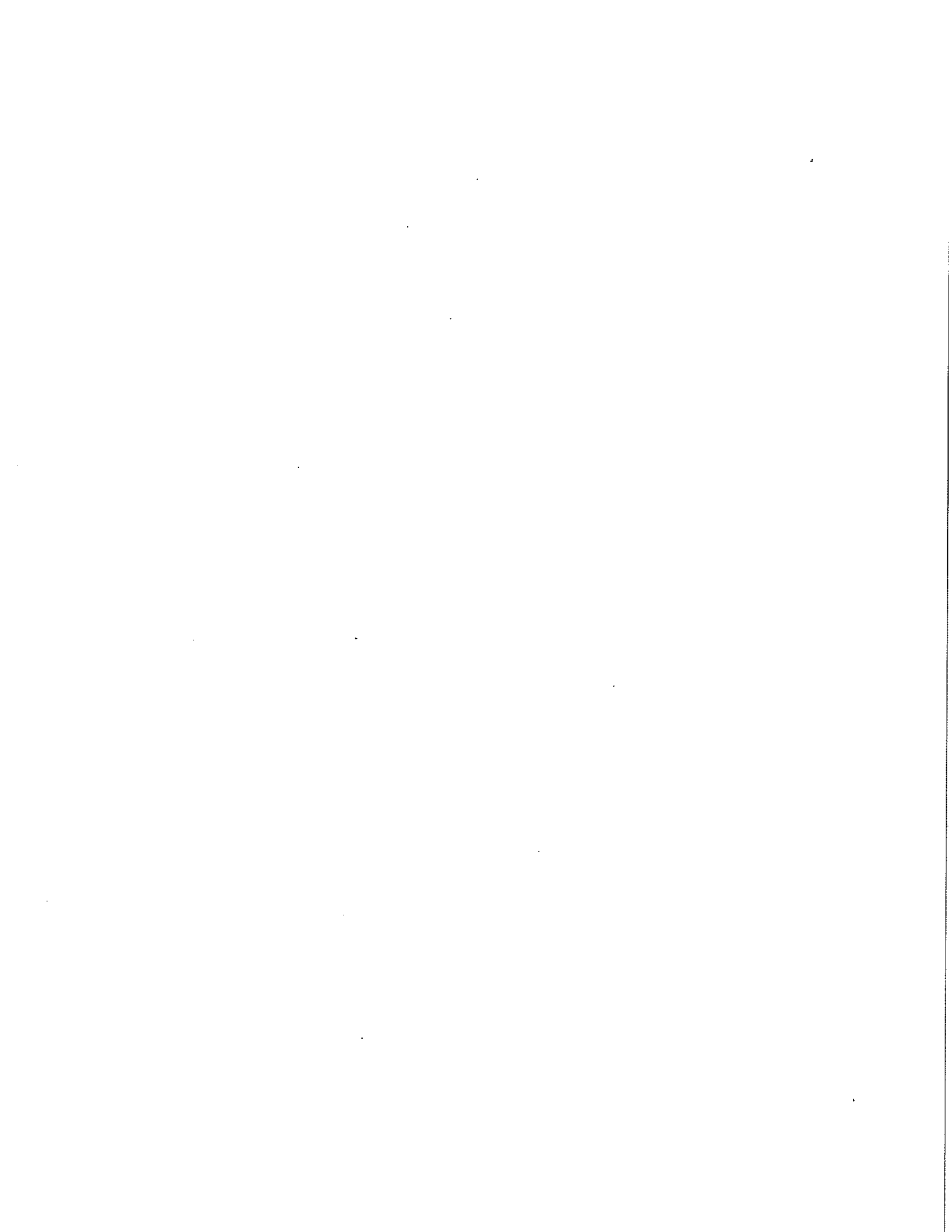


**FOOTHILLS MODEL FOREST
BUSINESS PLAN**

February, 1994

**This is a publication of the Foothills Model Forest pursuant
to the Partners in Sustainable Development of Forests program,
administered and funded by
Natural Resources Canada, Canadian Forest Service.**





Foothills Forest

Business Plan

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February, 1994



Table of Contents

1.0 Introduction	3
2.0 Recent History	3
3.0 Existing Realities	5
4.0 A Changing Environment.....	11
5.0 Issues and Challenges	13
6.0 Willed Future	19
7.0 Key Initiatives	25
8.0 Action Plan	31



1.0 Introduction

Foothills Forest was selected by Forestry Canada as one of 10 Model Forest sites from over 50 proposals submitted from across Canada. The successful sites were announced in June 1992 with funding approved under the Partners in Sustainable Development of Forests Program of Canada's Green Plan for an initial five-year period (1992-97). Foothills Forest was officially announced on March 1, 1993 when Frank Oberle, the federal Minister of Forestry, and Joe Clark, Minister of Constitutional Affairs and MP for Yellowhead, signed an agreement with the sponsoring partners - Weldwood of Canada Limited (Hinton Division), Alberta's Department of Environmental Protection, and the Forest Technology School.

Model forests are designed to demonstrate sustainable forest management in a working forest environment. Foothills Forest is a "working" forest that incorporates 1.2 million hectares immediately east of Jasper National Park encompassing the communities of Brule, Hinton, Cadomin and Robb. It includes the Forest Management Agreement Area held by Weldwood of Canada Limited, the Forest Technology School's Cache Percotte Forest, William A. Switzer Provincial Park and four Provincial Forest Management Units. Most of the land is public land administered by the Province of Alberta and managed for multiple use. Protected areas include W.A. Switzer Provincial Park and land within the Prime Protection Zone of the Eastern Slopes.

2.0 Recent History

In January of 1993, Foothills Forest opened for business. The "Foothills Forest Proposal", prepared by the original Steering Committee was used to guide the startup. Over the first 10 months, it became apparent that circumstances had changed. Available funding, new governments at all levels and the contribution of participating interest groups and individuals created a need to review the forest's original proposal and to develop a strategic plan.

The Board of Directors, Project Steering Committee and Partners Advisory Committee were invited, along with the 6 fulltime contract staff, to participate in a 3 day directional planning workshop. The objective was to provide the basis for a business plan - identify the current reality for the Foothills Forest, determine its "willed future" and identify initiatives which would lead to that future.

Success, for Foothills Forest, involves developing state-of-the-art integrated resource management capabilities for sponsors and partners. For this to occur, we will have to excel in the following "key success areas":

1. **Mission and Values.** Commitment, on the part of all participants, to a clearly-defined mission and set of values.
2. **Integrated Resource Management and Sustainability.** Forest management which considers the values placed on all resources.
3. **Information, Research and Knowledge.** Short-term deliverables in developing, managing and using information.
4. **Partnerships.** A network of sustaining partnerships that help achieve our mission.



5. **Communications.** Managing communications with target audiences to inform and encourage involvement.
6. **Management, Accountability and Funding.**

* * *

The following section describes the “existing realities” for Foothills Forest.

3.0 Existing Realities

3.1 Mission and Values

Foothills Forest's mission is "to develop and recommend an approach to sustainability and integrated resource management through research and technology developed by means of collaborative partnerships. This approach will achieve local, national and international recognition".

The partners are committed to achieving this by incorporating values such as conservation, cooperation and integrated resource management of resources.

3.2 Integrated Resource Management and Sustainability

The Foothills Forest has been blessed with a wealth and diversity of natural resources. The area was one of the first regions in Alberta to become involved in large scale forestry operations with the signing of Alberta's first Forest Management Agreement between the province and North Western Pulp and Power Ltd in 1954. Other resource based industries include 4 major coal mining operations, oil and gas development, and an ever-growing recreation and tourism sector. Areas of protected and reserved lands on or adjacent to the Foothills Forest are extensive and include W.A. Switzer Provincial Park and Jasper National Park, a UNESCO World Heritage Site.

There are 284 terrestrial vertebrate species and 25 aquatic vertebrates present representing 64% of all Alberta species and 96% of the species native to the provinces forested region. The forest contains more than 4,000 km of rivers and streams and more than 100 lakes and ponds. Grazing lands are included in the operational forest land base. Trapping has a long history in the area and all or parts of 64 Registered Fur Management Areas are found within the Foothills Forest boundaries.

The sponsors and partners have been active in integrating management of the area's natural resources:

- **Alberta's Policy for Resource Management of the Eastern Slopes** - guides decisions regarding land use while protecting the integrity of the land base and places a high priority on the management of watersheds. Over 25 years of research has already been carried out in the area documenting the effects of forest harvesting on hydrology, water quality and salmonids.
- **Integrated Resource Management Plans** - The sub-regional plans, developed under the Eastern Slopes Policy, define resource management objectives developed through an integral planning process and public review.
- **Provincial Forest Management Agreements and related legislation.** The area's history of progressive forest management relates to the original Forest Management Agreement - long-term tenure based on forest management practices that ensure sustainability.
- **Integrating forest management with wildlife and terrestrial ecosystems.** Weldwood's Forest Management Agreement area was designated as an Alberta Model for integrated timber/wildlife management in 1983. Through an Integrated Resource Management Steering



Committee, the company and provincial government are developing new integrated resource management processes. Weldwood and the Government of Alberta have established referral procedures for integrating a wide variety of other forest uses including industrial activities, recreation, trapping, and grazing.

- **Weldwood's Forest Resources Advisory Group.** In 1990, Weldwood established its own Forest Management Liaison Committee, comprised of government, professional, industrial, commercial, and other special interest groups, initially to provide input to its forest management plan. The group now provides the company with advice from foresters and non-foresters on a broad range of forest management issues.

3.3 Information, Research & Knowledge

Over the past 40 years, extensive information has been collected on resources that are part of the region covered by the Foothills Forest:

- Weldwood has a comprehensive inventory of forest resources - 3,200 permanent growth sample plots, 1,000,000 hectares of forest cover inventory (including upgrades for non-forest species as per Alberta Vegetation Inventory specifications), 8,000 Photo Point Sample plots, and over 27,000 temporary Regenerated Stand Inventory plots.
- Wildlife resources have been studied and documented through several hundred habitat plots and 1,200 bird survey plots.
- Since 1983, the integration of timber harvesting and wildlife management has been refined through guidelines and landscape modelling.
- The influences of timber harvesting on water quality and quantity have been studied extensively in the Tri-Creeks area.
- Fisheries inventory work has been carried out on approximately 30 percent of watercourses in the Foothills Forest.
- Tourism/Recreation inventory work has been carried out by both Weldwood and Foothills Forest.

Additional projects are underway as part of the Foothills Forest program that will enhance this information base:

- Completion of digital forest cover inventory for the Foothills Forest.
- Environmentally Significant Areas Inventory.
- Inventory of all recreational trails and campgrounds for input into GIS systems.
- Ecosystem classification update work by Corns/Annas and the implementation of the NAIA project (expert system for predictive ecosystem mapping).

- Compilation of additional digital data for soils, physical features as well as biotic information.
- Geographic Information Systems (GIS) are being developed and adapted as a means to store, manage and utilize information in support of integrated resource management decision making by Weldwood of Canada Limited.

3.4 Partnerships

Management of forested public land in Alberta is the responsibility of Alberta's Department of Environmental Protection. Management mandates include the regulation of both consumptive and non-consumptive uses such as timber harvesting, oil and gas development, coal extraction, hunting and fishing, grazing and recreational use.

In 1954, Alberta signed its first Forest Management Agreement with North West Pulp and Power Ltd. (now held by Weldwood of Canada Limited, Hinton Division). This "partnership" was in the form of Alberta's first Forest Management Agreement, an agreement that granted long-term tenure over a fixed land base for a renewable 20 year period in exchange for large capital investment in forest product facilities and the guarantee of sustainable yield forest management. This agreement has been twice renewed and is currently held by Weldwood of Canada Limited (Hinton Division).

This agreement contributed to decisions on the location and focus of the Forest Technology School and started a series of partnerships that have been key to resource management in the province. Partners include:

- Weldwood of Canada Limited
- Federal, provincial and municipal governments
- Research organizations
- Educational Institutions (Universities, NAIT, local High Schools)
- Researchers and students
- The forest industry and other commercial users of the forest
- Local communities
- Non-Government Organization's (Trout Unlimited, Rocky Mountain Elk Foundation, Hinton Good Companions, etc.)

The partnerships have matured with increasing interest in forest lands resulting in a growing number of stakeholders involved in forest management planning and decision making. Over time, the interest in the use of forest lands has resulted in an ever growing number of stakeholders involved in forest management planning and decision making.

The Foothills Forest is also based on strong partnerships:

- **Strong, dedicated primary sponsors/partners.** Weldwood, the Forest Technology School, Alberta's Department of Environmental Protection, and the Canadian Forest Service (representing the Federal Government's Green Plan and Partners in Sustainable Development of Forests Program) have demonstrated the desire to move forward in the area of forest management through their involvement with Foothills Forest.
- **Broad coalition of other partners.** The 73 partner groups that originally showed commitment to the Foothills Forest proposal represent a wide range of opinions and interests.
- **The Network of Model Forests.** Foothills Forest is only one of ten model forests across Canada. Shared information and resources between all forests provides us with an opportunity to improve effectiveness and efficiency.
- **A supportive community.** The economy of the Town of Hinton and the surrounding area is resource-based. The quality of life is dependent on a strong relationship with forest product companies and other resource users.

3.5 Communications

Internal and external communications are challenging and important for the Foothills Forest. There is no communications committee in place.

A Communications Plan was adopted by the Board of Directors in July. It included:

- A public newsletter issued 4 times per year.
- A second, more technical newsletter for partners and interested individuals/groups.

The intent of the current communications program is to inform those in the local area about the Foothills Forest and the significance of forest resources to their communities. Opportunities for providing information to residents of large urban centres will also be investigated. As the Foothills Forest begins to achieve its project goals, the focus will shift to professional development through transfer of new knowledge and technologies to forest resource managers and the presentation of information to national and international audiences.

