

Report on Public Hearings

**Tolko Manitoba Inc.
Forest Management Plan
1997-2009**

December, 1997

MANITOBA CLEAN ENVIRONMENT COMMISSION

**Unit 5, 284 Reimer Avenue
Post Office Box 21420
Steinbach, MB R0A 2T3
cec@mb.sympatico.ca**

TABLE OF CONTENTS

EXECUTIVE SUMMARY
PREFACE

1.0	THE ENVIRONMENTAL REVIEW PROCESS	1
	The Environmental Hearing Process	1
	The Clean Environment Commission	1
	Chronology of Events	2
	Procedural Motions	3
	Presentations and Exhibits	4
2.0	TOLKO MANITOBA INC.....	4
	Forest Management Licence Area No. 2.....	4
	Manufacturing Operations	5
	Harvesting Operations	5
	Planning and Operating Practices.....	6
	Forest Renewal	6
	Public Consultation	6
	Public Awareness	6
	Environmental Impact Statement.....	7
	Wood Supply Analysis	7
	Ecosystems and Biodiversity	7
	Habitat Supply	7
	Enduring Features Analysis.....	8
	Collaborative Efforts.....	8
	Monitoring	8
3.0	ISSUES	8
	Forest Management Plan	8
	Logging Practices	9
	Hazardous Materials Management.....	9
	Roads.....	10
	Land Use Conflicts.....	10
	Database Management	10
	Public Education.....	10
	Environmental Impact Statement	10
	Availability of Data.....	10
	Modeling	10
	Historic Resources	11
	First Nations	11
	Transboundary Issues	11
	Research.....	11
	Funding Sources	12
	First Nations	12
	Treaty and Land Entitlement	12
	Logging on First Nations Land.....	12
	Communication.....	12
	Information Sharing.....	13
	Procedural Matters	13

Manitoba Natural Resources	13
Predictive Modeling	13
Data	13
Reforestation	14
Wildlife	14
Biodiversity	14
Protected Areas	14
Ecosystems Based Management	14
Land Use Planning	14
Legislation	14
Enforcement	15
Manitoba Environment	15
First Nations Concerns	15
The Clean Environment Commission	15
4.0 PANEL CONCLUSIONS	16
5.0 PANEL OBSERVATIONS	18
6.0 PANEL RECOMMENDATIONS	20

APPENDIX A - TERMS OF REFERENCE

APPENDIX B - AREA MAP

APPENDIX C - LIST OF PRESENTERS

APPENDIX D - LIST OF EXHIBITS

EXECUTIVE SUMMARY

A hearing was convened under the instruction of the Minister of the Environment to examine the proposed *1997-2009 Forest Management Plan* submitted by Tolko Manitoba Inc. for the management of Forest Management Licence Area No. 2. This *Plan* related to the management of the wood supply for the Company's mill facilities located near The Pas, Manitoba.

The hearing opened in Winnipeg in early September with presentations by the Company and the Departments of Environment and Natural Resources. These presentations were video taped and subsequently distributed to interested parties and to locations where the general public would have convenient access.

In mid October, the hearing resumed in The Pas with questioning and presentations by the public. The intention had been to provide video conferencing between The Pas and Winnipeg to facilitate communication between the two communities. A technological failure resulted in a reconvening of the hearing in Winnipeg, the following week.

During the course of the hearing, participants raised a variety of concerns, including the impact of road development in areas inhabited by woodland caribou and free ranging wood bison. Other concerns included the use of buffer zones, cut block size, forest renewal activities, protection of endangered species, and wildlife areas, identification of historic resources and herbicide use.

Concerns were also raised by First Nations communities with respect to the planning of annual harvests, access to map information, protection of lands used for traditional activities, as well as the protection of lands from which they might make entitlement selections.

Increased harvesting levels resulting from the expansion of mill operations, as proposed by the Company, prompted questions about the availability of staff and resources to ensure adequate planning, monitoring and compliance within the forest management area.

The need to revise the provincial Forest Act so that it better addresses the protection of biological diversity and implement ecosystem based management was raised.

The panel concluded that the forest management plan proposed by Tolko Manitoba Inc. would meet the environmental objectives of Manitobans and was in keeping with sustainable development guidelines. The Panel has recommended the issuance of a licence under the Environment Act subject to specific conditions.

PREFACE

In December of 1995, Repap Manitoba Inc., later known as Tolko Manitoba Inc., (the Company) submitted an application for licensing under the Environment Act for a *Forest Management Plan* for the period 1997-2009. The *Plan* itself was filed in November of 1996, and the related *Environmental Impact Statement (EIS)* was filed in March of 1997. Because of the high level of public interest in the proposed *Plan* and the potential for environmental impacts, the Minister of Environment directed the Manitoba Clean Environment Commission to convene public hearings and provide recommendations as to whether a licence should be issued to the applicants and, if recommended, under what terms and conditions.

The Commission Panel that reviewed the proposed *Plan* and accompanying *EIS*, conducted three days of public hearings in The Pas, Manitoba, and a total of six days in Winnipeg, Manitoba; deliberated over the information provided; and arrived at the conclusions, observations, and recommendations contained in this report. In presenting this report, the Commission has fulfilled the request made by the Minister.

A detailed account of the evidence presented to the Panel is contained in the *Verbatim Transcript* of the hearing, which is available for review at the Clean Environment Commission office and at designated Public Registries.

1.0 THE ENVIRONMENTAL REVIEW PROCESS

Proposed developments that may have a significant impact on the environment require an environmental license under the Manitoba Environment Act. Depending upon the extent and complexity of potential impacts, projects are classified as:

- Class 1 developments with a specific discharge(s),
- Class 2 developments with a specific discharge(s) and related land-use issues, or
- Class 3 developments which are large and involve a number of environmental issues.

As part of the environmental licensing process, a proponent may be required to prepare an environmental impact statement which assesses the potential impacts of the project. The public is also informed about all license applications, and public participation and comments are invited. Documents related to the project and other pertinent information are placed in Public Registries for review.

Before a decision is made regarding a license, the Minister may direct the Clean Environment Commission to hold public hearings, and provide advice and recommendations related to the project. The Commission has 90 days after a hearing to arrive at its conclusions and recommendations, and present its report to the Minister.

The Director of Approvals of Manitoba Environment is responsible for the issuing of Class 1 or 2 licenses and if so, the terms and conditions that apply. The Minister of Environment decides for Class 3 projects. While the director and Minister are not obligated to accept the Commission's recommendations(s), they must state their reasons for not doing so, in writing.

A Director's license may be appealed to the Minister within 30 days of the issuing of the licence; in cases where the Minister makes the licensing decision, appeals may be made to the Lieutenant Governor in Counsel.

1.1 The Environmental Hearing Process

The Clean Environment Commission provides an environmental decision-making process in which the public can participate. To facilitate and encourage participation, the Commission will hold a hearing in a community close to the location of the proposed development, as well as in other centres where interest is high or where environmental impact is sufficient to elicit interest from individuals and/or environmental groups.

1.2 The Clean Environment Commission

The Clean Environment Commission is comprised of a full-time Chairman and Commissioners appointed by Order in Council who are called to serve as Panel members on specific hearings. The Commissioners represent a wide variety of occupations and reside in different regions of the province.

A Panel with a minimum of three members is selected for each hearing. The Panel of five which reviewed the proposal for the Tolko (formerly Repap) Manitoba Inc. 1997 - 2009 Forest Management Plan included:

- Mr. Arnie Barr of Carman;
- Mr. Maurice Blanchard of Portage la Prairie;
- Ms. Linda Ericsson of Winnipeg;
- Mr. Roger Young of Winnipeg; and
- Mr. Dale Stewart of Winnipeg, Panel Chair

For this hearing, EnviroScribe Consulting of Winnipeg assisted with the preparation of the report.

1.3 Chronology of Events

The *Environment Act Proposal* for the Repap [Tolko] Manitoba Inc. 1997 - 2009 *Forest Management Plan* for Forest Management Licence Area No. 2 was received by Manitoba Environment on December 19, 1995. On January 9, 1996, the Canadian Environmental Assessment Agency was advised of the receipt of the proposal and notification of federal interest was requested. The proposal and other relevant documents were put into Public Registries, and the proposal filed with the Forestry Technical Advisory Committee (TAC), for review.

The *Repap [Tolko] Manitoba Inc. 1997 - 2009 Forest Management Plan* was filed by Manitoba Environment November 8, 1996. Manitoba Environment staff met with the Interdepartmental Planning Board (IPB) On February 11, 1997, and again on March 26, 1997, to seek the advice of the IPB with respect to the form of the assessment to be conducted.

The IPB's recommendations included:

- Repap's [Tolko] 1997 - 2009 Forest Management Plan be reviewed as a Class 2 Development under The Environment Act;
- Clean Environment Commission hearings be held after an acceptable Environmental Impact Statement had been submitted; and
- the public review period for the *Plan* and *Environmental Impact Statement* be at least sixty days prior to the start of hearings.

On March 10, 1997, the *Environmental Impact Statement* concerning the Repap [Tolko] Manitoba Inc. 1997 - 2009 *Forest Management Plan* was filed.

