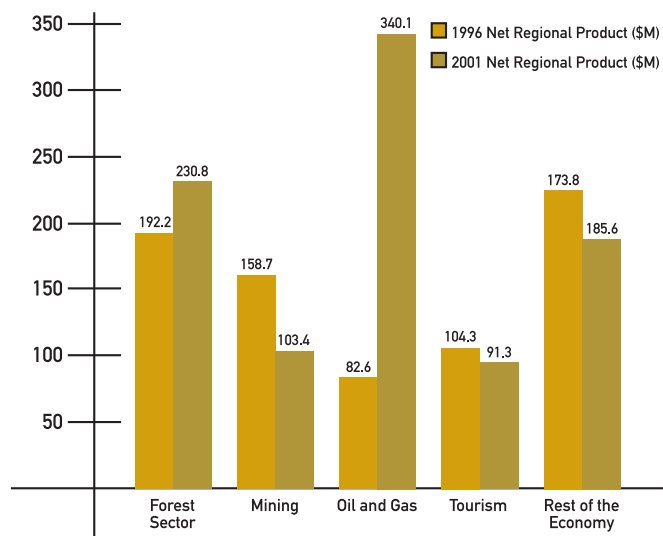
SOCIAL SCIENCES: ECONOMIC VALUE OF THE FOREST

Understanding the economics of resource-based communities and regions is critical to making informed resource management decisions. In 1996, the Foothills Model Forest partnered with the Canadian Forest Service to better understand our regional economy. This work resulted in an economic database for the region. In 2004/2005, economists from the Canadian Forest Service updated this database and summarized regional, economic trends. One finding from the research during the period of 1996 to 2001 found that the Foothills Model Forest region experienced an economic transition. The regional mining sector declined due to depleting reserves at existing mines and a fall in the global price of coal. Simultaneously, world natural gas prices were on the rise and natural gas exploration and extraction significantly increased in the Foothills Model Forest. Tourism also declined possibly due to climatic events and a sharp decline in global tourism demand following the events of September 2001. A noteworthy point is that the forest industry remained stable.

The Foothills Model Forest can provide regionally-specific economic data to decision-makers, which is rare. Typically, economic data of this nature is available on a provincial or national-scale. Studying the regional economy on a regular basis provides a strong foundation for wise decisions on sustaining regional economies and local communities.

SOCIAL SCIENCES: SOCIAL VALUES OF THE FOREST

The Foothills Model Forest is used extensively for human activities including industry, hunting, recreation, tourism



Net Regional Product of Foothills Model Forest for 1996 and 2001.

and transportation. Levels of human activities and landscape conditions are related to grizzly bear numbers and population health. The Foothills Model Forest Grizzly Bear Research Program has done extensive research on these relationships, however less is known about the public's values and opinions on grizzly bears and grizzly bear conservation. It is understood that managing for a sustainable population of grizzlies in the Foothills Model Forest may require society to make choices between human activities and conservation of grizzly bears. Therefore, it is important to understand how well informed the public is about grizzly bears, how they feel about them, and the social acceptability of management options for conservation. Towards this end, Canadian Forest Service social scientists conducted surveys with residents of Jasper, Edmonton, and the Foothills Model Forest (Hinton and surrounding communities) to address these questions. Conclusions from the study are:

- Residents of the Foothills Model Forest (residents of Hinton and surrounding communities) and Edmonton have positive views towards grizzly bears but are not well informed about grizzly bears.
- There is support for making some sacrifices of industrial development and economic opportunities to enhance grizzly bear conservation.
- Jasper residents were better informed, had more positive views of grizzly bears, and were more supportive of reduced industrial activity.
- Opposition to some of the management options appears to be driven primarily by specific interest groups including hunters, recreational off-road vehicle users, and Foothills Model Forest residents employed in the mining sector.



Our Partners

The Foothills Model Forest appreciates the support of its partners; many of whom make financial contributions to our organization and research. Equally important to the advancement of sustainable forest management is partner participation in workshops, conferences and other knowledge transfer activities. The engagement of partners in these activities better ensures that our knowledge and tools are integrated into land management practice and policy.

