



November 27th, 2014

Elise Dagdick
Environmental Assessment and Licencing Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main Street,
Winnipeg, MB
R3C 1A5

Re: Env. Act. Licence 2191 E extension conditions fulfilled

Dear Mrs. Dagdick:

LP has reviewed and acted upon your letter dated December 30, 2013 regarding a five-year extension to Environment Act Licence 2191 E. Specifically, condition one stated:

- 1) *By November 30, 2014 LP must, in relation to the development of an FMP for Forest management Licence Area (FMLA) No. 3:*
 - a. *develop and present to the FMP Planning Team for approval of the Director of the Forestry Branch an updated Terms of Reference for the FMP; and*
 - b. *have one or more draft operating areas for FMU 13 reviewed by the Stakeholder Advisory Committee, the local Moose management Committee, and the FMP Planning Team.*

Condition 1a – Terms of Reference

Director of Forestry – John Dojack signed and approved the Terms of Reference (ToR) on September 5th, 2014 (Appendix I). The ToR were also presented to the FMP Planning Team at their first meeting on Nov. 21st, 2014 (Appendix II) at the C-FIR boardroom in the University of Winnipeg. Please be aware that the ToR is a ‘living document’, and that small improvements to the ToR are in progress by the FMP Planning Team.

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Condition 1b – draft operating areas

Our planner (Vern Bauman) has developed two draft operating areas, which incorporate landscape planning that will assist with restricting access in Forest Management Unit 13 – Duck Mountain Provincial Forest.

The first operating area is in the Upper Dam (UPD) area, showing an area with much previous harvesting (Appendix III). In the UPD case, the landscape level plan's goal is to complete the harvesting in UPD area (Appendix IV), which would allow the road access to be closed until the next harvest rotation 50 to 70 years from now.

The second operating area is in the Watjask Lake (WJL) area, showing an area with almost no previous harvesting (Appendix V). The WJL area landscape level plan's goal is to demonstrate aggregated harvesting with a minimal amount of road (Appendix VI). Harvesting would be completed in two or three years, then the road closed until the next harvest rotation 50 to 70 years from now.

These two draft operating areas (UPD and WJL) have been reviewed by:

- i) Western Region Wildlife and Forestry staff on May 7th, 2014 (Appendix VII);
- ii) FML 3 Stakeholder Advisory Committee meeting on May 26th, 2014 (Appendix VIII)
- iii) Regional Moose Advisory Committee on Oct. 8th, 2014 (Appendix IX);
- iv) A second FML 3 Stakeholder Advisory Committee meeting on Oct. 20th, 2014 (Appendix X);
- v) FML 3 FMP Planning Team on Nov. 21st, 2014 (Appendix XI).

I trust that these licencing conditions 1a (Forest Management Plan - Terms of Reference) and 1b (draft operating areas) are met to your satisfaction. Please e-mail or call me if you have any questions, comments, or clarification items.

Sincerely,



Paul LeBlanc, District Forester

Swan Valley - Forest Resources Division

- c: Alisa Ramrattan, A/Director, Forestry Branch and Peatland Management
Don Labossiere, Director, Environmental Compliance and Enforcement Branch
Perry Stonehouse, Regional Director, Western Region
Robert Fournier, Canadian Forest Resources Manager, LP Canada Ltd.

Updated 20 Year Forest Management Plan for Forest Management Licence 3

Terms of Reference

Revised: September 5th, 2014

EXECUTIVE SUMMARY

Who – The holder of Forest Management Licence 3 is the plan proponent. The plan regulators are the province of Manitoba. The citizens of Manitoba, First Nations, Metis, stakeholders, conservations groups, and environmental groups will provide input and guidance to the plan.

A Planning Team consisting of LP staff, Manitoba Conservation and Water Stewardship staff, and possibly scientists or consultants will guide the creation of the Forest Management Plan. The Planning Team members will include:

- LP District Forester
- LP Planner
- LP Wildlife Biologist
- Mountain Forest Section Renewal Company - Silviculture Forester
- Forestry and Peatlands Management Branch
 - Western Region Forester
 - Forest Management and Development Representative
 - Forest Inventory and Resource Analysis Representative
- Integrated Resource Management Team / Conservation & Water Stewardship (CWS) Wildlife Branch - Representative

Other LP and CWS staff, Timber Quota holders, the Public or Stakeholders will be involved at different stages of development.

What – This Terms of Reference (ToR) is a blueprint for updating the 2006-2026 Forest Management Plan for Forest Management Licence 3. The update to a new 20 year plan is designed to simultaneously benefit moose with a community-supported strategy for the long-term conservation of moose populations, as well as other ecosystem values. Moose management benefits are being discussed with First Nations, Metis, stakeholders, and wildlife branch. The plan proponent will incorporate moose science and traditional knowledge regarding moose wherever possible. Ecosystem-Based Management will continue to be a central theme in the updated plan's land base, yield curves, management objectives, and modeling.

Where – Forest Management Licence 3 (Duck Mountain Provincial Forest) and surrounding area. This area is mostly within the Boreal Plain ecozone, with a small portion of the area within the Prairie ecozone.

When - The Terms of Reference (ToR) are like blueprints. Before a house is built, plans are crafted as to how to build the house. Once the blueprints are finalized, construction of the house may begin. As per the province’s 20 Year FMP guidelines (MC 2007):

“...Manitoba Conservation will approve [Terms of Reference], normally two years prior to plan submission.”

Therefore, the ToR must be mutually agreed upon in writing by the plan regulator (Forestry and Peatland Management Branch) and the Plan proponent (LP Canada Ltd.). Once ToR written approval occurs, the plan proponent will begin to follow the ToR blueprint and develop an update to the 20 Year Forest Management Plan for FML 3.

This ToR is related to the development of a 2018-2037 Forest Management Plan for Forest Management Licence 3, and anyone who harvests forest ecosystems within FML 3 during 2018-2037.

Information gathering and documentation of meetings – First Nations, Metis, northern communities, stakeholders, public at various stages of the plan:

- During plan development (post ToR approval, but the beginning of the plan process)
- Middle of the plan development – scenario planning, iterative modifications to scenarios based on input
- Scoring forest management scenarios to assist in choosing the ‘Preferred Management Scenario’ complete with 20 years of harvest scheduling and modeling output

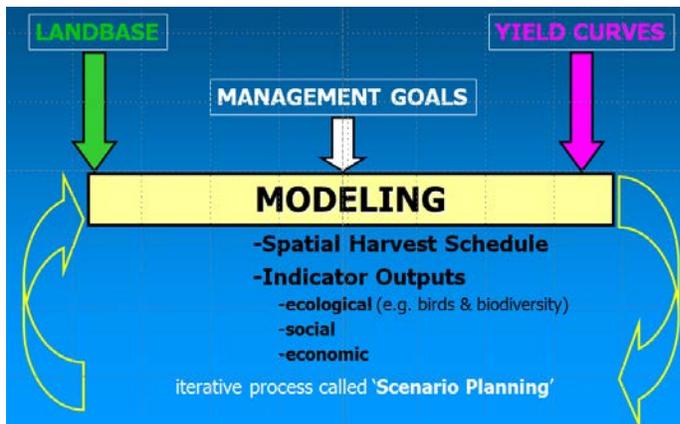
The planning team goal is to complete the FMP sooner than the timelines below but unseen delays may occur therefore these dates will guide the process.