3.6 Management, Accountability and Funding

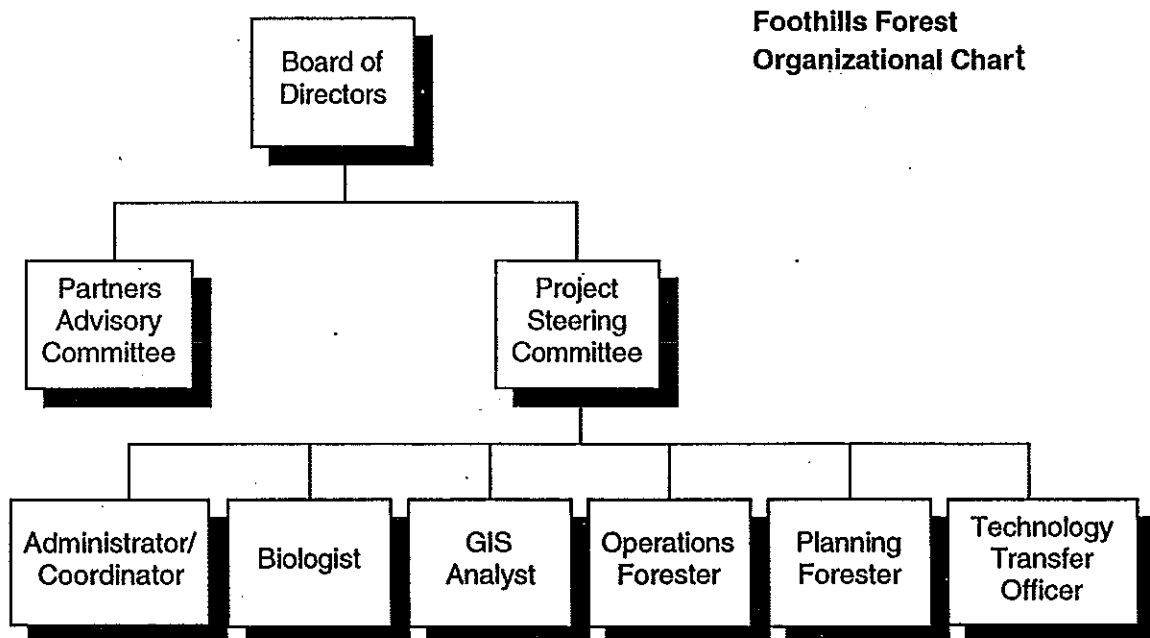
Management

The Foothills Forest, a non-profit company incorporated in Alberta, is founded on an innovative partnership structure that supports consensus among multiple stakeholders and respects existing resource management prerogatives and institutions. Four categories of partnership were defined: sponsors, resource partners, project partners and public partners.

Foothills Forest has a President and a Board of Directors that is responsible for the company. Operational management has been the responsibility of the Project Steering Committee - twelve representatives of sponsors and partners.

The Project Steering Committee proposes the direction of the program and, in conjunction with the Foothills Forest Executive Assistant, recommends that funds are allotted to projects consistent with that direction. This proposed direction is given to the Partners Advisory Committee (comprised of elected members from the group of partners) for their comments and recommendations. The Board of Directors reviews the recommendations of both groups before approving or modifying the proposal .

The current administrative structure is flat. Full-time staff include an Executive Assistant, a Technology Transfer Officer, Operations Forester, GIS Analyst and a Biologist. A Planning Forester has also been seconded from the Department of Environmental Protection for the duration of the project. Forest staff work on Model Forest projects, along with sponsor and partner staff. The latter are volunteer and part-time; serving on the Project Steering Committee and performing duties as Working Group Coordinators.



All full-time staff report directly to the President through the Working Group Coordinator(s). There is no central authority among full-time staff. The group works as a team with individual project supervision the responsibility of working group coordinators. Staff are independent, empowered and, within the scope of the Foothills Forest mandate, entrepreneurial.

There is uncertainty over strategic direction - a result of the differences between the Foothills Forest proposal and the current reality in program and funding. Uncertainty is also evident in the project management structure where coordination between projects and activities depends on part-time volunteers, coordinators, committees and management boards.

Accountability

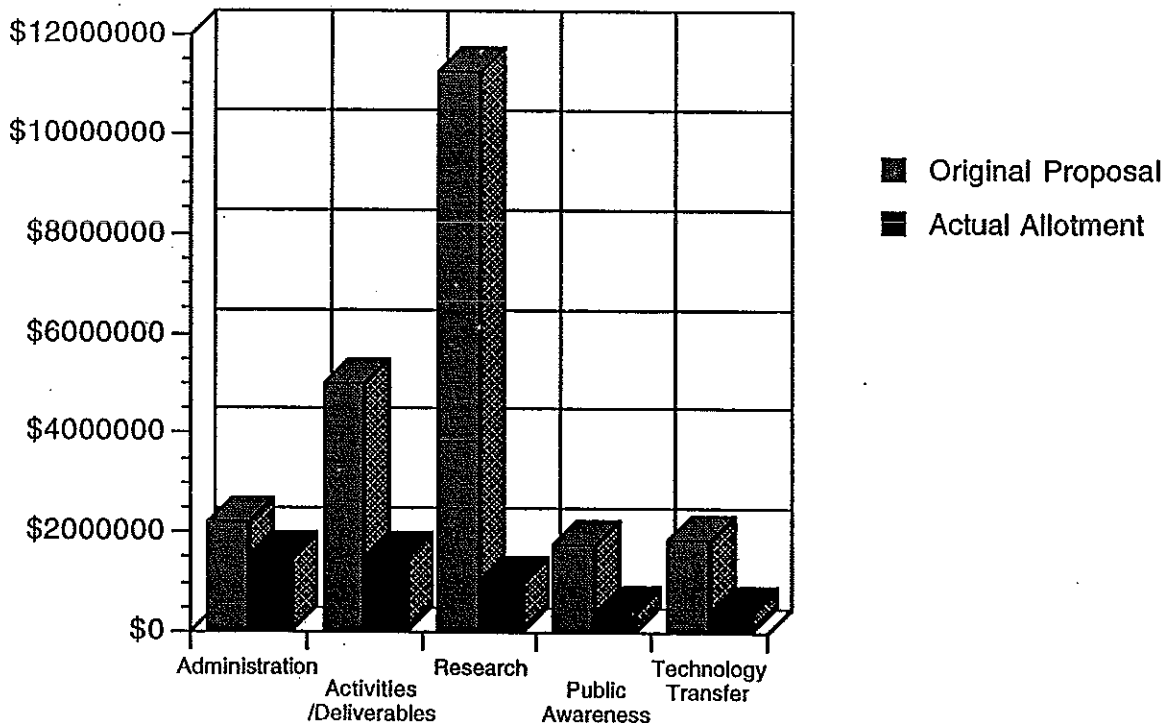
Foothills forest has been funded by sponsors and given the responsibility of developing new approaches to forest management. It must be both fiscally and professionally responsible to sponsors, partners and interested publics. At this time financial auditing is in place to assist in this but there is no program in place to measure results in terms of the quality and effectiveness of projects and the overall contribution to integrated resource management. An evaluation framework will be developed in 1993/94 to address this shortcoming.

Funding

The initial Foothills Forest proposal submitted to Forestry Canada, to establish a Model Forest under the Green Plan, Partners in Sustainable Development of Forests Program, included a budget with projected funding of \$22,113,000. Of this amount, \$11,144,000 was anticipated from the Green Plan's Model Forest Program with the balance coming from Sponsors and Partners in the form of cash and in-kind contributions.

When the Foothills Forest program agreements were signed, the final approved funding from the Government of Canada was \$5,000,000. In early 1993 Foothills Forest was advised, that due to Government restraints, this funding would be further reduced by as much as 10%. Hence the need for an updated plan of action.

Foothills Forest Funding Allocation



4.0 A Changing Environment

The Foothills Forest is being shaped and influenced by a range of "sources and forces of change". Integrated resource management is becoming more and more complex with a wide array of issues and concerns affecting our intended key success areas.

4.1 *Mission and Values*

- Changing community concerns about the economy and environment.
- Changes in provincial and federal governments and policies.
- The need for public and private sector organizations to do more with less resources and better cooperation.
- The international model forest program - linking the Foothills Forest with the Chihuahua Model Forest in Mexico.

4.2 *Integrated Resource Management and Sustainability*

Integrated resource management is becoming more complex:

- The demands for both consumptive and non-consumptive uses are growing.
- Increasing urbanization has weakened our connections to forests and the social and economic benefits that they provide.
- The public has become more knowledgeable and informed on environmental and ecological issues and is demanding that greater attention be focussed on other values besides timber.
- Highly competitive markets and burgeoning debt are affecting both public and private sectors limiting resources for comprehensive integrated management.
- Political agendas are now not only influenced but sometimes dominated by economic considerations.

4.3 *Information, Research and Knowledge*

Forest resource management is data and information intensive. Changes in the economy, technology and society create both the need and means for finding new ways of achieving our goals:

- **Government debt and deficits** - bringing a reduced role for government in the economy and in resource management and heightened public fiscal accountability.





- **Global and North American competition** - resource management must be effective and competitive - directly contributing to a successful economy.
- **Technology** - improving our ability to gather and use data. Enhancements to computer, remote sensing and surveying technology are rapidly adding to our capabilities and increasing expectations.
- **Information sharing** - technology, deregulation and fundamental changes in the role of government are allowing/driving broader access to information.

4.4 Partnerships

Partnerships help society share ideas, responsibilities, risks, and benefits. They are becoming increasingly important as we work towards resolving complex and costly problems in a world of scarce resources. Increasing numbers of stakeholders have interest in the management of forest resources.

4.5 Communications

There is a steady increase in the importance of effective communications in successful organizations. For forest resource management and the Foothills Forest, the interest in information is high, driven by:

- Concern over the economy and increasing realization of the strong economic role played by the forest sector in Canada.
- Awareness of linkages between the environment and human health, survival and quality of life - captured in concerns about global warming, loss of species diversity, and recognition of non-consumptive resource use.
- An aging "baby boom" generation with greater wealth and diverse leisure interests that include many forest-based activities.
- Popularization or democratization of government as voters seek and obtain a greater voice in resource management decisions.

5.0 Issues and Challenges

Foothills Forest has developed unique partnerships based on:

- Cooperation in working towards achieving our mission.
- Dedication among staff, sponsors, partners and volunteers.

These unique partnerships have the ability to "break new ground" in integrated resource management, however, issues and challenges - ie. barriers to achieving a willed future exist.

5.1 Mission and Values

The Foothills Forest mission and values had not been explicitly stated prior to the development of this plan. As part of the preparation of this directional plan, mission and values were discussed and resolved in conjunction with the business planning workshops.

The organization is striving to be on the leading edge of forest resource management. This and the large number of potential partners - specifically their evolving and changing expectations - will require that we undertake periodic review, refocusing and renewal of commitment to the Foothills Forest mission.

The scope of forest resource management is potentially very broad. Through strategic and business plans, goals - the willed future of the organization - must be matched to the available resources. There is evidence that today, staff and funds may be spread too thin and expectations may be too high - threatening effectiveness from several directions.

5.2 Integrated Resource Management and Sustainability

In the past, integration of resource uses on the Foothills Forest land base has been comparatively successful. While a strong foundation exists, there is a need to build on it in a number of areas:

- **Relationships between wildlife, terrestrial ecosystems and forest management that are only partially understood.** Particular knowledge gaps include:
 - understanding the relationship between forest wildlife species and their habitats.
 - defining forest management scenarios that accommodate the habitat needs of priority wildlife species such as caribou, etc.
 - understanding/predicting the response of forest wildlife species to habitat change through both natural and anthropogenic mechanisms.
 - identifying "indicator species" whose habitat requirements can be used to guide forest management strategies in certain ecosystems.



- using information to develop specific wildlife/habitat objectives and strategies.
- using forest management practices to conserve forest biodiversity.
- **Integrating forest management with public and commercial use.** While long-standing activities have been underway to better plan for and meet the needs of a variety of commercial and public uses of forest land, significant issues remain. In particular, the proximity of Jasper National Park and the strong recreational demand by residents of the region as well as those from major urban centres like Edmonton - raise the profile of outdoor recreation and tourism. Issues include:
 - resolution and identification of the land bases required for protected areas as part of the Special Places 2000 initiative taking into account land use priorities already identified in existing IRP documents, Weldwood of Canada Limited's Forest Management Agreement, etc.
 - concern over the visual impacts of industrial activity in the region.
 - integration of a broad spectrum of commercial and public uses on the same landbase.
 - access management to resolve conflicts between:
 - resource users and;
 - resource use
- **Managing ecological and successional impacts of forest management.** Concern exists over the interrelationships between forest management practices and ecosystems on a local, regional, provincial and global scale. Issues that have arisen in this regard include:
 - relationships between timber harvesting and sustained site/soil productivity.
 - the boreal forest's role in global warming.
 - characterizations of species diversity and biodiversity conservation.
 - definition of natural variability in ecosystems as a guide to forest management.
- **Integrating forest management with watershed and aquatic ecosystem management.** Over the past three decades, much has been done in the region in studying relationships between forest management and land use in aquatic ecosystems. Major projects have been undertaken to identify critical point sources of sediment and characterize relationships between timber harvesting and stream flow. In spite of this:
 - our ability to characterize aquatic ecosystems and their variability is weak.
 - watershed responses are highly variable under natural conditions making it difficult to identify specific impacts of forest management practices.
- **Socio-economics of resource use and integration.** To date much of the incentive for

integration of resources has been based on assessment of public issues and the value sets of those involved in forest resource and land management. Integrated resource management eventually involves tradeoffs. In the absence of objective mechanisms for guiding them - decision making is difficult and results often inconclusive.

- **Changing times and legislation.** The legislation that has effectively worked to protect or sustain our natural resources has not kept pace with rapidly changing times. Much of this legislation was developed with specific resources - (e.g., timber, oil and gas, coal) - in mind, rather than the notion of balancing many uses on one land base.
- **Public Involvement.** The public is becoming both increasingly sceptical and vocal when it comes to the use of forest lands. They are demanding a greater say in how things are done. Successful forest management will require that we listen and respond.

5.3 Information, Research and Knowledge

For the Foothills Forest to achieve its mission and its "willed future", it will require clear vision on the information and technology required to effectively develop an approach to integrated resource management. This involves:

- Identifying resources.
- Understanding the significance of relationships among resources.
- Deriving measurable parameters that characterize the interrelationships among resources.
- Collecting relevant and required data and interpreting its significance.
- Developing the technology and planning tools needed to apply the information in integrated resource management.

Significant resource information is already available within the Foothills Forest - among its partners and sponsors. Much of the framework for acquiring the remaining information is also in place and individuals and organizations are working towards that goal. Nevertheless, priorities must be set and a thorough review of the state of the information and information systems within the Foothills Forest and among its partners and sponsors is required.

At this time a number of strategic data gaps are thought to exist. Addressing these would help the Foothills Forest achieve its mission and its willed future:

- Ecological land classification
- Wildlife species inventory
- Wildlife model testing and validation
- Wildlife community inventory

- Range of natural variability and the characterization of disturbance
- Environmentally significant areas (natural features) inventory

One of the goals of the model forest is to raise awareness of new concepts and technology with applications in forest resource management. Key challenges in achieving this goal will include researching trends and initiatives in resource management and establishing information networks among potential collaborators.

5.4 Partnerships

Partnership is defined as; *1. the state or condition of being a partner; joint interest; association. 2. a company or firm with two or more members who share in the risk and profits of the business.* (The Gage Canadian Dictionary, 1973). This definition captures the ideals that are the cornerstone of the Foothills Forest. Success is based on sharing of risks and profits or successes associated with joint/mutual interests. Lack of clear direction or commitment by any or all partners can weaken the partnership, raise the profile of conflicting "agendas" and lessen effectiveness.

Partnerships require continual, effective communication. This requires that the "mutual interest" of partners be well defined and understood. The role of each partner must be clear as must their objectives in the partnership agreement.

The categories of partnership include sponsors, project partners, resource partners, and public partners. The latter two categories have had an inconsistent involvement in various projects and activities - perhaps a reflection of the scaled-down proposal. Relationships with these groups must be clarified and confirmed:

- **Partner commitment has changed** - in part due to a refocussing of the Foothills Forest funding and mission.
- **Partner and sponsor relationships can bias the development of initiatives** - without careful management of Committees and the Board of Directors to ensure that an objective assessment of the program and goals of the Foothills Forest occurs, biases can develop.
- **Limitations on the numbers of partners that can participate in direct management of the program can weaken communications with more passive participants.** Given the scaled-down nature of the program, some partners may no longer be interested or appropriate.