SPONSORING PARTNERS

Sponsoring partners Alberta Sustainable Resource Development, Jasper National Park, Natural Resources Canada and West Fraser Mills Ltd. make a five-year commitment to the Foothills Model Forest. In 2004/2005 the four sponsoring partners' combined contribution exceeded 1.4 million dollars.

In January 2005, West Fraser Mills Ltd. purchased Weldwood of Canada Limited from International Paper. Weldwood of Canada Limited, Hinton Division was a founding partner of the Foothills Model Forest. Over the last 13 years Weldwood made significant contributions to our organization. West Fraser Mills Ltd. continues to support the Foothills Model Forest and provides us with opportunities to work more closely with all West Fraser Mills Ltd. Alberta operations.



MANAGEMENT PARTNERS

Management partners provide financial and in-kind support to the Foothills Model Forest. They are also responsible for land, resource, or forest management, and are interested in using model forest knowledge and tools in their businesses.

Ainsworth Lumber Company Ltd.
Alberta Community Development
Alberta Newsprint Company
Alberta Transportation
Anadarko Canada Corporation
Banff National Park
Blue Ridge Lumber (1981) Ltd.
BP Canada Energy Company
Burlington Resources Canada Ltd.
Canadian National Railway
Canadian Natural Resources Ltd.
Canfor Corporation
ConocoPhillips Canada Resources Ltd.
Department of Fisheries and Oceans
Devon Canada Corporation
Elk Valley Coal – Cardinal River Operations
Millar Western Forest Products Ltd.
Petro-Canada Ltd.
Peyto Exploration
Shell Canada
Spray Lake Sawmills
Sundance Forest Industries Ltd.
Sundre Forest Products –
A Division of West Fraser Mills Ltd.
Talisman Energy Inc.
TransCanada Pipelines Limited
Weyerhaeuser Company Limited

PROGRAM & PROJECT PARTNERS

Program and project partners provide financial and in-kind support to specific programs or projects. These organizations believe in and support the Foothills Model Forest.

Alberta Chamber of Resources
Alberta Conservation Association
Alberta EcoTrust Foundation
Alberta Forest Products Association
Alexis Nakota Sioux First Nation
Aseniwuche Winewak Nation
Athabasca Bioregional Society
Bandaloop Landscape-Ecosystem Services
Big Horn First Nation
Canadian Association of Petroleum Producers
Canadian Cooperative Wildlife Health Centre
Environment Canada
EVS Environment
Foothills Ojibway Society
Forest Resource Improvement Association of Alberta (FRIAA)
The Forestry Corp.
Hinton Fish & Game Association
Hinton Training Centre
O'Chiese First Nation
Petroleum Technology Alliance Canada
Rocky Mountain Elk Foundation Canada
Sunchild First Nation
TJG Consulting
Town of Hinton
Trout Unlimited
University of Alberta
University of British Columbia
University of Calgary
University of Saskatchewan
World Wildlife Fund Canada

OTHER PARTNERS

The following associations, businesses, and communities support the vision and goals of the Foothills Model Forest organization.

Alberta Chamber of Resources
Alberta Innovation and Science
Alberta Research Council
AVID Canada
Canadian Centre for Remote Sensing
Canadian Institute of Forestry
Council of Forest Industries
College of Alberta Professional Foresters
Cows and Fish Program
Ember Research Services Ltd.
The fishin' hole
Forest Engineering Research Institute of Canada (FERIC)
Forest History Society, Durham NC
Golder & Associates
Inside Education
Jasper Yellowhead Museum and Archives
Linnet – The Land Systems Company
NSERC
Pulp and Paper Research Institute Canada (Paprican)
Sustainable Forest Management Network
Telemetry Solutions
UBC Press
UNESCO's Wonder of Water Initiative