April 2015	LP and CWS to Initiate public engagement and aboriginal consultation
April 2016	LP to submit first draft FMP text other than preferred Management scenario (the FMP draft text can be submitted in advance of this date as each chapter is complete)
December 2016	Modeling complete and Preferred Management Scenario selected
April 2017	LP to Submit first complete draft FMP for completeness review
July 2017	CWS to provide LP with comments from completeness review
December 2017	Submit Final FMP
December 2018	FMP Approval

Consultation of Sustainable Development Initiative (COSDI) 2002 provides further guidance on the principal elements of an effective communication strategy to involve stakeholders and governments in the development of a forest management plan and further illustrate the need for “transparent, timely and inclusive decision making”, “the development of meaningful, practical indicators” and to “follow the principle that good work which is up to date need not be done again”.

Why - The update to the existing 20 year plan is designed to simultaneously benefit moose and other ecosystem values.

How – A 20 Year Forest Management Plan (FMP) is a large and complex undertaking. Therefore, the Terms of Reference for this FMP update is sub-divided into meaningful categories:



- land base,
- yield curves,
- management goals, and
- modeling

The land base, yield curves, and management goals all lead into an iterative modeling process. Opportunities for input from First Nations, Metis, stakeholders, public, and government departments exist in all the

sub-divided categories.

Mediation

During the course of writing an FMP the Planning Team may encounter an impasse on courses of action. In the event of an impasse, a two-stage process will be used. Stage one mediation consists of a discussion between the LP Area Forest Manager and the Director of Forestry. Ideally, the impasse would be broken by the Area Forest Manager and Director of Forestry agreeing upon a solution. Stage two mediation would be enacted only if stage one mediation fails. Stage two mediation would consist of the LP Area Forest Manager and the Director of Forestry agreeing upon a third-party consultant. The third-party consultant would provide a solution that would break the impasse, allowing the Forest Management Plan efforts to continue.

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1. INTRODUCTION



Manitoba Conservation and Water Stewardship has requested in writing (Appendix I), that LP Canada Ltd.:

“...develop and present to the FMP Planning Team for approval of the Director of the Forestry Branch an updated Terms Of Reference for the FMP [Forest Management Plan]...”.

The Terms of Reference (ToR) are like blueprints. Before a house is built, plans are crafted as to how to build the house. Once the blueprints are finalized, construction of the house may begin. As per the province’s 20 Year FMP guidelines (MC 2007):

“...Manitoba Conservation will approve [Terms of Reference], normally two years prior to plan submission.”

Therefore, once the ToR are mutually agreed upon in writing, the plan proponent will follow the ToR blueprint and develop another 20 Year Forest Management Plan for FML 3. The timeframe for FMP submission will be two (2) years after approval of the Terms of Reference.

The Plan **proponent**, LP Canada Ltd., is the licence holder for Forest Management Licence 3 (FML 3), the Duck Mountain Provincial Forest and surrounding area. The plan **regulator**, MCWS- Forestry and Peatlands Management Branch has published 20 year FMP guidelines (2007) that LP will use as guidance in development of the ToR.

1.1 Ecologically-Based Approach

An **ecologically-based approach** to this proposed plan is consistent with provincial, national, and international guidance:

Provincial

- Manitoba's Forest Plan - Towards Ecosystem Based Management (KPMG, 1995)
- Manitoba's 20 Year FMP guidelines (2007)
- Tomorrow Now: Manitoba's Green Plan (2014)

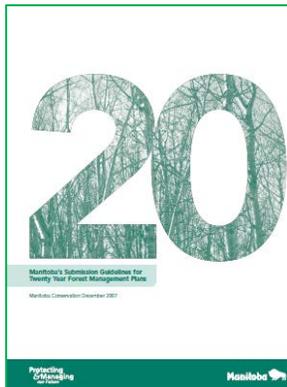
National

- Sustainable Forestry Initiative (SFI) certification system
- Forest Stewardship Council (FSC) certification system (Boreal Standard)
- Canadian Council of Forest Ministers – Indicators of Sustainable Forest Management (2003);
- Sustainable Forest Management (SFM)
- Canadian Boreal Forest Agreement (CBFA) Goal one: world-class forestry practices;
- Conservation groups

Globally

- Embedded with the World Conservation Strategy (International Union for the Conservation of Nature et al. 1980)
- United Nations Conference on Environment and Development's Agenda 21 (United Nations 1992a)
- United Nations Convention on Biological Diversity (United Nations 1992b)

1.2 Terms of Reference



(quoted from Manitoba Conservation 2007 FMP guidelines page 2, section 2.0 Pre-Planning Requirements)

Terms of Reference

The terms of reference is a living document. The terms of reference is used by the proponent and Manitoba Conservation as a planning aid to share information including scheduled activities, which Manitoba Conservation will approve, normally two years prior to plan submission. Wood supply information and/or analysis (base case) will be provided by the province. If Manitoba does not have a base case completed, in part or in total, by the time the terms of reference for the FMP is submitted, the Director of Forestry will give written instructions to the proponent on how to proceed in a timely manner.

The province will also provide:

- the date of FMP submission to Forestry Branch
- details of the Manitoba Conservation review process
- details of the Environmental Assessment and Licensing Branch process, under the Manitoba *Environment Act* (dates and actions required)
- Manitoba's First Nation consultation process (timelines and communities), including proponent's role in providing information for consultation
- proposed FMP approval date

- existing issues on the forest management license area
- confirmation that the suite of indicator species (plant and/or animal) proposed are satisfactory
- available information regarding other resource uses
- other relevant land base management plans

The proponent will provide:

- the public communication plan
- existing issues on the forest management license area
- the selected indicator species to be analysed in the FMP
- a request for information regarding other resource uses and the date the information is required

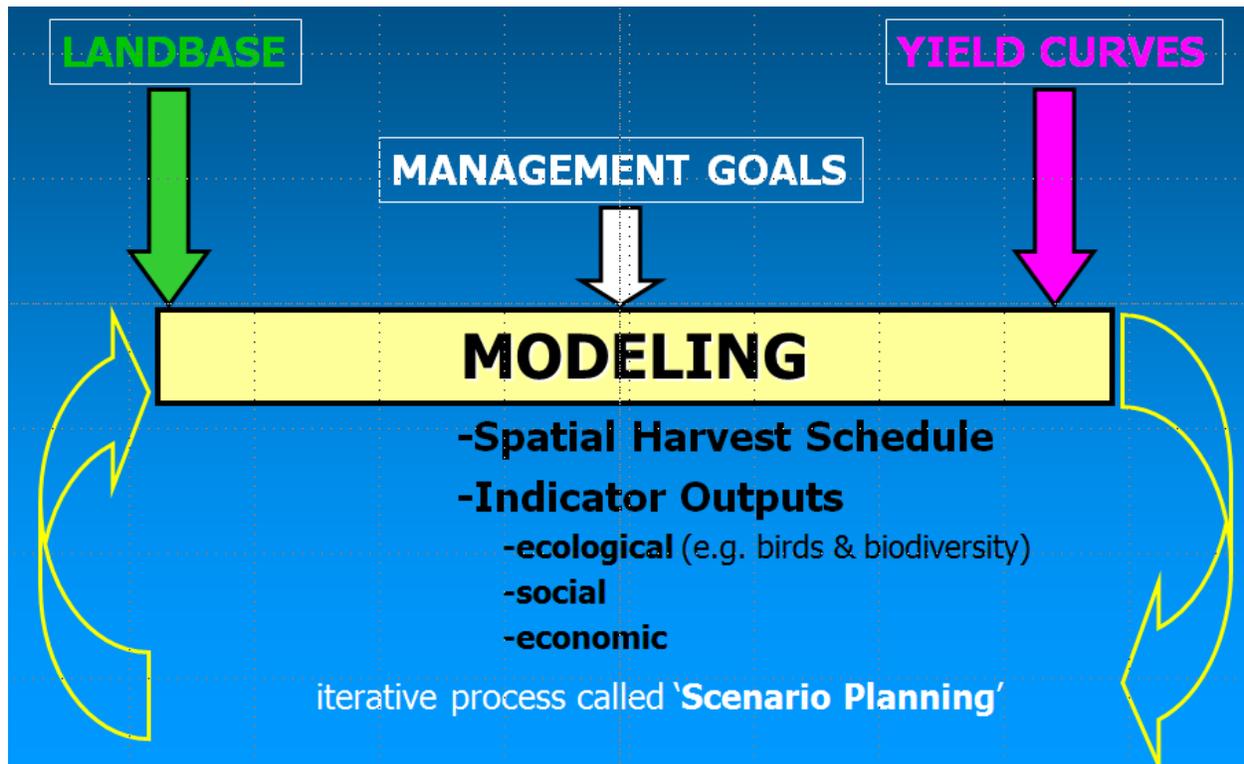
As stated in Manitoba Conservation's 20 Year FMP guidelines (2007):

