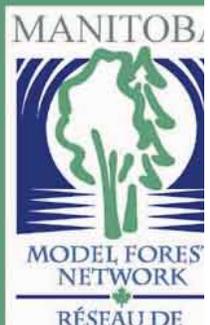


# Sustaining Manitoba's Forests and Forest- Based Communities



A Proposal Submitted by Manitoba Model Forest Inc.  
To the Canadian Forest Service and the Forest  
Communities Program

October 2006



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## 1.0 Executive Summary

**“To provide a place where people from different backgrounds can work together to learn about and appreciate all the values of the forest and help ensure those values are conserved for future generations”**

This is the Vision of the Manitoba Model Forest Inc. (MBMF). We are a not-for-profit organization incorporated under the laws of the Province of Manitoba. The MBMF has been part of the Canadian Model Forest Network since its inception in 1992. We have 15 years of experience in engaging communities and stakeholders in sustainable landscape management, developing capacity within communities to participate in natural resource decision-making, improving knowledge of how Boreal forest ecosystems function, and providing tools for the better management of forest resources in Canada. We have successfully completed over 400 projects, demonstrating our ability to deliver a large, multi-stakeholder program. In the most recent evaluation of the Model Forest program by the Canadian Forest Service, the MBMF was identified as an example of a “high functioning and well managed Model Forest”. Our job however, is not complete. We believe our sustainability journey has only just begun, and we are proposing to continue this journey through the Forest Communities Program (FCP). The development of our proposal represents the collaborative effort of many; our Board of Directors, Executive Committee of the Board, and all our partner organizations. This represents a broad cross-section of forest values in Manitoba. Our proposal is based on the outcomes of two program development workshops with our partners, as well as many meetings with individuals and organizations.

The MBMF represents a diverse partnership of those interested in the sustainable management of forested landscapes in Manitoba and includes First Nation, Métis and non-Aboriginal communities, rural municipalities, industries, provincial government departments, non-government organizations (environmental, economic, heritage) and academic institutions. Our Board consists of Assembly of Manitoba Chiefs, Black River First Nation, Brokenhead Ojibway Nation, Canadian Forest Service, Community of Bissett, Community of Manigotagan, Community of Seymourville, Hollow Water First Nation, Local Government District of Pinawa, Manitoba Conservation, Manitoba Métis Federation, Manitoba Naturalist Society, Manitoba Trappers Association, North East Sustainable Development Association, Rural Municipality of Alexander, Rural Municipality of Lac du Bonnet, Rural Municipality of Victoria Beach, Sagkeeng First Nation, Tembec Inc., Tembec Inc. Unions, Time to Respect Earth’s Ecosystems (TREE), Town of Lac du Bonnet, University of Manitoba, University of Winnipeg, Wassaabiya Shining Waters Heritage Region, Winnipeg River Brokenhead Community Futures Development Corporation and the Woodlot Association of Manitoba. With 27 organizations and communities and 33 individuals on our Board, diversity is a hallmark and strength of our organization. And, as part of our new 5 year program, our Board will grow with the potential addition of Louisiana Pacific Canada, Mining Association of Manitoba and Manitoba Forestry Association.

In addition to our Board members, a number of organizations will participate in our projects and activities as partners by providing in-kind support and/or cash funding, further diversifying our broad partnership base. These include Agrinomico Tropical de Investigacion y Ensenanza (CATIE-Costa Rica), Brokenhead River Restoration Committee, Cabacares Peoples of Costa Rica, Canadian International Development Agency (CIDA), Chiloe Model Forest (Chile), City of Winnipeg (Assiniboine Forest Naturalists Services Branch), Ducks Unlimited Canada, Environment Canada (Ecological Monitoring and Assessment Network), First Nations Forestry Program, Fisheries and Oceans Canada (DFO), Frontier School Division, Indian and Northern Affairs Canada, Manitoba Agriculture, Manitoba Education and Training, Manitoba Hydro, Manitoba Native Outfitters

Association, Manitoba Tourism, Manitoba Water Stewardship, Mariposa Monarca Model Forest (Mexico), Natural Sciences and Engineering Research Council of Canada (NSERC), Northern Forest Diversification Centre, Pinawa Fish and Wildlife Association, Red River Community College (Winnipeg), Regional Model Forest Network for Latin America and the Caribbean (LAC-Net), Reventazon Model Forest (Costa Rica), Royal Roads University (Victoria, BC), St. Joe's Fish and Wildlife Association, Sunrise School Division, Sustainable Forest Management Network (Edmonton, AB), Universidad Arcis Patagonia (Chile), Williche Council of Chiefs (Chile), Winnipeg River Regional Round Table, Winnipeg School Divisions, and Wabanong Nakaygum Okimawin (East Side Lake Winnipeg Planning Initiative).

Our partners are involved in many aspects of our activities. Partners participate as Board members, on working groups and committees and in individual projects as well as providing cash and in-kind support. Our partners take an active role in helping to shape our program and to ensure its success.

The MBMF area, located in eastern Manitoba will be the physical boundary for the site of our FCP activities. The MBMF area is located in the Boreal shield ecozone, an area dominated by a mosaic of Precambrian Shield bedrock outcrops and peatland areas. The main tree species include jack pine, black and white spruce, tamarack, balsam fir, trembling aspen and balsam poplar. This area has been our focus of attention throughout the 15 year history of the Canadian Model Forest program. Under the FCP, we will also be expanding our program to conduct projects and activities in western Manitoba, with new partners. This area is located in the Boreal Plain and Prairie Ecozones and is distinct from the MBMF area with respect to topography, soils, hydrology, forest types as well as socio-economic context. Projects and activities in western Manitoba will compliment those occurring in the MBMF area.

The Vision of the FCP is to have “resource-based communities that are equipped and empowered to be innovative in meeting the opportunities and challenges of a healthy forest and a changing forest sector”. Forest-based communities contribute greatly to the economic and cultural fabric of Canada, and the forests on which they rely contribute internationally to biodiversity, clean water and clean air, among other ecosystem services. We define forest-based communities broadly as any entity that has a direct interest in the forest. This includes not only forest-based villages, towns, municipalities and Aboriginal communities, but also Non-Government Organizations, and all resource sectors. Our proposal will not only strengthen our local communities and industries, but also conserve our forests for future generations. With this in mind, our proposed 5 year program was developed around, and fulfills, the four FCP Objectives. To paraphrase, these objectives are 1) to increase the capacity of local communities to understand the complex nature of landscape management, and to increase capacity to participate in informed landscape management decision-making, 2) to contribute to improved integrated landscape management decisions by working with all sectors to increase knowledge of ecosystem function and to develop innovative science-based management tools, 3) to explore and expand forest-based economic opportunities for MBMF communities, and 4) to bring Canada's wealth of knowledge, practices and tools with respect to sustainable management of forested landscapes to the wider, international community. To meet these objectives, our 5 year program includes the following projects and activities:

#### FCP Objective 1 – Capacity Building of Communities

- Facilitate the development of First Nation co-management of natural resources (with emphasis on moose)
- Facilitate the development of a Regional Trade School and Junior Rangers program

- Enhance community and First Nation involvement in all aspects of MBMF programming and decision-making
- Support community-based projects through our existing Community Opportunities Fund
- Promote forest education, through development of provincially-accredited curricula, involvement of youth in research projects, tours and presentations
- Build partnerships and capacity in western Manitoba

#### FCP Objective 2 – Integrated Landscape Management

- Research and facilitate management of species at risk and provincially-rare species
- Validate watershed (water quality) planning tools that were developed in Phase III of the Canadian Model Forest program, through landscape-scale experiments
- Undertake riparian management research
- Facilitate development of First Nations land use plans
- Establish long-term terrestrial bio-monitoring plots
- Develop visualization tools to assess the effects of natural resource decisions on future forest condition

#### FCP Objective 3 – Forest-based Opportunities

- Explore opportunities for Non-Timber Forest Product (NTFPs) enterprises in the MBMF area
- Facilitate tourism/Eco-tourism, guiding and outfitting opportunities
- Explore opportunities in Value-added forest products

#### FCP Objective 4 – Projects with International Model Forests

- Continue projects with the Mariposa Monarca (Monarch Butterfly) Model Forest in Mexico on protecting and enhancing monarch butterfly habitat, agro-forestry, NTFPs, environmental education and gender equity.
- Continue to support the work of Black River First Nation and the Assembly of Manitoba Chiefs on NTFPs, preservation of indigenous culture and protection of forests and biodiversity with the Chiloe Model Forest (Chile)
- Initiate new projects with the Reventazon Model Forest (Costa Rica) and the Cabecares peoples of Costa Rica on eco- (ethno) tourism, NTFPs, land use planning, and environmental education and monitoring.

Just as the Canadian Model Forest program is evolving, so to is the MBMF. This is reflected in several aspects of our FCP proposal. New industrial partners, including Louisiana Pacific Canada, Manitoba Hydro and the Mining Association of Manitoba will shape and participate in our new program, leading to more integrated landscape management. In addition, we have greatly expanded our funding base by attracting core funding from the Assembly of Manitoba Chiefs, Government of Manitoba (Manitoba Conservation), Louisiana Pacific, Manitoba Hydro and Tembec Inc. We are very pleased to note that several First Nation communities and rural municipalities and towns will be supporting the MBMF with core funding. We have also expanded our program to include projects and activities in western Manitoba. This will not only create new partnerships, but will facilitate comparisons between the Boreal Shield ecosystems of eastern Manitoba and the Boreal Plain and Prairie ecosystems of western Manitoba.

To implement our proposed 5 year program, **we are seeking \$400,000 per year (\$2 million total over 5 years) from the FCP.** More than \$3 million in cash will be provided by other funding partners over

the 5 years, including the Government of Manitoba (Manitoba Conservation), Manitoba Hydro, Louisiana Pacific Canada, Tembec Inc., Brokenhead Ojibway Nation, Black River First Nation, Hollow Water First Nation, Assembly of Manitoba Chiefs, and towns and municipalities (Local Government District of Pinawa, Rural Municipality of Alexander, Rural Municipality of Victoria Beach, Rural Municipality of Lac du Bonnet). We are also actively seeking funding from other organizations including the Mining Association of Manitoba, Canadian International Development Agency (CIDA) and Indian and Northern Affairs Canada (INAC), among others. As has been the case over the 15 year history of the MBMF, our partners will be contributing significant in-kind resources to our program. We estimate that over the 5 years of our program, partners will contribute approximately \$5 million in in-kind support. This significant contribution of time, equipment, office space, etc. clearly demonstrates the commitment of our partners to the MBMF and its program.

Letters of support from our participating organizations are provided in an appendix.

The following can be reached for further details regarding this proposal:

Beverly Dube, Acting General Manager  
Manitoba Model Forest Inc.  
P.O. Box 6500  
Pine Falls, MB R0E 1M0  
(204) 367-5232 (tel)  
(204) 367-8897 (fax)  
[bdube@mts.net](mailto:bdube@mts.net)  
[www.manitobamodelforest.net](http://www.manitobamodelforest.net)

## 2.0 Site Description

### 2.1 Introduction

The site in which we will implement the FCP will be the existing Manitoba Model Forest (MBMF) area, located in eastern Manitoba (Fig 1). However, we will also be undertaking selected projects and activities in western Manitoba (Fig 1). A brief description of the western area is provided at the end of this section of the proposal.

The MBMF area is located approximately 100 km northeast of the City of Winnipeg and is bounded on the west by Lake Winnipeg and on the east by the Manitoba/Ontario border (Fig 1). The MBMF is 1,047,069 hectares in size and is made up of two Forest Management Units (FMUs). FMU 31 includes part of the Tembec-Pine Falls operations Forest Management License 01 (the only forestry tenure holder in the region), Nopiming Provincial Park (a multiple use park) and part of Atikaki Wilderness Park- a protected area (Fig 2). FMU 23 is located south of FMU 31 and includes the north portion of Agassiz Provincial Forest, the Belair and Brightstone Provincial Forests and Grand Beach Provincial Park. Grand Beach, located on Lake Winnipeg, is internationally known for its fine textured sand beaches. Also found within the boundaries of the MBMF area is privately held land (predominantly in the southern part of the MBMF) and First Nation reserve lands.

### 2.2 Biophysical Environment

#### *2.2.1 Ecoregion and Climatic Context*

The MBMF area is located in the Boreal Forest, the largest forest region in Canada. The Boreal forest encompasses 35% of Canada's landmass and more than 75% of the country's forested area. The MBMF area includes parts of two Ecoregions. The majority of the MBMF is located in the Lac Seul Upland-Ecoregion 90 (Fig 1), with the remaining portion found in the Lake of the Woods-Ecoregion 91. Climate characteristics of the MBMF are typical of a sub-humid low to mid-boreal ecoclimate, with warm summers and cold winters. Mean summer temperature is 13.5 to 15.5°C, although days > 30°C are not uncommon in July and August. Mean winter temperature is -14.5°C. Night time lows in winter can reach -45°C, although this is rare. Precipitation ranges from 500-600 mm, with approximately 1/3 of the precipitation falling as snow. Annual precipitation can vary significantly from year to year. Because of its location close to the intersection of three major biomes - the Great Lakes-St. Lawrence Forest, the Northern Coniferous Forest and the Grasslands - the MBMF area is highly susceptible to the effects of climate change.

#### *2.2.2 Geologic Setting*

The geology of the MBMF is typical of other areas on the Boreal Shield. The bedrock is Precambrian, more than 2.6 million years old, and is made up of a diversity of mineral geologies. The advance and retreat of the Labradorean and Keewatin sectors of the Laurentide Ice Sheet, during the late Wisconsin Glaciation from about 25,000 years ago, played a major role in shaping the surficial geology, landforms and soil types in MBMF area. The action of the ice sheets left a series of bedrock ridges interspersed by depressions containing coarse till. Glaciofluvial deposits of sand and gravel in the trough between the two lobes of the ice sheet also formed a number of low hills. As the ice receded to the north, Glacial Lake Agassiz developed, draining in succession to the south, east and north.