On May 13, 1997 the Honorable James McCrae, Minister of Environment for Manitoba sent a letter to the Clean Environment Commission requesting that a public hearing be held to consider the *Forest Management Plan* (FMP) and *Environmental Impact Statement* (EIS). The *Terms of Reference* for the public hearings were forwarded to the Commission by the Minister of Environment on June 26, 1997 (Appendix A). The Commission was asked to provide advice respecting the issuance of an Environment Act License, consistent with the Principals and Guidelines of Sustainable Development as contained in *Towards a Sustainable Development Strategy for Manitobans, Applying Manitoba's Forest Policies, and Manitoba's Forest Plan ... Towards Ecosystem Based Management*.

On June 24, 1997 the Department of Environment received a letter from Repap Manitoba Inc., responding to requests for additional information from Manitoba Natural Resources and Manitoba Northern Affairs. Subsequently on July 21, 1997, a letter was sent from the Director of Environmental Approvals to the Chairperson of the Clean Environment Commission to notify that the FMP and EIS were suitable and that public hearings could proceed.

On August 8, 1997 Repap Manitoba Inc. was acquired by Tolko Manitoba Inc. and operations have continued under this name. Tolko Manitoba Inc. has endorsed the Repap Manitoba 1997 - 2009 forest Management Plan being considered by Manitoba Environment. [For the purposes of this report, "Repap Manitoba Inc." has been replaced by "Tolko Manitoba Inc."]

The Manitoba Clean Environment Commission advertised the public hearing on August 9, 1997 and on September 4, 1997, the Commission convened to hear and videotape the proponent's presentation and presentations by the Department of Natural Resources. Copies of the videotape were produced and made available to interested parties. A presentation by Manitoba Environment was also made.

Hearings resumed October 20 & 21, 1997 to permit questioning of the proponent, representatives of Manitoba Environment and Manitoba Natural Resources, and to facilitate public presentations. The Commission intended to provide interactive video connection between the Kikiwak Inn in The Pas and the Winnipeg Convention Centre. Four panelists and the Technical Advisor were in the Pas and one panelist, the Secretary and the Technical Writer remained in Winnipeg.

However, some technical difficulties prevented the successful linkage of the video component. The hearing continued in simultaneous audio cast for October 20 and 21, but was discontinued October 22. To ensure that the Winnipeg Panel member heard all of the evidence presented, the Commissioner joined the rest of the Panel in The Pas on October 22.

The hearing reconvened in Winnipeg, October 28, 29 & 30 with the full Panel, to hear submissions and conclude questioning of the Company and government officials.

1.4 Procedural Motions

Several procedural motions were tabled for Panel consideration during the proceedings.

The Commission was asked to suspend the hearing pending an appropriate environmental review of the *Forest Management Plan* and the *Environmental Impact Statement* by a federal/provincial panel. The Commission was also asked to request that all Federal departments who are members of the Technical Advisory Committee be made available for questioning.

Other groups recommended that the hearings be adjourned until such times as the rights, interests and lands of stakeholder First Nations groups in Forest Management Licence Area No. 2 are identified and addressed in the *Forest Management Plan* and *Environmental Impact Statement*.

The Panel declined all motions.

1.5 Presentations and Exhibits

Fifty-seven (57) presenters took part in the hearing (Appendix C - *List of Registered Presenters*) and sixty-three (63) exhibits were filed (Appendix D - *List of Exhibits*). The issues and concerns of participants at the Tolko Manitoba Inc. 1997 - 2009 Forest Management Plan hearing are located in Section 3.0 of this report, and the conclusions, observations and recommendations of the Clean Environment Commission Panel are presented in Sections 4.0, 5.0 and 6.0 of this report respectively, pursuant to Sub-section 7(3) of *The Environment Act*.

2.0 TOLKO MANITOBA INC. FOREST MANAGEMENT PLAN

The Tolko Manitoba Inc. *Forest Management Plan* (FMP) describes timber harvesting, access development, and forest renewal activities planned in Forest Management Licence Area No. 2 during the period 1997 - 2009 (Appendix B - *Map*). The *Forest Management Plan* and *Environmental Impact Statement* are requirements of the Company's *Forest Management Licence Agreement* with the Province of Manitoba. Both the *Plan* and the *EIS* require licencing under the Manitoba Environment Act.

This is the first *Forest Management Plan* to be prepared in the context of both ecosystems based management and sustainable forest management in Manitoba, and the Company has responded to sustainable forestry management system standards. Tolko Manitoba Inc. is a member of the Canadian Sustainable Forestry Certification Coalition.

The *Forest Management Plan* reflects current knowledge and understanding of the FML Area No. 2 ecosystems, and current research and analytical ability to address ecosystems based management and sustainable forestry management concepts. Tolko Manitoba Inc. has made a commitment to update policies and procedures as new knowledge and information becomes available.

2.1 Forest Management Licence Area No. 2

The total area of Forest Management Licence Area No. 2 is 11.3 million hectares, of which approximately forty percent (40%) is classified as productive forest (4.3 million ha), and the balance of the area designated as non-productive forest land (29%), non-forested land (8%) or water (23%). The area includes forested land in the Mountain, Interlake, Saskatchewan River, Highrock and Nelson River Forest Sections as delineated by Manitoba Natural Resources.

The vegetation within the licence area is classified as Canadian Boreal Forest. The territory is home to large mammals including woodland caribou and moose, fur bearers, small mammals, birds, fish and other aquatic life. Wood Bison have been introduced near Chitek Lake.

There is substantial wild rice production throughout the licence area, although it is only indigenous to the lakes of the Norway House area. Manitoba Natural Resources Lands Branch issues development and production licences and is responsible for regulatory control of wild rice.

The distribution of timber resource in the licence area is approximately seventy-three percent (73%) softwood species and twenty-seven percent (27%) hardwood species. During the life of the *Forest Management Plan*, Tolko Manitoba Inc. estimates that the maximum total area harvested will be less than 250,000 hectares or approximately 2% of the entire licence area.

2.2 Manufacturing Operations

Tolko Manitoba Inc. requires wood fiber to supply existing company manufacturing facilities in The Pas, Manitoba. These include an unbleached kraft paper mill (165,000 tonnes/year) with primary and secondary effluent treatment facilities and a sawmill which produces 95 million board feet annually of spruce, pine and fir stud and random length lumber for the North American market. The provincial Annual Allowable Cut (AAC) for FML Area No. 2 is 2,640,000 cubic metres for softwood and 1,124,000 cubic metres for hardwoods.

A new bleached chemi-thermomechanical pulp mill as proposed, would produce a range of air dried hardwood (and possibly softwood) pulp grades using peroxide bleaching technology.

Tolko Manitoba Inc.'s current mills and woodlands operation sustain approximately 850 direct jobs, with a gross annual payroll of \$54.3 million. A planned expansion of mill facilities during the *Management Plan* period is projected to result in an additional 330 jobs in mill and woodlands operations.

2.3 Harvesting Operations

The maximum annual harvest levels for FML Area 2, including third parties, is 1,800,000 cubic metres for softwoods and Tolko Manitoba Inc. has identified its maximum annual requirements to be 1,600,000 cubic metres. Similarly, the maximum annual harvest levels for hardwoods in the area is 890,000 cubic metres of which the Company requires 600,000 cubic metres. The Company currently utilizes 1,100,000 cubic metres of softwood but does not utilize hardwood species at this time.

Harvesting is conducted by the Company, contractors and third parties. The *Forest Management Plan* details the development forecast for the licence area including operating areas and the associated time frames for activity. No harvesting operations are currently planned in the area proposed for the Manitoba Lowlands National Park in the Interlake.

According to Manitoba Natural Resources guidelines, cutblocks should not exceed 100 hectares in size. Local conditions, such as landscape features, topography, timber types/age, and road infrastructure determine the distribution, size and shape of cutblocks. The Company's Forest Management Planning and Operating Practices (FMPOP) are designed to be flexible enough to allow adjustments to cutblocks as required when sensitive areas are identified. Adjustments may also be required to mimic natural disturbances in order to achieve ecosystems based management objectives.

Wood is delivered to The Pas by truck and rail. The *Forest Management Plan* details Tolko Manitoba Inc.'s plans to construct 860 kilometers of all-weather logging roads and 580 kilometers of winter access roads in the licence area.

2.4 Planning and Operating Practices

In the *Forest Management Plan*, Tolko Manitoba Inc. acknowledges that the extent of information about the ecosystems in FML Area No. 2 is limited. In response, the Company has developed a wide range of Forest Management Planning and Operating Practices (FMPOP) to address government forest management guidelines and regulations, and mitigate potential environmental impacts.

The FMPOP form the Company's framework for adaptive management of the forest resource. They include public participation and communication guidelines; planning and operating criteria; forest renewal and protection; and monitoring procedures. As ecosystem knowledge, understanding and analytical techniques improve over the life of the *Forest Management Plan*, the FMPOPs can be adapted to respond to change.

2.5 Forest Renewal

It is Tolko Manitoba Inc. policy to ensure the renewal of clear-cut harvested areas to a species composition similar to what was present prior to harvesting. This objective is achieved through tree planting activities, natural regeneration and other silvicultural activities.