"This guidebook is written to help professionals obtain an approved FMP. The proponent has the discretion to assemble the FMP in a form they prefer as long as the required information is contained within the FMP. The tables presented in the guidelines are not standards but are examples of showing the information required in the FMP."

1.3 Mediation

During the course of writing an FMP the Planning Team may encounter an impasse on courses of action. In the event of an impasse, a two-stage process will be used. Stage one mediation consists of a discussion between the LP Area Forest Manager and the Director of Forestry. Ideally, the impasse would be broken by the Area Forest Manager and Director of Forestry agreeing upon a solution. Stage two mediation would be enacted only if stage one mediation fails. Stage two mediation would consist of the LP Area Forest Manager and the Director of Forestry agreeing upon a third-party consultant. The third-party consultant would provide a solution that would break the impasse, allowing the Forest Management Plan efforts to continue.

2. FOREST MANAGEMENT PLAN OVERVIEW



A modern 20 Year Forest Management Plan (FMP) is a large and complex undertaking. Therefore, creating Terms of Reference for this FMP is sub-divided into meaningful categories:

- land base,
- yield curves,
- management goals; and
- modeling

The land base, yield curves, and management goals all lead into an iterative modeling process.

Please note that First Nations, Metis, northern communities information sharing, combined with stakeholders, public, and expert input can occur in each category. Likely, different groups will have more input into one category than others.

Embedded science – wherever possible, relevant science and traditional knowledge will be added into the land base, yield curves, management goals, and modeling.

2.1 Information Sharing and Consultation Plan

A significant component of the update to the 2006 FMP will be information sharing with First Nations, Metis and northern communities. Furthermore, stakeholders and the public will be consulted.

Information sharing and consultation will happen at various stages of the plan:

- During plan development (post ToR approval, but the beginning of the plan process);
- Middle of the plan development – scenario planning, iterative modifications to scenarios based on input; and
- Scoring forest management scenarios to assist in choosing the ‘Preferred Management Scenario’ complete with 20 years of harvest scheduling and modeling output.

Multiple methods will be used to engage the various groups of people. Furthermore, the province Manitoba will commence Crown-Aboriginal Consultation in April 2015 well before any major block selection or primary or secondary road development is planned (Appendix II).

The province of Manitoba anticipates that the following First Nations, Metis, and Aboriginal Communities will be interested:

- National Mills Community Council
- O-chi-chak-ko-sipi First Nation
- Pelican Rapids Community Council
- Pine Creek First Nation
- Powell Community Council
- Red Deer Lake Community Council
- Rolling River First Nation
- Sandy Bay Ojibway Nation
- Sapotaweyak Cree Nation
- Skownan First Nation
- Tootinaowaziibeeng Treaty Reserve
- Waterhen Community Council
- Waywayseecappo First Nation
- Wuskwi Sipiik First Nation

LP will be contacting the same list of First Nations, Metis, and Aboriginal Communities that the province of Manitoba contacts in their Crown-Aboriginal Consultation process.

2.2 Existing Issues

The initial existing issues in the Duck Mountains and surrounding area are listed below. This list will be modified during the information sharing and consultation stages.

- low moose population
- community-supported strategy for the long-term conservation of moose populations
- landscape-level management
- water yields
- excessive beaver population
- roads and road access
- species at risk
- ATV trails

To date, some existing issues have been raised by local stakeholders with regards to the decline in moose populations. Manitoba and other prairie provinces have experienced increased precipitation events during spring and summer months, increasing the frequency of spring and summer flood events. First Nation Communities, situated nearby Lake Winnipegosis and Valley River, have experienced increased water levels and have raised water as an issue. The province of Manitoba has also begun to review the issue of changing water levels.

There are many factors that have contributed to the moose population decline within this area. Road access into forest areas has been determined as a leading cause of moose population decline. Road access has increased both predator (e.g. wolf and bear) and hunting access for both licensed and unlicensed hunters. LP will be investigating a landscape management approach where future harvest will reduce the amount of road access. Additionally, we will reduce the number of active harvesting areas by aggregating forest harvest. This approach will be developed collaboratively with the Manitoba Provincial Government, First Nations and other stakeholder groups.

In recent years, Manitoba and other prairie provinces have experienced increased precipitation events during spring and summer months which have contributed to increases in severe overland flooding events across the prairies. Within the Duck Mountain region, higher water levels have been experienced in local communities situated near Lake Winnipegosis and Valley River as a result of this overall weather/ climate trend. LP made an initial commitment back in 1996 during the Clean Environment Commission (CEC) Hearings for the 10 Year Forest Management Plan (1996-2006), where based on existing science, no more than 30% of a watershed would be in a harvested state. To date, LP has tracked harvest levels and has never come close to exceed that threshold. However, LP will continue to track harvest levels and implement best management practices to prevent and/or minimize changes to water flow into the future.

2.3 Indicator Species in the FMP

LP will provide selected biodiversity indicator species to evaluate and monitor the ecological and social sustainability of the preferred forest management scenario. These indicators will include a closer examination of species such as forest song birds and moose. Other indicator species may be added during the information sharing and consultation stages. The list of indicator species in the FMP will be shared with Wildlife Branch.

2.4 Information Requests regarding other resource uses

2.4.1 2006 FMP 'completeness review'

LP wants Forestry Branch to provide LP with a copy of their 'completeness review' of the 2006 FMP, in an attempt to proactively avoid the same issues that caused delays.

2.4.2 Forestry Branch Base Case Scenario

In order to utilize the Base Case as a scenario, LP needs a copy of the Base Case shape files, modeling runs, model output, all model inputs, and other related documentation.

3. LANDBASE



A digital modeling land base needs to be created for Forest Management Licence 3. In keeping with the province of Manitoba’s stated goal of an ecologically-based approach, an ecological land base consisting of uplands, peat lands, and wetlands will be created. The ecological land base will include all ecosystems, not just upland timber.