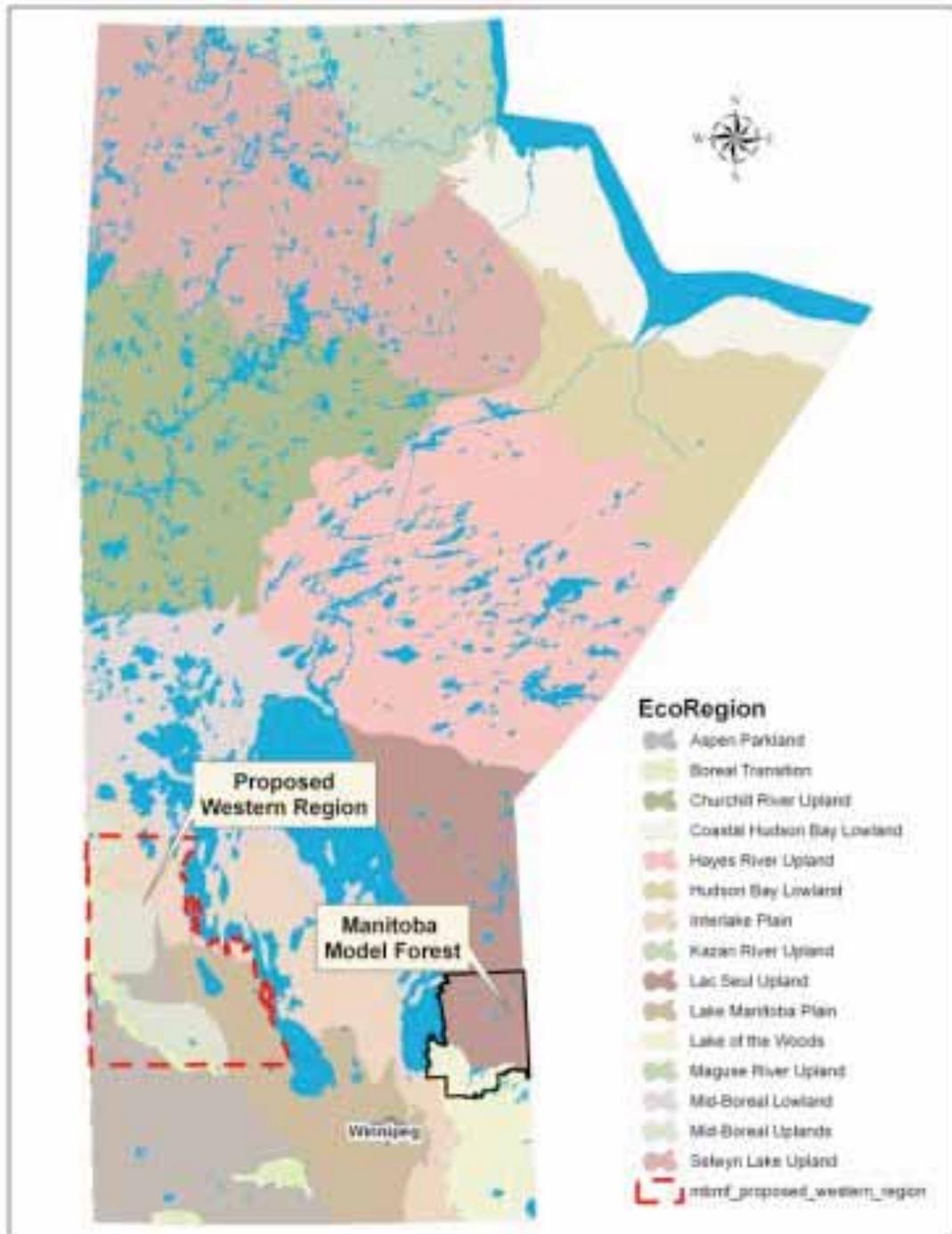


Figure 1. Ecoregions of Manitoba, location of Manitoba Model Forest area and proposed area of activities in western Manitoba. (low resolution graphic)



Figure 2. Detailed map of Manitoba Model Forest area. (low resolution graphic)

Eventually it was reduced to the current configuration of lakes in central and western Manitoba, leaving lacustrine clay deposits in the larger valleys and on the shores of Lake Winnipeg. As one travels west from the Ontario border, the landscape changes from one that is dominated by exposed bedrock and thin soils derived from acidic parent material, to level or gently undulating calcareous, lacustrine clays overlain by organic peat along the shores of Lake Winnipeg. Luvisols predominate along the major rivers.

### *2.2.3 Major Plant Communities*

Bedrock and soils have a significant effect on hydrology in the MBMF, and as a result, on plant communities. The major forest associations (Forest Sections, as described by Rowe, 1972) include the Northern Coniferous, Lower English River, Manitoba Lowlands, and the Nelson River. Taken together, the forest sections are dominated by jack pine, which forms associations with black spruce on the thin soil of upland ridges and tamarack and black spruce on poorly-drained lowland sites. Mixed stands of white spruce, balsam fir, trembling aspen and balsam poplar occur where soil conditions allow. Species such as black and green ash, white elm and bur oak are found on riverine sites.

### *2.2.4 Wetlands and Water Resources*

Wetland areas are a significant component of the MBMF. Wetlands in the MBMF include bogs, fens, swamps, marshes and open shallow water. Bogs and fens are peat-forming wetlands, whereas swamps and marshes are not. Other surface waters include lakes and flowing waters in rivers, creeks and streams. The tenth largest lake in the world, Lake Winnipeg, forms the western boundary of the MBMF. The Bloodvein River, which drains into Lake Winnipeg from Ontario and which is located just north of the MBMF, is designated as a Canadian Heritage River. The Manigotagan River, which traverses the MBMF area, is highly valued as one of the better and more accessible canoe routes in Manitoba.

Water quality of lakes and rivers can vary tremendously depending on soil and forest types found in their watersheds, as well as watershed disturbance history (fire, logging). Water bodies fed by peatlands (i.e., not having significant stream flow into them) are darker in color than those in headwater locations not draining extensive peatland complexes. Lakes that contain brown stained water, are typical in the MBMF, and are a result of high dissolved organic carbon (DOC) inputs from surrounding peatlands. Lands in the MBMF generally drain west and north into Lake Winnipeg.

### *2.2.5 Major Disturbance Regimes*

Natural disturbances have played a significant role in shaping the forests in eastern Manitoba since the last ice age ended 10,000 years ago. The main disturbance in the MBMF is wild fire. Fire cycles average 50 to 150 years throughout the MBMF area, with very few forest stands reaching an age of greater than 150 years. Disturbance is a rejuvenator of the forest, and triggers a series of plant community successional events. Fire suppression efforts have affected the number of fires that potentially could develop into large, landscape-level fires following ignition. However, despite these efforts, large fires do occur, typically following a period of low precipitation, low humidity, high winds and/or intense lightning events. Other disturbance agents such as insects (spruce and jack pine budworm, and to a lesser extent, forest tent caterpillar and sawyer beetle), diseases, wind throw (blow down) and flooding also occur. These disturbances create a patchwork of forests of different ages and types.

Anthropogenic disturbances are mainly the product of forestry, mining and the construction of roads, dams and transmission lines. Tembec's FML 01 overlaps with a significant part of the MBMF and was the first forest management license to be established in Manitoba. The original agreement was negotiated between Abitibi-Price Inc. and the Government of Manitoba in 1979. The company has forest management planning responsibilities for this area which include forest harvest planning, road construction, forest renewal and public consultation. Prior to designation of FML 01, logging occurred in the region since 1926. Much of the logging concentrated on areas close to the Winnipeg and Maskwa (Bear) Rivers, where the logs could be transported by river drive to the newly constructed newsprint mill. Some of the cleared land along the Winnipeg River has been converted to agricultural use. The part of the MBMF area south of the Tembec FML is a mix of crown-held forests and private land, some of which has also been cleared for agricultural production. The anthropogenic disturbances, in addition to intersecting the natural communities, contaminate local areas, disrupt natural drainage patterns and interfere with biodiversity by furthering the introduction of invasive alien species.

### 2.2.6 Biodiversity

The MBMF contains a rich mosaic of forested, non-forested, wetlands and aquatic habitats. The distribution of forest age classes (e.g., young, intermediate, old growth) and forest species mix is patchy, due in part to the complex interplay between natural disturbance (primarily fire), soils and hydrology. This rich mosaic of habitat provides for an equally rich mix of wildlife and other species. Large mammals include woodland caribou, moose, black bear and whitetail deer, among others. Smaller mammals that are important to the local trapping industry include beaver, marten, muskrat, lynx, otter, and to a lesser extent, wolves and wolverine. A bird monitoring program established under the MBMF found 167 species of birds that utilize the area. Aquatic ecosystems in the MBMF may provide important waterfowl breeding areas during periods of drought in the prairie pothole regions, as well as providing staging areas for waterfowl that breed further north. Large raptors such as Bald Eagles and the Great Gray Owl are well distributed through the MBMF area. Reptiles found in the MBMF area include snapping turtle, western painted turtle and the red-sided garter snake. Amphibians include Canadian toad, northern spring peeper, gray tree frog, boreal chorus frog, wood frog, and northern leopard frog. The blue-spotted salamander is also occasionally observed.

A survey in 1993 of 56 sites provided the basis for an inventory and checklist of 720 vascular plant species in the Model forest area which represents 45% of the provincial flora. Of these species, 50 are provincially rare, 3 nationally rare (*Cyperus houghtonii*, *Malaxis paludosa*, *Panicum perlongum*) and at least 82 introduced or alien to Manitoba, some potentially invasive. One species, *Lycopodium inundatum*, had not been previously reported in the province. Geographic coordinates, physical descriptions and plant community characteristics were recorded at all sites. This information will serve as an excellent baseline for monitoring vegetation changes due to disturbance, both anthropogenic (forestry, mining) and natural (animal activity, climate change). Several species listed under the Species at Risk Act are found in the MBMF area. Most notable is the woodland caribou (listed as threatened), a species on which the MBMF has focused much research, monitoring and management attention. Other species which have received less attention include birds (piping plover - endangered), fish (carmine shiner - threatened), mammals (wolverine - special concern), amphibians (northern leopard frog - special concern) and insects (monarch butterfly - special concern).

### 2.3 Socio-Economic Context and Infrastructure

A socio-economic study has been completed for the MBMF area as part of a CFS/Model Forest Network initiative (SIMFOR) and a larger study was conducted for Eco-region 90 as part of an Ecosystem Based Management Pilot Study by the province of Manitoba. The towns and villages located in the MBMF, include several Métis communities and four First Nation communities- Brokenhead Ojibway Nation, Sagkeeng First Nation, Black River First Nation and Hollow Water First Nation (Fig. 2). Together, the on reserve population of First Nations is approximately 4600 (2003 statistics) and the reserves cover approximately 16,000 ha of the MBMF area. Based on 1991 to 1997 census data, the population growth rate in MBMF First Nation communities is much higher than the provincial average (4 – 8% annual growth versus 1.9% for all of Manitoba). The demographics of the region differ between Aboriginal and non-Aboriginal communities. In Aboriginal communities, a high proportion of the population is under the age of 20. In non-Aboriginal communities of the MBMF area, the opposite is true.

The economic engine in the MBMF is diverse but focused on the land and natural resources. While forestry (and in particular, the Tembec-Pine Falls newsprint mill and associated woodlands activities) is a significant component of the economy in the MBMF, there is also a wide diversity of forest and natural resource-dependent industries operating. In the past year, following the increasing value of gold, the re-opening of the Bissett gold mine and increased mining exploration have helped to diversify the regional economy. Manitoba Hydro employs people from the region to operate hydroelectric power stations (dams) as well as transmission line and right-of-way maintenance (clearing of vegetation). Commercial fishing on Lake Winnipeg represents another significant source of income for residents of the MBMF area, although commercial fishing activity is limited to a few communities. Other economic activities include guiding and outfitting (hunting and fishing), trapping, wild rice harvesting, and the collection of minnows (for bait) and the operation of remote and semi-remote fishing and hunting lodges. Subsistence activities include hunting, fishing, trapping and berry picking. Agriculture is an important component of the local economy in the southern part of the MBMF. Poor soils north of the Winnipeg River preclude any significant expansion of agriculture northward. Recreation is an important activity in the MBMF and contributes to the overall economy. Due to the close proximity of the MBMF to the City of Winnipeg, the MBMF area is used significantly for recreation (camping, boating, canoeing, fishing, hiking, etc.). In general, however, forestry remains a cornerstone of the local economy. Employment is not equally distributed across MBMF communities. First Nations, in particular, are under-represented in the workforce as it relates to industrial enterprises. This has been slowly improving, but lack of access to local training facilities has hampered the entry of First Nations into the trades workforce. This is something we intend to address with our FCP proposal.

Compared to the more intensively developed parts of the province, a limited network of highways connects communities in the MBMF area (Fig 2). First Nation communities located north of the MBMF area (such as Bloodvein, Berens River, Poplar River, Little Grand Rapids and Pauingassi) are significantly more isolated than First Nation communities in the MBMF area; being only accessible by a winter road system, by air or (for some communities) by ferry across Lake Winnipeg. The main, gravel forestry roads that exist in the MBMF area operate under Tembec's Forest Management License Agreement for FML 01, and these and other roads are open to the public for access. However, some roads are closed to public access by the Government of Manitoba to protect special resource values (e.g., caribou or moose populations). There are eight hydroelectric generating stations and dams located on the Winnipeg River. A major hydro transmission line bisects the MBMF from the Great Falls dam to the town of Bissett.

## 2.4 Summary Description of the Western Area

As mentioned earlier, the MBMF will be expanding its work, projects and activities to western Manitoba (Fig 1). A brief description of the area is provided, as this area represents a significantly different ecological context to work in. The western area includes both the Boreal Plain ecozone and Prairie ecozone. It also encompasses the Louisiana Pacific FML 03, the largest forestry tenure in western Manitoba (approximately 2.5 million hectares in size) and surrounding area. In contrast to the MBMF area, the western area contains much more private land and significant agriculture activity. A well established road infrastructure exists because of this. The area historically was a mixture of open prairie grasslands, hardwood, mixedwood and softwood forests. Much of the grasslands and forests have been converted to agriculture. Trembling aspen and white spruce are common on upland sites, with black spruce being common on lowland sites. The western area also includes some of the most striking topographic relief in the province, including Riding Mountain National Park, the Duck and Porcupine Mountains, all of which are found in our proposed area of activity. The MBMF forest in contrast, contains little topographic relief. Soils are much more well-developed and fertile compared to those in the MBMF area and hydrology of the western area is much more complex. As a result, water quality is also significantly different. The differences in climate, topography, hydrology and habitat types create differences in biodiversity and species assemblages compared to the MBMF area. The differences therefore make for interesting and valuable comparisons, which provide a mechanism to better understand ecosystem function.

In terms of socio-economics, the primary industries in the western area are forestry, agriculture, mining and fishing. Agriculture is the economic mainstay for the region. There is one city (Dauphin, which is the economic hub) and several smaller towns and villages. There are seven First Nation communities within the West Region Tribal Council area, which overlaps with our proposed area of activity.

## **3.0 Goals and Objectives of the Manitoba Model Forest**

### 3.1 Introduction

The MBMF was selected in June 1992 by the Canadian Forest Service to be one of ten Model Forest sites in Canada. The MBMF has evolved over time to reflect the needs of our local communities, changes in societal values and the need for an improved understanding of our forest ecosystems to better inform policy-making decisions. One core value that has not changed over the 15 years of the MBMF is the desire to provide a venue in which all peoples can learn about our forests, and thus improve capacity to provide a valuable and tangible contribution towards its sustainable management. The MBMF has dedicated much effort to ensuring that communities, and in particular, First Nations, have direct input into our programs and actively participate in all aspects of the MBMF. This includes participation on the Board, the Executive Committee, working groups and committees and in individual projects. Our philosophical approach to ensuring the sustainable management of the forest is one of inclusiveness. This allows people from all walks of life to work cooperatively together.

In this light, the **Vision** of the MBMF is:

**To provide a place where people from different backgrounds can work together to learn about and appreciate all the values of the forest and help ensure those values are conserved for future generations.**

To achieve the above vision, the MBMF has set the following 4 **Objectives**:

- 1) To have facilitated opportunities for local level participation in sustainable forest management with emphasis on aboriginal involvement, planning and related activities and diverse economic opportunities
- 2) To have ensured that the value of forests and the results and knowledge gained were communicated to practitioners, forest users and the general public.
- 3) To have increased the development and adoption of innovative Forest Stewardship Practices, systems and tools within and beyond the MBMF boundary including incorporation of local and traditional ecological knowledge, the development of best practices and to have multiple values effectively recognized, realized and conserved for present and future generations.
- 4) To have shared knowledge and participated in joint ventures with other Model Forests and organizations.

To implement our Vision and Objectives, we operate under 4 guiding principles. The **Principles** of the MBMF are:

- **RESPECT AND CARE FOR THE COMMUNITY OF LIFE** of which we are all a part, and exploration and conservation of the ecological processes and diversity of our shared forest and wildlife heritage,
- **RESPECT FOR THE DIVERSE STREAMS OF HUMAN EXPERIENCE**, learning and culture that shall guide a multi-valued appreciation and wise and equitable use of the forest,
- **A CANDID AND OPEN PROBLEM-SOLVING APPROACH** that faces squarely potential negative impacts and conflicts and attempts to resolve them in accordance with the principles of respect for the community of life and the human community, and
- **RELIANCE UPON HUMAN INGENUITY WORKING CREATIVELY WITH NATURE'S INVENTIONS AND PRODUCTIVITY** to solve problems, pursue new opportunities, and improve environmental and economic benefits and efficiency.