A network of seed collection sites throughout the region supply up to 5.5 million seedlings for FML Area No. 2 renewal initiatives each year. Permanent sample plots have been established across the licence area to monitor forest survival and growth.

After forest renewal activities are completed, sites are monitored to ensure that they regenerate as intended. Sites are surveyed three years after the final silvicultural application is administered. If a site does not regenerate to acceptable standards, it receives additional silvicultural treatment. It is estimated that herbicides are used on competing hardwoods & grasses in less than 10% of the harvest area.

In the seventh year after harvest, each site is surveyed to ensure that provincial stocking standards are met. Certification Surveyors are licenced by Manitoba Natural Resources Forestry Branch.

2.6 Public Consultation

Tolko Manitoba Inc.'s public participation strategy included public information meetings and resource user consultations, meeting with First Nations groups and public awareness functions. Keewatin Community College also participated in the process by facilitating a project to ascertain community values placed on the use of the forest.

In 1996, the Company established a Forest Resource Advisory Committee (FRAC) so that a wide range of stakeholder groups could bring their interests, values and concerns to the Committee as they relate to the environmental licensing, forest management planning and operational activities in the licence area. The FRAC meets approximately four times per year.

2.6.1 Public Awareness

The Company participates in a number of public education activities throughout the year. These include forestry displays and trade shows, and presentations to interested groups. Tolko Manitoba Inc. also retains the services of a Liaison Forester who serves as

Education Coordinator in Forest Management Licence Area No. 2 with schools, and also oversees the operation of the Atikameg Forestry Centre located in Clearwater Provincial Park.

2.7 Environmental Impact Statement

2.7.1 Wood Supply Analysis

This component of the EIS investigated the sustainability of the provincial Annual Allowable Cut (AAC) and the sustainability of proposed harvest levels.

While Tolko Manitoba Inc.'s proposed harvest levels are below the AAC, the analysis of the Mountain, Interlake, and northern forest section produced results that suggest downward AAC adjustments may be required. It was also determined that many of the older age class stands are falling to successional pressure before they can be harvested.

The Harvest Schedule Generator (HSG) forest estate planning model was used to analyze the sustainability of FML Area No. 2 relative to AAC and proposed harvesting levels. This model was developed by the Canadian Forest Service at the Petawawa National Forestry Institute and is considered to be one of the best available tools for developing and analyzing sustained yield Annual Allowable Cut criteria, and can be linked to Geographical Information Systems (GIS) software, for mapping purposes.

This model produces data that is required for the analysis of ecosystems and biodiversity, and habitat sustainability for the forecast period.

2.7.2 Ecosystems and Biodiversity

The results of ecosystem and biodiversity assessments indicated that proposed harvesting levels will result in a forest composition and age structure that remains within the historical range.

2.7.3 Habitat Supply

To provide an indication of the impact of harvesting on habitat in the licence area, Habitat Suitability Index (HSI) models were used to conduct predictive wildlife habitat analyses for woodland caribou, pine marten, pileated woodpecker and the black-and-white warbler. Each of these species have very different habitat requirements and were chosen for species diversity in the modeling.

The analysis was constrained by data availability, and only predicts total habitat changes, not the spatial relationship of habitats within each region.

The analysis concluded that while habitat supply would remain similar to, or slightly increased for most species in the northern ecoregions of the licence area, there may be a reduction of habitat supply in the southern ecoregions due to a decline in mature forest. In the latter case, a future downward adjustment of the Annual Allowable Cut may be required to maintain older stands and mitigate impacts.

2.7.4 Enduring Features Analysis

An enduring feature is a physiographic component of the landscape which remains relatively unchanged over time. In consultation with Manitoba Natural Resources and the World Wildlife Fund, the Company undertook analysis to examine the implications of the *Forest Management Plan* on enduring features.

Of the 222 enduring features in the licence area, there are 13 single occurrence features totaling 123,190 ha, of which 56,796 ha is considered to be productive forest.

The Company has agreed not to harvest any of the single occurrence features for a period of 2 years to permit the finalization of the protected areas program. The Company has also agreed to leave a portion of other enduring features where logging is planned.

2.7.5 Collaborative Efforts

Tolko Manitoba Inc. is participating in several collaborative projects. One such study concerns access management, and will identify where access controls are required to effectively mitigate the impacts of forest management activities on wildlife. Access control measures undertaken by the Company will be under the direction and approval of Manitoba Natural Resources.

The Company will continue to cooperate with provincial authorities to mitigate the impacts of logging on woodland caribou.

2.8 Monitoring

The Company will monitor the forest resource on an ongoing basis through the course of record keeping activities (e.g. harvest records, forest renewal records), regeneration surveys, harvest cutblock status reports and the Forest Resource Advisory Committee. The Company has made a commitment to participate in relevant research activities and strike partnerships with other parties to improve sustainable forest management in FML Area No. 2.

The Company will also pursue "enhanced" forest management initiatives in the areas of new forest inventory, growth and yield, thinning, tree improvement and chemical stand tending trials.

3.0 ISSUES

3.1 Forest Management Plan

It was suggested that consideration be given to logging practices in areas of steep sloped terrain. This includes ensuring that the Annual Allowable Cut reflects the extent of the Porcupine Mountains that can not be logged, and declaring high risk erosion areas "no harvest zones".

The need for adaptive management strategies were discussed. Some presenters felt that caribou conservation measures were insufficient and that cutblocks and habitat leave areas for these species, and wood bison, require greater consideration.

Concern was expressed regarding the number of inconsistencies between Tolko's Forest Management Planning and Operating Practices (FMPOP) and Manitoba Natural Resources Forestry Branch guidelines. It was suggested that a review mechanism be established to ensure that all were in compliance. It was further suggested that basic provincial operating procedures would ensure more consistency in the application of provincial guidelines across the province, and that they be applied to all forestry activities.

Some presenters observed that 100 m buffer zones were unable to provide enough protection, food or cover for game. It was suggested that the size of buffers be increased around water bodies in particular.

Concerns were raised about the small number of permanent sample plots that have been designated in the licence area by the Company thus far.

3.1.1 Logging Practices

Several presenters questioned the Company about the amount of uncut material that would be left in the cutblocks throughout the licence area. It was suggested that the 1% residual that is left in the cutblocks was not sufficient, and recommended that a 5% target is more appropriate, and similar to other jurisdictions.

A range of concerns were raised about logging adjacent to protected areas. Some presenters suggested that buffers were not wide enough and that logging procedures and practices might need to be modified, as has been adopted for areas adjacent to Fundy National Park in New Brunswick.

Some presenters were concerned about the impact of logging on endangered species. The protection of bat caves received considerable attention, and it was recommended that logging guidelines consider a recent publication by Manitoba Natural Resources, as well as the International Union for the Conservation of Nature and Natural Resources (IUCN) guidelines for cave and karst, as they may be applied to the Grand Rapids Uplands topography.

A reference was also provided regarding studies on the effects of logging in karst topography in British Columbia. In these studies it was found that buffers of 500 metres to one kilometre may be necessary to ensure adequate protection.

The Company was asked to avoid harvesting from May to July, during the neo-tropical nesting season. It was recommended that timber resources be stockpiled during the winter months to ensure an adequate wood supply.

3.1.2 Hazardous Materials Management

Concerns were raised respecting the use of herbicides in silvicultural applications and in particular, aerial spraying. The potential effect of spray drift on buffer zones, residuals, wildlife and sensitive plant species was discussed, and the impact of herbicides on swamp milkweed which would impact the endangered monarch butterfly. It was suggested that the use of herbicides be disallowed.

The issue of leachate toxicity and the need for leachate management was raised, and the company asked to avoid wood stockpiles in ground water recharge areas such as gravel pits, and to locate log storage areas such that leachate can not directly enter any surface watercourse or waterbody.

3.1.3 Roads

3.1.3.1 Land Use Conflicts

Many presenters expressed concern over access control and routing criteria. Some believed that increased access would invite illegal hunting and poaching problems, while others questioned how access could be controlled.

In particular, the need to limit impact or avoid sensitive areas was raised using the Chitek Lake wood bison herd as an example. Arguments were made against the proposed Chitek Lake all-weather road proposal and Pickerel Lake road through the Long Point component of the proposed National Park.

3.1.3.2 Database Management

The need for a comprehensive road management plan that includes maintenance prescriptions was raised, for both active and inactive roads in FML Area No. 2. Participants noted that there is a need to identify rare species through vegetation and wildlife surveys before a road is developed. It was also suggested that Tolko Manitoba Inc.'s "Planning Pre-Harvest Forest Investigation" form be revised to include other species occurrences.

The need to inventory culverts in the licence area was stressed. It was suggested that Tolko Manitoba Inc. develop a decommissioning plan for roads, which includes reclamation plans and monitoring strategies. Due to the lack of baseline data for FML Area No. 2, concerns were expressed about the actual impact of roads, culverts and crossings on fish spawning or fish-bearing waters. The need for a stream crossing inventory was raised, as well as the decommissioning of culverts.

3.1.4 Public Education

The benefits and importance of outreach forest education for community youth both in the classroom and in the forest was stressed.