Board of Directors

ROD ALEXIS

Chief, Alexis Nakota Sioux First Nation ●

JIM BECK

Professor, Department of Renewable Resources, University of Alberta

RICK BONAR

Chief Biologist, Hinton Wood Products, West Fraser Mills Ltd. ●

KYLE CLIFFORD

Area Manager, Parks and Protected Areas, Alberta Community Development

BOB DEMULDER

Integrated Landscape Management Program Manager, Alberta Chamber of Resources ●

ALEX GALBRAITH

Former Mayor (2002-2004), Town of Hinton ●

DENNIS HAWKSWORTH

Vice President, Manufacturing Excellence, Wood Products, Weldwood of Canada Limited ●

CLIFF HENDERSON

Assistant Deputy Minister, Forest Protection Division, Alberta Sustainable Resource Development

RON HOOPER

Superintendent, Jasper National Park, Parks Canada

JOHN KERKHOVEN

Manager, Stakeholder Relations, Petro Canada Ltd.

JOHN KRISTENSEN

Assistant Deputy Minister, Parks and Protected Areas, Alberta Community Development

JIM LELACHEUR

Manager, Alberta Fibre Supply, West Fraser Mills Ltd. ●

KEITH MCCLAIN

Director, Science Policy and Strategy, Policy and Planning, Alberta Sustainable Resource Development

RACHELLE MCDONALD

Manager of Operations, Aseniwuche Winewak Nation

LLOYD METZ

General Manager, Elk Valley Coal, Cardinal River Operations

SHIRA MULLOY

Manager, Stewardship, Canadian Association of Petroleum Producers

EILEEN SASAKAMOOSE

Lawyer, Alexis Nakota Sioux First Nation ●

NEIL SHELLY

Executive Director, Alberta Forest Products Association

DOUG SKLAR

Executive Director, Forest Management Branch, Public Lands and Forest Division, Alberta Sustainable Resource Development

JIM SKRENEK

Executive Director, Wildlife Management Branch, Fish and Wildlife Division, Alberta Sustainable Resource Development

GLENN TAYLOR

Mayor (2004 - Present), Town of Hinton ●

KEVIN VAN TIGHEM

Chairman of the Board, Foothills Model Forest; Manager, Resource Conservation, Jasper National Park, Parks Canada

BRIAN WALLACE

Manager, Warden Service, Jasper National Park, Parks Canada ●

LORNE WEST

Forestry Liaison Manager, Canadian Forest Service, Natural Resources Canada

FOOTHILLS MODEL FOREST OFFICERS

JIM BOUTHILLIER

Legal Counsel, Foothills Model Forest; Lawyer, Shtabsky & Tussman, Barristers and Solicitors

NICOLE GRAVEL

Treasurer, Foothills Model Forest and Woodlands Controller, Hinton Wood Products ●

CURTIS PHILIPPON

Treasurer, Foothills Model Forest and Woodlands Controller, Forest Resources Department, Weldwood of Canada Limited, Hinton Division ●

MARSHA SPEARIN

Secretary, Foothills Model Forest Board of Directors; Administrative Coordinator, Hinton Forest Resources, Hinton Wood Products, West Fraser Mills Ltd.

ROBERT UDELL

President, Foothills Model Forest and retired forester, Weldwood of Canada Limited, Hinton Division ●

NOTE: In January 2005, West Fraser Mills Ltd. purchased Weldwood of Canada Limited from International Paper. Some Foothills Model Forest Board of Directors resigned from the board, as a result of their retirement, prior to January 2005. Because of this, they represented Weldwood of Canada Limited.

- Term began October 2004
- Term began November 2004
- Resigned October 2004
- Resigned November 2004
- Term began February 2005
- Bob Udell stepped down from the Board and Presidency of the Foothills Model Forest on March 31, 2005.



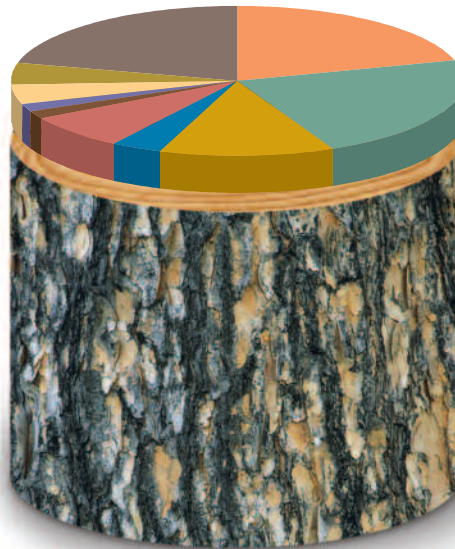
Summary of Financial Statements

The Foothills Model Forest audited financial statements are available at www.fmf.ab.ca