### 3.2 Forest Communities Program: A Natural Fit

Our vision, objectives and guiding principles are a natural fit with the FCP. The natural resource sectors and the communities which rely on them are in a state of transition, and the MBMF is well positioned to build capacity and assist the industry and communities towards greater stability. In particular, the forest sector faces many challenges. Globalization, cycles in commodity value, trade disputes and industry rationalization (usually resulting in downsizing of the workforce), among other factors, have affected the financial stability of companies. The increasingly complex nature of land use planning that accommodates environmental and other societal values places more demands on industries, governments and the forests themselves. The heavy reliance of forest-based communities on single industries (such as the forest sector) leaves communities in a precarious position. Despite this, forest-based communities have the opportunity to diversify their economies, capitalizing on products and services of the forest while at the same time conserving the important values of the forest. The MBMF has successfully completed over 400 small and large projects spanning a wide variety of topics related to the sustainable management of our forested landscape heritage, while contributing to the stability of our local industries and forest-based communities.

### 3.3 Relationship of MBMF Proposal to the FCP Objectives

The entire MBMF proposal was developed around the four key objectives of the FCP. In this way, our program is directly relevant to all aspects of the FCP. It should be noted that many of our proposed projects and activities support several of the FCP Objectives simultaneously. This is shown in tabular form in Section 5.3. Also shown in this table are the linkages between our proposed projects and activities and the MBMF Objectives.

In the following paragraphs we describe how our proposed program fits with each of the FCP Objectives.

#### **FCP Objective 1. To pilot ideas, conduct experiments and develop models that assist forest-based communities to build capacity and meet the opportunities and challenges of a forest sector in transition.**

We view this objective as one that primarily focuses on increasing the capacity of local communities to understand the complex nature of landscape management, and increasing capacity to participate in informed landscape management decision-making. To achieve this objective, our proposed activities and projects focus on community education (in particular, youth), involvement of communities and other stakeholders in governance and decision-making of the MBMF (e.g., as Board and Executive Committee members, and in the design and implementation of projects), continuance of an established project focused on co-management of natural resources (specifically, moose) by First Nations in the MBMF area, and providing seed money for community-based projects through our Community Opportunities Fund. With respect to education, we will continue our focus on development of provincially-accredited forest-based curricula, involvement of youth in research projects, teacher and woodlot workshops, providing forest tours and presentations to communities and stakeholders, and support for the Manitoba Envirothon. We will also help facilitate the establishment of a Regional Trade School in the MBMF area, as well as a Junior Forest Rangers program in the province. The design of the trade school is well under way and includes the input of local communities and industries to ensure its relevance to the region. A significant component of our work will involve engaging new partners in western Manitoba, to bring people around the table to enhance understanding of forests, improve landscape management and to increase capacity to participate in decision-making. Thus, our activities and projects under this FCP Objective are designed to build capacity within communities for more effective participation in decision-making by providing education and tools.

#### **FCP Objective 2. To develop and share integrated, multi-sector approaches, based on science and innovation, to address community transition that involves new and existing natural resource stakeholders.**

Landscape management decisions that fully account for all forest values and all users of the forest must be based on an integrated approach. In our proposed program, we view the involvement of all stakeholders, and decisions based on adequate knowledge, as the foundation of successful landscape management. To this end, we believe that a sound scientific understanding of the forest is required in order to build innovative science-based solutions. Both are being addressed by our proposal. In much of the MBMF area, the main industries include forestry, mining and hydro. In the southern part of the MBMF area, agriculture and private land/woodlots are also important. These partners will form an integral part of our program and our science-based approach includes all of these players, along with communities and educational institutions.

A main thrust of our program under this FCP objective focuses on species at risk, in particular, the Threatened woodland caribou. Over the last 15 years the MBMF has developed and employed innovative tools to assess caribou distribution and habitat use in the MBMF area and beyond, has developed an integrated landscape management strategy for one caribou herd (the Owl Lake herd, the most southern herd in western Canada) and designed and implemented a landscape-level forest harvesting experiment to ensure an adequate supply of high quality habitat for the Owl Lake herd exists over time. In our proposal we will continue to monitor the distribution of caribou (as well as predators [wolves, black bear] and alternate prey [moose, deer]) in relation to the experimental harvests in the Owl Lake area. We will develop landscape management strategies for other herds in the MBMF area and move our research further north out of the MBMF area to provide data to support the management of other herds in Manitoba. Our work ties in very closely with a new provincial strategy for woodland caribou. We will provide input into the provincial recovery strategy for woodland caribou, under the federal Species at Risk Act (SARA). In addition to caribou, we will also undertake assessments to determine the need for management strategies for other species at risk (wolverine, piping plover, etc) listed under SARA, as well as provincially-rare species.

Water quality is an important value in the MBMF area. In Phase III of the Canadian Model Forest program, we have developed watershed management planning tools for the forest industry which accommodate for water quality in forest management planning. In our new program, we will validate the watershed management tools by implementing several watershed-scale forest harvesting experiments. As part of this, we will also test the applicability of newly-released provincial riparian management guidelines.

Another important aspect of integrated landscape management is the inclusion of First Nation land use plans and the activities of groups such as trappers in landscape planning. In our proposal we will assist one community (Brokenhead Ojibway Nation) to complete the development of their land use plan, and work with the land use planning process currently under way along the east side of Lake Winnipeg to aid in facilitating the development of an integrated, land use plan for this area (approximately 8 million hectares).

In Phase III of the Canadian Model Forest program, we initiated projects on developing a forest harvesting template based on a natural disturbance (forest fire) model, the establishment of a terrestrial bio-monitoring program with schools to examine the impacts of climate change on forests and the development of computer-based tools to help stakeholders and communities visualize the implications of land use decisions on the structure of the future forest (e.g., biodiversity, old growth forest, timber supply). We will continue these projects in our new program.

### **FCP Objective 3. To work with industry and other community-level stakeholders to develop new forest-based opportunities for rural Canada.**

Many rural forest-based communities are highly reliant on the forest industry to provide economic opportunities. The recent closure of mills and cessation of woodlands-related activities (harvesting, forest renewal, road construction) in Canada have heightened the awareness of governments and communities alike that our rural communities must become more economically diversified. New forest-based opportunities hold much promise for making this happen. Our proposed program focuses on exploring these forest opportunities with communities. In particular, we will initiate projects on non-timber forest products (NTFPs), tourism/eco-tourism, guiding and outfitting, and other value-added forest products.

NTFPs are becoming increasingly recognized as a viable part of the local, forest-based economy. The MBMF recognizes that in order to avoid “reinventing the wheel”, that we must rely on the NTFP expertise that exists in other organizations. We therefore have chosen to partner with the Northern Forest Diversification Centre (The Pas, Manitoba) and Royal Roads University (Victoria, BC) to provide information on NTFP opportunities as well as to undertake inventories in the MBMF area. The Northern Forest Diversification Centre already houses a marketing and distribution centre for NTFPs, something that is essential for the economic viability of local NTFP businesses. We will tie directly into this existing network. NTFPs also link directly with our proposed work with international model forests, as well as local education and training through our Regional Trade School.

In our new program we will also work closely with partners on expanding and enhancing opportunities within the tourism and eco-tourism sectors, as well as guiding and outfitting opportunities. In addition to working with communities to identify opportunities for such business in the MBMF area, we will also integrate certified training courses into the Regional Trade School as well as provide linkages to our other projects, such as the moose co-management initiative.

Finally, we will also work with our communities to identify other forest-based opportunities including value-added wood products and utilization of wood processing wastes. Currently, wood fibre in the MBMF area is used primarily for pulp and the production of newsprint in the Tembec, Pine Falls mill. The forest is utilized very little for other forest products (e.g., lumber, etc). While any additional use of the forest resource must be balanced with other environmental and social values, the diversification of forest product production can provide additional benefits to the local economy and even the existing forest industry. For example, a component of Tembec’s Forest Stewardship Council (FSC) certification includes the requirement to help diversify the use of the forest for other forest products. In our program, we will therefore be helping Tembec with its FSC certification efforts by facilitating discussions between industry and communities with respect to other forest product opportunities.

**FCP Objective 4. To develop and share sustainable forest management knowledge, practices, tools and experiences with international forest-based communities and their Model Forests, in keeping with Canada’s international forest agenda.**

The MBMF has enjoyed a long working relationship with the International Model Forest Network and has undertaken many activities and projects with international Model Forests and local, indigenous peoples. Our projects and activities have taken us to Mexico, Chile, Japan, Thailand and The Philippines, to work collaboratively on issues relating to community-based decision-making and governance, gender equity, indigenous peoples cultural preservation and exchange, agro-forestry, biodiversity and habitat conservation, NTFPs and eco-tourism.

Our proposed program builds on, and expands our international work. To apply Canada’s wealth of knowledge, practices and tools with respect to sustainable management of forested landscapes, the MBMF will undertake projects in Costa Rica with the Regional Model Forest Network for Latin America and the Caribbean (LAC-Net), Reventazon Model Forest, and other partners. Projects will focus on ethno- and eco-tourism, land use planning, biodiversity preservation, NTFPs and environmental education and monitoring. Due to the cessation of a previous CIDA funding program, the MBMF has not worked with the Mariposa Monarca (Monarch Butterfly) Model Forest since 2004. In our new program, we will seek funding to re-establish our ties with this important Model Forest in Mexico. Finally, through our partnerships Black River First Nation and the Assembly of Manitoba Chiefs, we will continue to support projects with the Chiloe Model Forest (Chile) on topics relating to NTFPs, traditional medicines and biodiversity and habitat conservation.

### 3.4 Relevance of Proposed MBMF Program to Local Landscape and Transferability to Other Landscapes

All of our proposed activities and projects are highly relevant to eastern Manitoba, the area in which our Model Forest resides. Activities including stakeholder engagement and decision-making or science and technology-related projects are all suited to enhancing the capacity of local communities and industries in environmental, social and economic sustainability. As noted here and elsewhere in our proposal, we are proposing to extend our activities and projects to western Manitoba. This will not only provide for exporting “the Model Forest governance and engagement model” to another area of the province, but will make for valuable comparisons with respect to results derived from science-based projects. For example, our proposed work in western Manitoba will occur in the Boreal Plain and Prairie Eco-regions, an area with significantly different hydrology, soils and bedrock structure and forest ecosystem biodiversity than that present in the MBMF area. Comparison between the results of projects in the MBMF area with those of western Manitoba will provide valuable insight into how our ecosystems function and their response to disturbance.

### 3.5 Capacity of the MBMF to Undertake the Proposed Program

The Canadian Model Forest program has undoubtedly been one of the more successful programs (federally or provincially) to engage stakeholders and communities in natural resource decision-making. Over 15 years, the MBMF has taken a leadership role in achieving the objectives of capacity building, inclusive participation in forest management decision-making, and development of sustainable forest management tools. The size, diversity and effectiveness of our Board of Directors are testaments to our ability to bring people together to work in a spirit of cooperation to better manage our natural resources. The MBMF has successfully completed over 400 short-term and long-term projects on a diverse range of environmental and socio-economic topics related to sustainable forest management. These include understanding the life cycle needs of woodland caribou and the development of management strategies for caribou, facilitating the establishment of Traditional Area Advisory Committees in First Nation communities, development of models to predict the occurrence of archeological resources in the MBMF area, development of local level indicators of sustainable forest management, development of trap line inventories, providing seed funding for community-based environmental and educational projects, and supporting the development of First Nation Land Use studies. Finally, the work of the MBMF has been instrumental in helping to create new forest policy and guidelines. For example, our work on woodland caribou, including the development of the first management strategy for any caribou herd in the province, was used to help formulate a province-wide woodland caribou strategy. Our work of watershed management and water quality will similarly help inform decisions of management of water resources in Manitoba.

Perhaps the best evidence to evaluate the effectiveness of the MBMF and our ability to carryout such a broad-based program comes from the most recent evaluation of the MBMF conducted by the Canadian Forest Service. The evaluation was based on our performance in Phase II of the Canadian Model Forest program under the areas of A) governance, management and operations, B) research and the use of science and technology, C) leadership and outreach, and D) relevance to sustainable forest management.

The Executive Summary of the report states

**“The Manitoba Model Forest is an example of a high functioning, well-managed model forest. Its productivity is outstanding, inclusiveness is remarkable-and the use of science and**

**technology, outreach, communications and foresight are exemplary. Resources allocated to management are minimal. For this reason, attention to succession planning is essential. The lessons learned from the success and performance of this high performing model forest should not be lost.”**

#### **4.0 Participating Organizations and Governance**

The MBMF is made up of a diverse partnership of communities (Aboriginal and Non-Aboriginal) and municipalities, First Nations political organizations, industries, government departments and agencies, Environmental NGOs, local sustainable development NGOs, local economic and heritage organizations, land users (e.g., trappers association) and universities. Our Board of Directors is the largest among all the Model Forest sites. We currently have a Board of Directors composed of 33 people, representing 27 organizations and communities. Table 1 indicates our current Board of Directors.

Table 1. 2006/07 Manitoba Model Forest Board of Directors

Assembly of Manitoba Chiefs	Black River First Nation	Brokenhead Ojibway Nation
Canadian Forest Service	Community of Bissett	Community of Manigotagan
Community of Seymourville	Hollow Water First Nation	Local Government District of Pinawa
Manitoba Conservation (Government of Manitoba)	Manitoba Metis Federation	Manitoba Naturalists Society
Manitoba Trappers Association	North East Sustainable Development Association	Rural Municipality of Alexander
Rural Municipality of Lac du Bonnet	Rural Municipality of Victoria Beach	Sagkeeng First Nation
Tembec Inc.	Tembec Unions	Time To Respect Earth's Ecosystems (TREE)
Town of Lac du Bonnet	University of Manitoba	University of Winnipeg
Wassaabiyaa Shining Waters Heritage Region	Winnipeg River Brokenhead Community Futures Development Corporation	Woodlot Association of Manitoba

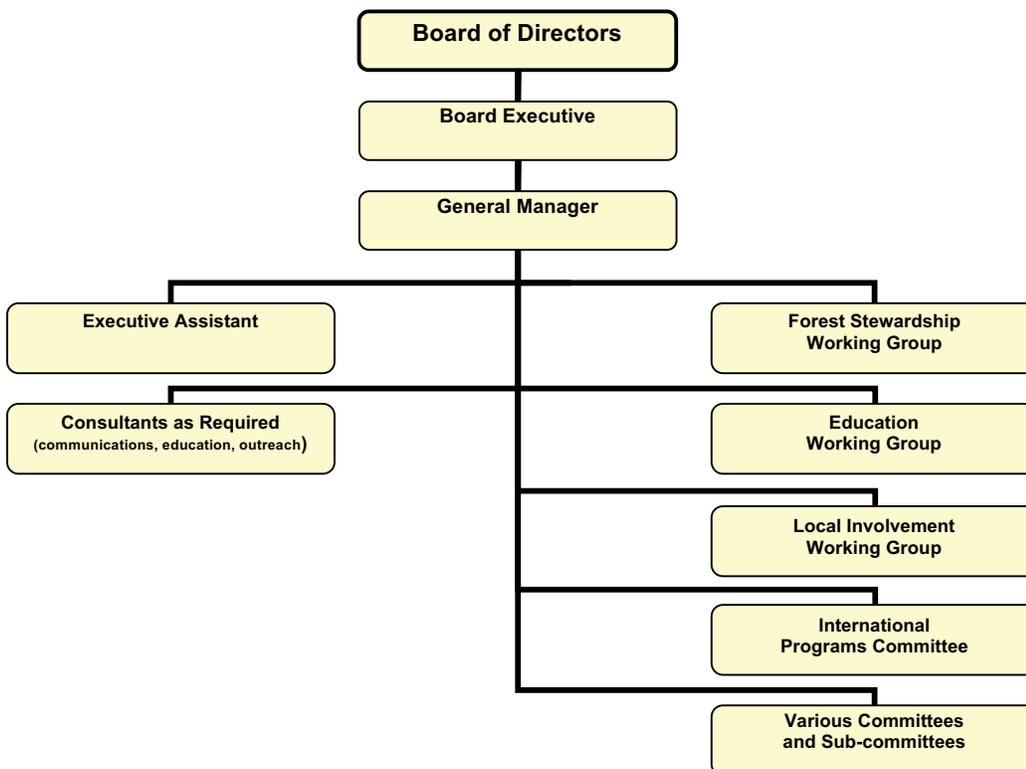
We have also invited Louisiana Pacific Canada, Manitoba Forestry Association and the Mining Association to join as Board members in April, 2007. With the exception of Manitoba Conservation the Manitoba Métis Federation and First Nation communities, each organization on the Board holds 1 position (as well as an Alternate). Manitoba Conservation holds 3 Board positions and 3 Alternates, and the Manitoba Métis Federation and each First Nation community has 2 Board members and 2 Alternates.