3.2 Environmental Impact Statement

3.2.1 Availability of Data

There was considerable concern about the reliability and age of certain statistics used in the analysis of the *EIS*. It was generally agreed that there should be more data collected about Manitoba's species, enabling less reliance on imported data.

3.2.2 Modeling

Concerns were raised about black spruce, pine marten and bird abundance modeling. The impact of disturbance on neo-tropical birds was discussed as well as the impact of the loss of mature forest on woodland caribou and pileated woodpecker range.

The impact of the Chitek Lake road on the local wood bison herd was found to be absent from the *Forest Management Plan* analysis.

It was noted that the current standard for environmental impact statement preparation in Manitoba does not include an assessment of the health of protected area

ecosystems. It was suggested that in future, these statements need to shift from an estimated projection of what would happen to statements based upon known impacts of previous developments.

Some presenters suggested that future modeling techniques incorporate enduring feature analysis and include both current and potential protected lands, while others noted that the impact of projected climate changes and the effect of harvesting on water yield should receive consideration in future assessments.

The recommendations contained within the *EIS* were discussed. It was suggested that the recommendation respecting the protection of plants identified as vulnerable, threatened or endangered should be expanded to include the protection of *animals*, as identified by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

It was also recommended that future ecosystems based management research and practices include natural disturbance regime models that mimic fire, insects and wind damage. Natural disturbance provides habitat variability, and with a better understanding of these factors, the Company can modify its cutting practices to emulate these influences.

3.2.3 Historic Resources

Ancient heritage sites are known to exist in Forest Management Plan Area No. 2 and it was observed that they could be disturbed if pre-clearing archeological surveys are not conducted prior to road building. It was noted that a *Heritage Resource Impact Assessment* would have prevented the destruction of a 3000 year B.P. [Before Present] archeological site during the construction of the National Mills Road in 1996.

3.2.4 First Nations

The value of bringing a First Nation's perspective into sustainable forestry practices was discussed. The Company was asked to continue to recognize and respect the concerns of First Nations in their planning processes, particularly when traplines, sacred grounds, and traditional medicine gathering areas could be affected by wood harvesting activities.

3.2.5 Transboundary Issues

A number of presenters indicated that the impact of forest harvesting operations in Saskatchewan, adjacent to FML Area No. 2, had not been taken into consideration. It was suggested that an Environmental Act Licence not be considered until this matter is investigated further.

3.3 Research

It was noted that the licence area is the northerly limit for certain plant species and that the regeneration pattern of these species could be inventoried to monitor the influence of climatic change. Others suggested that there should be more research of old growth stands in the licence area as well as studies on the effect of natural disturbance.

The need for traditional ecological knowledge studies as part of the *EIS* process was discussed, and the inclusion of First Nations economic variables in management decisions. The Company was urged to overlay First Nations interests on maps, including traditional land usage by Native peoples, and selection areas under the *Treaty Land Entitlement Agreement*.

Manitoba Natural Resources was encouraged to engage in economic analysis of other forest commodities in the understory, including medicinal herbs. Other presenters identified the need for the development of an old growth policy.

3.3.1 Funding Sources

Many presenters wanted to know the extent to which the Company is prepared to invest in forest research in Manitoba. It was suggested that Tolko Manitoba Inc. contribute information to the provincial data base on a voluntary basis.

Presenters recommended that both the government and the Company fund research and since there is a need for partnerships, it was suggested that they consider a system developed by the Centre for Sustainable Forests at the University of Alberta, as a model. In this situation, funding dollars are routed to the scientific community through a committee made up of public, government and industry representatives.

3.4 First Nations

3.4.1 Treaty and Land Entitlement

Representatives of First Nations communities and organizations suggested that the *Forest Management Licence Agreement* does not address impending land transfers currently being negotiated under the *1997 Treaty Land Entitlement Agreement* in FML Area No. 2. It was demonstrated that while the process is quite advanced in some communities such as Nelson House, the surveyed lands are absent from Company's maps.

The Company was asked about the likelihood of these lands being logged in the near future, considering that a land-use conflict currently exists in the Nelson House area. In this case, logging is proposed on selection area lands under the *Treaty Land Entitlement Agreement*.

Presenters urged Manitoba to fulfill its fiduciary obligations and curtail harvesting in these areas until matters are finalized, and there was general consensus that it is in the best interest of all parties concerned, to agree on clear goals and timelines for the ratification of land claim issues.

3.4.2 Logging on First Nations Land

The Company was encouraged to develop a land use agreement(s) with Manitoba Native Bands in the future. Tolko Manitoba Inc.'s agreement with the Whitefish Band in northern Alberta was identified as a good model.

3.5 Communication

Concerns were expressed that First Nations groups have not been adequately consulted at the community level with respect to development in the north, including forestry activities. The example of the Chitek Lake Road was cited, where 'right of access' concerns had been brought to the attention of the province in 1996.

Some observed that communication between Manitoba Natural Resources, Tolko Manitoba Inc., First Nations communities and trappers could improve, particularly with

respect to harvesting on traplines and traditional areas. Trappers indicated that they are not adequately consulted prior to cutblocks being assigned and allotted.

3.5.1 Information Sharing

It was suggested that Tolko Manitoba Inc. obtain caribou research results from Manitoba Hydro, as well as any data they may have compiled on watercourses. The Company was also asked to share its Geographical Information System information with stakeholders in the area, to supplement other databases.

Tolko Manitoba Inc. was encouraged to continue the Forest Resource Advisory Committee (FRAC), to ensure that dialogue between the public and Company continues. Non-residents of FML Area No. 2 expressed interest in participating.

It was also suggested that the Company develop a community education program for First Nations on sustainable development and biodiversity as well as the *Forest Management Plan*, and develop forest management education and training for First Nations councils.

There were concerns that the Company's response to issues raised on the part of individuals during the *Forest Management Plan* review process had been directed to the government, instead of the individuals concerned. In some cases, there was no response at all.

3.6 Procedural Matters

3.6.1 Manitoba Natural Resources

3.6.1.1 Predictive Modeling

The need to calibrate wood supply models with Manitoba conditions was discussed, as well as the need to incorporate wildlife values into the modeling. Volume projections for white spruce were questioned, since the inventory system does not document the amount, size or distribution of understory white spruce. The use of more appropriate photography was encouraged to supplement the inventory.

Concerns were also raised about volume projections for plantation-grown spruce, and the criteria that goes into those predictions.

3.6.1.2 Data

There was concern that the Annual Allowable Cut calculations for Forest Management License Area 2 may not be correct. Participants urged that Manitoba Natural Resources re-inventory Mountain Forest Sections 12 and 14 since the last inventory was conducted approximately 18 years ago, and requested more regeneration surveys in the FML Area.

It was also noted that the cumulative impact of the proposed logging, potential mineral development and associated roads in the licence area, and the proposed national park, must be considered.

3.6.1.3 Reforestation

Some presenters wanted to know how reforestation is handled on private land and suggested that there should be regeneration agreements in place. The issue of responsibility was also raised with regard to the reforestation of cutblocks that predate Tolko Manitoba Inc. and Repap's involvement in the FML area. Tolko Manitoba Inc. is only responsible for areas dating back to 1989.

3.6.1.4 Wildlife

Many presenters felt that there is not enough research taking place to be able to predict species survival, including the impact of logging on neo-tropical birds. Manitoba Natural Resources was asked to finalize the woodland caribou strategy expeditiously, so that logging impacts could be mitigated.

Other participants suggested that there is an apparent contradiction between Manitoba Natural Resources participating in the wood bison reintroduction project, and the potential impact that logging might have on the herd.

3.6.1.5 Biodiversity

The need for biodiversity guidelines was discussed and it was recommended that these guidelines govern more than just wildlife. It was stressed the Manitoba Natural Resources produce province-wide biodiversity guidelines for all forest activities and use provincial parks as a pilot program.

3.6.1.6 Protected Areas

Many participants urged that the boundaries of the Manitoba Lowlands National Park be identified as soon as possible, and some recommended that they be expanded to ensure that some of the missing conservation values be included. Logging was strongly discouraged in or near existing provincial parks, as well as adjacent to National Parks and protected areas.

It was observed that there are no protected areas in FML Area No. 2 for brown bat caves, and that there is a need to expedite the identification of protected areas.

3.6.1.7 Ecosystems Based Management

Ecosystems Based Management is an emerging field and some presenters wondered how Manitoba Natural Resources will monitor the proponent's performance if the terms have not yet been established. Others suggested that the language of Manitoba's forest management agreements do not promote the spirit of ecosystems based management, and Department officials were asked how staff are being trained to keep pace with change.

3.6.1.8 Land Use Planning

The need for land use planning was discussed and the suggestion made that a macro-overview of land use and management of the FML Area would be useful.

3.6.1.9 Legislation

It was suggested that the government is lagging behind industry when it comes to modernization of forestry practices. Many parties drew attention to the need to review the

Forest Act, so that it can meet the expectations of the next century by including sustainability, biodiversity and ecosystem based management.

3.6.1.10 Enforcement

Some participants observed that without adequate monitoring and enforcement, much of the environmental review and forest management planning processes amount to simply "good intentions". The Integrated Resource Management Team that is responsible for monitoring Tolko Manitoba Inc.'s cutting operations, was seen to be understaffed given the substantial volume increase to be harvested.