5.5 Communications

In many respects the Foothills Forest is ideally suited to interact with those interested in natural resource management. The local economy is resource based and - next to Jasper National Park - it is an area of considerable interest internationally as well as to Albertans and Canadians.

Communications will be the key to the success of the Foothills Forest - success that will depend on addressing several issues and opportunities:

- **A range of expertise.** Partnerships with the Canadian Forest Service, Jasper National Park, the University of Alberta, the Forest Technology School and Harry Collinge High School provide access to individuals experienced in the delivery of information to a variety of audiences. Many NGO's have well established communications networks that can assist us as well.
- **Public Interest.** The public now recognizes the importance of forests and forest resources to their quality of life - both social and economic. The Foothills Forest can be proactive in this - demonstrating that people and technology can come together to achieve common interests.
- **The interested partners.** Public interest in forest resource management is also evident in the range of interests represented by the Foothills Forest partners. The opportunity for communications is one of building upon this existing interest to communicate with these partners.
- **Multiple publics.** Foothills Forest faces a complex array of publics as it attempts to set priorities and goals in communications. The variety includes:
 - Local audiences including business leaders, regional government leaders, school-aged children, and employees of the major sponsors.
 - The partners themselves are also an audience of interest.
 - Large urban populations in Canada and Alberta.
 - International audiences - primarily in northern Europe.
- **A sceptical public.** Interest groups are becoming increasingly vocal in regard to the use of our forests - demanding a greater say in resource management decisions. The public and media are sceptical about Canadian resource management practices and of the stewardship of industry and government. Where the audience is appropriate and valuable, communications must address these concerns at a grass-roots level.

5.6 Management, accountability and funding

The "Foothills Forest Proposal" recognized the need for a management structure that facilitated the involvement of partners and sponsors and encouraged strong partnerships. However, the close involvement with many partners has produced a complex and cumbersome structure - but one that embodies the spirit if not the essence of integrated resource management

Foothills Forest is facing a number of challenges. Most are common to "startup" and are resolvable given the attention of staff and support of sponsors and partners. These include:

- **Day to day leadership.** A need to provide stronger central leadership for the Foothills Forest. Currently project management and administration are not coordinated.
- **Financial management.** The development of financial and budget systems has been delayed. To facilitate project management, accounting and reporting requirements for the Foothills Forest may well be distinct from those of government and Weldwood.



- **Timing and scheduling.** Working group coordinators have been assigned considerable responsibility in the management and delivery of project results. Given their "full-time" responsibility to employers it is frequently difficult to find the dedicated time needed for the Foothills Forest.
- **Decision making.** The Board of Directors serves as a forum for sponsors and partners and as a result, it retains significant operating responsibility for the Foothills Forest. It meets only three to five times per year which may affect informed and timely decision making.
- **Project management.** The Project Steering Committee is responsible for recommending funding and for project management. Decisions are based on consensus and - given the vested interests of many of the Steering Committee members - there is a danger that decision making will not reflect the overall best interests of the Foothills Forest.
- **Monitoring and evaluation.** At this point, project management is relatively weak, although improving. There is no agreement upon "measuring sticks" to determine if the Foothills Forest achieves its objectives and clear linkages between long-term and short-term plans and activities are not in place.
- **Partners in funding.** Foothills Forest is examining new and innovative ways to achieve its objectives through funding, partner participation and entrepreneurship. Caution must be exercised, however, to ensure that efforts are closely aligned with the Forests goals and objectives.

* * *

6.0 Willed Future

The willed future of the Foothills Forest describes the desired outcome of the program. Plans and activities will be directed towards the achievement of that willed future to the extent that priorities and resources allow.

6.1 Mission and Values

The mission of the Foothills Forest is to “develop and recommend an approach to sustainability and integrated resource management through research and technology developed by means of collaborative partnerships. This approach will achieve local, national and international recognition”.

For the Foothills Forest to achieve this it must be viewed as:

- Progressive.
- Providing leadership in the forest sector - provincially, nationally and internationally.
- A source of credible information to others - those involved in resource management and the public at large.
- Collaborative - bringing together partners with different interests and a common goal.

The operations and activities of the Foothills Forest will be consistent with the values or principles contained in the following sections as agreed upon by sponsors and partners:

6.2 Integrated Resource Management and Sustainability

The Foothills Forest will contribute to the integration of resource uses and their management by enhancing our understanding of the interrelationships that exist. Priority areas for management will include:

- **Integrating forest management with wildlife and terrestrial ecosystems.** We will strive to develop and recommend a process for balancing forest management practices with the need to protect and provide habitat for the various wildlife species currently residing in the Foothills Forest study area:

This will build on the existing capabilities in integrated wildlife/timber management and partnerships between:

- Weldwood
- Fish and Wildlife Division
- Land and Forest Services
- University of Alberta



- **Integrating forest management with public and commercial uses.** Of the multitude of uses in the region, we will focus on exploring synergies between consumptive and non-consumptive uses - and forest management.
- **Ecological and successional impacts of forest management practices.** We will strive to better understand the variability in the Foothills Forest ecosystems and the sustainability of forest management activities at the stand level, at the landscape level and, where appropriate, globally.
- **Integrating forest management with aquatic ecosystem management.** The essential relationships between land and resource use and aquatic ecosystems will be identified and consideration given to defining natural variability. Where strong relationships exist - mechanisms for integrating and sustaining the resources will be studied and improved.
- **Socio-economics of resource use and integration.** We will work to better understand the "value" and contribution of commercial and non-commercial resources - recognizing that the absence of a common valuation system makes specific conclusions difficult. Integrated resource management creates direct and indirect (opportunity) costs as well as benefits. These must be explored.

6.3 Information, Research and Knowledge

Foothills Forest should be recognized as a leader in applying information technology to integrated resource management. This will depend on:

- **Credible Information** - provided to stakeholders to help build their understanding and support for Foothills Forest projects.
- **Comprehensive inventories** - developing a framework for a more complete resource inventory in support of ongoing baseline data for integrated resource management planning.
- **Continuing Data Management** - defining a process for ongoing data management including continual updating of information bases and a flexible and adaptive data management structure.
- **Accessible Information** - making all Foothills Forest information available to stakeholders and the general public. This will increase awareness of the Foothills Forest, increase our credibility, and help promote better forest management. Proprietary information provided to the Foothills Forest by Weldwood of Canada Limited for various research purposes will remain the sole property of the company for distribution at their own discretion.
- **Data Driven Recommendations** - recommending integrated forest management strategies based on sound, scientific information and demonstration and adapting to changes in information and knowledge.
- **Technology** - continuing to apply and refine existing and new technology to ensure that our approach to integrated forest management remains focused on the leading edge.

- **Usefulness** - demonstrating the usefulness and applicability of our approach by developing user friendly technology that is available to a variety of resource managers and other stakeholders.

6.4 Partnerships

The Foothills Forest will have encouraged and strengthened "meaningful" partnerships that are mutually beneficial. Partnerships will be self-sustaining, outlasting or continuing to support the Foothills Forest. Partnerships will:

- **Involve specific user groups.** These will include the local community, large-scale commercial users, environmental groups, and educational groups.
- **Improve communications between partners.** Foothills Forest will be continually developing and enhancing effective two-way communications tools that not only keep partners informed but allow for feedback as well.
- **Cooperative Environment.** We will provide a cooperative environment which will help to foster teamwork and networking opportunities.
- **Joint Stewardship.** We will encourage the participation of all stakeholders, including the public at large, to promote involvement in forest management and good stewardship of the resource.

6.5 Communications

We will encourage the involvement of special interest groups as well as individuals through openness and a willingness to interact with them. We will give and receive information in a variety of ways. Based on our core values of sharing information with the public as well as with professional groups through open, honest communications.

By 1997, Foothills Forest will be well-known, accepted, understood and supported locally, provincially, nationally and internationally. Our priority audiences will be:

- The local community, its leaders and educators.
- Provincial interest groups identified for their role in resource management.
- National and provincial business, governments and social leaders.

The activities associated with Foothills Forest will convey a message of resource integration and sustainability. The associated principles will be understood by those residing in the region. Our communications will be:

- **Consistent.** A common message will be shared by peers, sponsors and partners.
- **Open and honest.**

- **Effective.** Communications will be cost-effective and efficient.

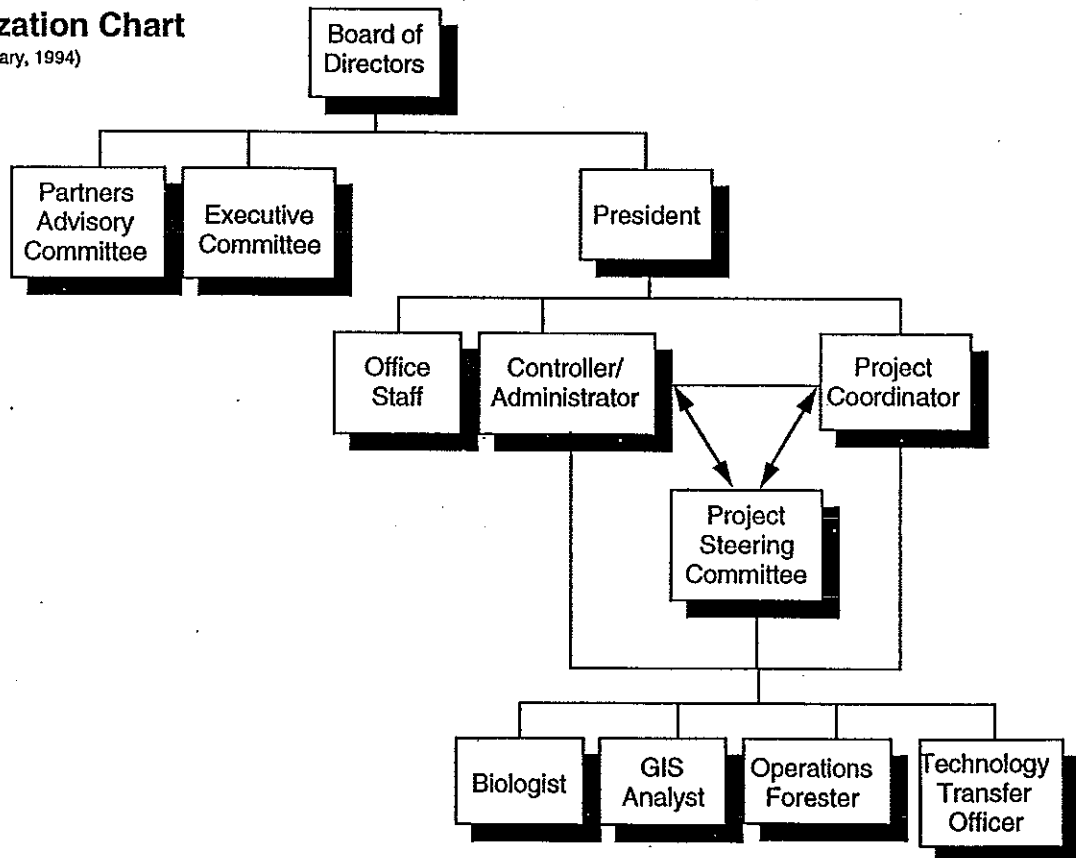
6.6 Management, accountability and funding

The Foothills Forest will be effectively managed and accountable - at all levels of detail. We will be competent in organization and project management. We will develop, implement, monitor and evaluate projects on a timely basis while at the same time providing opportunities for input from collaborative partnerships.

The Foothills Forest management structure will include personnel committed to providing project management and empowered to manage and make decisions within budgeted guidelines.

This structure will recognize the appropriate responsibilities of the Board, partners, sponsors and contract staff. Project approval will be logical and provide for accountability based on details, schedules and deliverables provided in required work plans.

**Foothills Forest
Organization Chart**
(revised January, 1994)



We will prioritize, track and evaluate individual projects and the overall program. The final evaluation will show that funds have been spent responsibly in the achievement of our mission.

Funding will be allotted to reflect a balance between our economic, environmental and community goals. Collaborative partnerships will assist in securing funding. Long term funding goals will be set with our major sponsors and partners ensuring that their long term goals are addressed.

- We will attempt to sustain the Foothills Forest program beyond the current life of the Model Forest Program by exploring innovative funding options and alternatives.
- We will provide a high rate of return to Natural Resources Canada, sponsors and partners for the funding invested in the Foothills Forest.



7.0 Key Initiatives

A number of key initiatives are identified which deserve action as part of the Foothills Forest program. Unfortunately, time and resources will not permit an appropriate or adequate treatment of all initiatives. An important result of this business planning exercise will be to identify those initiatives that will be addressed within our initial contribution agreement timeframe and their priority.

7.1 Mission and Values

The mission and values of the Foothills Forest have been developed in the course of this directional plan. This is an important accomplishment as it represents a point of common understanding among partners and sponsors.

There are a large number of partners currently and potentially involved in the Foothills Forest and maintaining an ongoing commitment to the mission and the focus of participants is a challenge.

Initiative 1 - Raise the profile of the Foothills Forest mission and values. This can be accomplished by building the mission and values into a number of communications vehicles including newsletters and reports.

Initiative 2 - Undertake a periodic review, refocusing and renewal of the commitment of partners and sponsors to the Foothills Forest mission. This can be accomplished formally and/or informally - perhaps in association with initiatives aimed at strengthening and expanding partnerships.

Initiative 3 - Ensure that program activities are consistent with the Foothills Forest mission and values and with its strategic direction and funding. As part of the review and approval of business activities, a "check" should be made of their match to the organization's strategic goals.

7.2 Integrated Resource Management and Sustainability

The Foothills Forest was awarded a place in Canada's Model Forest Network on the basis of the region's strong history in forest and integrated resource management. The Green Plan has provided an opportunity to accelerate and expand a number of in-place initiatives in forest operations, integrated resource management, decision support systems, research, technology transfer, and public involvement.

Initiative 4 - Advance capabilities in integrating forest management and wildlife management through:

- *identification of indicator species or communities whose habitat requirements are representative of distinct groups of species.*
- *understanding the relationships between forest wildlife species and their habitat.*
- *understanding and predicting the response of forest wildlife species to habitat change through natural and man-caused mechanisms.*

- developing specific wildlife/habitat management objectives and strategies
- defining opportunities for using forest management to conserve biodiversity.

Initiative 5 - Identify environmentally significant areas for potential designation as protected spaces.

Initiative 6 - Evaluating the environmental impacts and user conflicts associated with various types of access.

Initiative 7 - Review and evaluate the impacts of forest management practices on site productivity.

- Ecological and successional impacts of forest management practices. The primary keys to successful and sustainable forest management include sound long-range planning, adaptive harvest systems and silvicultural practices that ensure establishment and performance of regeneration. The ongoing evaluation of forest management practices impact on ecology will help us in the design of improved forest management practices.