Many of our partners participate in several aspects of our program (e.g., Board members, members of working groups and committees, helping with project design, proposal writing and fundraising, participation in field tours, conducting research, writing reports), while others such as funding organizations provide financial support only. Partners in the MBMF need not be represented on the Board of Directors. All however share the same goal of ensuring the sustainability of our forests and the communities which rely on them. In addition to our managing partners, there are over 200 people

from the partner organizations, other organizations and interested public both local and from other areas of Manitoba that act in a volunteer capacity to support the Board of Directors and the program. All these organizations are identified in Section 7 - Administration and Finances. The ratio of volunteers to staff is in excess of 100:1. Most of our Board members and partners have maintained a long relationship with the MBMF. Many were part of developing the original MBMF proposal in 1992. This enduring association with the MBMF speaks volumes about the value of these relationships. Many of the volunteers on the Board, Executive, Working Groups and Committees spend considerable time in project development and implementation. Board members alone spend in excess of 700 person-hours of time at Board meetings annually. Members of the Eastern Manitoba Woodland Caribou Advisory Committee sit on other subcommittees, including education and outreach, science and technology, and data management and may contribute over 200 hours each of in-kind time throughout the year. When added up, this contribution is very significant. In fact, this is one of the reasons why in-kind contributions to the MBMF program over the last 5 years have averaged approximately \$1,000,000. Letters of support from our participating organizations are found in Appendix B.

Over the years we have also taken on new partners, and continue to do so. In many instances, new organizations join after hearing about the MBMF from colleagues and others that participate in the MBMF. The high profile of the MBMF in local communities and the support of community projects by the MBMF have attracted new partners.

Below is a chart showing the organizational structure of the MBMF.



The MBMF is a non-profit organization incorporated under the laws of Manitoba in 1992. Our latest constitution and by-laws were enacted in June 2001. The activities of the MBMF are governed by its

managing partners who conduct the affairs of the Company by virtue of membership on its Board of Directors. The Board is supported by an Executive Committee. Working groups (Forest Stewardship, Education, Local Involvement) and committees (Eastern Manitoba Woodland Caribou Advisory Committee, Committee for Moose Management, International Programs) are responsible for developing and implementing projects. Each is described below. All positions on the Board, the Executive Committee and working groups and committees are on a voluntary basis.

#### 4.1 Board of Directors

The Board of Directors maintains overall responsibility for the organization and program. Their duties and responsibilities include;

- Setting overall program direction and priorities
- Approving long-term/strategic and annual work plans including budgets
- Setting/revising policy and by-laws
- Approving the hiring of staff
- Establishing committees and terms of reference
- Reviewing program progress and performance
- Electing Officers for the Board Executive Committee (e.g., President, Vice-President, Treasurer and Secretary)
- Approving project award procedures

#### 4.2 Board Executive

The President and Chairperson of the Board, Past President, 1<sup>st</sup> Vice President, 2<sup>nd</sup> Vice President, Secretary, Treasurer and the General Manager (as an ex-officio member) constitute the Executive Committee. Their responsibilities are:

- Monitor the effectiveness of the Corporation in achieving its stated objectives
- Make recommendations to the Board regarding the recruitment and dismissal of staff
- Make recommendations for any changes in the personnel or administrative policies of the Corporation
- Set levels of compensation for staff
- Act as a grievance committee in disputes between the Corporation and its employees or the Corporation and the community at large
- Be responsible for the review and recommendation of the Corporation insurance agents and professional firms
- Review the financial statements of the Corporation in relation to the approved budget, and report and/or make recommendations to the Board of Directors

#### 4.3 Working Groups and Committees

Working groups are established under three of our main Theme Areas: Forest Stewardship, Local Involvement and Education. Each working group is chaired by a volunteer. Participation on working groups is open to any interested group or individual. Committees such as the Eastern Manitoba Woodland Caribou Advisory Committee and the Committee for Moose Management report to working groups. A separate International Programs Committee reports directly to the General Manager. The majority of working group and committee members are affiliated with the organizations represented on the Board of Directors, and include the Directors themselves. Detailed Terms of Reference exist for the Committees. In general, their duties include:

- Determining and recommending to the Directors, activities and budgets on an annual basis

- Management of programs and projects in their representative Theme Area

#### 4.4 Staff

The MBMF employs two full-time staff positions – a General Manager and an Executive Assistant. On a project-specific basis or under particular Theme Areas, consultants may be hired to assist in program delivery. Examples include education specialists, First Nation community outreach specialists and communication consultants.

#### 4.5 Decision-Making and Resolving Conflicts

Decision-making at all levels in the organization is by consensus. This applies equally to Board decisions as it does to decisions made at working group and committee levels. This form of decision-making has been effective in ensuring that all individuals are given the chance to articulate their points of view. Meetings are held in a forum of openness, trust and respect. Generally, formal resolutions are only utilized at the Board level, and with ample time given for discussion. At working group and committee levels, decisions are not usually voted upon, but the prevailing consensus is documented in meeting minutes, along with alternate points of view. Conflicts, should one arise, are brought to the attention of the Executive Committee who then function as a Grievance Committee.

#### 4.6 Keeping Partners Informed: Networking and Information Sharing

As mentioned later in our Communications, Outreach and Networking strategy (Section 6), the MBMF spends considerable effort in ensuring our partners are informed of our activities, progress and results. Presentations are made regularly by project leaders on the status of individual projects, outcomes and deliverables at Board meetings. Working groups and committees have an open door policy with respect to participation and/or attending meetings. The progress and results of projects and activities are commonly discussed at such meetings. Newsletters are also used as a mechanism to keep partners informed.

#### 4.7 Linking with Centres of Expertise and Research Capacity

Due to the diverse nature of our partnership, the MBMF has access to world-class centres of Boreal forest expertise and research capacity. We continue to partner closely with the Centre for Forest Interdisciplinary Research (University of Winnipeg) and the University of Manitoba on projects ranging from woodland caribou to water quality. Under the FCP we are planning on initiating projects on Non-Timber Forest Products (NTFPs). Expertise will be drawn from the Northern Forest Diversification Centre (The Pas, MB) and Royal Roads University (Victoria, BC). In addition to university/college-based expertise, many of the members of our working groups and committees are experts in Boreal forest sustainability. We draw heavily on such partners. Existing Model Forest sites and their long track record of research are also an important source of expertise and knowledge to our projects. In addition, the MBMF is an affiliate member of the Sustainable Forest Management Network (Edmonton). This provides a very large resource in terms of research capacity. We regularly keep abreast of the research being planned and results from this important network.

#### 4.8 Involvement in the Canadian Model Forest Network

The MBMF is one of the founding members of the new Canadian Model Forest Network. Our current president is a member of the first Board established under this new organization. The MBMF has

played a role in all aspects of the development of the new network (from by-law development to communications). As mentioned later in our Communications, Outreach and Networking strategy, we will remain actively involved in the Canadian Model Forest Network in a number of ways. For example, as a member of the Board of Directors, by working on the various committees (once they are established), and by working with the national network to plan and sponsor meetings, workshops and conferences. We will also endeavor to work closely with the International Model Forest Network, given our planned projects with Model Forests in Costa Rica, Mexico and Chile.

## **5.0 Five Year Program Plan: Activities, Deliverables and Outcomes**

### **5.1 Program Development**

Our five year plan was developed over a 10 month period with the input and assistance of a very large and diverse group of organizations and partners. The breadth of the proposed program demonstrates the commitment of those involved to the vision and objectives of the MBMF, the objectives of the FCP, and their willingness to work collaboratively and cooperatively together across cultures, sectors and points of view to work to achieve them. In order to ensure that the resulting program would have relevance and benefit to as broad a cross section of interests in the forest as possible, we invited our current MBMF partners and Board members, as well as new potential partners and others with an interest in the forest, to participate in program development workshops. In total, 56 individuals, representing 27 organizations, companies, governments and communities were involved. A list of those which participated in the program development workshops is found in Appendix A.

An initial workshop was held to solicit input and ideas on the future program areas and projects that participants felt should be included in the FCP application. Participants were asked to provide guidance on past and current MBMF projects that should be carried on into the new five year program, and to brainstorm ideas for new projects. The workshop discussions were focused entirely around the four FCP Objectives to ensure that all projects incorporated into the new program were directly applicable to the FCP. Following the initial workshop, participants (and those who were not able to participate) were asked to fill out a survey to prioritize the project ideas that originated from the workshop. Based on the results, a second workshop was held to solicit ideas for the specific components, activities and tasks that should be included under each project that was previously identified as high and medium priorities for inclusion in the five year FCP. Thus, our application and our proposed 5 year plan were developed by a very diverse cross-section of participants, representing our existing MBMF partners, as well as others. In addition to providing the MBMF with a more holistic and inclusive program proposal, the process also resulted in expanding our partnership base, bringing in additional partners to the new program. Finally, individual meetings were held with all of our major and potential funding partners to ensure that the new program would satisfy their needs. Meetings were held with Manitoba Conservation, Manitoba Hydro, Tembec Inc, Louisiana Pacific Canada and the Mining Association of Manitoba. This proposal was reviewed by the MBMF Board of Directors and approved unanimously by the Board on October 18, 2006.

**Note:** the MBMF acknowledges and recognizes all Treaty Rights under the Constitution of Canada. This proposal and work plan in no way detracts, derogates or prejudices nor takes away any right of land claim nor affects any right, action or claim of any First Nation in respect of any improper surrender, alienation, or other disposition by Canada of Reserve Lands, claims related to traditional Indian Lands or any right, action or claim which may exist or hereafter arise.

The MBMF has chosen to use the four FCP Objectives as the core program objectives of our five year plan.

**The four FCP Objectives are:**

1. To pilot ideas, conduct experiments and develop models that assist forest-based communities to build capacity and meet the opportunities and challenges of a forest sector in transition.
2. To develop and share integrated, multi-sector approaches, based on science and innovation, to address community transition that involves new and existing natural resource stakeholders.
3. To work with industry and other community-level stakeholders to develop new forest-based opportunities for rural Canada.
4. To develop and share sustainable forest management knowledge, practices, tools and experiences with international forest-based communities and their Model Forests, in keeping with Canada's international forest agenda.

It should be noted that we define "forest-based communities" very broadly as any entity that has a direct interest in the forest. This includes not only forest-based villages, towns, municipalities and Aboriginal communities, but also Non-Government Organizations, and all resource sectors. We recognize that local, regional, provincial, national and international pressures and circumstances are changing the legislative, economic, social and environmental conditions under which all resource industries operate. Our program acknowledges that not only must we provide tools and build capacity for rural communities to meet the current and future opportunities and challenges, but we must also do so for all natural resource industries in the MBMF area and beyond. We therefore acknowledge that this involves more than just a forest sector in transition.

We have also decided to continue to maintain the MBMF objectives from Phase III of the Canadian Model Forest Network Program.

**The MBMF Objectives from Phase III, which will be continued under the FCP are:**

- 1) To have facilitated opportunities for local level participation in sustainable forest management with emphasis on aboriginal involvement, planning and related activities and diverse economic opportunities
- 2) To have ensured that the value of forests and the results and knowledge gained were communicated to practitioners, forest users and the general public.
- 3) To have increased the development and adoption of innovative Forest Stewardship Practices, systems and tools within and beyond the MBMF boundary including incorporation of local and traditional ecological knowledge, the development of best practices and to have multiple values effectively recognized, realized and conserved for present and future generations.
- 4) To have shared knowledge and participated in joint ventures with other Model Forests and organizations.

5.2 Implementation Strategy

Below is a summary of the Projects and Activities of our five year program. Included in each is a description of the outputs and outcomes/deliverables, linkages with collaborating and participating organizations, methods of measuring and reporting results, impacts "on the ground", applicability/transferability to other locations and expertise of the MBMF and our partners to carry out such projects and activities.

**FCP Objective 1. To pilot ideas, conduct experiments and develop models that assist forest-based communities to build capacity and meet the opportunities and challenges of a forest sector in transition.**

Projects and Activities under this objective are designed to help rural communities (both Aboriginal and non-Aboriginal) build capacity to participate more fully in natural resource management and in MBMF decision-making, and to understand and adapt to climate change.

**First Nation Co-management of Moose in Eastern Manitoba:** Since 1992, the Committee for Moose Management, a committee of the MBMF which includes four MBMF First Nation communities, a local wildlife association, Manitoba Conservation, and the forest industry (Tembec Inc), has provided people in the MBMF area the opportunity to address management issues related to one of the most culturally and socially important wildlife species in our area – moose. The “moose committee” has established much credibility in the MBMF as a vehicle for building capacity and involving people (in particular, First Nations) in providing recommendations for the management of moose. First Nation participation on the moose committee is amongst the highest of all the MBMF committees. The committee has actively engaged in designing and conducting landscape-level experiments on hunting and road access controls, wildlife surveys and the collection of traditional knowledge. The committee has also spent a considerable amount of effort on public education with respect to the status of the moose resource in the MBMF area, the effects of various hunting control strategies and road closures and forestry activities on moose populations. The committee has played a key role in the development of road and access management plans in the region and regularly provides guidance to Tembec Inc and the government of Manitoba.

First Nations have increasingly taken a leadership role in the committee and have expressed a desire to become much more actively involved in the actual management of the moose resource. With the support of the committee and Indian and Northern Affairs Canada (INAC), a small pilot project was conducted by Black River First Nation and Hollow Water First Nation in 2006 to gauge the level of interest in conducting a pilot program on managed hunting in each of the communities’ traditional areas whereby the communities would help develop management plans (including quotas for First Nations and non-First Nations hunters, road and access plans, etc.). Presentations were made and meetings were held in the 2 communities over a period of approximately 4 months and a regional moose survey was conducted.

We are proposing to continue this by working with the two communities to develop the managed hunting plans through a series of community workshops and working group meetings, to work with Manitoba Conservation to establish trial areas in Game Hunting Areas 17A and 26 that are supported through legislation, to facilitate training of community people in monitoring of hunting activity in the areas, reporting on results and adaptively managing the program. We intend to hold workshops in the communities which will bring in experts from other areas of North America (Yukon, US Great Lakes region) to share their Aboriginal co-management experiences with our partners. We will also work closely with a consortium that has established a First Nations fisheries co-management system in another region of Manitoba (Lake Dauphin) in order to learn from their experiences. Funding for this project will also be used to support the regular meetings, outreach (newsletters, presentations) and related work of the Committee for Moose Management. Direct costs for the functioning of the committee are modest, as most of the work is provided by in-kind time of committee members.

The outcomes and deliverables from the committee and the implementation of 2 pilot projects on moose co-management will be the enabling of First Nations to take a much more active role in the management of this important resource, providing opportunities for employment (through monitoring, outfitting, etc.) and the development of First Nation co-management plans for moose in parts of eastern Manitoba. The moose co-management project is also linked to several other MBMF projects under FCP Objective 1 and 2. These include education and training for First Nation community outfitting opportunities (through a regional trade school), involvement of community Traditional Area Advisory Committees (TAACs), development and refinement of First Nation land use plans and providing information to inform the East Side Lake Winnipeg Broad Area Planning Initiative, more recently known as Wabanong Nakaygum Okimawin (WNO). Discussions will be held with other MBMF partners to evaluate the use of such a template in other regions of the province. Partners in the moose committee and/or the co-management project include First Nations (Black River, Sagkeeng, Hollow Water, Brokenhead), Manitoba Conservation, INAC, Lac du Bonnet Fish and Wildlife Association, Pinawa Wildlife Association, St. Joe's Wildlife Association, Manitoba Trappers Association and Tembec Inc. Performance indicators will be number and diversity of individuals involved, establishment of 2 trial areas, training of First Nations in monitoring and enforcement, improved community awareness, number of jobs provided to First Nations, establishment of preliminary co-management plans, and establishment of formal co-management agreements between First Nations and the Government of Manitoba.