3.6.2 Manitoba Environment

A number of procedural issues were raised concerning the environmental review process and many presenters required assurance that the concerns of Federal representatives on the Technical Advisory Committee (TAC) had been adequately addressed. It was also observed that a number of Federal Departments on the TAC did not make presentations at the Hearing.

Some participants noted that the majority of logging roads are approved without environmental assessment.

3.6.2.1 First Nations Concerns

It was recommended that First Nations be invited to participate directly in all aspects of the assessment process, and that First Nations interests be incorporated into the environmental review process.

Some presenters felt that as it currently exists, there is no provision to include aboriginal concerns in the early stages of the decision-making process, and that the participation of First Nations needs to increase.

3.6.3 The Clean Environment Commission

Many presenters were frustrated by the technical difficulties that prevented efficient communication between The Pas and Winnipeg during the hearing. Presenters had some procedural concerns and requested that there be an equitable rotation of questions between the two locations.

It was suggested that it would be less intimidating if proponents produced executive summaries of their documents for public review, and that the Internet be used to make these documents available to more Manitobans.

4.0 PANEL CONCLUSIONS

The Clean Environment Commission considered the proposal and the public concerns respecting the Tolko Manitoba Inc. 1997-2009 Forest Management Plan Proposal and has concluded that the proposal will meet the environmental objectives of Manitobans, and is in keeping with the Provincial sustainable development guidelines.

TERMS OF REFERENCE

In his letter to the Clean Environment Commission, the Minister of Environment set out the *Terms of Reference* (Appendix A) to be addressed in the public review of the proposed forest management plan and in the Commission's subsequent recommendations. The Panel has provided a response to each topic (appears in italics) identified in the *Terms of Reference*.

** "...whether an Environment Act Licence should be issued respecting the Repap [Tolko] Manitoba Inc. 1997-2009 Forest Management Plan Proposal.*

The Panel has concluded that the proponent should be issued an Environment Act licence. It was felt that a licence would ensure that the environmental objectives of Manitobans are met.

** "...the potential environmental impacts of the forest management activities proposed in the Repap [Tolko] Manitoba Inc. 1997-2009 Forest Management Plan Proposal on the biophysical environment, sustainability of all forest values including ecosystems and biological diversity, and land use."*

Based upon the evidence presented and commitments made during the hearings, the Panel has concluded that environmental impacts can be mitigated. The Panel notes that this is the first *Forest Management Plan* to be prepared in the context of both ecosystems based management and sustainable forest management in Manitoba. The panel also notes that the implementation of ecosystem based management will require a continued focus by government and the forest industry in addressing short and long term forest management planning issues.

** "...socioeconomic, social, cultural and health impacts directly related to the environmental impacts of the Repap [Tolko] Manitoba Inc. 1997-2009 Forest Management Plan Proposal.*

The Panel has concluded from the evidence presented at the hearings, that the socioeconomic, social, cultural and health impacts related to environmental impacts of the proposed forest management plan, can be mitigated. Impacts concerning First Nations continue under negotiation or are before the courts.

• *"...measures proposed to mitigate any adverse impacts resulting from the Repap [Tolko] Manitoba Inc. 1997-2009 Forest Management Plan Proposal, and where appropriate, to manage any residual effects;"*

The Panel has concluded that evidence respecting mitigation of potential adverse impacts were presented, discussed and debated during the course of the hearings. The Panel is of the belief that potential adverse impacts can be mitigated and managed satisfactorily.

• *"...proposed plans and procedures for the transportation, handling and disposal of dangerous goods and hazardous materials, and for response to environmental accidents;"*

Much of the discussion with regard to dangerous goods and hazardous material pertained to herbicide use. The Panel has concluded that existing regulations would provide the necessary conditions for controlling the transportation, handling and disposal of dangerous goods and hazardous materials. The Panel also believed that appropriate conditions could be provided in a license to safeguard the environment from the impact of an accident.

• *"...monitoring and research which may be recommended in relation to the forest management activities proposed in the Repap [Tolko] Manitoba Inc. 1997-2009 Forest Management Plan Proposal;"*

A good deal of evidence and discussion took place during the hearing with respect to monitoring and research. The Panel concluded that this has important ramifications to determining forest sustainability and in implementing ecosystem based management and has concluded that appropriate recommendations, with respect to monitoring and research activities, can be developed.

• *"...The Clean Environment Commission recommendations shall incorporate, consider and directly reflect, where appropriate, the Principles of Sustainable Development as contained in Towards a Sustainable Development Strategy for Manitobans. Applying Manitoba's Forest Policies, and in Manitoba's Forest Plan...Towards Ecosystem Based Management"*

The Panel has concluded that the principles of sustainable development and, in particular, sustainable development forest policies were considered and addressed throughout the duration of the hearings. The Panel notes the planning undertaken by the proponent to incorporate ecosystem based management concepts into the *Plan*. However, the Panel is of the belief that a number of conditions would be required in an *Environment Act License* to ensure the sustainability of the forest and to achieve ecosystem based management.

The panel also noted the desirability of reviewing and revising the Manitoba Forest Act to reflect biological diversity and ecosystem based management.

5.0 PANEL OBSERVATIONS

ACKNOWLEDGMENT

The Panel acknowledges the cooperation and assistance of the proponent, Tolko Manitoba Inc., the provincial government departments of Natural Resources and Environment, and other participants at the hearing while attempts were made to overcome technical difficulties experienced at the outset of the proceedings. In addition, the Panel notes the high quality of the proponents *Environmental Impact Statement* and professional manner in which it was presented.

OBSERVATIONS

The following Observations contain general comments to government regarding the management of FML Area No. 2. These observations do not form part of the Panel's recommendations respecting the licence application submitted by Tolko Manitoba Inc. They are presented as matters of concern to the Panel which warrant consideration by government.

1. The Panel observes that in order to ensure appropriate planning, monitoring, and compliance of harvest activities the departments of Natural Resources and Environment must have adequate staffing resources. Significant increases in the total volume of wood licenced for harvest must be accompanied by increased staff resources in both Departments. *[Reference Sections: 2.1; 2.3; 3.6.1.10]*
2. Continued consultation with First Nations communities is required respecting the process for identifying and securing land claims. Careful attention to the protection of selected areas from undue change pending completion of this process is required. *[Reference Sections: 2.6; 3.4.1]*
3. The panel believes that Manitoba Natural Resources should aggressively pursue the evaluation and application of modeling techniques for the determination of the Annual Allowable Cut. These modeling techniques should incorporate the concepts of cumulative impacts and the maintenance of biodiversity. *[Reference Sections: 2.3; 2.7.1; 2.7.3; 3.1; 3.6.1.2]*
4. Manitoba Natural Resources should assume a leadership role in the development of a management plan for the free ranging wood bison herd in the area of Chitek Lake. This plan should identify herd size, anticipated growth, and range patterns. The impact of forest harvesting activities on the Wood Bison herd should be identified and considered in the development and implementation of the management plan. *[Reference Sections: 2.1; 3.2.2; 3.6.1.4]*
5. Manitoba Natural Resources should develop a wild rice management plan for northern Manitoba which takes into consideration the impact of wild rice seeding and species growth on water flow and aquatic life. *[Reference Section: 2.1]*
6. Manitoba Natural Resources should begin the process of reviewing and revising the Forest Act in 1998 to ensure that this legislation reflects a commitment to ecosystem based management for all forest values, and provides for the adequate protection of biodiversity in Manitoba's forests. This review and revision process must involve extensive consultation with all interested parties. *[Reference Sections: 2.0; 2.7; 3.2.2; 3.6.1.9]*

7. Manitoba Natural Resources should require that all planning activities respecting FML Area No. 2 include consideration of the cumulative impacts of changes to the landscape brought about by wood harvesting, mining operations, and the development of access roads and utility right-of-ways. *[Reference Sections: 3.6.1.2; 3.6.1.8]*
8. Manitoba Natural Resources should aggressively pursue the development of modeling techniques to assist in the prediction of the impacts of harvesting activities on the biota and water yield of the licence area. *[Reference Sections: 2.4; 3.2.2]*
9. The Manitoba Natural Resources guidelines related to the establishment and management of buffer zones and leave blocks should be reviewed and, where necessary, revised. Consideration should be given to the impacts that forest harvesting activities in these areas might have with respect to the maintenance of biodiversity and the replication of natural disturbance patterns. *[Reference Sections: 2.3; 3.1; 3.1.1; 3.6.1.5]*
10. The panel believes that Manitoba Environment should encourage the development of assessment documentation respecting licensing proposals which takes advantage of emerging technologies. Use of the Internet for the posting of environmental impact statements and summary documentation, along with the distribution of documentation on computer diskettes should be considered as first steps towards ensuring widespread access to environmental assessment information. *[Reference Section: 3.6.3]*

6.0 PANEL RECOMMENDATIONS

The panel recommends that an Environment Act licence be issued to Tolko Manitoba Inc. for the management of FML Area No. 2, subject to the following conditions.