Initiative 8 - Assess the role of the boreal forest in global warming.

Initiative 9 - Define natural variability in Foothills Forest ecosystems.

Initiative 10 - Characterize aquatic ecosystems in the Foothills Forest.

- Integrating forest management with watershed and aquatic ecosystem management. The Foothills Forest anticipates building on existing knowledge of watershed management and aquatic ecosystems in the region to gain a better understanding of the interrelationships and potential conflicts that exist.

Initiative 11 - Evaluate the socio-economics of integrated resource management.

- Socio-economics of resource use and integration. The long-term sustainability of the many forest resources is vital to economic stability in the region and provincially. A better understanding of the costs and benefits of the forest sector to both local and provincial economies along with the impacts of comprehensive, integrated resource management strategies is required.

Initiative 12 - Assess the relationships between land and resource legislation and the task of integrated resource management.

- Forest management legislation plays a central role in the activities of the forest sector in Alberta. Changing technology, public expectation and fiscal realities are affecting government's role. Understanding the economic and policy impacts of forestry legislation would be an important contribution to integrated resource management. *This is currently being carried out as part of the province's ongoing development of a Forest Conservation Strategy. Input to this strategy will be provided by the Foothills Forest on an on-going basis.*

7.3 Information, Research and Knowledge

Forest management is potentially a major beneficiary of the revolution in information technology. The Foothills Forest is well positioned to take advantage of this revolution given the history of the sponsors and partners in using geographic information systems and the extensive data that exists for the area. A number of initiatives have been identified as critical towards advancing the current state of information development and use.

Initiative 13 - Develop an information strategy. This is a necessary commitment aimed at defining the scope of data/information needed to meet the goals of integrated resource management, identification of data gaps and priorities. Strategies for filling data gaps and a plan for ongoing information management (including data updates, ownership, etc.).

Initiative 14 - Address known gaps in resource management data.

Initiative 15 - Develop decision support systems that store and access data that can provide us with predictive outcomes of various natural and man-made disturbances based on sound ecological principles.

Initiative 16 - Undertake activities to increase Foothills Forest exposure to new concepts and technologies in forest resource management. This may include workshops and conferences in Hinton as well as networking with organizations in North America involved in integrated resource management.

7.4 Partnerships

The success of the Foothills Forest proposal is based on a long standing history of forest resource management and good relations between the sponsoring partners. The potential for the program to look outside of the traditional realm of forest resource management and reassess forest management practices helped attract 73 partners to the original proposal. Much has been done to build and strengthen existing partnerships and is continuing.

Initiative 17 - Enhance and encourage mission and project-focused partnerships with specific interested parties.

Initiative 18 - Build on support and involvement from primary resource user groups. Support for integrated forest resource management has traditionally come from government and the forest sector but in recent years, similar interest and activity has come from other large-scale resource users such as the oil and gas sector, coal industry and transmission companies. Integration of planning and activities is the key focus of this initiative.

Initiative 19 - Undertake active communications with partners - keeping them informed on the direction and achievements of the Foothills Forest.

Initiative 20 - Develop a "partnership communications strategy" as a component of the Foothills Forest communications strategy. This is a recognition of the unique audience that partners provide.

Initiative 21 - Facilitate communications among partners to ensure that they will be represented on the Board of Directors and the Partners' Advisory Committee.

7.5 Communications

Achieving a willed future requires a serious commitment to communications on the part of the Foothills Forest staff and Board of Directors. A thorough review of the audiences, message funding, delivery mechanisms and evaluation of communications initiatives must be undertaken in the very near future.

Initiative 22 - Review and revise the communications plan and associated budget. The plan and funding requires reassessment to ensure that our priorities are being met and communicating with local, provincial, national, and international audiences. The communications plan will:

- **Start locally and branch out.** Local support is essential to continued success of the Foothills Forest.
- **Identify audiences.** In order to be both efficient and effective, specific target audiences must be identified for communications purposes.
- **Create a message or theme.** Designed to focus on the positive contributions of the Foothills Forest.

Initiative 23 - Establish baseline information. Collect data regarding the public's awareness of and attitudes towards forestry issues. This may include investigating opportunities to build on the activities of other agencies such as the AFPA, the Model Forest Network and the Alberta Government. This will provide the basis for evaluating the success of communications in the future.

7.6 Management, Accountability and Funding

Substantial work remains in the startup of the Foothills Model Forest. At this point - some 11 months into the project - outstanding items remain to be addressed with respect to the completion of organizational structure and processes, refinements to management systems and development of monitoring and evaluation capabilities.

Initiative 24 - Assign central responsibility for Foothills Forest operations. This will simplify the roles of the working group coordinators and enhance operational direction and decision making.

Initiative 25 - Refine financial and budgeting systems.

Initiative 26 - Appoint a new treasurer from among Weldwood senior accounting staff.

Initiative 27 - Review roles and responsibilities at all levels. The goal should be to clarify the Board's responsibility - approving annual plans and associated budgets - and assign administrative and operating responsibility to personnel charged with the responsibility in the Foothills Forest.

Initiative 28 - Streamline internal administration. The Foothills Forest administrative policies,

adopted during the early stages of operation are becoming cumbersome. Streamlining of these policies will ensure continued input from partners and sponsors and, at the same time, provide operational efficiency.

Initiative 29 - Revise budget allocations to address priority areas in an appropriate manner. Inevitably, everyone's expectations will not be met but apportioning limited funds to all the priority areas identified in the original proposal would also be unlikely to achieve satisfactory results in all areas. Similarly, it may be impossible to adequately address all of the initiatives identified in this revised plan so there is a need to focus if we are to achieve excellence in any of the areas at all.

Initiative 30 - Enhance project management skills. Staff responsible for project implementation will take a short course in project management.

Initiative 31 - Develop a concise project management procedure. Such a procedure will identify responsibilities, timelines and budget and incorporate checks and milestones.

Initiative 32 - Develop a monitoring and evaluation framework and procedure.

Initiative 33 - Develop a marketing plan which incorporates innovative ways of generating revenue to hopefully help to sustain the Foothills Forest beyond its current mandate. With this in mind, the concept of promoting and marketing intellectual property will be investigated and, where feasible, pursued.

Initiative 34 - Develop contingency funding strategies. Work closely with potential funding agencies - partners and sponsors - to encourage continued support of the model forest program and the Foothills Forest.



8.0 Action Plan

The following section will provide details on how the Foothills Forest plans to deal with the many initiatives referred to in section 7.0 (Key Initiatives).

The action plan(s) are based on what is practical and achievable based on the time remaining in our current agreement with the federal government and the fiscal and human resources available to complete the various tasks.

The information provided will provide the basis for the Foothills Forest evaluation framework, a companion document to the business plan that will be completed by the end of the first quarter of 1994.



Foothills Forest



Key Success Area: Information, Research and Knowledge

Project Title: GIS Systems Administration (Operational)

Working Group Coordinator: Sean Curry

Account Code: 110-110

Objective(s):

- to provide a facility for ongoing training and technology transfer in the area Geographic Information Systems and applications
- to use this facility as an opportunity to generate revenue for the Foothills Forest and to fund a hardware/software maintenance fund.

Rationale:

The Foothills Forest is placing a heavy emphasis on the development of GIS based tools to aid in the support of resource management decision making. Training opportunities for this type of technology are limited in Alberta, especially in a setting that can not only provide the required hardware and software but real world data and examples of application.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17)</i> Weldwood, Foothills Forest, Forest Technology School		S. Curry	Ongoing	
<i>Information, Research & Knowledge (Init. 13/15/16)</i> Establishment of hardware and software platform	Operational GIS lab	C. Doering	March/93	\$217,349
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report Promotional Tools Marketing Strategy	Stat. report Ann. Report Newletters Policy	S. Curry Curry/ Blackwood Curry/Golec ?	Jan./July 1 June 30 Ongoing July/94	



Key Success Area: Information, Research and Knowledge

Project Title: GIS Systems Administration (Technology Transfer)

Working Group Coordinator: Sean Curry

Account Code: 110-115

Objective(s):

- to provide a facility for ongoing training and technology transfer in the area Geographic Information Systems and applications
- to use this facility as an opportunity to generate revenue for the Foothills Forest and to fund a hardware/software maintenance fund.

Rationale:

The Foothills Forest is placing a heavy emphasis on the development of GIS based tools to aid in the support of resource management decision making. Training opportunities for this type of technology are limited in Alberta, especially in a setting that can not only provide the required hardware and software but real world data and examples of application.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17)</i> Weldwood, Foothills Forest, Forest Technology School		S. Curry	Ongoing	
<i>Information, Research & Knowledge (Init. 13/15/16)</i> Establishment of hardware and software platform	Operational GIS lab	C. Doering	March/93	\$186,741
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report Promotional Tools Marketing Strategy	Stat. report Ann. Report Newletters Policy	S. Curry Curry/ Blackwood Curry/Golec ?	Jan./July 1 June 30 Ongoing July/94	

Key Success Area: Information, Research and Knowledge

Project Title: Blocking Model and Landscape Forecasting Model

Working Group Coordinator: Sean Curry

Account Code: 110-120

Objective(s):

- to develop the capability to provide information for the levels of resource values which result from each alternative set of management strategies.

Rationale:

By providing "snapshots" of the seral stage of each geographic unit in the forest landscape at various points in the future, assessment models can be used to evaluate the ability of the landscape (and thus the management strategies that resulted in the landscape) to provide for other resource values.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18)</i> Weldwood, Foothills Forest, University of New Brunswick		S. Curry	Ongoing	
<i>Information, Research & Knowledge (Init. 15/16)</i> Initial definitions of functional requirements of model Test data acquisition/development Blocking model development Simulation model development	outline functional model functional model	Curry/ Lougheed Lougheed UNB UNB	July/93 Sept./93 January/95 January/95	\$67,250
<i>Integrated Resource Management (Init. 4/5/9)</i> Operational use of models in preparation of Detailed Forest Management Plan	DFMP	Lougheed	Feb./95	
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report Site visits	Stat. report Ann. Report	S. Curry Curry/ Blackwood Curry	Jan./July 1 June 30 Ongoing	

Key Success Area: Information, Research and Knowledge

Project Title: Ecologically Classify Foothills Forest (NAIA)

Working Group Coordinator: Sean Curry

Account Code: 110-125

Objective(s):

- to provide a uniform spatial database that is correct for both spatial and attribute data for forest cover and soils to allow for the implementation of NAIA

Rationale:

An ecological inventory removes inherent resource inventory biases, provides the opportunity to track fewer elements in the modelling system, allows different development patterns to be identified, identifies the dynamic and complex nature of the forest resource and creates a common foundation upon which compatible and conflicting resource use decisions can be based.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, Resource Information Division, Alberta Research Council, Canadian Forest Service		S. Curry	Ongoing	
Information, Research & Knowledge (Init. 13/14/15/16) Unload copies of all forest cover/base data information Create spatially correct, geo-referenced ArcInfo dataset and match forest cover attributes to spatial forest cover polygons Scan and clean forest soils information referenced to 1:20,000 digital base Fill required soils gaps Compile and join existing and newly created soils data Begin initial runs of NAIA based on above work	Clean data set Digital soils information Digital soils information Working data set Predictive maps	S. Curry Consultant Consultant RID Consultant Consultant/ temp. staff	January/94 March/94 Feb/94 March/94 March/94 Ongoing after Apr/94	\$55,000
Integrated Resource Management (Initiative 9) Utilization of ecological base for forest resource management planning	Thematic maps	Curry/ Lougheed	Ongoing after Apr/94	
Communication (Initiative 22) Semi-annual status reports Annual report Information Paper/Presentation Forestry Chronicle Tech. Paper Foothills Tech. Report	Stat. report Ann. Report Paper Paper Report	S. Curry Curry/ Blackwood Curry Curry Curry/Golec	Jan./July 1 June 30 July/94 Jan/95 Jan/95	 in-kind in-kind in-kind

Key Success Area: Information, Research and Knowledge
Project Title: Extend and Upgrade the Digital Inventory of the Foothills Forest
Working Group Coordinator: Sean Curry
Account Code: 110-130
Objective(s):

- to provide a complete spatial inventory for the Foothills Forest area.

Rationale:

The Foothills Forest DSS requires a complete digital inventory in order to work and will provide the basic information required for a number of other spatially oriented projects and activities.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, Land and Forest Services, Resource Information Division		S. Curry	Ongoing	
Information, Research & Knowledge (Init. 14) Scan existing Phase III forest inventory	Digital Forest Cover	S. Curry/ Contractor	January/94	\$80,100
Integrated Resource Management (Initiative 13/15) Initial work on DSS development/structure	DSS structure	Curry/ Lougheed	March/94	
Communication (Initiative 22) Semi-annual status reports Annual report Information Report Marketing Strategy	Stat. report Ann. Report Report Policy	S. Curry Curry/ Blackwood Curry/Golec Curry/Golec	Jan./July 1 June 30 June/94 July/94	

Key Success Area: Information, Research and Knowledge

Project Title: Evaluation of ArcForest Data Model

Working Group Coordinator: Sean Curry

Account Code: 110-135

Objective(s):

- to obtain and evaluate the ArcForest data model developed by ESRI (Environmental Systems Research Institute) for possible use as the Foothills Forest's data model.
- if found appropriate, to make whatever necessary changes to the program that are required to enable it to act as the centralized storage and retrieval facility for all data used by the Foothills Forest DSS.

Rationale:

The development of a data model is a very complex task if the model is to be both functional and flexible. If the ArcForest product provides an acceptable shell for use as the Foothills Forest data model, it will save considerable time and effort that would have been required to build it from the ground up.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, ESRI, Land and Forest Services, Fish and Wildlife		S. Curry	Ongoing	
Information, Research & Knowledge (Init. 16) Initiate data model development	data scope	C. Doering	February/93	\$58,000
Obtain and review ESRI's ArcForest	draft logical model	C. Doering	May/93	
Develop logical model	draft detailed model	C. Doering	June/93	
Develop detailed model	revised detailed model	C. Doering	October/93	
Review ArcForest based on detailed model		C, Doering	Nov./93	
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report	Stat. report Ann. Report	C. Doering Doering/ Blackwood	Jan./July 1 June 30	
Technical Report and Documentation	Report/ Dcmntion.	C. Doering	July/95	in-kind

Key Success Area: Information, Research and Knowledge

Project Title: Decision Support System for Wildfire Threat Analysis

Working Group Coordinator: Sean Curry (Terry Van Nest)

Account Code: 110-140

Objective(s):

- to provide resource managers with the means to evaluate the future fire implications resulting from their planned management options.