**Implementation of a Regional Trade School:** Local communities and industries in the MBMF area have long recognized the need for a regional trade school which will provide members of local communities with the opportunity to receive education and training on trades of importance to local industries (forestry, mining, hydro) and to the communities. In particular, the disconnection of youth from their community support system makes it difficult for them to complete education and training programs in larger urban centres. With the help of the MBMF and the Government of Manitoba, a study is currently being completed for a regional trade school to be established in the MBMF area. An agreement has also been established with Sunrise School Division for the use of the Pine Falls School building by the trade school in 2007 after the current K-6 program is terminated in June 2007. The school division is considering not only provide the building, but also covering all maintenance costs. Discussions have been on-going between the Winnipeg River Regional Round Table (a consortium of local communities and municipalities, industries and the Government of Manitoba) and Red River Community College (Winnipeg) to provide curricula and courses for the regional training centre. We are now at the point of identifying relevant courses to offer when the facility opens in late 2007.

Over the next 5 years, the MBMF will work with local communities and industries to identify training courses of relevance. In addition to more traditional trades (e.g., mechanics, electricians, pipe fitters, loggers, etc.), courses on other topics of regional importance (non-timber forest products, trapping, outfitting, First Nation traditional values, tourism/eco-tourism, small business development) will be developed. Current and proposed curricula developed by the MBMF (e.g., sustainable forest ecosystems) could also be offered at the trade school. All courses will be accredited. There will be opportunities for involvement of local people in training course development and teaching. MBMF funding will be used to aid in community workshops, curriculum development, hosting workshops and information sessions on MBMF projects and the general implementation of the trade school. The outcomes of the project will be the establishment of a regional trade school in the MBMF area, development of locally-relevant curricula, training of local youth and others, increased availability of qualified trades people, increased economic opportunities for local communities and involvement of people from the MBMF area in the programs. Partners include the Winnipeg River Regional Round Table, Manitoba Education and Training, Red River Community College, Northern Forest

Diversification Centre, Tembec Inc, Manitoba Hydro, Mining Association of Manitoba, Ainsworth Engineered Canada LP, First Nations Forestry Limited Partnership, Town of Powerview-Pine Falls, Rural Municipality of Alexander and Black River First Nation. A modest amount of funding will also be used to continue our support of the Winnipeg River Economic Round Table. Performance measures include the establishment of the trade school; establishment of agreements between Sunrise School Division, Red River Community College, Government of Manitoba and other partners; number and diversity of programs/courses offered; number of students registered each year; number of students completing programs; satisfaction level of students and local communities; increase in local employment for graduates and satisfaction of local industries.

**Junior Rangers Program:** Over the last 2 years, the MBMF has been actively working with its industrial and government partners, communities and educational specialists to develop a Junior Rangers program that is similar to those established in Ontario and Alberta, and as such, the MBMF will host meetings between our partners and these other provincial initiatives. Initially we will implement a program in eastern Manitoba utilizing the Wallace Lake Camp (owned by Manitoba Conservation) and work to expand the program in western Manitoba with the assistance of Louisiana Pacific and other partners. The program will be designed to provide First Nation and other youth with work experience and training in the areas of natural resource management, Boreal forest ecology and traditional knowledge. Training and topics will include first aid, chainsaw and brush saw safety and maintenance, boat and ATV safety, firearm safety, EFF (fire) training, leadership skills, assertiveness, conflict resolution, health, career development, orienteering (compass/GPS), GIS, forest ecology, forest management planning, traditional knowledge, tree planting and field trips to local areas of interest and to local industries. Training for many of the topics will be provided by in-kind contributions of local industries and experts. The program will run each summer for 6-8 weeks. Wage subsidies for the students will be provided by the participating First Nation communities. A total of 15-20 youth are expected to participate each summer. Also over the five year period, a province-wide curriculum will be developed. The MBMF will also assist in the program promotion. Options for program coordination and delivery (e.g., MBMF, First Nation communities, regional trade school) will be investigated. Partners will include Tembec Inc., Manitoba Hydro, Manitoba Conservation, MBMF and surrounding First Nation communities, INAC, Louisiana Pacific Canada, West Region Tribal Council and the Assembly of Manitoba Chiefs. Outcomes and deliverables will be the training of youth in topics relevant to careers in natural resource management, increased availability of qualified youth to the job market, increased awareness of youth and communities regarding job opportunities in natural resource management and increased self esteem and maturity of youth. Performance indicators include establishment of the program in eastern and western Manitoba, number and diversity of training instructors involved, establishment of an interface between youth and local industries, number of youth in the program each year, satisfaction of youth and communities involved (determined by follow-up surveys) and the number of accredited training certificates awarded.

**Forest Education:** In Phase III of the Model Forest Program, the MBMF hired an Education Coordinator to develop provincially-accredited forest-based curricula and educational programs related to the Boreal forest and forest values and products. Our educational programs have been an overwhelming success with frequent requests for presentations, Boreal forest tours and training sessions for teachers. In the last 3 years, we have involved schools in the collection of scientific data on many of our research projects. Students spend time in the forest with our research scientists, learn data collection skills (water quality sampling, vegetation assessments, caribou management) and participate in the gathering of data that are used by natural resource decision-makers. Our education initiatives also have included support for the Manitoba Envirothon, working with partners on woodlot

education, hosting a one day Forest Youth Symposium for schools in the MBMF area (more than 200 students participated in 2006) and the creation of educational DVDs (on the Boreal forest, woodland caribou). Under the FCP, we will continue to develop provincially-accredited curricula that address forest and forest community sustainability at the various grade levels (including working with First Nation community Elders to develop a Traditional Ecological Knowledge-TEK curriculum), facilitate training of First Nation youth in the collection and recording of TEK, and work closely with other educational programs (e.g., Junior Rangers, Regional Trade School). We will provide forest tours and presentations, develop educational fact sheets covering MBMF projects and activities (making some relevant ones available in Ojibway as well as English), support the Envirothon and teacher workshops, and expand the participation of schools in our research program (including schools in forest-based communities and urban centres such as Winnipeg). We will also link with the Canadian Model Forest Network on national-level educational initiatives. We will continue to support the work of the Manitoba Forestry Association on woodlot education, and the promotion of a new woodlot best management practice manual developed in Phase III of the Model Forest program. In addition, we will continue our work on enhancing the capacity of local communities to understand the consequences of climate change, assess community vulnerability to climate change and continue to pilot the Fire Smart program in local communities (one pilot project was successfully completed in the MBMF community of Victoria Beach in 2005).

In Phase III of the Model Forest program, we also partnered with the Manitoba Forestry Association (MFA) and the Woodlot Association of Manitoba (WAM) on numerous woodlot education initiatives. Private woodlots are becoming an increasingly important source of wood fibre to mills in Manitoba. The impending construction of an Oriented Strand Board (OSB) mill in Manitoba, utilizing trembling aspen, will further increase the need for wood fibre. It is imperative that these woodlots are managed sustainably for all values (biodiversity, protection of riparian areas, etc.), not just as a source of fibre. Our Phase III projects with MFA and WAM included the development of a provincial database to track woodlot management activities, development and implementation of standardized woodlot management plans, a woodlot best practices manual, the creation of demonstration woodlots and an land owner education program. Under the FCP we will continue to work closely with WAM and MFA to continue educational programming for woodlot owners and the public. A new component will include NTFPs.

Outcomes and deliverables will include development of provincially-accredited curricula and fact sheets on forest sustainability, training of teachers on curricula and Boreal forest issues, training/participation of students in MBMF research projects, and outreach through presentations and Boreal forest tours. Partners will include Manitoba Forestry Association, Woodlot Association of Manitoba, Manitoba Education, Citizen and Youth, various schools and school divisions in Manitoba, Louisiana Pacific Canada, Tembec Inc., Manitoba Hydro, Mining Association of Manitoba, and MBMF First Nation communities. Finally, financial resources under the FCP will be used to support the on-going activities (primarily meetings) of the Education Working Group of the MBMF. Educational materials and projects will be focused on both the MBMF area and in western Manitoba.

**Enhancing First Nation and Local Community Participation in MBMF Decision-making:** A significant contribution to the growing success of the MBMF has been the steady increase in community participation in activities of the MBMF, including sitting as members on the MBMF Board of Directors, as members of the Executive Committee, on our various working groups (Forest Stewardship, Education, Local Level Involvement), program committees (Committee for Moose Management, Eastern Manitoba Woodland Caribou Advisory Committee) and in various MBMF-sponsored projects. Community representatives who participate do so as an in-kind donation to the

MBMF program. The MBMF provides financial resources for the Board and committees to hold meetings, and where needed, pay mileage to community individuals (at a rate set by the Board). Under the FCP, we will continue to support the operations of the Board and Executive, as well as the operations of the Local Level Involvement and Forest Stewardship Working Groups under this program. Support for other committees (Caribou, Moose) is built into their respective programs. As part of this community involvement initiative, we will work closely with our new partners (Louisiana Pacific Corp., West Regional Tribal Council, Assembly of Manitoba Chiefs) to improve capacity for First Nations, industries and other stakeholders in western Manitoba to participate in MBMF programs and in natural resource decision-making. In particular, the MBMF will provide staff and Board support to help bring the MBMF process of “inclusive participation” to western Manitoba.

**Traditional Area Advisory Committees (TAACs):** In Phase III of the Model Forest Program, the MBMF facilitated the creation of TAACs in two First Nation communities (Hollow Water First Nation, Black River First Nation). These committees, made up of community members and land users (trappers, fishermen, medicinal plant specialists, etc.), meet regularly to discuss issues and options with respect to natural resource development in their traditional territories. The committees provide a conduit for resource industries to meet with communities, and the TAACs in turn provide advice to Chief and Council on existing and future land use issues. The TAACs provide an effective means by which the community’s leadership and members stay informed about land use allocations and issues. We will continue our modest financial support of the two existing TAACs and help facilitate the creation of TAACs in our other MBMF area First Nation communities (Sagkeeng First Nation, Brokenhead Ojibway First Nation). Financial resources are used to provide meeting rooms, pay honoraria for Elders and provide transportation to other related workshops and field tours. Partners include the four First Nation communities, Tembec Inc., Manitoba Conservation, Manitoba Hydro, INAC, First Nations Forestry Program and the Mining Association of Manitoba.

**Community Opportunities Program:** Annually, the MBMF sends out a call for proposals to local MBMF communities for community-based projects and initiatives that meet MBMF goals and criteria. The program has been very successful with more than 26 communities and local organizations funded since 1999. The program provides local communities with the opportunity to develop initiatives that enhance environmental, social or economic aspects of the community and region. A sub-committee of the MBMF Board reviews all applications and provides recommendations to the MBMF Board. The program allows communities to lever MBMF funds with other municipal, provincial or national funding programs. In conjunction with the Community Opportunities Program, the MBMF also hosts an annual “Fundings Forum” in one of the MBMF communities in which representatives from a diverse cross-section of funding agencies set up displays and help communities understand their funding programs and provide guidance on writing proposals. This has been a very effective mechanism to help communities tap into a wide variety of funding programs and to help build capacity in local communities for writing successful funding proposal applications. We will continue both the Community Opportunities Program and the Fundings Forum under the FCP. Outcomes and deliverables include community-initiated projects which improve the local environmental, social and economic stability of MBMF communities, increased awareness by communities of the various funding agencies, and increased capacity of communities to write successful funding proposals. Partners include INAC, Manitoba Conservation, Manitoba Hydro, Environment Canada, HRDC and all the local communities.

**FCP Objective 2. To develop and share integrated, multi-sector approaches, based on science and innovation, to address community transition that involves new and existing natural resources stakeholders.**

Projects and activities under this objective will help ensure the sustainability of the forest and forest dependent communities (including Aboriginal and non-aboriginal communities, natural resource industries and other forest users) by focusing on the development of tools, guidelines, management plans, etc. that result in improved integrated landscape management decisions and that involve a wider diversity of forest users. Projects will focus on water quality and watershed scale experiments, continuation of terrestrial baseline data collection, testing of new provincial riparian guidelines and existing riparian buffer strips, testing of newly developed best management practices for forestry activities in trap lines, and the management of biodiversity (with particular attention to species at risk and rare species). These projects will seek to develop tools that incorporate all activities in the forest including forestry, mining, hydro development, agriculture, trapping, etc.

**Species at Risk and Rare Species:** Since 1992, the Eastern Manitoba Woodland Caribou Advisory Committee (EMWCAC), a committee of the MBMF, has conducted research on woodland caribou in the MBMF area and beyond. Woodland caribou in western Canada are a Threatened species under the federal Species at Risk Act (SARA) and a Threatened species under the Manitoba Endangered Species Act. Research has included the use of Global Positioning System (GPS) collars and Very High Frequency (VHF) collars to track caribou movement, improving our understanding of habitat requirements, map caribou distribution, determine predator-prey relationships, evaluate the effects of disease and plan and implement landscape-level forest harvesting experiments. This work has also resulted in the development of a management strategy for the most southern woodland caribou herd in western Canada-the Landscape Management Strategy for the Owl Lake Woodland Caribou Herd. The EMWCAC has also provided input into the newly released provincial woodland caribou strategy, has hosted numerous workshops and a national conference on woodland caribou, and developed educational materials including a DVD and school curricula. The EMWCAC is composed of very diverse partners including Manitoba Conservation, Tembec Inc., Manitoba Hydro, Manitoba Department of Highways, Brokenhead Ojibway Nation, Hollow Water First Nation, Black River First Nation, University of Winnipeg, Time to Respect Earth's Ecosystems (an ENGO) and Lac du Bonnet Wildlife Association. Funding partners over the last 15 years have included Environment Canada, Manitoba Conservation, Tembec Inc., Manitoba Hydro and World Wildlife Fund.

Under the FCP, woodland caribou will remain a cornerstone of the science-based portion of our program. As part of the Owl Lake herd management strategy, we will continue to monitor animals of the Owl Lake herd by use of GPS and VHF collars in response to a landscape-scale forest harvesting experiment that is in progress. We will continue to support projects investigating the use of calving areas, predator-prey relationships and the transmission of brain worm parasites (which are fatal to caribou) from whitetail deer to moose and caribou. Other activities specifically for the Owl Lake herd will be conducting habitat modeling to assess future caribou habitat supply, contributing towards the development of provincial SARA-compliant Recovery Strategies and Action Plans, and the continued development of educational materials. A modest amount of funding will be provided to support the continued work (meetings, workshops, etc.) of the EMWCAC. In addition to our focus on the Owl Lake herd, we will also continue our monitoring of herds (Atiko, Bloodvein) in the northern part of the MBMF area and beyond. Monitoring of caribou distribution using GPS and VHF collars will be expanded in support of the land use planning currently underway on the east side of Lake Winnipeg. Outcomes and deliverables will include expansion of our dataset on the distribution of woodland caribou in eastern Manitoba, identification of core use habitat areas, analysis of the effects of

disturbance (fire, harvesting, linear features such as roads, transmission lines) on caribou distribution and habitat use, projections on future habitat supply, mitigation plans for various caribou herds, contribution towards SARA-compliant recovery strategies and action plans and additional public outreach activities. Partners will include not only the current members of the EMWCAC, but also the Mining Association of Manitoba.