INCOME

Year ending March 31, 2005

Alberta Sustainable Resource Development (ABSRD)	\$548,333	
Canadian Forest Service	\$500,000	
Forest Industry	\$512,676	
Government of Alberta (excluding ABSRD)	\$114,500	
Jasper National Park	\$100,000	
Mining Industry	\$45,000	
Non-government Organizations	\$35,000	
Oil & Gas Industry	\$185,000	
Other	\$88,945	
West Fraser Mills Ltd.	\$300,333	

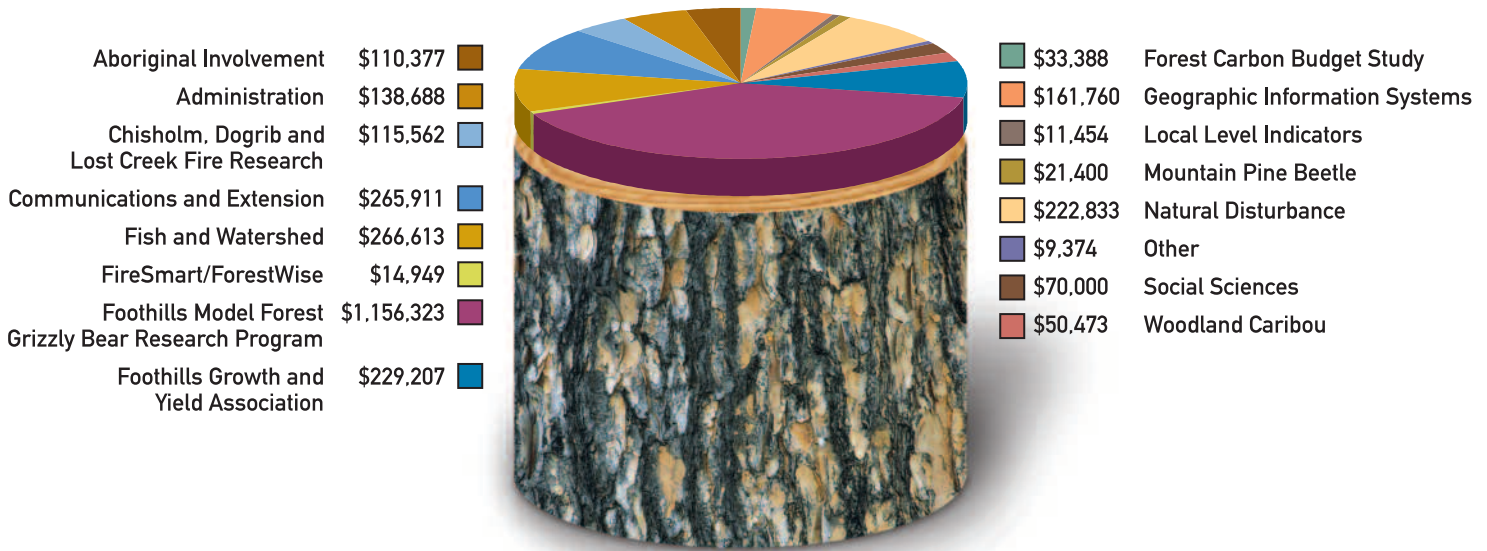


In 2004/2005, Foothills Model Forest received \$2,429,787 in funding to support its research, knowledge transfer and communications programs. A breakdown of funding sources is as follows:

- Alberta Sustainable Resource Development contributes 23% of funds.
- Canadian Forest Service contributes 21% of funds.
- Jasper National Park, Parks Canada contributes 4% of total funds.
- West Fraser Mills Ltd. (formerly Weldwood of Canada Limited, Hinton Division) contributes 12% of total funds.
- The forest industry, excluding West Fraser Mills Ltd. contribution, contributes 21% of total funds.
- The oil and gas industry contributes 8% of total funds.
- Non-government organizations contribute 1% of total funds.
- The Government of Alberta (excluding Alberta Sustainable Resource Development) contributes 5% of total funds.
- Additional sources of funding include items such as interest, donations, rebates and administration fees amount to 4% of total funding.
- The Foothills Model Forest receives additional in-kind support from its partners. In 2004/2005 this amounted to approximately \$800,000.