1. No harvesting of oak, ash, elm, maple, or cedar shall take place within FML Area No. 2. All occurrences of these species shall be identified, and adequate measures taken to ensure their protection from harvesting activities. *[Reference Sections: 2.3; 2.4; 3.1.3.2]*
2. Respecting road development:
 - (a) There shall be no through road or similar connection between PTH #6 and PTH #60. Road access to the Pickerel Lake and Chitek Lake area shall be "seasonal" with route planning to ensure minimum impact on woodland caribou and wood bison herds ranging or migrating through this area. *[Reference Sections: 2.3; 3.1.3.1; 3.2.2]*
 - (b) Road development projects, and road decommissioning programs, shall be planned in consultation with the impacted local communities and resource harvesters on an ongoing basis. *[Reference Sections: 2.3; 3.1.3.2; 3.5.1]*
 - (c) An up-to-date inventory of all culverts and stream crossings shall be developed and specific plans for the decommissioning of these structures shall be included in all future road development. *[Reference Sections: 2.3; 3.1.3.2]*
 - (d) Effective control measures shall be used to reduce access to sensitive areas and decommissioned or closed roads. *[Reference Sections: 2.7.5; 3.1.3.1]*
3. Tolko Manitoba Inc. shall work with the Manitoba Heritage Resources Branch and other agencies and organizations to prepare a cultural/archeological management plan for the licence area. Tolko Manitoba Inc. shall be responsible for ensuring that pre-harvest survey crews and harvesting contractors are trained to identify and protect archeological sites. Adequate buffer zone protection shall be provided around all cultural/archeological sites. *[Reference Sections: 2.3; 2.4; 3.2.3]*
4. Tolko Manitoba Inc. shall ensure that First Nations communities within the licence area are fully appraised in advance of all harvesting activities, including road building and decommissioning plans, which may impact their communities, and shall ensure that appropriate maps and related planning documents are made available to First Nations community leaders on an ongoing basis. *[Reference Sections: 2.4; 2.6; 3.4.1; 3.5]*
5. Softwood harvesting volumes of 1,800,000 cubic metres, and hardwood harvesting volumes of 890,000 cubic metres shall not be exceeded until such time as Annual Allowable Cut calculations are researched and verified. *[Reference Sections: 2.3; 3.6.1.2]*

6. *Annual Operating Plans* shall include specific strategies to ensure that areas of karst topography, particularly those in the Grand Rapids Uplands, are identified and protected from harvest. In addition, adequate buffers must be planned to limit the disturbance to any significant geophysical features, including endangered spaces and vulnerable wildlife habitats such as those of the brown bat. [Reference Sections: 2.4; 2.7.3; 2.7.4; 3.6.1.4; 3.6.1.6]
7. Tolko Manitoba Inc. shall be required to consult on an annual basis with major harvesters on the Saskatchewan side of the west boundary of FML No. 2 to ensure that transboundary concerns are addressed, including the coordination of harvesting operations on both sides of the boundary so as to avoid negative impacts. [Reference Section: 3.2.5]
8. Tolko Manitoba Inc. shall exercise particular caution when harvesting operations approach the boundaries of parks, wildlife management areas, ecological reserves, and other protected areas. [Reference Sections: 2.4; 3.1.1; 3.6.1.6]
9. *Annual Application Permits* for the use of herbicides shall recognize and offer protection for sensitive areas. In particular, the Panel recommends that particular attention be paid to the protection of the Monarch Butterfly and its habitat. [Reference Sections: 2.5; 3.1.2]
10. The Forest Resource Advisory Committee (FRAC) shall continue to function and shall be comprised of a broad base of interested stakeholders, including those Manitobans residing outside of the boundaries of FML Area No. 2. [Reference Sections: 2.6; 3.5.1]
11. All log storage areas shall be located in a manner so as to ensure that leachate cannot directly enter any surface watercourse or body. [Reference Sections: 2.4; 3.1.2]
12. Tolko Manitoba Inc. shall undertake research activities to establish baseline information upon which future forest harvest operations can be developed so as to "mimic" natural disturbance patterns. The results of this research shall be provided to Manitoba Environment by the year 2005. [Reference Sections: 2.7.1; 3.3]

APPENDIX A

Terms of Reference for Clean Environment Commission Hearings on the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal

BACKGROUND

On December 14, 1995, Repap Manitoba Inc. (the Company) submitted an Environment Act Proposal for a 1997-2009 Forest Management Plan. On November 8, 1996, the Company submitted the 1997-2009 Forest Management Plan, and on March 10, 1997, the Company submitted an accompanying Environmental Impact Statement (EIS) addressing the forest management activities proposed in the Plan. The above documents constitute the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal.

MANDATE OF THE HEARINGS

The Clean Environment Commission shall conduct public hearings to consider the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal, and to receive public comments and concerns respecting the Proposal. Following the hearings, the Clean Environment Commission shall provide a report to the Minister of Environment pursuant to Section 7(3) of the Environment Act. The Commission may at any time request that the Minister of Environment review or clarify these Terms of Reference.

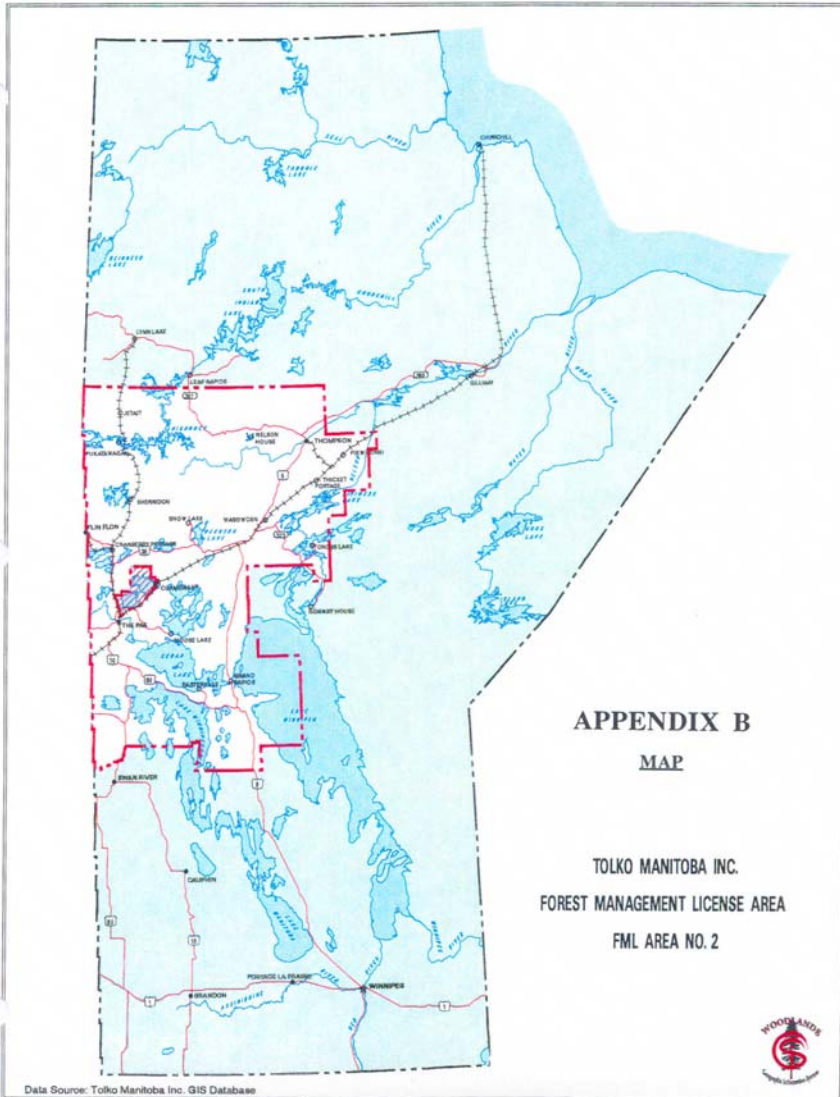
SCOPE OF THE REVIEW

The Clean Environment Commission is to consider the proposal and public concerns and provide a recommendation on:

- whether an Environment Act Licence should be issued respecting the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal.

Should the Commission recommend the issuance of a Licence, then appropriate recommendations should be included in the report respecting:

- the potential environmental impacts of the forest management activities proposed in the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal on the biophysical environment, sustainability of all forest values, including ecosystems and biological diversity, and land use;
- socioeconomic, social, cultural and health impacts directly related to the environmental impacts of the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal;
- measures proposed to mitigate any adverse impacts resulting from the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal and, where appropriate, to manage any residual adverse effects;
- proposed plans and procedures for the transportation, handling and disposal of dangerous goods and hazardous materials, and for response to environmental accidents;
- monitoring and research which may be recommended in relation to the forest management activities proposed in the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal.
- The Clean Environment Commission recommendations shall incorporate, consider and directly reflect, where appropriate, the Principles of Sustainable Development as contained in Towards a Sustainable Development Strategy for Manitobans, and in Manitoba's Forest Plan...Towards Ecosystem Based Management.



Data Source: Tolko Manitoba Inc. GIS Database



APPENDIX C

LIST OF REGISTERED PRESENTERS

Abramson, Ralph
Treaty Land Entitlement
Committee of Manitoba Inc.