As stated in Manitoba Conservation’s 20 Year FMP guidelines:

“This guidebook is written to help professionals obtain an approved FMP. The proponent has the discretion to assemble the FMP in a form they prefer as long as the required information is contained within the FMP. The tables presented in the guidelines are not standards but are examples of showing the information required in the FMP.”

Forest Inventory and Resource Analysis section has agreed to update the ecosystem modeling landbase. All disturbances up to March 31st, 2014 would be included. LP would then review the landbase to ensure completeness, and utilize the updated landbase in the Forest Management Plan. All analysis by the province of Manitoba and LP would utilize the same modeling landbase file.

3.1 Ecological Boundaries

Ideally, there would be a single ecological land base that follows ecosystem boundaries at a relevant scale. This is well-described by the province of Manitoba’s 5-Year Report on the Status of Forestry 2006-2011 in the section called “Ecozone-Based Reporting Structure” (Figure 1).

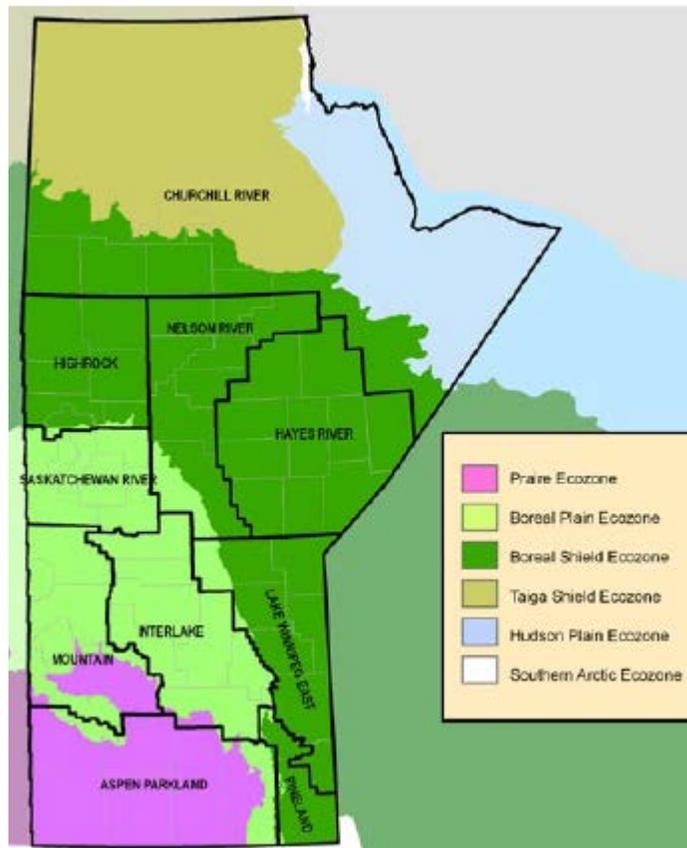


Figure 1. Ecozone boundaries and forest section boundaries in Manitoba (Manitoba Conservation and Water Stewardship 2011).

3.2 Ecological Land Base

Forest Management Licence 3, consists of three Forest Management Unit (FMU) administration areas:

1. FMU 10 (area east and south of the Duck Mountains)
2. FMU 11 (Swan-Pelican forest and Swan Valley areas)
3. FMU 13 (Duck Mountain Provincial Forest)

There are separate forest inventories for each area. Each inventory has a different date and different methodology. These differences create some challenges for amalgamating forest land bases. Peat lands, wetlands, soils, and any other mapped ecological products will be incorporated into the ecological land base (Table 1). It has been agreed that the Ducks Unlimited Canada wetlands mapping will be utilized across all FMUs, wherever possible.

Table 1. Ecological land base components by Forest Management Units.

	FMU 10	FMU 11	FMU 13
Surficial Geology	Manitoba Geological Survey (MGS) 1:250,000 scale surficial geology maps		
Soil Landscapes of Canada (SLC)	Consistent coverage across Canada. (used for high-level ecological boundaries like EcoRegions)		
Soil mapping (bottom-up ground samples and photos)	Agriculture soil maps (1959) scale 1:126,720	Agriculture soil maps (1962) scale 1:126,720	2002 Forest Lands Inventory soils mapping 1:60,000 scale
Soils – ground samples only	Pre-Harvest Survey soils data from proposed cutblocks (point samples with X,Y coordinates - not complete coverage of areas)		
Peat lands and wetlands	Ducks Unlimited Canada - Enhanced Wetland Classification Guide (2007) satellite interpretation (30 m resolution) -bogs, fens, swamps, marshes and open water. <i>Note that in FMU 13 only, there is also 1:15,000 wetland photo interpretations as part of the 2002 Forest Lands Inventory.</i>		
Forest Inventories	1982 or 1984 Forest Resources Inventory -annual harvest mapping	2009 Forest Resources Inventory <i>(available in the near future)</i> -annual harvest mapping	-2002 Forest Lands Inventory (ecosystem mapping) -2012 blow down mapping -annual harvest mapping
Wildlife Surveys	Wolf survey?	Moose aerial surveys:	Moose aerial surveys flown: Feb 2009? Feb. 2014 Elk aerial survey? LP Bird surveys
Ecosites	Option to generate ecosites across FMU 10 (combine soil and forest cover)	Option to generate ecosites across FMU 11 (combine soil and forest cover)	1:15,000 scale stand-level ecosystems mapped
Watershed Boundaries			
Water – lakes, rivers, creeks			
Roads -			

3.3 Land Base Strata

In keeping with the province of Manitoba’s stated goal of an ecologically-based approach, ecological strata will be used for modeling all ecosystems goods and services.

“The purpose of FMP’s is to ensure the use of forest resources in Manitoba is consistent with the province’s commitment to an ecosystem-based approach to achieving sustainable forest management.”

Manitoba’s Five-year report on the Status of Forestry (April 2006-March 2011).

Timber-only strata do not capture the ecological detail needed to manage ecosystems. Negative consequences of using timber strata include the loss of: Carbon curves; Habitat Element Curves; successional trends of forest ecosystems; linkages to elk habitat (Chranowski 2009); and biodiversity indicators from birds.

The plan proponent can use ecological strata, and the plan regulator can still track timber strata simultaneously. The 2006 FMP took Ecosystem Based Management (EBM) seriously, and used ecosystem strata throughout the FMP (volume curves, Carbon curves, Habitat Element Curves – snags, down woody debris, % shrub cover etc.). The ecological strata also provided an ‘ecological robustness’ that benefited biodiversity and Dr. Rob Rempel’s bird habitat modeling.

Ecological strata and timber strata are not mutually exclusive on the Duck Mtn land base with the Forest lands Inventory. The Forestry Corp. consultants, Rob Arnup, and LP had the foresight to setup the inventory to easily allow multiple strata to be assigned to every polygon. In the LP data, each polygon in the Duck Mountain Provincial Forest was assigned an:

- Ecosite
- EcoSeries
- Habitat Element Curve strata
- Ecological Representation Analysis (class 1 to 5)
- Rare Ecosites (scale of 1 to 5)
- Seral stage
- Note that any other classifications can easily be added

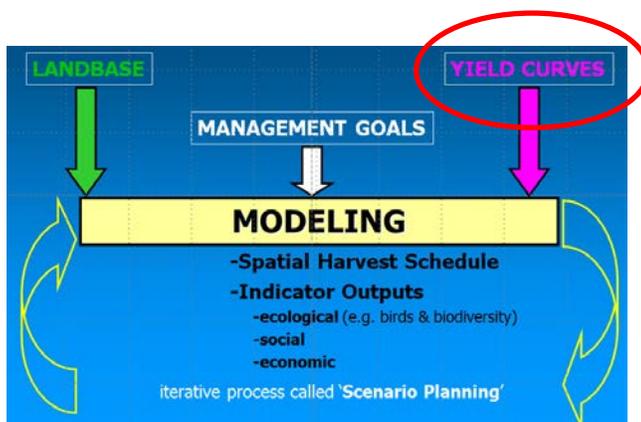
In summary, ecological strata can be used, and the plan regulator can still track timber strata simultaneously.