In addition to woodland caribou, we will also conduct assessments of the need for management strategies for other species listed under SARA, and provide assistance (financial, human, research support) where appropriate. This will include species such as the wolverine (listed as a Special Concern species) as well as other terrestrial and aquatic species at risk. In addition to species identified in provincial and federal regulations, we will undertake surveys to evaluate the status of vascular plants, lichens and animals whose distributions are not well understood, but which are invasive or thought to be provincially rare. This information will contribute to an understanding of the effects of industrial activity and climate change on vegetation and landscapes. Where possible, such surveys would include youth from the region. Finally, under our program of Species at Risk and Rare Species, we will also work with First Nation communities to identify key plants of interest (e.g., medicinal plants) in order to develop predictive models of where such plants may occur in the MBMF area. These models will then be used to aid natural resource planning (forestry, mining) and to help identify alternate areas for community use of such plants. A subset of areas identified by the predictive models will be ground-truthed as part of our plant surveys mentioned above.

**Testing of Water Quality/Watershed Management Tools:** In early 2007, the MBMF will complete the development of draft watershed planning tools for forestry activities in eastern Manitoba. The tools, based on 3 years of water quality surveys on rivers, streams, creeks and lakes will provide guidance to the forest industry on appropriate watershed-level harvesting planning and harvesting operations in order to maintain water quality. As part of our existing aquatic project, youth have participated in the collection of water quality samples, gaining experience in environmental monitoring methods. The tools are based on data collected in watersheds experiencing various amounts of historic harvesting and fire disturbance. The tools however, are not based on a controlled before/after experimental design and thus, contain several assumptions. Under the FCP, we will test the validity of the newly developed watershed management tools in several large, watershed-scale experiments so that they can be refined for full implementation by Tembec in the future. In addition, water quality monitoring on a small subset of rivers and lakes in our current monitoring program will continue, providing valuable long-term baseline data against which to assess future disturbances (fire, harvesting, road construction, mining) and stresses (climate change). Included in our program will be an assessment of the impacts of beaver activity on water quality. As with our current aquatic monitoring projects, youth from the local communities will also be involved in helping to collect data. In addition, while the majority of our current aquatics program has focused on the forested landscapes of the MBMF, there has been growing interest to examine water quality at the forest-agriculture interface. A project focused on this interface will be implemented in 2007 along the Brokenhead River, which originates in the agricultural portion of the province and flows through part of the MBMF area. The project will involve the participation of students from Sunrise School Division, as well as youth and Elders from Brokenhead Ojibway First Nation. We will also explore the possibility of expanding this type of program to western Manitoba. Partners in the program will include Tembec Inc., Mining Association of Manitoba, Manitoba Hydro, Manitoba Water Stewardship, Manitoba Conservation, Brokenhead Ojibway First Nation, Sunrise School Division, Manitoba Agriculture, Brokenhead River Restoration Committee, Fisheries and Oceans Canada (Department of Fisheries and Oceans), Louisiana Pacific Canada and Ducks Unlimited Canada. Outcomes and deliverables include a long-term water quality database in eastern Manitoba (which is currently lacking), refined watershed

management tools for the forest industry (and which potentially may include other resource industries such as mining) and participation of youth and Elders in scientific research.

**Assessment of Provincial Riparian Management Guidelines and Existing Riparian Buffer Strips:**

In Manitoba, riparian buffer strips are commonly used in forest management operations to protect aquatic resources and terrestrial values (wildlife, sensitive soils, aesthetics). Under previous provincial guidelines, riparian buffers have been left along waterways, but an assessment of the effectiveness of such buffer strips in maintaining the key values that they were designed to protect has never been undertaken. In addition, in eastern Manitoba, wildfire is a natural disturbance agent which may commonly burn down to the waters edge. A comparison between “natural” buffers created by wildfire with the artificial buffers created by forestry operations has never been attempted, but would provide valuable information on the importance of riparian areas and disturbances in the MBMF area. Finally, the recent release of draft provincial guidelines on riparian management provides a timely opportunity to test the validity of the new guidelines while assessing past riparian management practices. Under the FCP, we will undertake field and GIS-based research studies to compare the effectiveness of past buffer strips, buffer strips created under the new provincial guidelines and a fire-based natural disturbance model. In relation to testing the new provincial guidelines, experimental watersheds identified in the Watershed Management Tools project above, will also contain a riparian research component. Key attributes of riparian areas and the riparian-aquatic interface will be studied. This includes water quality, riparian vegetation, microclimate, and wildlife use. The study will also be linked to our program on Forestry Best Management Practices in Trap Lines, incorporating the involvement of local trappers. Also, with the participation of the Mining Association of Manitoba, we will facilitate a comparison between riparian management guidelines established for forestry, with that of voluntary codes of practice established by the mining industry, with the view of harmonizing such guidelines to move towards better integrated landscape management. We will also explore the opportunity to conduct similar assessments in western Manitoba. In conjunction with the Watershed Management Tools project, a workshop will be held which showcases recent forestry-related watershed and riparian management research from across the country. Partners will include Tembec Inc., Louisiana Pacific Canada, Mining Association of Manitoba, Manitoba Trappers Association, Manitoba Water Stewardship, Manitoba Conservation, Fisheries and Oceans Canada, Manitoba Agriculture and the Sustainable Forest Management Network (based in Edmonton). Outcomes and deliverables will include testing and validation of new provincial riparian management guidelines and comparison to older buffers left historically along water ways, submission of suggested revisions to the provincial government to improve the new riparian guidelines based on outcomes of the research, comparison of buffers left after forestry operations to riparian buffers left following wildfire, and networking with other watershed and riparian scientists across Canada.

**Integrating First Nations Values Into Land Use Planning:** First Nations values and land use information is a critical component of any integrated landscape management plan. In Phase II of the Canadian Model Forest program, the MBMF provided support to two First Nation communities in the MBMF area to develop land use plans. These plans provide each community with a written and GIS-based record of locations of spiritual, cultural and economic importance in their traditional areas and provide information necessary for future land use decisions. The use of such land use information however, has not been consistent between the communities. Also, there are other First Nation communities in the MBMF area that do not have traditional land use plans. The MBMF will provide assistance to First Nation communities to develop traditional land use plans or to implement and use existing plans. We will help develop capacity in the First Nations communities to undertake land use plans and to learn how to use them effectively in land use decision-making.

Additionally, there is currently a very large land use planning exercise (known formerly as the East Side Lake Winnipeg Planning Initiative) on approximately 8 million hectares of land that is underway. This planning area overlaps partially with the MBMF area. The MBMF will offer assistance to Wabanong Nakaygum Okimawin (WNO - the consortium of First Nations communities leading the land use planning exercise) to assist in the development of a coordinated land use plan for the entire region. In particular, we will offer our expertise and human resources on community-based land use planning, securing community involvement, gathering and analyzing resource information, and possibly provide assistance to WNO on developing guidelines for the development of community-based plans, so that all communities are developing plans based on the same framework. The resulting land use plans will also take into consideration a recent World Heritage Site nomination. If the offer of assistance is accepted by WNO, additional funding arrangements not included in the FCP budget submission will need to be negotiated with WNO and Manitoba Conservation to reflect MBMFs involvement in the planning process. Partners would include WNO, Manitoba Conservation, Brokenhead Ojibway First Nation, Sagkeeng First Nation, Black River First Nation, Hollow Water First Nation, Tembec Inc., and the Mining Association of Manitoba. Outcomes and deliverables will be the development of land use plans for communities that currently do not have one, updating and effective use of existing plans, improved community awareness about their land use plans and resources in their traditional areas, building relationships with WNO and other First Nation communities outside of the MBMF area, and ultimately, one coordinated land use plan (made up of many local community plans) for the east side of Lake Winnipeg.

**Incorporating Trapping Values Into Landscape Management Decision-Making:** In Phase II of the Model Forest Program, the MBMF worked with the trapping community to develop a GIS-based database of trapper's values (location of trails, cabins, high value habitat) in each registered trap line. This product has been used effectively to help plan forest harvesting areas in trap lines and to develop associated mitigation plans. In addition, the MBMF, with the assistance of the Manitoba Trappers Association, is currently completing the development of a Best Management Practices (BMP) manual entitled "A Foresters/Contractors/Trappers Guide to Best Practices When Planning and Operating on Trap Lines". Certain aspects of the BMP manual are related to how forest harvesting (size of harvest areas, residual trees, etc) should occur in trap lines. Under the FCP, we will take ideas from the BMP manual and design on-the-ground experiments to test the assumptions in the manual. Trappers will be intimately involved in the design of the experiments, as well as monitoring the response of selected wildlife species before and after forest harvesting. Lastly, a review of the manual will be undertaken to incorporate other aspects of forest use (e.g., mining, recreation) in trap lines. Partners will include Manitoba Trappers Association and local trappers, Tembec Inc., Mining Association of Manitoba, Louisiana Pacific Canada, Manitoba Hydro and Manitoba Conservation. Outcomes and deliverables will be testing of the assumptions in the BMP manual with respect to maintaining key wildlife values after forest harvesting, as well as updating of the manual to account for other forest uses.

**Natural Disturbance-Based Forest Harvesting – Re-measurement of Permanent Sample Plots:** Starting in 1998, the MBMF undertook research to understand and document wildfire behavior in the MBMF area. This was followed by the design and implementation of a forest harvesting trial at both the landscape level and site level, based on a natural disturbance template, as a way to enhance the ecological sustainability after harvest. Several aspects of ecosystem structure and function were monitored in wildfire burns and in the trial harvest areas from 1999 to 2004. These included initial plant community recovery, plant biomass and soil characteristics. Intensive monitoring of the study plots occurred immediately post disturbance and then at longer time intervals. During the FCP, we will undertake one additional re-measurement to assess forest sustainability after harvest in comparison to wildfire. Outcomes and deliverables will include evaluation of short-term post disturbance plant

and soil trajectories, indicators of forest ecosystem sustainability and the refinement of natural disturbance template guidelines. Partners will include Tembec Inc., Canadian Forest Service, Manitoba Conservation and Sustainable Forest Management Network.

**Terrestrial Biomonitoring:** From 2004-2006 the MBMF led the development of a regional terrestrial Biomonitoring program to examine the potential impact of climate change and other stressors on forest ecosystem parameters. In 2005 and 2006, the MBMF partnered with Environment Canada's Ecological Monitoring and Assessment Network (EMAN) to establish and monitor permanent sample plots in various areas of the MBMF. As well, a limited number of plots have been established in the Assiniboine Forest in Winnipeg (the largest urban forest in North America) using nationally approved EMAN protocols. In addition, we have partnered with 4 schools in the MBMF and one school in the City of Winnipeg to provide opportunities for high school students to participate in the collection of baseline data on forest species composition of the tree, shrub and herb layer, climate (air temperature, relative humidity), soils (temperature, pH) and small mammal diversity. Students are trained on the use of the scientific research equipment and help to collect data that goes into the national EMAN database. We will continue to establish new plots under the FCP program and re-measure some of our original plots, while increasing the participation of schools in the program. In addition, we will explore opportunities to add additional monitoring protocols to complement the program. This could include surveys for rare plants and frog species as mentioned under the Species at Risk and Rare Species project. We will also create an information booklet and resource materials for the schools that are participating in the project. In this way, the project will become a more formal part of the curriculum for the participating schools. Partners will include the Ecological Monitoring and Assessment Network, Tembec Inc., Manitoba Hydro, Manitoba Conservation, Mining Association of Manitoba, Sunrise School Division, Frontier School Division, Assiniboine South School Division (Winnipeg) and the City of Winnipeg. Outcomes and deliverables are: the establishment of long-term monitoring plots against which to track environmental and forest-related changes; contribution to the national EMAN database; the development of partnerships with schools in the region and in Winnipeg; providing students from Winnipeg with the opportunity to learn about the Boreal forest in the MBMF area and for students from the MBMF area to learn about urban forests; providing information and data on rare plants and frogs in the MBMF region and development of resource material for the participating schools.

**Scenario Planning – Refinement of Future Forest Visualization Tools:** Since 2002, the MBMF has been working on developing tools that would allow for an exploration of the changes expected in environmental (habitat, wildlife populations, forest fragmentation) and economic indicators as a result of various land use decision scenarios. Models have been developed in Phase III of the Model Forest program to examine the natural variability and pre-industrial condition of the forest, incorporation of natural disturbance into modeling, development of a moose population model and the development of a draft computer visualization tool that allows the general public to visually see the consequences of various land use decisions. Under the FCP, we will refine the draft visualization tools and utilize the tools in community workshops taking the development of a 20 year Forest Stewardship Plan for Tembec as a case study. Partners will be Tembec Inc., Louisiana Pacific Canada, Manitoba Conservation, Tolko Industries Inc and Forestry Corp. Outcomes and deliverables will be the refinement of a scenario planning visualization tool and use of the tool in the development of the Tembec 20 year Forest Stewardship Plan. The tool will be easily adapted for use in other regions of Manitoba and will be useful in application for all land use decisions (forestry, mining, hydro development, agriculture, etc.).

### **FCP Objective 3. To work with industry and other community-level stakeholders to develop new forest-based opportunities in rural Canada.**

Projects and activities under this objective are designed to explore and develop forest-based economic activities in order to diversify local economies so as to lessen the dependence of forest-based communities in the MBMF area on timber *per se*. Projects and activities are focused on non-timber forest products, value-added forest products and woodlot management. It is recognized that the MBMF will play key roles in bringing information to communities about new forest-based opportunities and will also provide a mechanism for key organizations in related forest-based enterprises to work with MBMF communities. However, the MBMF will not financially support the creation of new businesses.

**Facilitation of the Development of Non-timber Forest Product Enterprises:** There are many opportunities for the development of non-timber forest product (NTFP) businesses in the MBMF area. NTFPs can provide opportunities for communities by building on local skills and knowledge of the forest. In most instances, NTFPs represent an opportunity for supplemental income, not as a main, annual income. Under the FCP, the MBMF will conduct an initial exploratory survey of what NTFPs are being produced in Canada by reviewing information from the Northern Forest Diversification Centre (The Pas, Manitoba), the Centre for Non-Timber Resources and the associated Canadian Non-Timber Forest Products Network, based out of Royal Roads University (Victoria, BC) and other Canadian Model Forest Network sites which have historically worked on NTFPs. Working closely with these organizations, the MBMF will host workshops in communities and with woodlot owners within the MBMF area to highlight key areas of NTFP opportunities. An inventory of what NTFPs are found in the MBMF will be developed, along with a community-based skills assessment. Courses and/or workshops will be developed around NTFPs and implemented through the new Regional Trade School. We will work closely with the Northern Forest Diversification Centre on curriculum development, or use their existing curricula as appropriate. The Northern Forest Diversification Centre employs a full-time marketing manager and has over 350 NTFP harvesters in 25 northern Manitoba communities, and thus provides a valuable resource to the MBMF. The MBMF will also assist communities in developing NTFP feasibility studies, conducting research on the distribution of certain NTFPs of interest, understanding the sustainable harvest levels of certain NTFPs and integrating NTFP harvesting with other forest-dependent industries (e.g., working with the forest industry to provide access to newly logged sites, adjacent old growth sites, etc). Special emphasis will be placed on bringing together Elders and youth from First Nation communities. Based on interest from communities, our Community Opportunities Program may be structured around NTFP proposals for one or more years. In addition to work on NTFPs in the MBMF area, we will also work with our international Model Forest partners (Mariposa Monarca Model Forest in Mexico, Reventazon Model Forest in Costa Rica, Chiloe Model Forest in Chile) on development of NTFP opportunities and opportunities for cross marketing. Outcomes and deliverables will be the identification of potential NTFP opportunities, greater awareness in communities with respect to these opportunities, development of feasibility studies, creation and use of NTFP courses in the Regional Trade School and the creation of new NTFP businesses with a support structure for marketing of products.