Rationale:

Existing natural vegetation in the Foothills Forest is a result of past fire occurrences. Forest management practices alter these vegetation mosaics and therefore influence the long term probability of large scale wildfires.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, Canadian Forest Service, LAFS, University of Alberta		Van Nest	Ongoing	
Information, Research & Knowledge (Init. 14/15/16) Literature review Organization and analysis of data base material Gathering of "expert opinion" Fire perimeter growth modelling	lit. review data base report GIS model	Van Nest Van Nest Van Nest Van Nest		\$75,000
Integrated Resource Management (Init. 9) Operational use of DSS module in forest management planning	Functional module and software	Van Nest	March/97	
Communication (Initiative 22) Semi-annual status reports Annual report Bi-annual seminars Newsletter articles Journal article	Stat. report Ann. Report	Van Nest Van Nest/ Blackwood Van Nest/ Golec Van Nest	Jan./July 1 June 30 Ongoing Ongoing April/96	



Key Success Area: Information, Research and Knowledge

Project Title: Cache Percotte Fire Regime Study

Working Group Coordinator: Sean Curry (Terry Van Nest)

Account Code: 110-145

Objective(s):

- to collect fire history information pertaining to the establishment of the existing age class structure within the Cache Percotte Forest.

Rationale:

Existing natural vegetation in the Foothills Forest is a result of past fire occurrences. Fire history information that can be obtained from remnant stands will provide valuable information relating to the natural variability of the forest in this area.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Foothills Forest, Canadian Forest Service, LAFS		Van Nest	Ongoing	
Information, Research & Knowledge (Init. 14) Stand id and location Age class validation Tree ring analysis Tree marking	Map data data sample trees	Van Nest Van Nest Van Nest Van Nest	March/94 March/94 March/94 March/94	
Integrated Resource Management (Init. 9) Background information for wildfire DSS	data	Van Nest	March/94	
Communication (Initiative 22) Semi-annual status reports Annual report Final report	Stat. report Ann. Report Report	Van Nest Van Nest/ Blackwood Van Nest/ contractor	Jan./July 1 June 30 March/94	

Key Success Area: Information, Research and Knowledge
Project Title: Effect of Forest Practices on Lichen Communities
Working Group Coordinator: Rick Bonar
Account Code: 110-205
Objective(s):

- to quantitatively describe the vegetation in 5 lodgepole pine stands in the Berland River area with particular attention to lichen communities.
- to determine the immediate effects of clear-cutting (winter/summer) on the vegetative composition, diversity and community structure of these stands.
- to determine the pattern of lichen cover and diversity one year after these treatments specifically with regard to the original fine-scale pattern of ground cover.
- to make recommendations as to the forestry practices most appropriate to lichen recovery and caribou habitat.
- to establish long-term plots to monitor lichen regeneration in terms of species composition and growth.

Rationale:

Large-scale forestry operations have an impact on the forest communities in which they are operating with varying degrees of impact on different components. The role of lichens in forest dynamics has traditionally been overlooked and is not fully understood. Their relationship with caribou populations is also not known in its entirety even though lichens rank high in importance in the caribou winter diet. Thus, the maintenance of sufficient lichen cover in a managed forest region is directly relevant to the preservation of endemic caribou populations.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, Fish and Wildlife, LAFS, University of Alberta		R. Bonar	Ongoing	
Information, Research & Knowledge (Init. 15) Selection of study sites Preliminary sampling Literature review Establish sample sites Winter/Summer data collection	Lit. review	Grad.Stdnt. Grad.Stdnt. Grad.Stdnt. Grad.Stdnt. Grad.Stdnt.	March/94 March/94 March/94 May/94 March/95	In-kind by Weldwood
Integrated Resource Management (Initiative 4) Planning/harvest strategy for maintenance of lichen populations	Plan	Grad. Stdnt./ R. Bonar	March/97	
Communication (Initiative 22) Semi-annual status reports Annual report Technical Report and Documentation	Stat. report Ann. Report Report/ Dcrrntion.	R. Bonar R. Bonar/ Blackwood R. Bonar	Jan./July 1 June 30 March/97	

Key Success Area: Information, Research and Knowledge
Project Title: Effects of Management on Genetic Diversity of Lodgepole Pine and White Spruce
Working Group Coordinator: Rick Bonar
Account Code: 110-210
Objective(s):

To compare the extent of genetic variation among the following gene pools:

- 1) natural populations of lodgepole pine and white spruce from different seed zones on Weldwood's and Weyerhaeuser's Forest Management Agreement areas.
- 2) random seed collections from these natural populations
- 3) seed collected from these same areas for production of seedlings for reforestation after extraction and cleaning at Pine Ridge Forest Nursery.
- 4) seedlings produced from the seed collected at Pine Ridge at the ready to ship stage.
- 5) stands in the same areas which were regenerated by planting up to 30 years ago.
- 6) stands in the same areas which were reestablished by natural regeneration after logging.
- 7) populations of trees from these same areas which have been selected for breeding programs.

Rationale:

Widespread forest management has the potential to cause reductions in genetic diversity of forest trees, thereby impairing their potential to adapt to future environmental conditions. The collection of this data will provide insight into the effects of present-day forest management on genetic diversity in future stands and, perhaps, lead to recommendations for modified procedures to ensure the maintenance of genetic variation.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, University of Alberta (For. Sc., Genetics)		Rick Bonar	July/93	
Information, Research & Knowledge (Init. 14) Definition and validation of seed zones Seed/seedling sampling of pine from nursery stock Seed/seedling sampling from uncut/cut field stands and Weyerhaeuser's seed orchard Analysis of pine field samples Preliminary Report on pine Ongoing pine analysis White spruce component begins Ongoing spruce analysis	Site map Gen. analysis Data Report	U of A	July/94 Dec./94 August/ 94 June/95 Sept./95 August/96 May/96 April/99	\$40,000
Integrated Resource Management (Init. 7/9) Recommendations to Weldwood/Weyerhaeuser for inclusion into long-term forest management planning	Report	U of A	Sept./95	



<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report	internal rpt Ann. Rpt.	R. Bonar Bonar/ Blackwood	Jan./July 1 June 30	
Industry updates Preliminary report on pine	Presentation Report	U of A U of A	March/95 Sept./95	\$500

Key Success Area: Information, Research and Knowledge

Project Title: Habitat Supply Model

Working Group Coordinator: Rick Bonar

Account Code: 110-215

Objective(s):

- to test the habitat supply component of the Foothills Forest DSS with a real world data set and management alternative proposal.
- to demonstrate GIS based habitat supply analysis forecasting process.
- to de-bug operational problems with a small-risk application before applying process on a large-scale basis.
- to provide justification for Weldwood and provincial implementation.
- to provide a technology transfer product to others interested in the process.

Rationale:

This project will use an existing data set to evaluate and refine some of the modeling work already completed. This will help to make future modeling efforts more effective and help in proving the concept of habitat supply models.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, Fish and Wildlife, Canadian Forest Service, University of Alberta		R. Bonar	Ongoing	
Information, Research & Knowledge (Init. 15) Prepare test area data set Design artificial compartments Complete preliminary spatial HSI models Link HSG/HSI models	Complete test area	R. Bonar R. Bonar R. Bonar		\$20,700
Integrated Resource Management (Initiative 4) Make computer based forecasts for two different management scenarios	Output	R. Bonar	August/94	
Communication (Initiative 22) Semi-annual status reports Annual report Technical Report and Documentation	Stat. report Ann. Report Report/ Dcmntion.	R. Bonar R. Bonar/ Blackwood R. Bonar	Jan./July 1 June 30 July/95	\$1,000

Key Success Area: Information, Research and Knowledge

Project Title: Terrestrial Wildlife Habitat Research and Management Strategy

Working Group Coordinator: Rick Bonar/Kirby Smith

Account Code: 110-220

Objective(s):

- to develop, test, modify, and validate single species Habitat Suitability Index (HSI) models.
- to develop a multidisciplinary inventory or "ecosystem characterization" providing for the inventory/variable needs of all projects contributing to the DSS, including those variables required for HSI models and habitat supply analysis (HSA).
- to develop and test community habitat models for use in HSA.
- to produce the HSA for incorporation into the DSS.
- to examine the future linkage of habitat models to population models.

Rationale:

Lacking is essential baseline information on the critical life requisites of a number of wildlife species and communities, as well as information on the impacts that forest management practices have on wildlife and their responses to such disturbance. This activity will address some of these gaps and organize the information for use in the development of a HSA for terrestrial wildlife which will then be incorporated into the Foothills Forest Decision Support System at the assessment model level.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18/19)</i> Weldwood, Foothills Forest, Fish and Wildlife, NOVA, Rocky Mountain Elk Foundation, Weyerhaeuser, LAFS, Hinton Fish and Game Association, NSERC, CAPAIF, University of Alberta		M. Todd	Ongoing	
<i>Information, Research & Knowledge (Init. 13/14/15/16)</i> Model Testing, calibration and validation additional species models species priority ranking model testing.	Lit. Review Species ranking validated model(s)	Contractor Todd/Bonar/ Smith Contractor/ Grad student/Todd	March/94 March/94 Ongoing to March/97	\$300,000
<i>Integrated Resource Management (Initiative 4/6/7/9/11)</i> Linkage to DSS	Assessment model(s) (HSA)	M. Todd	Ongoing to March/97	



<p>Communication (Initiative 22) Semi-annual status reports Annual report</p> <p>Technical Report(s) and Documentation</p> <p>Grad Thesis (MSc and PhD)</p> <p>Presentations</p>	<p>Stat. report Ann. Report</p> <p>Report/ Dcmntion. Thesis(s)</p> <p>Presentation</p>	<p>M. Todd M. Todd/ Blackwood</p> <p>M. Todd</p> <p>Grad Student(s)</p> <p>M. Todd/Grad Student(s)</p>	<p>Jan./July 1 June 30</p> <p>Ongoing to March/97 March/97</p> <p>Ongoing to March/97</p>	
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Key Success Area: Information, Research and Knowledge

Project Title: Bull Trout Spawning and Rearing Evaluation

Working Group Coordinator: Sean Curry

Account Code: 110-225

Objective(s):

- to ground truth potential spawning areas identified as having high to medium potential for bull trout.
- to assess the use of aerial reconnaissance surveys during ice conditions to identify potential bull trout spawning areas.
- to conduct redd surveys along other selected streams in the general area.
- to determine the bull trout rearing use and population status in each system.

Rationale:

Bull trout populations have experienced drastic declines in the last 50 years. More effective baseline data is required to develop more effective management strategies.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, Fish and Wildlife, Trout Unlimited		S. Curry	Ongoing	
Information, Research & Knowledge (Init. 14) Selection of study sites Sample sites Report preparation	Final Report	Contractor Contractor Contractor	June/94 October/94 March/94	\$22,300
Integrated Resource Management (Initiative 4/10) Utilize information in future aquatic research			Ongoing	
Communication (Initiative 22) Semi-annual status reports Annual report Technical Report	Stat. report Ann. Report Report	S. Curry S. Curry/ Blackwood Contractor	Jan./July 1 June 30 March/94	



Key Success Area: Information, Research and Knowledge

Project Title: Watershed Contingency

Working Group Coordinator: Sean Curry

Account Code: 110-230

Objective(s):

- project objectives and direction still being rationalized by Foothills Board of Directors

Rationale:

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18)</i> Weldwood, Foothills Forest, Fish and Wildlife, Trout Unlimited, University of Alberta, NRBS, Fisheries and Oceans			Ongoing	
<i>Information, Research & Knowledge (Init. 14)</i>				\$129,000
<i>Integrated Resource Management (Initiative 10)</i>				
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report	Stat. report Ann. Report	Blackwood	Jan./July 1 June 30	

Key Success Area: Information, Research and Knowledge
Project Title: Pileated Woodpecker Study
Working Group Coordinator: Rick Bonar
Account Code: 110-235
Objective(s):

- to describe the characteristics of nest trees and their selection compared to availability to calibrate a preliminary habitat model and develop a nest tree management strategy.
- to determine the home range of breeding pairs during critical nesting and winter periods.
- to compare home range, habitat use, nesting success, and survival of birds in fragmented forest habitat versus those living in contiguous forest habitat.
- to measure habitat use, particularly foraging habitat by season, habitat type and structural features to calibrate the habitat model.
- measure the short-term response of birds to logging in terms of survival, response, and changes in home range or habitat use.

Rationale:

In the Weldwood FMA, habitat supply forecasts assume that habitat supporting the pileated woodpeckers will also support a number of other forest wildlife species and communities. Because at least 45 other species are associated with pileated woodpecker habitat, validation of the preliminary habitat model is a high priority.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Weldwood, Alberta Fish and Wildlife, University of Alberta and Alberta Bird Rescue Association. Numerous in-kind partners.		Rick Bonar	Ongoing	
Information, Research & Knowledge (Init. 14/15)	Habitat Model	Rick Bonar	March/97	\$45,133
Integrated Resource Management (Initiative 4)	Landscape scale habitat management strategy	Rick Bonar	March/97	
Communication (Initiative 22) Semi-annual status reports Annual report Presentations Treasure Hunt Poster Poster summary/presentation Newsletter articles Ph D Thesis Slide Documentation	Stat. Report Ann. Report	Rick Bonar Bonar/ Blackwood Rick Bonar Bonar/Golec Rick Bonar Bonar/Golec Rick Bonar Rick Bonar	Jan./July1 June 30 Ongoing March/94 April/94 Ongoing March/97 Ongoing	

Key Success Area: Information, Research and Knowledge

Project Title: Validation of Basal Diameter Ratio (BDR) Competition Index for Pine/Aspen

Working Group Coordinator: Bill Rugg

Account Code: 110-316

Objective(s):

- to evaluate the ease of applying the BDR competition index in determining what sections of a cutblock should be targeted for stand cleaning.
- to determine what level of aspen control (as quantified by the BDR index) is the best for conifer growth.
- to determine how consistent is the growth improvement in pine with a given level of aspen removal.
- to determine if this approach can be used in managing cutblocks for increased biodiversity by selectively targeting the release effort.

Rationale:

Stand cleaning is an expensive, labor intensive practice. Stands selected for cleaning should provide an acceptable economic return on investment to justify the expenditure of time and effort in treating.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team), Foothills Forest (silv.), Canadian Forest Service (silv.)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14/15) Application of BDR	Estblshmt. Report Progress Report Final Report	CFS CFS CFS	March/94 March/96 March/97	\$25,000
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Application of BDR	Stat. Report Ann. Report Report Estblshmt. Report Progress Report Final Report	Bill Rugg Rugg/ Blackwood Pat Golec CFS CFS CFS	Jan./July1 June 30 March/97 March/94 March/96 March/97	 \$500 in-kind in-kind in-kind

Key Success Area: Information, Research and Knowledge
Project Title: Silvicultural Impacts of Chipper Residue Disposal
Working Group Coordinator: Bill Rugg
Account Code: 110-317
Objective(s):

- to assess the effects of chipper residue on short-term tree establishment and growth as well as long-term site productivity.
- to enhance the silviculture DSS module.