3.4 Updating the digital modeling land base

The 2006 FMP modeling landbase will be updated to the date stamp March 31st, 2014 including:

- Updating natural disturbance – e.g. June 2012 blowdown event which MC mapped; any mapped fires or mapped insect and disease events
- Updating actual cutover boundaries to March 31st, 2014
- Account for all wetlands (bogs, fens, swamps, marshes and open water) in FML 3 (using Ducks Unlimited Canada wetland mapping)
- Traditional knowledge if location-specific
- Ensuring the unique key field (FORESTKEY) is present. FORESTKEY allows us to link each polygon to ecosites, HEC strata, future wildlife habitat rankings, etc.
- Restoring the original FMU 13 Duck Mountain boundary back to the surveyed boundary edge, which is easily seen both aerially and on the ground

4. YIELD CURVES



Yield curves provide information for forest management decisions. Ecosystem yield curves would include a variety of ecosystems goods and services (e.g. snags and coarse woody debris) rather than just the standard yield curve of merchantable timber volume over age. Note that a yield curve is needed for each strata/ ecosystem goods and services combination.

As stated in Manitoba Conservation's 20 Year FMP guidelines:

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4.1 Volume Curves

Volume over age (i.e. volume curves) is a standard modeling input that estimates changes in timber volume over time across the landbase. LP will not use volume curves to determine wood supply, since Forestry and Peatlands Management Branch determines wood supply numbers.

The Forestry and Peatlands Management Branch wishes to re-evaluate the volume curves used by LP in the 2006 Forest Management Plan. Therefore, these Terms of Reference for creating a Forest Management Plan will need to be amended once agreement is reached regarding volume curves.

LP has utilized Forestry Branch's yield curves within the range of actual sampled observations (aged 40 to 120 years) from the 2002 Forest Lands Inventory. LP did not extrapolate beyond 120 years, but utilized the Riding Mountain Permanent Sample Plot data for ages 120-200 years (LeVac 2012). The Riding Mountain data showed that stand volume declined with age, canopy gaps opened, and 2-cohort stands of a lower volume were formed. For ages older than 200 years, no data are currently available.

4.2 Carbon Curves

The Canadian Forest Service - Forest Carbon Accounting model (CBM-CFS3) is one way to account for carbon. However, CBM-CFS3 runs outside the modeling system, requiring a data export after each and every modeling run is completed.

The use of Dr. Mark Johnston's carbon curves for ecological strata in the Duck Mountains (Johnston 2005) allows the carbon to be accounted for inside the modeling run, and is easily generated with each scenario. In addition, the carbon curves are calibrated to local conditions using the same data that the province of Manitoba used for creating yield curves.

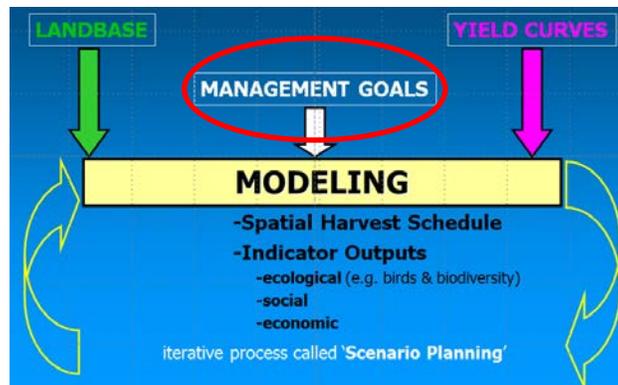
4.3 Snag and Coarse Woody Debris Curves

LP will utilize the whole suite of ecosystem yield curves (Habitat Element Curves) for volume over age, snags by age, down woody debris, % shrub cover etc.

4.4 Modeling Inputs - Post-Harvest Transitions

The Forestry and Peatlands Management Branch wishes to examine post-harvest transitions of harvested hardwood, mixedwood, and softwood stands. Therefore, these Terms of Reference for creating a Forest Management Plan will need to be amended once agreement is reached regarding post-harvest transitions.

5. MANAGEMENT GOALS



As stated in Manitoba Conservation's 20 Year FMP guidelines (2007):

"This guidebook is written to help professionals obtain an approved FMP. The proponent has the discretion to assemble the FMP in a form they prefer as long as the required information is contained within the FMP. The tables presented in the guidelines are not standards but are examples of showing the information required in the FMP."

5.1 Management Goals Overview

Management goals have a significant influence over the modeling results and subsequent harvest schedule. Therefore, the public information sharing, communication, and input have a large influence over the management goals, and also the harvest schedule.

At present, management goals for the FMP may include, but are definitely not limited to:

- Maintain or improve moose habitat and moose populations
- Significant engagement with First Nations, Metis, northern communities, stakeholders, and the public
- Maintain or improve biodiversity as shown by various bird species representing different parts of the biodiversity spectrum
- Forest should be less vulnerable to climate change
- Determine when and where the forest is a carbon sink or a carbon source
- Protection of wetlands and waterfowl
- Not to exceed 30% of a watershed in a harvested state
- Not to exceed the Annual Allowable Cut of hardwood or softwood by Forest Management Unit

The list of management goals (above) will change or additional goals added when information sharing and public consultation have started.

5.2 Relevant land base management plans

Land base management plans that are within or adjacent to Forest Management Licence 3 area will be reviewed. This list includes, but is not limited to:

- 2004 Swan Lake Basin Management Plan
- 2007 Duck Mountain Provincial Park Management Plan
- Saskatchewan Duck Mountain Provincial Park Management Plan
- 2009 Duck Mountain Provincial Park ATV Trail Planning Group
- Integrated Watershed Management Plans
 - 2006 Shell River
 - 2013 (draft) East Duck Mountain – Sagemace Bay Watershed
 - Swan Lake (initiated 2009; in progress)
 - Dauphin Lake (initiated 2010; in progress)
- 2007 Riding Mountain National Park management plan

The goals and objectives of each plan will be reviewed and considered. Wherever possible, forest management activities will attempt to implement or complement each plan's goals and objectives.

6. MODELING



Caption: controls of the space shuttle – modeling, like piloting the space shuttle, can be simple or complex

Modeling is the culmination and mixture of the landbase, yield curves, and management goals. Modeling results in both a spatial harvest schedule and indicator outputs of various ecosystem values.



As stated in Manitoba Conservation’s 20 Year FMP guidelines:

“This guidebook is written to help professionals obtain an approved FMP. The proponent has the discretion to assemble the FMP in a form they prefer as long as the required information is contained within the FMP. The tables presented in the guidelines are not standards but are examples of showing the information required in the FMP.”

Although forest management planning in Manitoba has traditionally been based on **sustained yield timber management**, the need to balance economic objectives with environmental and social needs was enshrined in Manitoba’s sustainable development strategy and recommendations that Manitoba’s forest management policies move towards the implementation of SFM [Sustainable Forest Management](Manitoba Natural Resources, 1996).