Adams, Al
Norman Regional Development Corp.

Anderson, Michael
Manitoba Keewatinowi Okimakanak Inc.

Balenovic, Ivan
Manitoba Natural Resources

Chambers, Alice
Canadian Parks and Wilderness Society and
Private Representation

Chan, Randy
Tolko Manitoba Inc.

Clubb, Lindy
Western Canada Wilderness Committee

Cook, Kent
The Pas & District Chamber of Commerce

Corey, Susan
Manitoba Natural Resources

Cowell, Daryl
Geomatics International

DePape, Dennis
Geomatics International

Filuk, Ron
Private Representation

Gillespie, Brian
Manitoba Natural Resources

Gluska, Len
Rural Municipality of Kelsey

Hannon, Gord
Manitoba Justice

Hart, Charlie Jo
Nelson House Resource Mgmt Board

Henderson, Bill
Tolko Manitoba Inc.

Hoole, Art
Manitoba Natural Resources

Hopper, Gary
Town of The Pas

Hornbeck, Hugh
Private Representation

Hreno, Trent
Manitoba Environment

Hunt, Doug
Tolko Manitoba Inc.

Johanson, Ed
Private Representation

Johnson, Cathy
Manitoba Natural Resources

King, Al
Manitoba Natural Resources

Lamont, Bob
Manitoba Natural Resources

Lathlin, Don
Swampy Cree Tribal Council

Leonard, Lorne
Porcupine Trappers Association

Linklater, Darcy
Nisichawayasihk Cree Nation

Martin, Warren
Private Representation

Matthews Lemieux, Valarie
Nisichawayasihk Cree Nation

McNamee, Kevin
Canadian Nature Federation

Millar, Troy
Private Representation

Miller, Peter
Time to Respect Earth's Ecosystems

Mount, Doug
Tolko Manitoba Inc.

Munro, Ian
Private Representation

Nepinak, Harvey
Waterhen First Nation

Neufeld, Dave
Tolko Manitoba Inc.

O'Connor, Joe
Manitoba Natural Resources

Perchuk, Ward
Spruce Products Ltd.

Payne, Harvey
Pine Creek First Nation

Petryk, Michael
Petryk Brothers Ltd.

Petch, Virginia
Association of Manitoba Archaeologists

Polakoff, Jeff
Manitoba Northern Affairs

Prouse, Gordon
Manitoba Natural Resources

Scheffers, Karen
Atikimig Forest Centre

Soprovich, Dan
Private Representation

Stock, Karen
Private Representation

Smith, Chris
Tolko Manitoba Inc.

Smook, Ted
Thompson Brothers Ltd.

Sullivan, Don
Future Forest Alliance

Taylor, Mark
Geomatics International

Vogel, Chris
Manitoba Natural Resources

Watkins, Bill
Manitoba Natural Resources

Waugh, Duncan
Private Representation

Westwood, Richard
Manitoba Natural Resources

Whelan Enns, Gaile
Endangered Spaces Campaign

Wickware, Gregory
Geomatics International

APPENDIX D

LIST OF EXHIBITS

- | # | DESCRIPTION |
|-----|---|
| 1. | Letter, dated May 13, 1997 from Honourable James C. McCrae, Minister of Environment, Province of Manitoba, to Dale Stewart, Chairman, Manitoba Clean Environment Commission. |
| 2. | Letter, dated June 26, 1997 from Honourable James C. McCrae, Minister of Environment, Province of Manitoba to Dale Stewart, Chairman, Manitoba Clean Environment Commission. |
| 3. | "Terms of Reference for Clean Environment Commission Hearings on the Repap Manitoba Inc. 1997-2009 Forest Management Plan Proposal". |
| 4. | <u>Sustainable Development: Applying Manitoba's Forest Policies</u> . Government of Manitoba. |
| 5. | <u>Manitoba's Forest Plan...Towards Ecosystems Based Management: Report to Manitoba Natural Resources 1995</u> . Government of Canada, Government of Manitoba, KPMG Management Consulting. |
| 6. | <u>Forest Management Plan 1997 - 2009</u> . Repap Manitoba Inc. Submitted by R. L. Chan, Tolko Manitoba Inc. |
| 7. | "APPENDICES" <u>Forest Management Plan 1997 - 2009</u> . Repap Manitoba Inc. Submitted by R. L. Chan, Tolko Manitoba Inc. |
| 8. | "Environmental Impact Statement" <u>Forest Management Plan 1997 - 2009</u> . Repap Manitoba Inc. Submitted by Greg Wickware, Geomatics International. |
| 9. | "Presentation to the CEC" <u>Forest Management Plan 1997 - 2009</u> . Tolko Manitoba Inc. Submitted by R. L. Chan, Tolko Manitoba Inc. |
| 10. | "Presentation: Clean Environment Commission, September 4, 1997" Environmental Impact Statement: Forest Management Plan 1997 - 2009: Forest Management Licence Area No. 2". Submitted by Greg Wickware, Geomatics International. |
| 11. | "Submission to the Clean Environment Commission Hearing respecting the Repap Manitoba Inc. 1997-2009 Forest Management Plan". Manitoba Environment. Submitted by J. Trent Hreno, Manitoba Environment. |
| 12. | "MNR Video Presentation for Clean Environment Commission Hearings: Environment Act Licence Proposal File #3094.60 - Tolko Manitoba Forest Management Plan (1997-2009), FML #2". Submitted by Chris Vogel, Manitoba Natural Resources. |
| 13. | "Forest Management Submission - Manitoba Natural Resources". Manitoba Forestry Branch. Submitted by Susan Corey, Manitoba Natural Resources. |
| 14. | "Outline of Parks and Natural Areas Branch Presentation to Repap/Tolko Manitoba Clean Environment Commission Hearings". Submitted by Gord Prouse, Manitoba Natural Resources. |
| 15. | <u>Sustainable Management of Manitoba Forests: Section 1, February, 1997</u> . Manitoba Natural Resources. Submitted by Chris Vogel, Manitoba Natural Resources. |
| 16. | <u>Sustainable Management of Manitoba Forests: Section 2</u> . Manitoba Natural Resources. Submitted by Chris Vogel, Manitoba Natural Resources. |

17. "Concerns of the Porcupine Trappers' Assoc.". Submitted by Lorne Leonhard, Porcupine Trappers Association.
18. "An Action Plan for Manitoba's Network of Protected Areas 1996-1998". Manitoba Natural Resources. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign.
19. "Update: An Action Plan for Manitoba's Network of Protected Areas 1996-1997 Progress Report: 1997-1999 Strategic Plan Update". Manitoba Natural Resources. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign.
20. "Presentation by Chief Harvey Nepinak to the Clean Environment Commission Hearings at The Pas RE: Environmental Impact Assessment of the Repap (presently Tolko) Thirteen Year Forest Harvest and Renewal Plan 1997-2009." Submitted by Harvey Nepinak, Waterhen First Nations.
21. "Presentation by Chief Clifford McKay to the Clean Environment Commission Hearings at The Pas RE: Environmental Impact Assessment of the Repap (presently Tolko) Thirteen Year Forest Harvest and Renewal Plan 1997-2009." Submitted by Harvey Payne, Pine Creek First Nation.
22. "Presentation by Karen Stock, Dept. of Geography, University of Manitoba to the Clean Environment Commission Hearings at The Pas RE: Environmental Impact Assessment of the Repap (presently Tolko) Thirteen Year Forest Harvest and Renewal Plan 1997-2009." Submitted by Karen Stock.
23. "The Traditional Land-Use of the Waterhen First Nation vis-a-vis A Forest Management Plan". Karen Stock. April, 1997. Submitted by Karen Stock.
24. "Presentation to the Clean Environment Commission on Tolko Manitoba's 1997-2009 Forest Management Plan". Submitted by Michael F. Petryk, Petryk Bros. Ltd.
25. Brief, untitled, submitted by Troy Millar.
26. Brief, untitled, submitted by E. B. Johanson.
27. Brief, untitled, submitted by Duncan Waugh, Waugh Woods Ltd.
28. "Public Hearing Submission RE: 1997-2009 Forest Management Plan and Environmental Impact Statement TO: The Manitoba Clean Environment Commission FROM: Rural Municipality of Kelsey (Consol). Submitted by L.A. Gluska.
29. "Presentation of The Manitoba Keewatinowi Okimakanak Inc. to the Manitoba Clean Environment Commission respecting The Tolko Manitoba Inc. 1997-2009 Forest Management Plan and Related Environmental Impact Statement". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.
30. "Presentation to Manitoba Clean Environment Commission October 20, 1997 The Pas, Manitoba: Tolko Manitoba 1997-2009 Forest Management Plan". Submitted by Al Adams, Norman Regional Development Corporation.
31. "Presentation by the Town of The Pas to the Clean Environment Commission on Tolko Manitoba's 1997-2009 Forest Management Plan ". Submitted by Gary Hopper, Town of The Pas.
32. (A) "Framework Agreement Treaty Land Entitlement". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.
 (B) Correspondence, dated March 27, 1997, from W. J. Henderson, Repap Manitoba, to Michael Anderson, MKO. Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.
 (C) Excerpt (pages 35-40) from "Framework Agreement Treaty Land Entitlement". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.
 (D) Excerpt (pages 25-29) from "Framework Agreement Treaty Land Entitlement". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.