Rationale:

Remote chipping is a forestry practice that is increasing in usage today because of its ability to allow the utilization of smaller diameter wood. Remaining debris from chipping is put back on the site. Very little is known about how this debris may affect nitrogen fixation and tree growth, soil temperature (the debris may act as an insulating layer on already cold boreal soils), water holding capacity, etc. If this practice is to continue and grow in the future, its affects on tree growth and site-productivity must be understood and documented.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team/forest management/g & y), Foothills Forest (silv.), Canadian Forest Service (silv.)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14/15) Effects of chipper residue Enhance DSS Silviculture Module	Int. Report DSS Module	Act. Team DSS Contractor	March/96 March/97	\$48,500
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Effects of chipper residue Enhance DSS Silviculture Module	Stat. Report Ann. Report FF Report CFS paper	Bill Rugg Rugg/ Blackwood Pat Golec CFS	Jan./July 1 June 30 March/96 March/97	 \$500 in-kind

Key Success Area: Information, Research and Knowledge
Project Title: Aspen Regrowth and Competition after Release of Conifers
Working Group Coordinator: Bill Rugg
Account Code: 110-318
Objective(s):

- to determine the best timing and cutting techniques to reduce aspen growth and competition after release and to improve the understanding of the vegetative processes of cut juvenile aspen.
- to quantify responses after release in terms of; aspen density and growth, height and radial growth of released pine, ingress of other competition, overall competition levels affecting conifer growth.
- to compare the biological efficacy of manual-mechanical and chemical (ground application of glyphosate) release methods.
- to formulate tending prescriptions for lodgepole pine regeneration.

Rationale:

Aspen regrowth after release often necessitates repeated treatments and may negate tending investments. Very little is known about how the time of release cut and type and height of cut affects the density and growth of aspen and how these processes are in turn related and controlled by aspen size and age. Preliminary trials by Forestry Canada suggest that proper techniques could greatly improve the efficacy and cost-benefits of release treatments.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team), Foothills Forest (silv.), Canadian Forest Service (silv.)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14/15) Best timing and cutting technique Quantify responses after release Compare biological efficacy Enhance silviculture DSS Module	Interim Rpt. Comp. Rpt. Silv. DSS Module for tending	Activity Team CFS DSS Contractor	March/96 March/97 March/97	\$63,000
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual Report Best timing and cutting technique Quantify responses after release Compare biological efficacy Silviculture DSS Module	Stat. report Ann. report Report on efficacy Comp. Rpt.	B. Rugg Rugg/ Blackwood Pat Golec CFS	Jan./July1 June 30 March/96 March/97	\$500

Key Success Area: Information, Research and Knowledge

Project Title: Tree Growth and Stand Yield Impacts of Basal Girdling by Small Mammals

Working Group Coordinator: Bill Rugg

Account Code: 110-320

Objective(s):

Quantify potential fibre loss (Phase I)

- at the tree level (point in time analysis of total circumference and impact on height, diameter, and vigor across a broad range of sites)
- at the stand level (determine actual and predicted volume impacts of the damage)

Carry out a timber risk analysis (Phase II (optional))

- determine stand characteristics that are prone to attack based on AVI data
- determine landscape level characteristics that are prone to attack

Carry out habitat supply analysis for small mammals (Phase III (optional))

- incorporate identified species responsible for damage into one of the developing HSI models

Rationale:

To evaluate potential growth and yield losses in pole-sized lodgepole pine regeneration due to damage caused by the basal girdling of stems by small mammals.

Action(s)	Product/Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team), Foothills Forest (silv.), Canadian Forest Service (silv.), University of Alberta (For. Sc.)		Bill Rugg	February/94	
Information, Research & Knowledge (Init. 14) Fibre loss Timber at risk (phase II, optional)	Growth & Yield Report GIS application and report	Activity Team Grad Std or AEC	January/95 Sept./96	\$30,000 \$10,000 (optional)
Integrated Resource Management (Init. 4) Development of HSI for small mammals	GIS based HSI module	M. Todd	Sept./96	See terrestrial wildlife
Communication (Initiative 22) Semi-annual status reports Annual report Fibre loss (phase I) Timber at risk (phase II) HSI module (phase III)	internal rpt Ann. Rpt. Report CFS Mgmt Note CFS Publication GIS report or thesis GIS module	B. Rugg Rugg/ Blackwood P. Golec CFS CFS AEC or U of A FF (wildlife)	Jan./July 1 June 30 July/95 Dec./95 March/96 March/97 March/97	 \$500 in-kind in-kind in-kind in-kind

Key Success Area: Information, Research and Knowledge
Project Title: Adapting Shelterwood Practices to Enhance and Protect Natural White Spruce Regeneration
Working Group Coordinator: Bill Rugg
Account Code: 110-325
Objective(s):

- to evaluate even-age shelterwood systems with two levels of canopy removal and site preparation for enhancement of white spruce establishment in mixed predominately aspen stands.
- to determine the response of shrubs, herbs and grasses to the seeding cuts of shelterwood systems and their interference with white spruce establishment.
- to determine the quality (density and growth) of aspen regeneration under the conditions of the seeding cuts of shelterwood systems and relate these to light and temperature thresholds.
- to determine light transmission levels through the canopy after the seeding cuts of shelterwood systems.
- to demonstrate the adaptation of modern mechanized harvesting systems to achieving protection of established immature white spruce within the context of shelterwood management.
- to monitor and demonstrate the incorporation of protected immature white spruce into mixedwood stocking standards, and its role in future stand structure and growth and yield. The primary monitoring tool will be large scale-post harvest photography.
- to integrate silviculture and wildlife objectives as appropriate with particular attention to elk management objectives in Athabasca 8.

Rationale:

Recent dramatic increases in demand for the deciduous component of mixedwood stands, characterized by aspen, poplar and white spruce - commonly as an understory has coincided with increased concern about alternatives to clearcutting and maintenance of the relatively diverse composition and structure of mixedwoods (biodiversity). Mixedwoods common in the Foothills Forest are ecologically suited to management systems other than clearcutting, particularly shelterwood, which can be adapted to facilitate enhancing and protecting natural white spruce regeneration.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team, operations team), Foothills Forest (silv.), Canadian Forest Service (silv.), University of Alberta (For, Sc.)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14/16) Evaluate even-aged shelterwood systems for use Determine responses of grass, herbs and shrubs Determine quality/quantity of aspen regeneration Determine light transmission levels	Report Rpt./Thesis? CFS Mgmt Note Thesis	Act. Team Act.Team/ U of A CFS U of A	March/97 March/97 March/97 March/97	\$150,000
Integrated Resource Management (Init. 4/7) Demonstrate adaptation of harvest equipment Monitor and demonstrate incorporation of immature Sw into mixedwood stocking standards	Report Prelim/Final Report	Contractor Bill Rugg	Nov./93 March/96/97	\$23,000



<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report	Stat. Report Ann. Report	Bill Rugg Rugg/ Blackwood	Jan./July 1 June 30	
Tour package and demonstration site	Tour Pkg.		Sept.94	\$1,500

Key Success Area: Information, Research and Knowledge
Project Title: Pre-Harvest Treatments of Aspen for Reducing Brushing Expenditures
Working Group Coordinator: Bill Rugg
Account Code: 110-330
Objective(s):

- to test the efficacy of single-tree, pre-harvest treatments for reducing aspen suckering and eliminating aspen competition in regenerated softwood stands.
- to compare single-tree herbicide (glyphosate) and manual-mechanical girdling pre-harvest treatments.
- to provide cost-benefit comparisons between pre-harvest treatments and other vegetation management treatment techniques.
- to predict the changes in regenerated forest cover due to pre-harvest management practices (DSS Module)

Rationale:

Aspen competition in regenerated conifer stands that originally had a hardwood component can be severe and requires expensive brushing or tending treatments to ensure the ongoing production of softwoods. Pre-harvest treatments offer potentially inexpensive and environmentally sound methods for controlling aspen competition.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team/forest management), Foothills Forest, Canadian Forest Service (silviculture/economics)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14/15) Single tree efficacy Single tree/manual comparison Cost-benefit comparison Silviculture DSS module	Comparative Report Economic rpt DSS Module	Activity Team CFS DSS Contractor	March/97 March/97 March/97	\$76,000
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Single tree efficacy Single tree/manual comparison Cost-benefit comparison Silviculture DSS module	Stat. Report Ann. Report FF Report for both CFS report	Bill Rugg Rugg/ Blackwood Pat Golec CFS	Jan./July1 June 30 March/96 March/97	 \$500 in-kind

Key Success Area: Information, Research and Knowledge

Project Title: Development of an Ecotourism Product for the Foothills Forest

Working Group Coordinator: Dennis Quintillo

Account Code: 110-405

Objective(s):

- to develop an international-calibre tourism generator using criteria established by Alberta EDAT, WED and the activity team
- Promotion and interpretation of demonstration areas.
- Establishment of an ecotourism product in the Cache Percotte Forest in conjunction with Hinton Good Companions.
- Development of indices to evaluate economic benefits derived from ecotourism.
- Identification of opportunities for cooperative ventures
- Expansion of existing multi-use trails and integration into long-distance network with signage.
- Preparation of appropriate field guides.
- Promotion of Foothills Forest activities.

Rationale:

Tourism is a vital and ever growing component of the local and provincial economy. The opportunity exists for a variety of tourist activities based on wildlife viewing opportunities and habitat interpretation.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Weldwood, Foothills Forest, University of Calgary, Hinton Good Companions, Evergreen Tourism Council, Parks Canada, local Chambers of Commerce		Grad Student	Ongoing	
Information, Research & Knowledge (Init. 13/14) Literature review Resource inventory Recreational inventory Area suitability analysis Field guide development Economic analysis Marketing strategy		Grad Stndt. Grad Stndt. Grad Stndt. Grad Stndt. Grad Stndt. Grad Stndt. Grad Stndt.	June/93 August/93 October/93 Feb./94 May/94 May/94 May/94	\$26,120
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Report	Stat. report Ann. Report Report/ Thesis	Grad Stndt. Grad Stndt./ Blackwood Grad Stndt.	Jan./July 1 June 30 June/94	 inclusive

Key Success Area: Information, Research and Knowledge

Project Title: Stratification of Foothills Forest Permanent Sample Plots on an Ecological Basis

Working Group Coordinator: Sean Curry

Account Code: 110-705

Objective(s):

- to establish a compendium of existing data sources showing the significance of ecological variables and an ecological framework for collection and analysis of mensurational data. This information will be added to the current PSP remeasurement program.
- to develop a sampling plan for PSP's to verify initial classification
- to establish digital coverage of PSP locations
- to establish digital coverage of ecological classification data.

Rationale:

Ecological stratification of existing growth and yield databases is required to improve our understanding of growth and yield and response to silviculture treatments.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, LAFS, CFS, The Forestry Corp., BC Ministry of Forests		Sean Curry	Ongoing	
Information, Research & Knowledge (Init. 14) Compile existing data and prepare report Digitize IRP ELC map data Digitize PSP locations Stratify PSP's using ELC Design field sampling program	Report Digital file Digital file Data base Sampling protocol	S. Curry S. Curry S. Curry S. Curry S. Curry	October/93 October/93 October/93 October/93 March/94	\$5,000
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Final report/sampling protocol	Stat. report Ann. Report Report/digital files/sample protocol	S. Curry Curry/ Blackwood S. Curry	Jan./July 1 June 30 March/94	

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Snag Dynamics for the Subalpine/Boreal Forests of the East Slopes of Alberta
Working Group Coordinator: Sean Curry
Account Code: 220-180
Objective(s):

- to quantify the height, diameter and density relationships in the snag population over time.
- to identify how various mortality factors impact the height, diameter and density relationships
- to define the snag characteristics that are important for terrestrial vertebrate life functions and to determine the dynamics of these attributes over time.

Rationale:

Forest management activities can have a significant impact on the abundance of snags. Regenerated coniferous stands typically have few, if any, snags. Snags are sometimes created when deciduous trees are left standing during timber harvest and the tops break sometime after the harvest operation. It is unknown if the number of snags in a managed forest will differ from the number found in a fire-origin stand. However, the absence of suitable snags may be the limiting factor for some wildlife species and populations.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, University of Alberta		Sean Curry	Ongoing	
Information, Research & Knowledge (Init. 14) MSc program enrollment at U of A (on-hold) Preliminary data sampling (on-hold) Data collection (on-hold) Model development (on-hold)		S. Curry S. Curry S. Curry S. Curry	April/93 Sept./93 Dec./94 Dec./95	\$1,200
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report	Stat. report Ann. Report	S. Curry Curry/ Blackwood	Jan./July 1 June 30	



Key Success Area: Integrated Resource Management and Sustainability

Project Title: Habitat Yield Curves

Working Group Coordinator: Sean Curry

Account Code: 220-250

Objective(s):

- to revise/confirm the list of habitat variable information needed to run all HSI habitat models.
- to analyze existing data sets to extract habitat variable yield curve information
- to develop sampling protocols and a work plan to obtain data needed to augment existing information and provide data to develop new yield curves where needed.
- to collect required data and prepare yield curves.
- to incorporate revised yield curves into the wildlife habitat supply analysis module of the DSS.
- to prepare and distribute a yield curve report to complement the preliminary habitat model report.

Rationale:

Yield curves describing variable changes over time have been used in wood supply models for many years. The concept also applies to habitat variables, which can be expected to change in a predictable manner over time. Yield curves must be based on field data to predict habitat suitability with confidence.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Weldwood, Foothills Forest and other in-kind partners		Melissa Todd	Ongoing	
Information, Research & Knowledge (Init. 14/15) Develop databases for HSI model habitat variables Develop data/sampling protocols and databases created for variables unmeasured	Database Database/ Sampling Protocol	Grad Student/ M. Todd	Sept./97 Sept./97	
Integrated Resource Management (Initiative 4/6/9) Develop habitat yield curves for use in wildlife habitat supply analysis	Habitat yield curves	Grad Student/M. Todd	Sept./97	\$20,000
Communication (Initiative 22) Semi-annual status reports Presentations Annual report Project report	Stat. report Paper Ann. Report Final Report	M. Todd M. Todd Todd/ Blackwood Todd Grad Student	Jan./July 1 Ongoing June 30 Sept./97 Sept./97	

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Integrating Elk and Timber Management in a Boreal Mixedwood Ecosystem
Working Group Coordinator: Rick Bonar/Kirby Smith
Account Code: 220-255
Objective(s):

- to identify important components of elk winter range by comparing elk-selected vs random habitats.
- to test model variables relative to elk-selected habitats.
- to determine if current model variables are the most significant factors relative to the presence or absence of elk and to modify the model if necessary.
- to calibrate model variables to reflect local geographic conditions (if necessary).
- to test the ability of the elk HSI model to predict elk spatial distribution/habitat use.
- to determine current, undisturbed elk distribution and habitat use for future assessment of response to habitat alteration through harvesting, etc.
- to determine current, undisturbed activity patterns on winter/summer ranges to allow assessment of elk response to short and long-term disturbances.