“The practice of sustainable forest management requires different skill sets and a broader knowledge base than sustained yield timber management. The ability to prepare and implement forest management plans based on the concept of sustainable forest management will evolve over time as new data sets are created, research is carried out, and new skills are acquired (Manitoba Natural Resources, 1996).”

6.1 Modeling Overview

The modeling land base and its’ ecological strata utilize the yield curves, management objectives, and targets. Scenarios will then be run, creating modeling output (indicators). The modeling results in both a harvest schedule and a suite of ecosystem outputs.

6.2 Modeling Scenarios – Scenario Planning

We will be working towards a ‘moose-friendly’ scenario, where our forest management efforts attempt to benefit moose populations. Scenarios evaluated will include:

- 1) Landscape Management & Moose scenario;
- 2) Stand-level Management & Moose scenario; and
- 3) Provincial Base Case.

The scenarios will be evaluated, “...analyzed and ranked against the management objectives...” as per Table FMP-5 from the 20 Year Plan Guidelines (2007). A maximum of 10 objectives will be used to score the forest management scenarios. Input from First Nations, Metis, northern communities, stakeholders, and the public will guide the creation of a list of objectives, followed by prioritization of 10 objectives.

The highest ranked scenario will become the ‘Preferred Management Approach’ which will form part of the submitted Forest Management Plan, modeling output, and the harvest schedule.

The ‘Preferred Management Approach’ forest management scenario will be:

- Submitted in the 20 Year Forest Management Plan, complete with harvest schedule maps and ecosystem outputs (e.g. amounts of old forest over time)
- Evaluated as part of an EIA (Environmental Impact Assessment)
- Summarized in an EIS (Environmental Impact Statement) document.
- will likely go to the CEC (Clean Environment Commission);
- Potentially, possibly CEC hearings may be initiated by the CEC on all aspects of the ‘Preferred Management Approach’, FMP, EIA process, and EIS document.

7. 20 YEAR FOREST MANAGEMENT PLAN DOCUMENT

The modeling mentioned in the previous section will be documented in a 20 Year Forest Management Plan (FMP). The 20 Year FMP will cover the 20 year period of 2018 to 2037. The start year of 2018 presumes several assumptions:

- 1) The volume curve issue and post-harvest transition issue are both resolved in a timely fashion;
- 2) This document (FMP Terms of Reference) are approved in writing, allowing LP to begin work on the FMP;
- 3) Forestry and Peatlands Management Branch creates a modeling landbase in a timely fashion; and
- 4) No significant landbase changes (e.g. large wildfires, park expansions) occur during the creation of the FMP, necessitating significant changes to the FMP.

If any of these assumptions are incorrect, then the start date of the 20 Year FMP may need to be a later date (e.g. 2019 or 2020).

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APPENDIX I: ENVIRONMENT ACT LICENCE EXTENSION LETTER



Conservation and Water Stewardship

Environmental Stewardship Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-8321 F 204 945-5229
www.gov.mb.ca/conservation/eal

File: 3893.00

December 30, 2013

Mr. Wade Cable
Area Forest Manager
Louisiana-Pacific Canada Ltd.
P.O. Box 998, 439 Westwood Road
Swan River MB R0L 1Z0

Dear Mr. Cable:

Re: Environment Act Licence No. 2191 E

We have reviewed your letter dated October 29, 2013 requesting an extension of the terms and conditions of Environment Act Licence 2191 E to December 31, 2019. In your letter you indicate that this extension is necessary for Louisiana Pacific (LP) to undertake consultation with Manitoba Conservation and Water Stewardship and the Regional Moose Advisory Committee to develop a community supported strategy for the long-term conservation of moose populations within Forest Management Unit (FMU) 13 and subsequently revise the Forest Management Plan (FMP) with this strategy.

The Environmental Approvals Branch is processing this request as a minor alteration to Environment Act Licence No. 2191 E, pursuant to clause 14(2)(b) of The Environment Act. I hereby approve the extension of the expiration date of Environment Act Licence No. 2191 E to December 31, 2019, subject to the following conditions:

1. By November 30, 2014 LP must, in relation to the development of an FMP for Forest Management Licence Area (FMLA) No. 3:
 - a. develop and present to the FMP Planning Team for approval of the Director of the Forestry Branch an updated Terms of Reference for the FMP; and
 - b. have one or more draft operating areas for FMU 13 reviewed by the Stakeholder Advisory Committee, the local Moose Management Committee, and the FMP Planning Team.
2. A valid Annual Operating Plan must be maintained for FMLA No. 3;
3. All specifications, limits, terms and conditions identified in Environment Act Licence No. 2191 E shall be strictly adhered to.

If you have any questions regarding this matter, please contact Elise Dagdick at (204) 619-0709 or elise.dagdick@gov.mb.ca.

Yours truly,

Tracey Braun, M.Sc.
Director
Environmental Approvals Branch

c: Public Registries
John Dojack, Director, Forestry Branch
Don Labossiere, Director, Environmental Compliance and Enforcement Branch
Perry Stonehouse, Regional Director, Western Region

APPENDIX II: CROWN – ABORIGINAL CONSULTATION PROCESS

Manitoba will commence Crown-Aboriginal Consultation in April 2015 well before any major block selection or primary or secondary road development is planned.

The process to engage Aboriginal communities by Manitoba is:

1. Identify Aboriginal communities within or adjacent to FML-3;
2. Send a letter of engagement to each identified community;
3. Follow up with personal communication to determine interest and to develop a consultation plan that is acceptable to each community; and
4. Carry out Crown-Aboriginal consultation and follow up.

Crown-Aboriginal consultation of the FMP is a separate process from the development process. The FMP will list changes made as a result of issues or concerns identified during Crown-Aboriginal consultation.

FML 3 FMP Planning Team Meeting

Friday November 21st, 2014 - 8:30 am

Centre for Forest Interdisciplinary Research (C-FIR) boardroom, University of Winnipeg

Invitees:

Phil Keenan - Forest Management and Development section

Brad Epp – Forest Inventory and Resource Analysis

Andrew Grauman – A/Western Region Forester & Integrated Resource Management Team

Dan Bullock - Conservation & Water Stewardship (CWS) Wildlife Branch

Jeannette Coote – Silviculture Forester (Mountain Forest Section Renewal Company)

Wade Cable – Area Forest Manager

Vern Bauman - Planner

Donna Kopecky - District Biologist

Paul LeBlanc - District Forester

AGENDA

1. Introductions; overview of FML3 FMP Planning Team
2. Draft moose harvest layout for consideration by the Planning Team – Vern Bauman
3. Present updated Terms of Reference (ToR) to the FMP Planning Team (Sept. 5th, 2014 version approved by Director of Forestry) – Paul LeBlanc
4. Ecosystem Based Management (EBM) overview -
5. Outstanding ToR items not agreed to as of Sept. 5th, 2014. Develop guiding principles for:
 - a. Yield Curves (volume over age)
 - b. Post-Harvest Transitions (original species composition versus post-harvest species composition)
6. FMP timeline and future Planning Team meetings
7. Digital Land Base (status) – Brad Epp

Agenda Item #1 - Overview of FML3 FMP Planning Team

Updated 20 Year Forest Management Plan for Forest Management Licence 3 *Terms of Reference* Revised: September 5th, 2014

A Planning Team consisting of LP staff, Manitoba Conservation and Water Stewardship staff, and possibly scientists or consultants will guide the creation of the Forest Management Plan. The Planning Team members will include:

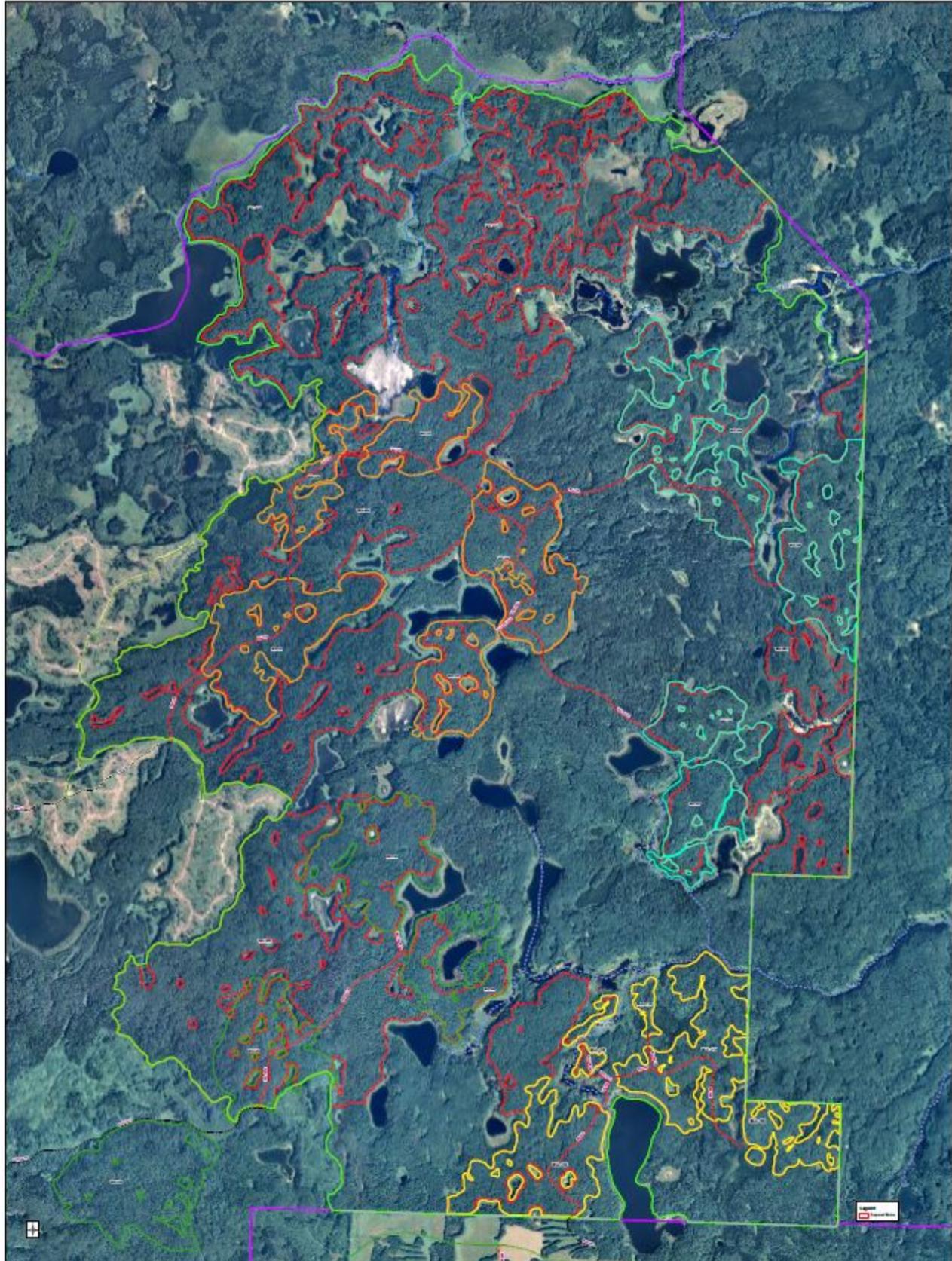
- LP District Forester
- LP Planner
- LP Wildlife Biologist
- Mountain Forest Section Renewal Company - Silviculture Forester
- Forestry and Peatlands Management Branch
 - Western Region Forester
 - Forest Management and Development Representative
 - Forest Inventory and Resource Analysis Representative
- Integrated Resource Management Team / Conservation & Water Stewardship (CWS) Wildlife Branch - Representative

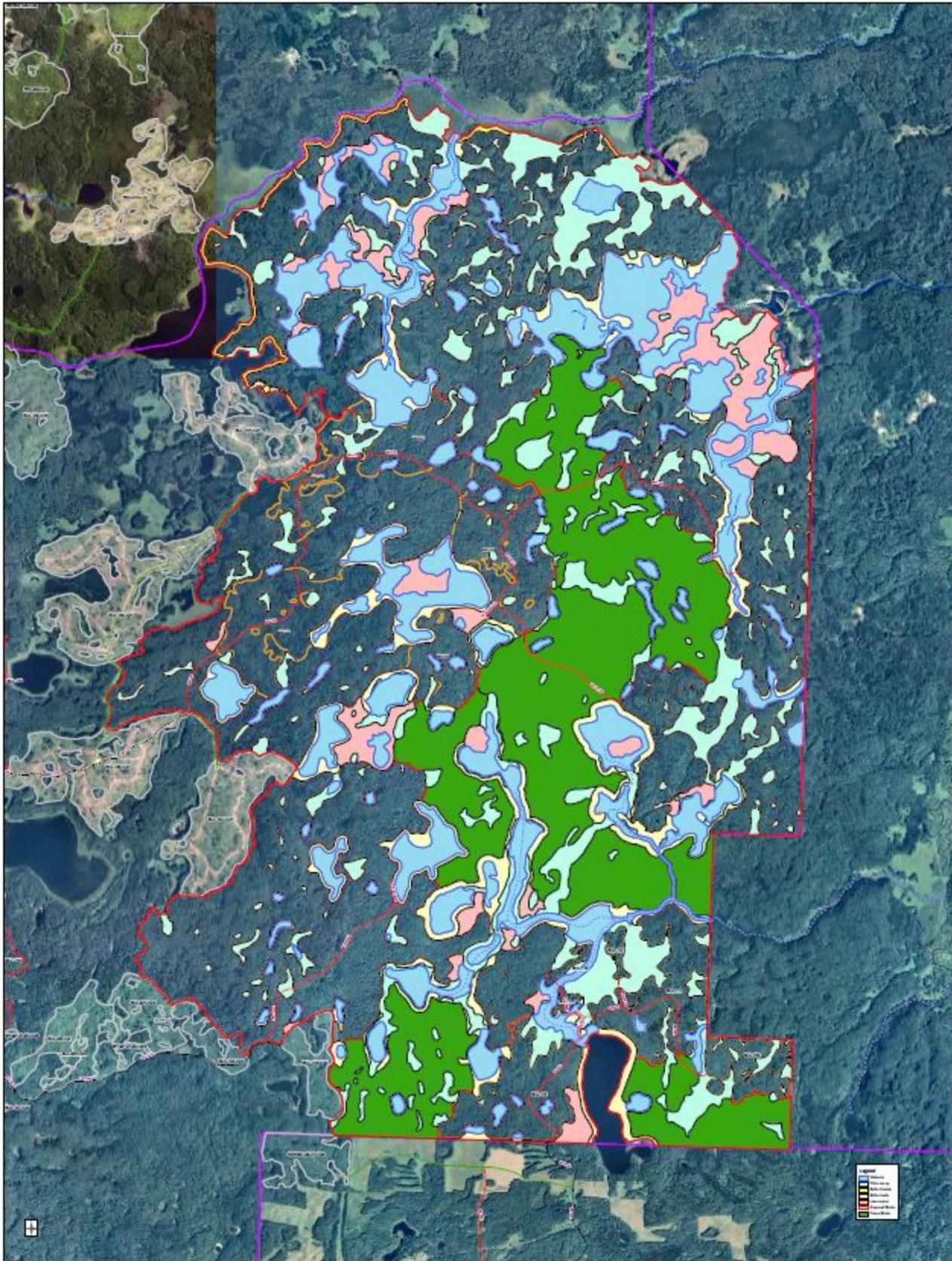
Other LP and CWS staff, Timber Quota holders, the Public or Stakeholders will be involved at different stages of development.