**Tourism/Eco-tourism, Guiding and Outfitting:** The MBMF area represents a geographically large and untapped resource for outdoor-based activities including tourism/eco-tourism, guiding and outfitting. In particular, communities located in the northern portion of the MBMF have been largely excluded from such opportunities, despite being road accessible and located in close proximity to large areas of pristine wilderness. The MBMF will bring together community governments, economic development organizations, Manitoba Department of Tourism and the Manitoba Association of Lodges

and Outfitters to help identify opportunities in the MBMF area. We will also host workshops, conduct skills assessments in communities and facilitate the development of a regional marketing plan. Depending on community interest, provincially-accredited courses in tourism, ecotourism, guiding and outfitting could be offered at the new Regional Trade School. This program also links closely to our Moose Co-Management project with respect to providing First Nation community-based opportunities for eco-tourism, guiding and outfitting, and also links to our international program on eco-tourism with the Reventazon Model Forest in Costa Rica. Outcomes and deliverables will be greater awareness of local communities with respect to potential opportunities, community skills assessments, development of a regional marketing plan, establishment of training courses in the Regional Trade School and the creation of new businesses in the MBMF area.

**Value-Added Forest Products:** Currently, only a few forest products are produced from the Model Forest, far below what could be sustainably produced. A majority of jack pine and black spruce that is harvested is used to create newsprint at the mill in Pine Falls, MB. A small amount of these species is also exchanged as saw logs for wood chips with sawmills in Kenora, ON. A limited amount of ash, tamarack and jack pine is harvested to produce lumber in small local sawmills and a limited amount of trembling aspen is shipped to Ontario and the northern United States. Under the FCP, the MBMF will facilitate discussions and hold meetings with our local communities, forest product industries and our regional economic round table to identify other potential forest product opportunities, including the use of wood waste as a source of raw materials for other products or energy production. In particular, there is a desire by our First Nation communities to produce products (e.g., lumber) that can be not only produced locally, but sold locally to the communities, thereby avoiding the need to deal with international market pressures. This also has the benefit of filling First Nation community needs for housing, etc. The MBMF will help facilitate the development of feasibility studies where appropriate. Training courses will be developed in the new Regional Trade School for those new forest product opportunities that appear to be feasible. Outcomes and deliverables will be greater awareness among communities about forest product-based opportunities, creation of feasibility studies, greater communication and cooperation between existing forest product businesses and communities, development of training programs for the Regional Trade School and the creation of new forest product businesses in the MBMF area.

**FCP Objective 4. To develop and share sustainable forest management knowledge, practices, tools and experiences with international forest-based communities and their Model Forests, in keeping with Canada's international forest agenda.**

The MBMF has a long history of working with the International Model Forest Network and individual international Model Forests, building on our domestic strengths such as programs of partnership development, involvement of indigenous peoples, conservation of biodiversity, to name a few. We have worked with international partners to help establish new international Model Forests (e.g., in Mexico, Russia, Japan, Thailand and the Philippines), have successfully completed projects with the Mariposa Monarca (Monarch Butterfly) Model Forest (Mexico) and Chiloe Model Forest (Chile) and participated in technical exchanges/site visits with the State of Jalisco, Mexico. In recent years, we have facilitated the involvement of local MBMF First Nations communities in our international projects, provided reciprocal travel and exchanges between First Nations and indigenous peoples and the sharing of indigenous culture and history. Under the FCP, we will continue our work with the Monarch Butterfly Model Forest, Chiloe Model Forest (through the Assembly of Manitoba Chiefs and Black River First Nation) and have already initiated the development of programs in cooperation with the Reventazon Model Forest, the Regional Model Forest Network for Latin American and Caribbean

and the Cabecares peoples of Costa Rica. In addition to the international projects described below, we will also update our MBMF brochure to include our international programs.

**Monarch Butterfly Model Forest:** The winter habitat of the Monarch Butterfly in parts of Mexico is threatened by illegal forest harvesting, wildfire and land clearing for agriculture, brought on by a lack of economic opportunities for local people. The migration pattern of the Monarch Butterfly between forests in Mexico and forest in the MBMF area and the need to integrate economic development with habitat conservation in Mexico provided the opportunity in 1999 for the MBMF to work with the Mexican government and local peoples to establish the Monarch Butterfly Model Forest. Since then, we have worked collaboratively with the newly established Model Forest on numerous projects including reforestation and protection of monarch butterfly habitat, agro-forestry, environmental education, non-timber forest products, eco-tourism and gender equity. We also established an educational exchange between elementary students in Manitoba (including Black River First Nation) and students in the Monarch Butterfly Model Forest. In recognition of our international success, the Government of Manitoba acknowledged the MBMF with the *Excellence in Sustainable Development Award* for our work in Mexico. In 2005, CIDA discontinued the previous funding program. Although we have not undertaken projects with the Monarch Butterfly Model Forest in 2006, we will, under the FCP, work closely with the Monarch Butterfly Model Forest and the International Model Forest Network to secure funding to continue our projects. Future projects will build upon the notable successes of recent years in enhancing Monarch Butterfly habitat, and in improving the lives of local peoples who depend on the same forests.

**Chiloe Model Forest:** Beginning in 2004, representatives of two MBMF First Nation communities (Black River First Nation and Brokenhead Ojibway Nation) began working on a project (funded by CIDA Indigenous Peoples Partnership Program), with the Williche peoples of Chile, Chiloe Model Forest and the MBMF on non-timber forest products, traditional medicines, establishment of a traditional medicines processing facility, cultural exchange between indigenous people of Canada and Chile, gender equity and the retention of traditional practices and culture. As a result of the success of this project, the Assembly of Manitoba Chiefs (AMC) became involved, including the Grand Chief. Under the FCP, we will continue to work with AMC and its First Nation partners to continue their work on traditional medicines, sustainability of medicinal plant harvesting as well as sustainable management of the surrounding forests. Partners will include Assembly of Manitoba Chiefs, Black River First Nation, Brokenhead Ojibway Nation, Chiloe Model Forest, Williche Council of Chiefs, Universidad Arcis Patagonia (Chile) and the Canadian Embassy to Chile.

**Reventazon Model Forest:** Over the past 6 months, Brokenhead Ojibway Nation and the MBMF has been in discussions with the Reventazon Model Forest, the Regional Model Forest Network for Latin America and the Caribbean (LAC-Net) and Centro Agrinomico Tropical de Investigacion y Ensenanza (CATIE) to develop a project on ethno-cultural tourism with the Cabecares peoples of Costa Rica. To this end, a Concept Paper to the Indigenous Peoples Partnership Program of CIDA has already been submitted and approved for funding for the development of a full proposal. A delegation from the MBMF and Brokenhead Ojibway Nation will travel to Costa Rica in January, 2007 to meet with the project partners and Cabecares communities. Under the FCP, the joint program in Costa Rica will focus on eco-tourism, non-timber forest products, land use planning and management of the Cabecares Reserve lands which abuts up against La Amistad International Park (a World Heritage Site based on its exceptional biodiversity values), environmental education and monitoring. The project will provide opportunities for collaboration and exchange of ideas between the Cabecares peoples and Brokenhead Ojibway Nation (who have experience in eco-tourism, NTFPs, indigenous land use planning and

cultural exchange). Partners will include CIDA, Brokenhead Ojibway Nation, Cabecares communities, LAC-Net, Revenatazon Model Forest and CATIE.

### 5.3 Relevance of Proposed MBMF Projects and Activities to FCP Objectives and MBMF Objectives

Table 2 shows the relevance of our proposed projects and activities to the FCP Objectives and the MBMF Objectives.

Table 2. Relationship between proposed MBMF projects and activities and FCP objectives and MBMF objectives.

<b>Projects and Activities</b>	<b>FCP 1</b>	<b>FCP 2</b>	<b>FCP 3</b>	<b>FCP 4</b>	<b>MBMF 1</b>	<b>MBMF 2</b>	<b>MBMF 3</b>	<b>MBMF 4</b>
First Nation Co-Management of Moose	X	X	X		X	X	X	X
Regional Trade School	X		X		X	X		
Junior Rangers	X		X		X	X		X
Forest Education	X	X	X	X	X	X	X	X
First Nation and Community Participation in MBMF Decision-Making	X	X	X	X	X	X	X	X
Traditional Area Advisory Committees	X	X	X		X	X	X	
Community Opportunities Program	X		X		X	X		
Species at Risk/Rare Species	X	X			X	X	X	X
Water Quality/Watershed Management Tools	X	X			X	X	X	X
Riparian Management	X	X			X	X	X	X
First Nation Land Use Planning	X	X		X	X	X	X	X
Trapper's Values	X	X	X		X	X	X	X
Natural Disturbance		X				X	X	
Terrestrial Biomonitoring	X	X			X	X	X	
Scenario Planning	X	X			X	X	X	X
Non-Timber Forest Products	X	X	X	X	X	X	X	X
Tourism/Eco-tourism, Guiding and Outfitting	X	X	X	X	X	X	X	
Value-added Forest Products	X	X	X		X	X	X	X
Mariposa Monarca Model Forest	X	X	X	X		X	X	X
Chiloe Model Forest	X	X	X	X		X	X	X
Reventazon Model Forest	X	X	X	X		X	X	X

A list of the FCP and MBMF Objectives is found in Section 5.1.

## 6.0 Communications, Outreach and Networking Strategy

Since its inception in 1992, the MBMF has developed, implemented and refined its communications, outreach and networking strategy to keep pace with changes in communications tools and technologies

and the changing ways in which various target audiences can be best reached. Our strategy contains three main components: a) knowledge and technology transfer, b) communications and outreach, and c) networking. To achieve our strategy objectives, the MBMF periodically utilizes a communications consultant who is responsible for developing and maintaining several of our communications tools including our website ([www.manitobamodelforest.net](http://www.manitobamodelforest.net)), displays, newsletters and brochures, and our annual report. The content of written materials such as brochures and newsletters are commonly developed by individual project leaders, with formatting and editing done by the communications consultant. Target audiences include MBMF Board and committee members, MBMF communities, the research community, educators, environmental organizations, political organizations and decision-makers (e.g., Members of the Legislative Assembly, Members of Parliament, Political Parties, Municipal representatives), media, the Canadian Model Forest Network, our international project partners and the general public of Manitoba. Our strategy also includes assistance with communication efforts of both the Canadian Model Forest Network and the International Model Forest Network.

An important aspect of our strategy also includes the use of communication as a vehicle for fundraising and to increase sponsorship of the various MBMF programs. Sponsorship marketing is an investment in exchange for benefits and business expenditures in sponsorship marketing has increased by 250% in North America during the past 10 years. A rapidly growing component of global marketing plans, sponsorship marketing is used by companies to increase sales, target specific markets, facilitate customer/employee loyalty and to enhance/brand image. The MBMF will capitalize on this growing trend both as a sponsor of events as well as a venue for companies seeking sponsorship opportunities. Under the FCP, sponsorship marketing will be considered in all outreach and product development.

**The objectives of our communications, outreach and networking strategy are:**

- To advance the level of understanding and awareness of individuals, organizations, communities, industries and governments with respect to Boreal forest ecosystems and the diverse values of such forests, as well as the activities, achievements and societal benefits of the MBMF related to sustainable management of such landscapes
- To utilize effective communication to position the MBMF as a provincial, national and international leader in partnership building and the development of innovative solutions to sustainable landscape management
- To utilize effective communication to support program fundraising
- To share our experiences, successes and landscape management solutions nationally and internationally by supporting the communications efforts of the Canadian Model Forest Network and the International Model Forest Network
- To network broadly across the nation so as to more fully utilize the pool of expertise available in Canada in developing and implementing projects

6.1 Knowledge and Technology Transfer

The MBMF knowledge and technology transfer program is broad-based and reaches target audiences from scientists, policy makers and industries (the “implementers” of many of the tools the MBMF helps develop for improving landscape management) to MBMF Board members and the general public. Our knowledge and technology transfer program begins at the community level and reaches across the province of Manitoba, the Canadian Model Forest Network and internationally through our international partnerships and the International Model Forest Network.

One successful method of technology transfer is through hosting conferences and workshops both in the MBMF area and in major urban centers (e.g., Winnipeg). As an example, the MBMF hosted a national conference on woodland caribou management in April, 2005. Venues such as this and smaller technology transfer workshops are also utilized at all stages of program development – from hosting workshops with local and national experts to develop initial project designs, to workshops and conferences which highlight progress on projects or final results on projects. We firmly believe that technology transfer is most effective when it starts at the planning stages of projects. The MBMF also regularly participates in conferences and workshops developed by other agencies or groups, by sending delegates or speakers as well as exhibits which highlight our projects. Priority is usually given to events wholly or partially sponsored by the Model Forest Network.

Technology and knowledge transfer also occurs through many smaller meetings with government departments and industries, who are the ultimate vehicles for implementing new and innovative landscape management tools. The MBMF continually keeps the Board of Directors apprised of project and outcomes by having researchers make presentations at Board meetings. In this way, Board members (which approved the project proposals) gain a deeper understanding of each project.

As mentioned above, the MBMF has hosted a website and provided uninterrupted service of the website since 1994. We have continually updated the content and design of the website. The website has become a major way in which to transfer knowledge to people around the globe. Reports are prepared for most projects, and these are posted as Acrobat (pdf) files on the website. Over time, the website has evolved to include features beyond the distribution of MBMF publications. On a typical month, our website attracts in excess of 10,000 visitors. Our website contains links to the Canadian Model Forest Network, individual Model Forest sites and the International Model Forest Network. Other Model Forest partners also maintain links to our site. Under the FCP we will add additional functionality to the website, such as offering the ability of educators and others to access interactive on-line data sets. These datasets can be used in conjunction with MBMF and CMFN educational products. To increase the capacity of the website, we will develop a website marketing plan. The plan will focus on increasing public awareness of the site and sponsorship potential through the use of banner opportunities and project sponsorship links.

Project reports, whether available on our website or distributed by hardcopy or electronically (e.g., by email) have become an effective method of technology transfer, having significant positive effects on provincial policy. For example, a woodland caribou management strategy, developed by the MBMF in 2005, was used extensively by the Government of Manitoba when formulating its new provincial woodland caribou strategy.

The MBMF has recently begun to work with digital media for both technology transfer and communications and outreach. In 2005, a DVD on woodland caribou was developed which not only discusses the ecology and distribution of woodland caribou in Manitoba, but the caribou research and management programs undertaken by the MBMF caribou committee. This video has been widely distributed across Canada and integrated into the Manitoba high school science curriculum.

In certain instances, technology transfer occurs best through providing field tours and field demonstrations. The MBMF supports many such tours to research project areas. Some of these tours are organized by our various committees (e.g., moose and caribou committees), while other tours are organized by the MBMF office or our partners (such as the Manitoba Forestry Association and the Woodlot Association of Manitoba). Participants include MBMF Board members, committee members,

policy makers, industry and interested publics. Tours have been one of our most successful methods of technology transfer. It has also become a valuable tool for communications and outreach.

Finally, a unique aspect of our technology transfer program is to involve schools and students. This occurs through the introduction of forest-based curricula (developed by the MBMF) into the school system and the direct involvement of students in our research program where possible. Hands-on participation of students in data collection provides a rare opportunity for the “next” generation to understand the complexity of the Boreal forest and how humans manage the landscape. In the last 5 years, the MBMF has partnered with many schools in the MBMF area, schools in major urban centers (e.g., Winnipeg) as well as organizations which provide summer research opportunities for high school students (e.g., Deep River Science Academy).

## 6.2 Communications and Outreach

The communications and outreach component of our strategy is designed to reach many different audiences for the purposes of educating people about forest ecosystems, landscape management and the role that the MBMF plays in helping to achieve the goal of healthy forests and robust communities. The MBMF will be undertaking more activities in western Manitoba under the FCP, and we will thus focus more resources on communications and outreach in that part of the province than has historically been done.

One vehicle for outreach is the production of a quarterly newsletter (For All Our Relations), which has been utilized since 1994. The rapid acceptance of the publication illustrated the public need for up-to-date information on sustainability issues. Under the FCP, we will refocus our newsletter to include theme issues. Such topics could include the evolution of the Model Forest program, Boreal forest education, activities of the MBMF and the CMFN. Partnership and sponsorship opportunities will be pursued for the various theme issues. Current circulation of the newsletter is 3,000 and we will aggressively pursue increasing circulation by a target of 10-15% per year. This will involve the development of a newsletter marketing plan. In addition to our flagship newsletter, our moose management and caribou committees also produce periodic newsletters (Moose News, Atik News), which will continue under the FCP. These newsletter publications are available both in print and electronically on the website.