Rationale:

Elk have been identified as a priority for management purposes by Weldwood of Canada. It is felt that by managing for elk, habitat will be provided for a number of other species with similar habitat requirements.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Weldwood, Alberta Fish and Wildlife, Foothills Forest, Rocky Mountain Elk Foundation, Nova Corp., Hinton Fish and Game Association		Melissa Todd	Ongoing	
Information, Research & Knowledge (Init. 14/16) Database on elk ecology in the boreal mixedwood Pre-harvest baseline database Trapping methodology for boreal mixedwood	GIS database GIS database Tech. Report	Contractor/ Grad Student Melissa Todd	Sept./97 Sept./97	
Integrated Resource Management (Initiative 4/6/9) Develop/test HSI model in GIS format and incorporate into the wildlife habitat supply analysis of the DSS	Functional HSI model	Grad Student/M. Todd	Sept./97	\$156,858
Communication (Initiative 22) Semi-annual status reports Presentations Annual report Project report Grad Thesis	Stat. report Paper Ann. Report Final Report Ph D Thesis	M. Todd M. Todd Todd/ Blackwood Todd Grad Student		\$3,500

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Mammal Inventories in the Foothills Forest
Working Group Coordinator: Sean Curry
Account Code: 220-260
Objective(s):

- to create a database providing information which will be used to test and modify existing mammal HSI models developed for the Foothills Forest
- to create a database providing information which will be used to develop HSI models for mammal species for which draft HSI models do not already exist.

Rationale:

HSI models are required for the habitat supply analysis module of the Decision Support System.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Weldwood, Alberta Fish and Wildlife, Foothills Forest		Melissa Todd	Ongoing	
Information, Research & Knowledge (Init. 14) Baseline mammal inventory Snow track survey methodology	Final Report Final Report	Grad Student/ M. Todd	Sept./97 Sept./97	
Integrated Resource Management (Initiative 4/6/9) Develop/test HSI model in GIS format and incorporate into the wildlife habitat supply of the DSS	Working HSI model	Grad Student/M. Todd	Sept./97	\$84,600
Communication (Initiative 22) Semi-annual status reports Presentations Annual report Project report Grad Thesis	Stat. report Paper Ann. Report Final Report Thesis	M. Todd M. Todd Todd/ Blackwood Todd Grad Student	Jan./July 1 Ongoing June 30 Sept./97 Sept./97	\$1,500

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Woodland Caribou Distribution and Habitat Selection in Disturbed/Undisturbed Winter Range
Working Group Coordinator: Kirby Smith
Account Code: 220-265
Objective(s):

- to assess woodland caribou habitat selection
- to assess if and how caribou utilize fragmented or logged areas of their winter range.
- to assess overall distribution of caribou in winter ranges and monitor annual changes in distribution due to snow conditions and predator distribution.
- assess changes in alternate prey distribution and densities in logged caribou habitat
- to incorporate the results of this study into a Habitat Suitability Index for woodland caribou winter range in west-central Alberta and a habitat supply module for the Foothills Forest

Rationale:

Historical and recent reports of woodland caribou population declines following timber harvesting on their winter range have been identified but poorly documented.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Weldwood, Alberta Fish and Wildlife, Land and Forest Services, Weyerhaeuser, Nova Corp.		Kirby Smith	Ongoing	
Information, Research & Knowledge (Init. 14/15) Prepare/capture 20 woodland caribou Initial HSI workshop Radiotelemetry Aerial/ground surveys Analyze relocation data to establish habitat preference Incorporate into GIS HSI model	data data Habitat Model	Kirby Smith Kirby Smith Smith/Stdnt. Smith/Stdnt. Smith/Stdnt. Smith/ Doering	October/93 Nov./93 Ongoing/96 Ongoing/96 Ongoing/96 April/97	
Integrated Resource Management (Initiative 4) Incorporation of habitat information into long-term management planning process	Mgmt. Plan	Smith/ Lougheed	April/97	\$125,000
Communication (Initiative 22) Semi-annual status reports Annual Report Final Report	Stat. Report Ann. Report Tech. Report	Kirby Smith Smith/ Blackwood Smith/Golec	Jan./July 1 June 30 Sept./97	\$1,500

Key Success Area: Partnerships
Project Title: Variables Affecting Furbearer Trapping Success
Working Group Coordinator: Sherry Maine
Account Code: 220-270
Objective(s):

- to collect information on furbearers to integrate wildlife needs into management planning.
- to determine the effects of harvesting on furbearer populations by analyzing fur harvest returns.
- to provide information on furbearer population dynamics and general health.

Rationale:

There is a need to better understand the effects of industrial activities on commercial trapping success and to also establish a better dialogue with trappers and forest management planners.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Weldwood, Foothills Forest, Alberta Fish and Wildlife, local trappers		C. Butt	Ongoing	
Information, Research & Knowledge (Init. 14) Input fur return affidavits and value Analysis of data on prices and RFMA holders Establish correlations to recreational use and linear disturbance Establish correlations to coal and logging activity	Database	C. Butt C. Butt C. Butt C. Butt	Ongoing Ongoing Ongoing Ongoing	
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report Report	Stat. report Ann. Report Report	C. Butt C. Butt/ Blackwood Butt/Golec	Jan./July 1 June 30 July/95	

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Bird Study
Working Group Coordinator: Rick Bonar
Account Code: 220-275
Objective(s):

- to examine patterns of variation in bird assemblages among major forest categories defined by dominant tree (spruce, pine, aspen) and stand age (young, mature).
- to describe the effects of other factors, such as understory structure and snag density, on bird abundance within each tree species/age combination. This will facilitate the evaluation of proposed Habitat Suitability Index models for selected bird species in the FMA area.
- to determine the patterns of similarity in the distribution and abundance of bird species. This will help refine the habitat groupings described by Quinlan et. al. (1990) that simplify the problems of managing for over 200 bird species in the region.

Rationale:

To identify and describe the influence of factors affecting the distribution and abundance of forest birds in west-central Alberta and to use that information to contribute to the ongoing process aimed at integrating timber and non-timber resources within the FMA.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, Wildlife Habitat Canada		Rick Bonar	Ongoing	
Information, Research & Knowledge (Init. 14) Data gathering/field sampling		Grad Stdnt.	August/93	
Integrated Resource Management (Init. 4) Development and modification of HSI models for a variety of bird species	HSI models	Grad Stdnt.	March/95	Funding provided outside of FF.
Communication (Initiative 22) Semi-annual status reports Annual report Final report/thesis	internal rpt Ann. Rpt. PhD Thesis	R. Bonar Bonar/ Blackwood Grad Stdnt.	Jan./July 1 June 30 March/95	



Key Success Area: Integrated Resource Management and Sustainability

Project Title: Environmental Impacts of Forestry Practices on Boreal Mixedwood Ecosystems

Working Group Coordinator: Ian Corns

Account Code: 220-355

Objective(s):

- to conduct research to provide baseline information and gain a better understanding on structure and ecological processes of Boreal Mixedwood ecosystems against which short and long-term impacts of management practices can be evaluated to assist in the development of sustainable forestry.
- to refine concepts and determine information needs to support ecologically sound forestry practices which will maintain long-term sustainable productivity in boreal mixedwoods.

Rationale:

Forest management activities can have a significant impact on some aspects of forest productivity. The intent of this study is to determine the impact of selected forestry practices (organic matter removal and soil compaction) on short and long-term site productivity and the composition and structure of plant communities, including biodiversity.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18) Weldwood, Foothills Forest, Canadian Forest Service		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14)				
Integrated Resource Management (Init. 7) Area harvesting Organic matter removal research Soil compaction research Composition monitoring	Report Report Report	Contractor Ian Corns Ian Corns Ian Corns	August/93 March/93 Ongoing/95	
Communication (Initiative 22) Semi-annual status reports Annual report	Stat. report Ann. Report	Rugg/Corns Rugg/ Blackwood	Jan./July 1 June 30	

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Modelling Soil Compaction, Decomposition and Tree Growth on Alberta Forest Soils after Harvesting
Working Group Coordinator: Bill Rugg
Account Code: 220-360
Objective(s):

- to model the compaction of Alberta soils from skidder traffic during forest harvesting, the natural rate of soil decomposition, and the effects that soil compaction has on tree growth.
- to model the changes in soil physical properties resulting from summer logging on moist soil at three levels of skidding activity.
- to model the natural rate that compacted forest soils recover as a function of severity of compaction, soil type, and climate; and
- the effect of soil compaction on seedling growth, including the effect on seedlings growing adjacent to areas of contrasting amounts of compacted soil.

Rationale:

Protection of the soil resource is a wide-spread concern to the forest industry in Alberta. The effect of soil degradation and its effect on tree growth varies widely across the province and more scientific data is needed to help foresters plan their harvesting operations more effectively to reduce impacts on soil, tree growth and ecosystem processes.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood (silviculture team/forest operations), Foothills Forest (silv.), LAFS, AEC, AERT, AFPA, Weyerhaeuser, Canadian Forest Service (silv.)		Bill Rugg	Ongoing	
Information, Research & Knowledge (Init. 14) Soil Compaction model	Model	D. McNabb		
Integrated Resource Management (Init. 9) Site selection to reflect climatic, regional differences Replicate establishment Harvest and skidding Soil measurements Planting Soil Compaction model	Site map Trial sites Model	D. McNabb D. McNabb Contractor D. McNabb Contractor D. McNabb	To be det. To be det. To be det. To be det. To be det.	\$67,500
Communication (Initiative 22) Semi-annual status reports Annual report Publications Workshop	Stat. Report Ann. Report Publications Workshop	Bill Rugg Rugg/ Blackwood D. McNabb McNabb/ Golec	Jan./July 1 June 30 Ongoing Ongoing	 Cost recovery

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Ecologically Based Pre-harvest Planning
Working Group Coordinator: Sean Curry
Account Code: 220-365
Objective(s):

- to develop an ecologically based pre-harvest planning process that will provide a systematic framework that links both silviculture and harvest planning to ensure that both timber and non-timber management objectives are translated into site specific operations.

Rationale:

Sound reforestation practices require good planning that now incorporates not only biological considerations but environmental and economic ones as well. Experience has shown that it is easier and more economically feasible to resolve potential problems with good planning rather than existing problems after harvest because of inadequate planning.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest		S. Curry	Ongoing	
Information, Research & Knowledge (Init. 16) Pre-harvest prescription workshop	PHP design	D. Presslee	July/93	
Integrated Resource Management (Initiative 7/9) Site classification work	Trials based on initial PHP design Refined PHSP methodology	D. Presslee	Completed July/94	\$75,000
PHSP Preparation based on trial results		D. Presslee	March/95	
Communication (Initiative 22) Semi-annual status reports Annual report	Stat. report Ann. Report	D. Presslee Presslee/ Blackwood	Jan./July 1 June 30	
Summary Report	Report	D. Presslee	July/95	

Key Success Area: Information, Research and Knowledge

Project Title: Ecosystem Classification of Protected Areas and Stratified Permanent Sample Plots

Working Group Coordinator: Mike Wesbrook

Account Code: 220-715

Objective(s):

- to develop a matrix that relates various ecosystem classification systems to IRP and the Four Mountain Park biophysical classification.
- to verify existing classification of sites based on existing information.
- to enter this information into the GIS for storage and retrieval on an as needed basis.

Rationale:

There is a need to classify the protected areas within and adjacent to the Foothills Forest in the same manner and with the same vigor as that done within Weldwood's Forest Management Agreement area.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Weldwood, Foothills Forest, W. Switzer Park, Parks Canada		Wesbrook	Ongoing	
Information, Research & Knowledge (Init. 14) Development of matrix Gathering plot data Incorporation of IRP plot data Reclassification Classification of PSP's	Matrix Data	Contractor Contractor Contractor Contractor Contractor	June/93 Summer/93 Summer/93 Summer/93 Summer/93	
Integrated Resource Management Relation of field information into management planning process		Curry/ Lougheed	Ongoing	\$6,500
Communication (Initiative 22) Semi-annual status reports Annual report Report	Stat. report Ann. Report Report	Wesbrook Wesbrook/ Blackwood Contractor.	Jan./July 1 June 30 Sept./93	 in-kind

Key Success Area: Integrated Resource Management and Sustainability
Project Title: The Effect of Horse Grazing on Forest Regeneration
Working Group Coordinator: Sherry Maine
Account Code: 220-720
Objective(s):

- to determine the effects of horse grazing on conifer seedling survival and growth.
- to determine the size at which conifer seedlings experience acceptable levels of damage by horses
- to separate the damage by causal agents

Rationale:

There are conflicting conclusions concerning the cause/effect and extent of horse damage to tree seedlings. There is also the potential for horse grazing to have beneficial effects on conifer seedling survival and growth. The historical position of the forest industry has been to have no grazing on regenerated cutblocks. Historical use of the area by outfitters and private owners of livestock precludes the forest sector. Work must be done to better integrate the two uses.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Weldwood, Foothills Forest, University of Alberta, local grazing association		S. Maine	Ongoing	
Information, Research & Knowledge (Init. 14) Identify potential study sites Survey horse utilization Construct exclosures Survey horse utilization Evaluate seedling damage Survey horse utilization	Map Data Exclosures Data Data Data	B. Irving B. Irving B. Irving B. Irving B. Irving B. Irving		
Integrated Resource Management Development of an integrated resource management strategy to accomodate horse use	Mgmt. Plan	S. Maine	March/97	\$47,000
Communication (Initiative 22) Semi-annual status reports Annual report Technical Report Thesis	Stat. report Ann. Report Int. Report Thesis	S. Maine S. Maine/ Blackwood Maine/Golec B. Irving	Jan./July 1 June 30 July/95	\$200

Key Success Area: Integrated Resource Management and Sustainability
Project Title: Socio-economic Study for the Foothills Forest
Working Group Coordinator: Dennis Quintilio
Account Code: 220-725
Objective(s):

- objectives and direction of study still to be ratified by Foothills Board of Directors. Concept submitted by Dr. Hugh Walker for review and submission to Board.

Rationale:

The role that our forests play in the economic and social well being of Albertan's extends well beyond the communities that have wood processing facilities located in them. Our business plan identifies the need to evaluate the role that our forests play in mainaining both local and provincial economies as well as the cost of integrating various resource uses.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Foothills Forest, Weldwood, Canadian Forest Service		Blackwood	Ongoing	
Information, Research & Knowledge				
Integrated Resource Management (Init. 11) Detailed socio-economic analysis	Report	Contractor	March/97	\$45,000
Communication (Initiative 22) Semi-annual status report Annual report	Report Ann. Report	Blackwood Blackwood/ Pat Golec	Jan./ July 1 June 30	



Key Success Area: Integrated Resource Management and Sustainability

Project Title: Industrial Forest Impacts Model

Working Group Coordinator: Dennis Quintilio

Account Code: 220-730

Objective(s):

- objectives and direction of study still to be ratified by Foothills Board of Directors. Concept will be championed by Colin Edey, industrial representative of the Board and Partners Advisory Committee. Other industrial users will be consulted as to the direction and scope of this study at the planned April/94 Partners Workshop.

Rationale:

Industrial impacts on the forest land base from activities other than commercial timber harvesting (ie. oil and gas exploration, mining, road construction and development) can be fairly substantial and are difficult to predict in terms of long-term planning horizons.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18/19)</i> Foothills Forest, Weldwood, Partners Advisory Committee, industrial forest users		Blackwood	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management (Init. 6)</i> Details to follow			March/97	\$30,000
<i>Communication (Initiative 22)</i> Semi-annual status report Annual report	Report Ann. Report	Blackwood Blackwood	Jan./ July 1 June 30	



Key Success Area: Integrated Resource Management and Sustainability
Project Title: Carbon Budget Study
Working Group Coordinator: Mike Wesbrook
Account Code: 220-735
Objective(s):

- to derive the current and historical carbon budget for the Foothills Model Forest.