EXPENSES

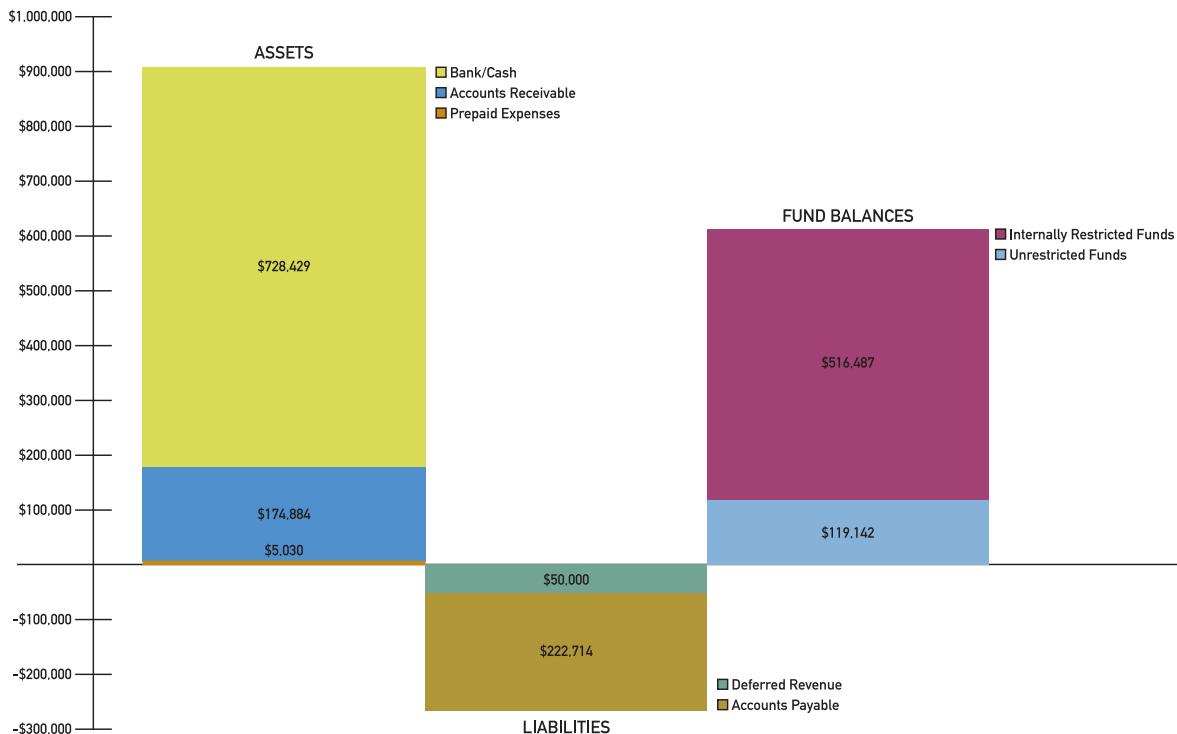
Year ending March 31, 2005

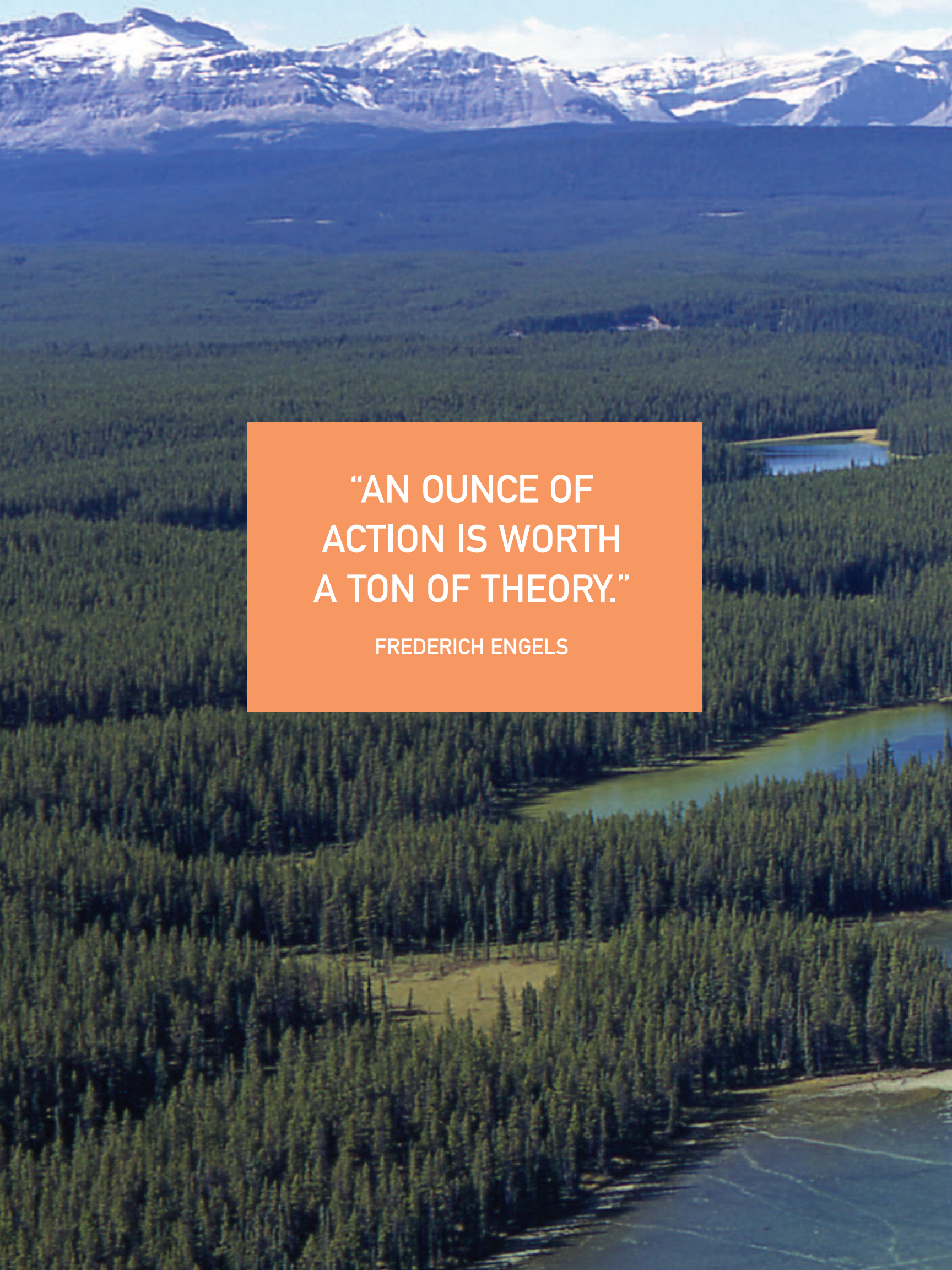


In 2004/2005, The Foothills Model Forest expenses totaled \$2,878,312. Upon approval from the Foothills Model Forest Board of Directors, each project area is responsible for its own budget and expenditures. In 2004/2005 expenses were paid using funds from the prior year's fund balances.

STATEMENT OF FINANCIAL POSITION

As of March 31, 2005



An aerial photograph of a vast, dense forest of evergreen trees. In the foreground, a large body of water, possibly a lake or a wide river, is visible, reflecting the sky. The forest extends to the base of a range of mountains in the distance, which are covered in patches of snow. The sky is clear and blue. A semi-transparent orange rectangle is overlaid on the center of the image, containing white text.

**“AN OUNCE OF
ACTION IS WORTH
A TON OF THEORY.”**

FREDERICH ENGELS



Since 1996 we've been using this quote.