The use of promotional brochures is also a method of communication and outreach that is utilized by the MBMF. These materials are typically taken to events being attended by MBMF staff and our partners. They are also available at our display booth at events. Under the FCP we will also redevelop and update our promotional brochure material to reflect the new program as well as develop project-specific fact sheets.

A key method of outreach used by the MBMF is giving presentations and setting up our MBMF display booth at workshops, conferences and community events, and by providing guest lectures at universities, colleges and in high schools and elementary schools. These presentations are given not only by MBMF staff, but by many of our partners. The presentations provide an effective means by which the MBMF and its activities and successes have become known across Manitoba and Canada. In any one year, more than one hundred presentations are made by our staff and partners. We will continue this under the FCP. In addition, we will also update and redevelop our display booth to reflect the new program and make it more interactive, and will be developing other promotional materials.

We maintain a photographic database of our programs, people and activities which we also use in our displays, publications and presentations.

Communications also takes place by holding our Board meetings, committee meetings and project meetings (e.g., Traditional Area Advisory Committees) in MBMF communities. In this way, the MBMF and its partners have a visible presence in the communities.

The MBMF also periodically advertises in local media (local newspapers, radio) to inform the public of opportunities, MBMF activities and the program in general.

### 6.3 Networking

Networking includes not only working with organizations and people in Manitoba and across Canada, but also with other Model Forest sites, the CMFN and the IFMN. The MBMF will participate on relevant committees, working groups and as a Board member of the CMFN. As with past phases of the Model Forest program, we will continue to support the national network in areas of communications, reporting, attendance at network meetings and conferences/workshops and in specific strategic initiatives undertaken by the network and provide assistance to the IFMN where needed. As a CMFN communications and networking strategy has not been developed yet, the MBMF will take an active and continuing role as a Board member to help shape and develop such strategies

There are also several projects which we are proposing in our 5 year program that other Model Forest sites also have expertise in. It is our intention that once we know of the successful FCP sites and their intended programs, we will work collaboratively with such sites to build on their existing knowledge and experience. The current Model Forest sites (whether successful in the FCP competition or not) have gained 15 years of experience in implementing projects and we acknowledge that this wealth of experience must be utilized to create innovative and effective projects. In addition, and where appropriate, the MBMF will also network with CFS staff and scientists on projects of mutual interest. This could be on our projects outlined in our 5 year program plan, or on individual CFS strategic initiatives that may arise periodically.

### 6.4 Communication in Canada's Official Languages

Our outreach products, tradeshow presence (e.g., display) components that are designed for national distribution will be translated into Canada's official languages: English and French, as required. Most local material will be in English only. However, certain communications pieces that are relevant to our First Nation communities will also be translated into Ojibway. Additionally, communications pieces such as our general MBMF brochure and fact sheets on our international projects will be translated into Spanish and distributed to our international partners. Through our international programs, we will also help our international partners develop communication materials that will be translated back from Spanish to English, for distribution in the MBMF area. In this way, project information written by our international partners will be accessible to our own English-speaking communities. Any translation services will have to be contracted out, and this is reflected in our communications budget.

## **7.0 Administrations and Finances**

Over the years of the Canadian Model Forest Program, the MBMF has diversified its funding base to become less reliant on CFS core funding. We have secured project-specific funding from a large

number of organizations and funding programs including Environment Canada's Eco-Action Program, Sustainable Development Innovations Fund, World Wildlife Fund Canada, Indian and Northern Affairs Canada (as leveraging funds through First Nation-initiated projects), CIDA, Habitat Stewardship Program, Southeast Resource Development Corporation, Louisiana Pacific, Manitoba Hydro and Tolko Industries Inc. In particular, we have made great strides over the last 6 months to expand our core funding base in preparation for our FCP application. For example, in Phase II and III of the Model Forest program, core funding to the MBMF was provided by CFS and our main industrial partner (Tembec). In our application to the FCP we have expanded our core funding partners that will provide cash support, to include the Government of Manitoba (Manitoba Conservation), industrial partners (Manitoba Hydro, Louisiana Pacific Canada and Tembec Inc.), three First Nation communities (Brokenhead Ojibway Nation, Black River First Nation, Hollow Water First Nation) in the MBMF area, the Assembly of Manitoba Chiefs, and several municipalities, towns and villages. **Under the FCP, we are requesting core funding from the CFS of \$400,000 per year.** Table 3 provides a summary of the annual cash contributions and contributions over the length of the 5 year program from our core funding partners, as well as annual and program total in-kind contributions. The table demonstrates that our total proposed program and funding (cash and in-kind) greatly exceeds the core funding requested from the FCP on an annual basis. In addition, we have matched more than 50% of the FCP funding in cash contributions from our partners. Finally, use of FCP funding for program administration declines over the length of the 5 year program, and is less than the required 60% in Years I & II, less than the required 50% in Years III & IV and less than the required 40% in Year V.

Table 3. Annual and Five Year Total Cash and In-Kind Contributions

<b>Funding Source</b>	<b>Annual Contribution</b>	<b>Total 5 Year Contribution</b>
<b>Cash Funding</b>		
FCP (CFS)	\$400,000	\$2,000,000
Manitoba Conservation	\$100,000	\$500,000
Manitoba Hydro	\$100,000	\$500,000
Louisiana Pacific Canada	\$75,000	\$375,000
Tembec Inc.	\$50,000	\$250,000
Brokenhead Ojibway Nation	\$15,000	\$75,000
Black River First Nation	\$5,000	\$25,000
Hollow Water First Nation	\$15,000	\$75,000
Assembly of Manitoba Chiefs	\$10,000	\$50,000
Other Communities and Municipalities	\$2,200	\$11,000
MBMF	\$3,660	\$18,300
CIDA	\$75,000	\$375,000
Other	\$197,400	\$987,000
<b>Total Cash</b>	<b>\$1,048,260</b>	<b>\$5,241,300</b>
<b>In-Kind</b>	<b>\$1,086,500</b>	<b>\$5,432,500</b>
<b>Total Cash and In-Kind</b>	<b>\$2,134,760</b>	<b>\$10,673,800</b>

In addition to the organizations and communities on our Board, and our core funding partners, other partners will provide in-kind support in the MBMF projects and program from 2007 to 2012. Table 4 provides a list of these organizations.

Table 4. Additional partners in the MBMF program from 2007 to 2012.

Agrinomico Tropical de Investigacion y Ensenanza (CATIE-Costa Rica)	Brokenhead River Restoration Committee	Cabacares Peoples of Costa Rica
Chiloe Model Forest (Chile)	City of Winnipeg (Assiniboine Forest Naturalists Services Branch)	Ducks Unlimited Canada
Environment Canada (Ecological Monitoring and Assessment Network)	First Nations Forestry Program	Fisheries and Oceans Canada (DFO)
Frontier School Division	Indian and Northern Affairs Canada	Lac du Bonnet Fish and Wildlife Association
Manitoba Agriculture	Manitoba Education and Training	Manitoba Forestry Association
Manitoba Native Outfitters Association	Manitoba Tourism	Manitoba Water Stewardship
Mariposa Monarca Model Forest (Mexico)	Mining Association of Manitoba	Natural Sciences and Engineering Research Council of Canada (NSERC)

Table 4 (continued)

Northern Forest Diversification Centre	Red River Community College (Winnipeg)	Regional Model Forest Network for Latin America and the Caribbean (LAC-Net)
Reventazon Model Forest (Costa Rica)	Royal Roads University (Victoria, BC)	Sunrise School Division
Sustainable Forest Management Network (Edmonton, AB)	Universidad Arcis Patagonia (Chile)	West Region Tribal Council
<ul style="list-style-type: none"> <li>▪ Williche Council of Chiefs (Chile)</li> </ul>	Winnipeg River Regional Round Table	Winnipeg School Divisions
<ul style="list-style-type: none"> <li>▪ WNO (East Side Lake Winnipeg Planning Initiative)</li> </ul>		

Taken together with our diverse Board of Directors, the above list clearly demonstrates the breadth and diversity of partnerships developed by the MBMF.

### 7.1 Five Year Financial Plan and Budget

The following table provides a five year breakdown of the cash contributions for each of our funding partners. Projects and activities are grouped together into Theme Areas. These theme areas were created by the MBMF in Phase III of the Canadian Model Forest program and we have chosen to retain the categories. The Theme Areas are Local Involvement, Education, Forest Stewardship, International Programs, Administration and Communications. To facilitate comparisons of our Theme Areas to FCP Objectives, we have cross-referenced the information in the table. In our proposed 5 year program, we have identified projects and activities that require a total of \$5,241,300 in cash support. After accounting for confirmed levels of financial support (including the FCP contribution of \$400,000 per year), we have also identified the need to raise an additional \$987,000 from other sources to reach our projected budget for projects over the 5 year period. In Table 5 below, this is indicated by the “Other” funding category. As with previous MBMF 5 year program budgets, we will be developing proposals to meet or exceed our planned budget. We have begun to develop joint proposals with Hollow Water and Black River First Nations to INAC for funding of the moose co-management and other First Nation-initiated projects. This one funding application alone totals more than \$400,000. The MBMF has historically been very successful at writing proposals and working with our partners to secure grants under partnership agreements. We will actively pursue funding opportunities with Eco-Action, Sustainable Development Innovations Fund, NSERC, SHERC, CIDA, Forest Enhancement Fund, WWF, and INAC, among others. In addition, we have indicated support of \$375,000 from CIDA. This has not been secured yet but we have already initiated work on working with CIDA for our international programs. Funding has been approved by CIDA for the development of a full proposal for our work with the Revenatazon Model Forest and partners in Costa Rica.

Included in our budget are financial resources dedicated to working directly with the CMFN. For each year, money has been allocated for network-related travel expenses to attend meetings and to work on various CMFN committees as well as for work in collaboration with other FCP and Model Forest sites. Money is also available in some of our projects to send Board members and/or stakeholders to network-sponsored meetings and conferences. While not reflected in our budget, the MBMF will also

apply for funding in relevant Strategic Initiatives of the Canadian Model Forest Network and/or CFS policy and research priority projects that are periodically identified over the 5 year period by CFS and the CMFN.

Table 5 also indicates the considerable level of in-kind support to our program from our partners. This in-kind support occurs at all levels of the organization, projects and activities and includes contributions from our local communities, Board members, working group and committee members, government and industrial partners, academic institutions and other NGOs. A considerable amount of time is provided by individuals and organizations in the planning and implementation of projects. In-kind support also includes provision of equipment (trucks, satellite phones, telemetry equipment), supplies and other services (e.g., GIS analysis, color printing and map plotting). Tembec Inc. in particular, will continue to provide office space and other administrative support for the MBMF, an estimated in-kind contribution of \$25,000 per year, in addition to other in-kind support to committees and projects. Manitoba Conservation will continue to provide fixed wing and helicopter support (worth \$800 - \$1500 per hour) for our caribou and moose projects. We project our in-kind support to be approximately \$1,000,000 per year. This value is quite realistic, as over the last 5 years of Phase III of the Canadian Model Forest program, annual in-kind contributions to the MBMF have averaged between \$1.0 and \$1.1 million. A detailed accounting of the estimated in-kind support for the FCP program is found in Table 6.

### 7.2 Strategy to Diversify Funding Sources and Increasing the Financial Stability of the MBMF

As mentioned previously, the MBMF has made great strides during Phase III of the Canadian Model Forest program to diversify our partnership base and funding. In particular, we have been extremely successful in bringing in new core funding partners (government, new industry partners, First Nation communities and political organizations and local communities). As identified in the Communications, Outreach and Networking section of the proposal, we will be developing new communication tools designed to increase the profile of the MBMF and thus our fundraising capacity. Part of our funding diversification strategy has also been to invite new partners to sit on our Board of Directors. We are pleased to note that the Mining Association of Manitoba will become a new Board member effective April 1, 2007. In fact, our new program already reflects the input of the mining industry, which will play a role in our individual projects. Due to short window of time for the development of our FCP funding application, the Mining Association of Manitoba was not able to confirm a cash commitment to our program. However, they have already, through their letter of support and in our 5 year plan development workshops, committed to financially supporting the MBMF. In particular, the Mining Association has already indicated that there is significant potential for the association (and its member mining and exploration companies) to provide cash and in-kind support to a number of MBMF projects, including the Regional Trade School, Junior Rangers program, Forest Education, First Nation Land Use Studies, Traditional Area Advisory Committees, Species at Risk, Water Quality and Riparian Management projects, and Trapper Involvement. Over the next 6 months we will be actively pursuing this. The MBMF will also be working with other agencies such as INAC and Manitoba Agriculture.

### 7.3 Maintenance and Reporting of Financial Information and Organizational Capacity to Carry Out the Program

The responsibility for maintaining all financial information, and tracking and reporting on the financial status of the MBMF resides with the Executive Assistant and General Manager, the two staff positions of the MBMF. Over the last 15 years, the MBMF has administered several million dollars worth of

projects and activities, providing accountability through audited financial statements. The MBMF utilizes standard financial accounting software and can provide up-to-date financial information on specific projects, activities and the program as a whole at any point in time. Financial summaries are reported to the Executive Committee on a regular basis and to the Board at all Board meetings (6-8 times per year). For simplicity's sake, a spreadsheet that summarizes each project, activity or major component of the budget is provided to the Executive and Board. This reporting tool provides a snapshot of progress in budgetary spending (total budget, period spending, year to date spending, funds remaining) by project/major activity/major component and by funding partner. Financial planning of projects and activities occurs at working group (e.g., Forest Stewardship, Education, Local Involvement) or committee (e.g., Caribou, Moose) levels throughout the year. Budget allocations and progress on projects are tracked frequently. Annually, the financial records are audited by a certified auditing firm. The choice of the firm is made by the Board of Directors, by resolution. This information is provided in our annual report to the CFS and the CMFN.

In Phase III of the Canadian Model Forest program, the MBMF employed three staff positions: a General Manager, Executive Assistant and a Community Programs Officer. Technical and outreach support on educational and communications was also provided by contracts to an educational specialist and a communications consultant. Under the FCP, we will retain the General Manager and Executive Assistant as the only staff positions. On a contractual basis, we will hire consultants as needed for various projects in the areas of education, community outreach and communications. These costs are covered in various projects. The MBMF office consists of a reception area, two offices, a photocopying and storage room, library and meeting room. The office space is provided as an in-kind contribution by Tembec Inc. The MBMF office also has desktop and laptop computers, laser and color inkjet printers, high speed internet access, telephones and a photocopier. The MBMF has access to Tembec's color photocopier and color plotter.

#### 7.4 Development of Annual Work Plans

A considerable amount of energy and time is dedicated to the development of annual work plans and budgets and to the involvement of all those interested in helping to shape the work plan on an annual basis. Annually rough budget allocations are decided upon by the chairs of working groups and committees and the General Manager for the main Theme Areas (e.g., Forest Stewardship, Local Involvement, Education, etc.), ensuring consistency with the 5 year program plan. The details of projects and activities identified in the 5 year program plan are also developed at working group and committee levels. These committees have a wide cross-section of representation from stakeholder groups, First Nations, government agencies, industry, etc. This process starts approximately in November, 5 months prior to the start of a fiscal year (the MBMF fiscal year starts April 1). A standardized work plan template is used for each project, activity or component of the work plan. The template includes key words, relation to MBMF objectives, relation to national objective, project descriptions, project deliverables, outputs, technology transfer activities, communication activities, immediate outcomes and performance indicators and project contact information. In addition, the template includes a table that requires the identification of all funding partners (cash and in-kind values). Projects and budgets are developed by the working group and committee members. Once projects and activities are ratified by consensus, the whole annual work plan is compiled by the General Manager and presented to the Board for their review. If required, revisions are made to the annual work plan based on Board recommendations and then the annual work plan is approved by the Board. Any major changes required to the work plan throughout the year must be approved by the Board.