Rationale:

Scientific developments have suggested that the global carbon balance may be very dependent on the existence of a northern terrestrial carbon sink. Particular attention has been placed on the circumpolar boreal forests. The Foothills Forest is the first working forest for which a comprehensive carbon budget will be determined.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17) Weldwood, Foothills Forest, Parks Canada and the Canadian Forest Service		M. Wesbrook	Ongoing	
Information, Research & Knowledge (Init. 15/16) Organize required data sets Develop biomass growth functions Assemble historical carbon source information Initial model run Carbon "balance sheet"	Database Data set Database Output Output	M. Apps M. Apps M. Apps M. Apps M. Apps	Sept./97 Sept./97	
Integrated Resource Management (Initiative 8/9) Development of projection scenarios for forest responses to a range of future scenarios of management and climate	Output	M. Apps	March/97	\$51,000
Communication (Initiative 22) Semi-annual status reports Presentations Annual report Preliminary Report Journal Publication Workshop Project report Journal Article Workshop	Stat. report Paper Ann. Report Report Publication Workshop Final Report Article Workshop	Wesbrook Wesbrook/ Blackwood Apps Apps Apps Apps Apps Apps	Jan./July 1 Ongoing June 30 March/95 March/96 March/96 March/97 March/97 March/97	\$1,500



Key Success Area: Integrated Resource Management and Sustainability

Project Title: Community Forest

Working Group Coordinator: Dennis Quintillo

Account Code: 220-740

Objective(s):

- to complete a review of current community forest practices now in use.
- to prepare a summary for review by the Foothills Forest Board of Directors and the ADM of the Land and Forest Services Division of Alberta's Department of Environmental Protection.

Rationale:

Growing public demands for involvement in forest management planning are forcing agencies responsible for management and administration to reevaluate how decisions pertaining to land and resource use are made. This process must take into account the needs of local residents while still being sensitive to the larger public.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18/19/21)</i> Foothills Forest, Weldwood, Land and Forest Services		Rick Blackwood	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management (Initiative 12)</i> Comprehensive literature review Development of "white paper"	Lit. review White paper	Blackwood Blackwood	January/94 April/94	\$1,500
<i>Communication (Initiative 22)</i> Semi-annual status report Annual report	Report Ann. Report	Blackwood Blackwood	Jan./ July 1 June 30	

Key Success Area: Integrated Resource Management
Project Title: Protected Areas Study
Working Group Coordinator: Dennis Quintilio
Account Code: 220-745
Objective(s):

- to develop an inventory of undisturbed ecosystems, including currently protected areas and other lands.
- to identify ecosystems and areas that may be suitable and desirable for protection as undisturbed ecosystems and to make such recommendations to the Department of Environmental Protection.
- to incorporate undisturbed/protected ecosystem objectives into integrated resource management strategies.

Rationale:

An integrated resource management philosophy must include conservation and sustainable development as a basic philosophy. A complimentary and equally essential element of sustainable development is the establishment of a network of protected areas that conserve forest biodiversity, including genetic, species, ecosystem, spatial, and temporal aspects.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Foothills Forest, Weldwood, Alberta Parks Service, Land and Forest Services, general public		Rick Blackwood	Ongoing	
Information, Research & Knowledge (Init. 14) Carry out Environmentally Significant Areas inventory of Foothills Forest Field verification of ESA findings Detailed inventory of candidate site(s)	Report/Open House Report Report	Consultant/ Blackwood Consultant/ Blackwood Consultant/ Blackwood	March/94 January/95 Dec./95	
Integrated Resource Management (Initiative 5) Develop management strategy for site(s) and incorporate into long-term management planning process	Mgmt. Plan	Lougheed/ Blackwood	July/96	\$22,000 (93/94) Current and future funding dependant upon Green Plan program
Communication (Initiative 22) Semi-annual status report Annual report Initial Public Open House Progress Open House Progress Open House Progress Open House	Report Ann. Report Open House Open House Open House Open House	Blackwood Blackwood Blackwood Blackwood Blackwood Blackwood	Jan./ July 1 June 30 October/93 March/94 February/95 February/96	

Key Success Area: Communications

Project Title: Peer Review and Open Houses

Working Group Coordinator: Dennis Quintillo

Account Code: 330-415

Objective(s):

- to provide an opportunity for people living in the vicinity of the Foothills Forest to interact with the scientists and others involved in Foothills Forest activities in an informal setting.
- to obtain input from the public regarding the activities being carried out within the Foothills Forest.
- to provide an opportunity for other persons involved in resource management to review and critique the activities being carried out on the Foothills Forest.

Rationale:

By inviting public and professional groups to the Foothills Forest, individuals and groups will have an opportunity to learn about the progress being made by various activity teams. They will also be able to question the intent and results of research and have some input into the development of future work plans. This fresh, outside perspective will hopefully result in an overall improvement in the quality and direction of work performed.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18/19)</i> Weldwood, Foothills Forest, Partners Advisory Committee, Canadian Forest Service, Fish and Wildlife, Land and Forest Services		Pat Golec	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report Open House	Stat. report Ann. Report Open House	Pat Golec Golec/ Blackwood Pat Golec	Jan./July 1 June 30 Annually	\$33,700

Key Success Area: Communications

Project Title: Newsletters

Working Group Coordinator: Dennis Quintilio

Account Code: 330-420

Objective(s):

- to publish a quarterly newsletter which will be circulated to the Foothills Forest partners, the public and other model forests.
- to provide regular reporting and updates as to the progress of the activities and people involved in the Foothills Forest.

Rationale:

There is a definite need to provide the public with factual information on the concepts of integrated resource management and sustainability and the efforts now being undertaken by the Foothills Forest to work towards those goals. For the public to actively participate, they must be kept up-to-date on the intent of projects and their status.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 18/19/20/21) Weldwood, Foothills Forest, Partners Advisory Committee, Canadian Forest Service, Fish and Wildlife, Land and Forest Services		Pat Golec	Ongoing	
Information, Research & Knowledge				
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status reports Annual report	Stat. report Ann. Report	Pat Golec Golec/ Blackwood	Jan./July 1 June 30	
Quarterly Newsletter InForM Partners Newsletter	Newsletter Newsletter	Pat Golec Pat Golec	Quarterly Monthly or as needed	\$80,970

Key Success Area: Communications

Project Title: Major Signs and Brochures

Working Group Coordinator: Dennis Quintilio

Account Code: 330-425

Objective(s):

- to develop and install signage to ensure that all persons travelling on primary highways in the area are aware of entering the Foothills Forest.
- to provide general information related to the Foothills Forest which will stimulate interest among persons living or travelling in the area to learn more about sustainable forestry and integrated resource management.

Rationale:

Advertising the boundaries of the Foothills Forest by way of signs and brochures will stimulate interest in the project and will encourage local persons and tourists to investigate and to become involved with other activities being carried out within the forest.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/19)</i> Weldwood, Foothills Forest, Alberta Transportation		Pat Golec	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status reports Annual report	Stat. report Ann. Report	Grad Stndt. Grad Stndt./ Blackwood	Jan./July 1 June 30	
Sign development and installation Brochure development and distribution	Signage Brochures	Pat Golec Pat Golec	May/94 June/94	\$43,500

Key Success Area: Communications

Project Title: Tour Development

Working Group Coordinator: Dennis Quintilio

Account Code: 330-430

Objective(s):

- to provide information to the public as well as students regarding the geography, ecology and resource management practices in various parts of the Foothills Forest.
- to encourage the use of tours through promotion and distribution of the interpretive materials describing them.

Rationale:

The Foothills Forest must encourage people to get out into the forest to see for themselves how our forests and natural resources are managed. This process will help to increase the overall understanding of the environment and natural resource use.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/18/19)</i> Weldwood, Foothills Forest, tour companies, local tourism association, schools		Pat Golec	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status report Annual report	Report Ann. Report	Pat Golec Golec/ Blackwood	Jan./ July 1 June 30	
Tour package development and design Tour implementation	Tour pkgs. Tours	Pat Golec Summer student/ FF staff	Nov./94 May-August or as needed	\$83,680

Key Success Area: Communications

Project Title: Speaker's Bureau

Working Group Coordinator: Dennis Quintillo

Account Code: 330-440

Objective(s):

- to maintain a list of qualified persons willing to make presentations regarding Foothills Forest activities and integrated resource management practices.
- to ensure that all interested groups requesting presentations are accomodated.

Rationale:

As the various activities associated with the Foothills Forest receive more publicity, greater public interest will be generated resulting in a greater number of requests for presentations. Limitations on staff time and availability and our large number of partners make a speakers bureau a highly effective tool in meeting this anticipated demand.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19/21) Foothills Forest, Forest Technology School, Weldwood, LAFS, CIF/ARPFA, AFTA		Pat Golec	Ongoing	
Information, Research & Knowledge				
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status report Annual report Development of support materials	Report Ann. Report Infor. pkgs.	Pat Golec Golec/ Blackwood Pat Golec	Jan./ July 1 June 30 Ongoing	\$15,000

Key Success Area: Communications
Project Title: Training Programs in Environmental Ethics and Resource Management
Working Group Coordinator: Dennis Quintilio
Account Code: 330-445
Objective(s):

- to provide forestry workers with information regarding the potential negative impacts of timber harvesting and silviculture activities and the mechanisms that can be used to minimize those impacts before they occur.

Rationale:

Many of the problems that can occur as a result of timber harvesting and silviculture treatments can be alleviated by better training and an understanding of the natural ecological processes that occur in the forest. By providing an educational program for forestry workers who actually carry out many of the harvest/silviculture aspects of forest management, we hope to limit the number of problems that will occur in the future.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/18/19/21) Foothills Forest, Weldwood, International Woodworkers of America, Alberta Forest Products Association, Fox Creek Development Association, Forest Engineering Research Institute of Canada		Pat Golec	Ongoing	
Information, Research & Knowledge				
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status report Annual report	Report Ann. Report	Pat Golec Golec/ Blackwood	Jan./ July 1 June 30	
Development of support/training materials	Video/print materials	Pat Golec	March/95	\$15,000
Training package	Training pkg.	Pat Golec.	April/95	

Key Success Area: Communications

Project Title: NAIT Student Training Exercise

Working Group Coordinator: Dennis Quintilio

Account Code: 330-450

Objective(s):

- to provide practical hands-on experience in resource management skills, as they relate to activities being carried out in the Foothills Forest, to high school students.
- to demonstrate to young Hinton area residents that resource management is a complex science which requires skill and training to understand and carry out.
- to provide NAIT students with an opportunity to participate in hands-on public presentations dealing with their own natural resource management training.

Rationale:

NAIT students represent many of our future forest managers. Forestry professionals are required more and more often to make public presentations on how our forests are managed and must be able to not only deal with very generic questions but very difficult and topical issues as well in a professional and responsive manner.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/19/21)</i> Foothills Forest, Forest Technology School, Harry Colling High School		Pat Golec	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status report Annual report Development of support materials Presentations	Report Ann. Report Infor. pkgs. Presentation	Pat Golec Golec/ Blackwood Pat Golec Students/ FF staff/FTS staff	Jan./ July 1 June 30 April/94 bi-annually	\$1,500

Key Success Area: Communications

Project Title: Junior Forest Wardens

Working Group Coordinator: Dennis Quintilio

Account Code: 330-455

Objective(s):

- to provide information regarding integrated resource management and Foothills Forest activities to JFW leaders.
- to involve JFW's in appropriate Foothills Forest field work.

Rationale:

Thousands of children have been introduced to the concept of resource conservation through the Junior Forest Warden program. There is a great potential to participate in the education of these children by involving them in Foothills Forest activities.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Foothills Forest, Forest Technology School, local Junior Forest Warden club		Pat Golec	Ongoing	\$1,500
Information, Research & Knowledge				
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status report Annual report	Report Ann. Report	Pat Golec Golec/ Blackwood	Jan./ July 1 June 30	

Key Success Area: Communications

Project Title: Video Production

Working Group Coordinator: Dennis Quintilio

Account Code: 330-460

Objective(s):

- to provide information to the public, including local, provincial, national and international audiences, about Foothills Forest and the resource management practices and principles being employed here.
- to serve as one mechanism for responding to international campaigns targeting Canadian forest management practices.
- to collect video images which can be used by international tour operators in the promotion of the Foothills Forest.

Rationale:

Need to document the history, developments, features and accomplishments of the Foothills Forest.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 17/19)</i> Foothills Forest, Weldwood, Forest Technology School		Pat Golec	Ongoing	
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Semi-annual status report Annual report	Report Ann. Report	Pat Golec Golec/ Blackwood	Jan./ July 1 June 30	
Video production	Video prod.	Pat Golec	March/97	\$40,000



Key Success Area: Communications

Project Title: Development of Foothills Forest Annual Report

Working Group Coordinator: Dennis Quintilio

Account Code: 330-735

Objective(s):

- to provide information to the public as well as potential and existing partners regarding the Foothills Forest activities and performance for each fiscal year.
- to account financially to the people of Canada who, through the Green Plan and the Partners in Sustainable Development of Forests program, support the Model Forest program by way of an independantly audited financial statement.

Rationale:

The Foothills Forest must provide accurate information on an annual basis that ensures that it is not only perceived to be accountable for its performance but is accountable for its projects and fiscal management of public funds.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
<i>Partnerships (Initiative 18/19)</i> Weldwood, Foothills Forest, Working Group Coordinators, Canadian Forest Service		Rick Blackwood	Ongoing	\$40,000 (in-kind)
<i>Information, Research & Knowledge</i>				
<i>Integrated Resource Management</i>				
<i>Communication (Initiative 22)</i> Annual report	Ann. Report	Blackwood	June 30 of each year	\$20,000

Key Success Area: Mission and Values

Project Title: Evaluation Framework

Working Group Coordinator: Dennis Quintilio

Account Code: 570-745

Objective(s):

- to provide the conceptual basis for eventual evaluation of the Foothills Forest program including a methodological and analytical framework for identification and measurement of program output, effects and impacts.
- to present an overview of the Foothills Forest program, particularly the working objectives, and measurable performance indicators.
- to specify the role and nature of monitoring, audit and review of program performance preparatory to the eventual program evaluation process in 1996.
- to present an overview of the program monitoring and review processes, and will identify responsibility for program monitoring, review and evaluation,
- to select appropriate performance indicators for various model forest working objectives.

Rationale:

Required as a part of the Foothills Forest Statement of Understanding (Sub-Section 8.1) with the Canadian Forest Service.

Action(s)	Product/ Deliverable	Person Responsible	Target Date	Budget Level
Partnerships (Initiative 17/19) Foothills Forest, Canadian Forest Service Evaluation framework Actual evaluation	Process document Final evaluation	Blackwood Blackwood/ Contractor Blackwood/ Contractor	Ongoing March/94 March/97	\$55,000
Information, Research & Knowledge				
Integrated Resource Management				
Communication (Initiative 22) Semi-annual status report Annual report	Report Ann. Report	Blackwood Blackwood Pat Golec	Jan./ July 1 June 30	