Its message continues to resonate and reflect the values of the Foothills Model Forest. Our commitment to applied research, development of practical tools and knowledge transfer provides high value in improving land and forest management practices and developing improved policy for sustainable development.

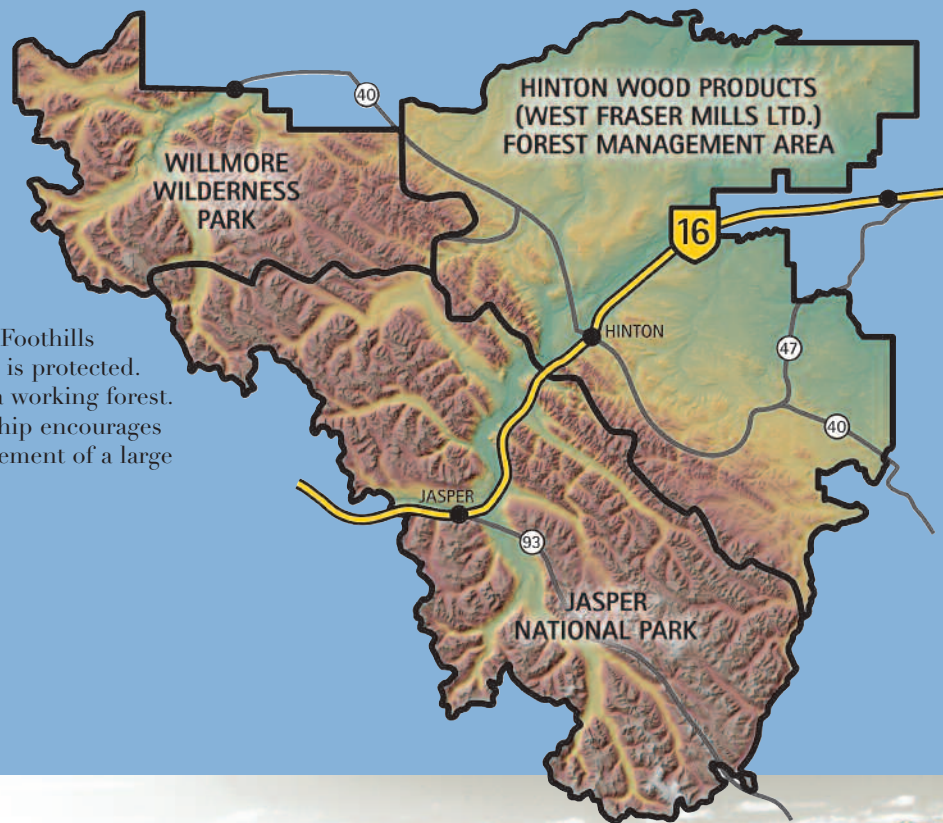
IMAGINE.

THE FOOTHILLS MODEL FOREST

At 2.75 million hectares you could call it one of the largest laboratories on the continent. The Foothills Model Forest land base includes all of Hinton Wood Products (West Fraser Mills Ltd.) Forest Management Area, Jasper National Park, Willmore Wilderness Park and other public lands.


Alberta Sustainable Resource Development, Jasper National Park, Natural Resources Canada through the Canadian Forest Service, and West Fraser Mills Ltd. are sponsoring partners of the Foothills Model Forest. Each sponsoring partner makes a five-year commitment of financial and human resources to the Foothills Model Forest research programs. In addition to our sponsoring partners, we appreciate the support of over 90 other organizations. Their continued support in Phase III (2002-2007) is a testament to the value of our research and development. Equally noteworthy is our partners' use of world-class science when making decisions about forest management policy and practice. This approach better ensures communities, economies and forests provide opportunities for present and future generations.

Over 60 percent of the Foothills Model Forest land base is protected. The remaining area is a working forest. This model of partnership encourages the coordinated management of a large and rich landscape.



A special thanks to Brian Carnell for many of the photographs used in this report.

We welcome inquiries: Box 6330, Hinton AB T7V 1X6
T: (780) 865-8330
F: (780) 865-8331
fmf@fmf.ab.ca
www.fmf.ab.ca

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