33. "Presentation to the Clean Environment Commission with respect to Tolko Manitoba Inc. 1997-2009 Forest Management Plan". Submitted by Don Lathlin, Swampy Cree Tribal Council.
34. Brief, untitled, submitted by Ward Perchuk, Spruce Products Ltd.
35. Brief, untitled, submitted by Ian Munro.
36. Brief, untitled, submitted by Ron Filuk, Blue Ox Inc.
37. "Motion to Suspend Hearings by Manitoba's Future Forest Alliance". Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
38. (A) Correspondence, dated October 9, 1990, from Bernard Valcourt, Minister, Fisheries and Oceans Canada, to Robert de Cotret, Minister, Environment Canada. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(B) Correspondence, dated September 4, 1990, from Keith Grady, Federal Environmental Assessment Review Office, to David Johns, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(C) Correspondence, dated December 18, 1990, from Greg McKinnon, Fisheries and Oceans Canada, to Paul Richards, Repap Manitoba Inc. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(D) "Draft - 03/25/91 Canada Manitoba Agreement on Terms of Reference for a Federal - Provincial Panel to Conduct a Public Environmental Assessment Review of the Proposed Repap Mill Development and Forestry Plan". Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(E) "Canada-Manitoba Agreement for Environmental Assessment Harmonization". Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(F) Correspondence, dated February 14, 1996, from Dan McNaughton, Canadian Environmental Assessment Agency, to Clem Moche, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(G) Correspondence, dated January 23, 1996, from Barry Briscoe, Environment Canada, to Larry Strachan, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(H) Correspondence, dated May 23, 1997, from Val Chacko, Environment Canada, to Trent Hreno, Forest Technical Advisory Committee. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(I) Correspondence, dated May 15, 1997, from Donald Cobb, Fisheries and Oceans Canada, to Trent Hreno, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(J) Correspondence, dated May 15, 1997, from M. Fay, Parks Canada, to Trent Hreno, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(K) Correspondence, dated January 17, 1996, from Donald Cobb, Fisheries and Oceans Canada, to Dan McNaughton, Canadian Environmental Assessment Agency. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(L) Correspondence, dated February 5, 1996, from Martin Egan, Indian and Northern Affairs Canada, to Dan McNaughton, Canadian Environmental Assessment Agency. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(M) Correspondence, dated July 9, 1997, from Grant Baker, Manitoba Natural Resources to Larry Strachan, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(N) Correspondence, dated July 10, 1997, from Trent Hreno, Manitoba Environment, to W.J. Henderson, Repap Manitoba Inc. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(O) Correspondence, dated July 14, 1997 from W.J. Henderson, Repap Manitoba Inc. to Trent Hreno, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
(P) Correspondence, dated May 12, 1997 from Ron Quinn, Saskatchewan Environment and Resource Management to Trent Hreno, Manitoba Environment. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
39. Response to Motion #1. Manitoba Clean Environment Commission. Submitted by Manitoba Clean Environment Commission.
40. Response to Motion #2. Manitoba Clean Environment Commission. Submitted by Manitoba Clean Environment Commission.

41. "Comments on Tolko Manitoba's 1997-2009 Forest Management Plan and EIS from Time to Respect Earth's Ecosystems (TREE): Clean Environment Commission Hearings, October 29, 1997". Submitted by Peter Miller, Time to Respect Earth's Ecosystems.
42. Map: "Assessment of Representation of Landscape Units within FML 2 Based on Existing Protected Lands and the National Park Proposal". Submitted by Bill Watkins, Manitoba Natural Resources.
43. "Presentation by the Association of Manitoba Archaeologists to the Manitoba Clean Environment Commission Regarding Repap Manitoba Inc. (Tolko) 1997-2009 Forest Management Plan". Submitted by Virginia Petch, Association of Manitoba Archaeologists.
44. "Manitoba Department of Northern Affairs/Manitoba Department of Justice Presentation Regarding Treaty Land Entitlement Framework Agreement/Northern Flood Agreement to The Clean Environment Commission The Tolko Manitoba Inc. 1997-2009 Forest Management Plan". Submitted by Jeff Polakoff, Manitoba Northern Affairs and Gordon Hannon, Manitoba Justice.
45. Brief, untitled, submitted by Lindy Clubb, Mixedwood Forest Advisory Council/Western Canada Wilderness Committee.
46. "Remarks to Manitoba Clean Environment Commission in the matter of Repap/Tolko Ltd. Forest Management License #2 (1997-2009)" [with supporting documentation] Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
 - (A) "Guidelines for Cave and Karst Protection". 1996. World Conservation Union. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
 - (B) "Endangered Spaces Progress Report 1996-97 Number 7". World Wildlife Fund. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
 - (C) "A Companion to World Wildlife Fund's Endangered Spaces Progress Report - 96-97 Guide to the Grades". World Wildlife Fund. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
 - (D) "The Last Frontier Forests: Ecosystems & Economics on the Edge". Dirk Bryant, Daniel Nielson, Laura Tanglely. 1997. World Wildlife Fund. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
 - (E) "Current Issues in Forest Certification in Canada". Chris Elliot, Arlin Hackman. 1996. World Wildlife Fund. Submitted by Gaile Whelan Enns, Endangered Spaces Campaign/World Wildlife Fund Canada.
47. "Vision Use in Forest Management". Ministry of Forests and Lands, Province of British Columbia. Submitted by Richard Westwood, Manitoba Natural Resources.
48. "Submission by Kevin McNamee, Wildlands Campaign Director, Canadian Nature Federation to the Clean Environment Commission Hearings on the Environmental Impact Statement and Forest Management Plan for 1997-2009 Repap Manitoba Inc. October 30, 1997". Submitted by Kevin McNamee, Canadian Nature Federation.
49. "A Presentation to the Clean Environment Commission". Submitted by Dan Soprovich, Bluestem Wildlife Services.
50. Brief, untitled, submitted by Hugh Hornbeck. [Read into record by Lindy Clubb].
51. "Canada Department of Fisheries and Oceans - Habitat Management Presentation to the Manitoba Clean Environment Commission Hearings Regarding the Tolko Manitoba Inc. 1997-2009 Forest Management Plan and Associated Environmental Impact Assessment". Submitted by Don Cobb, Fisheries and Oceans Canada.
52. "Presentation by CPAWS Manitoba to the Manitoba Clean Environment Commission RE: The Repap Manitoba Inc. 1997-2009 Forest Management Plan" Submitted by Alice Chambers, Canadian Parks and Wilderness Society.

53. "Population Statistics" "Confirmed Treaty Land Entitlement Amounts and Potential Forest Section Locations of TLE Selections" Map: "Manitoba Keewatinowi Okimakanak First Nations". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak.
54. "Treaty Land Entitlement Framework Agreement - Background and Summary". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak.
55. "Summary of the Treaty Land Entitlement Framework Agreement". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak.
56. "Presentation of the Nisichawayasihk Cree Nation to the Clean Environment Commission respecting The Tolko Manitoba Inc. 1997-2009 Forest Management Plan and Related Environmental Impact Statement" [with supporting documentation]. Submitted by Myers Weinberg Kussin Weinstein Bryk - Solicitors for Nisichawayasihk Cree Nation.
57. "Motion of the Manitoba Keewatinowi Okimakanak Inc., October 30, 1997, In the Matter of The Manitoba Clean Environment Commission Environmental Review of the Tolko Manitoba Inc. 1997-2009 Forest Management Plan". Submitted by Michael Anderson, Manitoba Keewatinowi Okimakanak Inc.
58. "Motion of the Nisichawayasihk Cree Nation, October 30, 1997, In the Matter of The Manitoba Clean Environment Commission Environmental Review of the Tolko Manitoba Inc. 1997-2009 Forest Management Plan". Submitted by Darcy Linklater Nisichawayasihk Cree Nation.
59. "Motion of the Treaty Land Entitlement Committee of Manitoba Inc., October 30, 1997, In the Matter of The Manitoba Clean Environment Commission Environmental Review of the Tolko Manitoba Inc. 1997-2009 Forest Management Plan". Submitted by Ralph Abramson, Treaty Land Entitlement Committee of Manitoba Inc.
60. "A Summary Report on the Alternative to Clear Cutting Hardwoods". Don Sullivan. 1997. Submitted by Don Sullivan, Manitoba's Future Forest Alliance.
61. "Repap Manitoba Inc. 1997-2009 Forest Management Plan: MB Environment File No 3094.60 - Presentation to the Manitoba Clean Environment Commission". Submitted by Alice Chambers.
62. "Presentation by Karen Stock, Department of Geography, University of Manitoba, to the Clean Environment Commission Hearings at The Pas Re: 1997-2009 Forest Management Plan, Repap Manitoba Inc. (presently Tolko) - Geographic Background Information: Chitek Lake Wood Bison". Submitted by Karen Stock.
63. "Waterhen First Nation Assessment of Repap Manitoba 1996 Annual Harvest and Renewal Plan October 1995." Harvey Payne. Submitted by Harvey Nepinak, Waterhen First Nation.