Agenda Item #6 - FMP timeline and future Planning Team meetings

April 2015	LP and CWS to Initiate public engagement and aboriginal consultation
April 2016	LP to submit first draft FMP text other than preferred Management scenario (the FMP draft text can be submitted in advance of this date as each chapter is complete)
December 2016	Modeling complete and Preferred Management Scenario selected
April 2017	LP to Submit first complete draft FMP for completeness review
July 2017	CWS to provide LP with comments from completeness review
December 2017	Submit Final FMP
December 2018	FMP Approval







DRAFT MOOSE OPERATING AREAS MEETING

May 7, 2014 AGENDA 1 pm

LP Boardroom

Attendees:

Serge Scrafield, Gerald Shelemy, Brent Fuchs, Wade Cable, John Thorpe, Vern Bauman, Paul LeBlanc

1. Overview and Context – Wade Cable

- Still harvest within the Annual Allowable Cut
- Larger harvest area, minimize the amount of roads
- Looking for support to move forward with planning blocks that are beneficial to moose

2. Draft examples of moose operating areas – Vern Bauman

Different operating areas with different characteristics – MGL, WJL, ARL, UPD, RTH

- UPD and MGL are clean-up areas, while WJL and others have minimal previous harvest

3. Discussion on draft layout – advantages, disadvantages – all

- Same amount of wood cut, but less roads.
- Roads open for a shorter time.

Monday, May 26th

SAC Meeting Minutes

Swan Lake Watershed Conservation District Office

Pete Borowski	Wade Cable
Vern Bauman	Glen Roberts
Paul LeBlanc	George Bullock
Greg Logan	Aaron Liskey
Debbie Soloway	Jeannette Coote
Rick Wowckuk	David Livingston
Thomas Nepinak	Val Reich
Donna Kopecky	Greg Logan

Forest Management Plan – Landscape Layout – Vern Bauman

Pete - Harvesting against Buffer

Donna Less w/ residual in blocks

Pete – Access control

Wade – Block Harvested 3 times (96, 05, 14)

Vern - Cut Larger area 1 time & close roads

Greg (IMCD) – Run off problems

Wade – no watershed analysis done yet, still to be done. Anything under 15%

Thomas – Long term – once moose hunting lifted, what is going to happen to decommissioning

Wade – From LP position new roads have to be decommissioned, existing roads will stay open if they have to

Thomas – Gov't not doing full capacity to help all

- *Night hunting – gov't has to do their part to either shut down all moose hunting

- *Want consultation & meeting for solution

Wade – Operating this way minimizes access, making Manitoba Conservation easier

'Going to get worse before it gets better'

Paul – Not proposing to harvest more, but aggregating cutblocks and minimizing roads to help moose populations

Donna – How many areas would be needed to operate at 1 time

Wade – Not going to do a huge harvest & a huge harvest right next block

Donna – Moose in serious condition, looking towards species at risk

Wade – Reduce access increase cutting area size

Pete – Logistics of area & operations

Wade – 2007 Roads issue & moose population going down, this wasn't an overnight process

Aaron – Regen run off – at what point do they get back to normal

Donna – When a stand comes back into production, gov't assesses the blocks & becomes free to grow

- *Free to grow aspen is 5 years old

- *Hydrological recovery is 15 years

- **Disturbance's in water shed

 - fire, insect, damage, disease

Aaron – Will stand ever be back to normal & at what point does it get back to normal

Donna – normality depends on vegetation, wetland area based on area

Paul – 20 year stand will take on more water than an original stand

Wade – We want to see support to amalgamate areas into larger cutting areas

Glen – Agree (for new cutting practice) way to rid access for moose

Thomas – Talked to Gov't *re: moose areas restricted sections of the mountain closed for hunting

Rick – Immediately following a harvest close area to have a moose habitat

Greg (IMCD) – too bad access has to be denied

Rick – policy where no access it will be decommissioned, previous access will be granted

Management Goals

Pete – how does the gov't know how to run the forest when it now is a multi-use area not just for timber use

Wade – How do we manage when there is a fine line in different as how to do a process

Glen- Commendation on trying to manage species

Pete – Track a change in species of wood

Indicator Species

Thomas – Why isn't gov't looking after species at risk

Donna – LP identifies indicator species & tracks to see what the trend is for predictions

Q & A

Moose Advisory Committee

Meeting Notes

October 8, 2014

Westwood Inn, Swan River, Manitoba

Participants:

Gerald Shelemy	Duane Whyte
Brian Ogilvie	Andrew Grauman
Dwayne Strate	Ken Fulford
Tom Ainsworth	Orest Woloshyn
Kris Woodward	Chris Hunt
Rick Wowchuk	Grant Rattlesnake
Richard Genaille	Brian Joynt
Brian Bulloch	Ivan Mentuck
Paul LeBlanc	Toni Hayes
Glen Roberts	Kent Whaley
David Minish	Wade Cable
Vern Bauman	Thomas Nepinak
Peter Fleming	Brent Fuchs
Perry Stonehouse	Ken Rebizant
James Garrow	

Opening remarks by Dan Bulloch

Introductions by the people in attendance.

Duck Mountain Survey – presentation by Ken Rebizant

- Discussion regarding the elk compensation program.
- Discussion regarding Elk Management and the need for a good elk management plan.
- Discussion regarding Metis harvest.
- Discussion regarding Rights Based harvesting and the information entered into the elk model.
- Discussion regarding Supreme Court decisions and impact on Rights Based hunting.
- Further discussion on modeling and information used to supply the model.

SUPPER

LP presentation on landscape design – Vern Bauman

- Description of landscape design.
- Discussions using Wajask Lake and Upper Dam as possible examples for landscape design.
- Proposed design will result in fewer roads (that will be closed after cutting) and larger cut-blocks.

- Expect that this design will benefit moose through access management.
- Question – Will consultation be done? Answer – Government will consult on the Forest Management Plan and LP will participate as required.

Review of the minutes.

- Question - Was Consultation done with the MMF and is it completed? CWS Response — Yes.
- Meeting notes for May 21, 2014 accepted.

CWS updates, Dan Bulloch.

- GHA 12 is now closed. A Conservation Closure was implemented in September.
- GHA 19A is closed to licensed hunters. Concerns raised regarding the length of time to make hunting season changes needed.
- Elk information regarding the Duck Mountain elk survey was presented by Ken Rebizant.
- Request to Ken Rebizant to discuss standardizing seasons for various species. Chris Hunt was invited to send questions to Wildlife Branch (Ken).

Citizen Science – Rick Wowchuk

- There are lots of positives for citizen science but we need to build trust between the department and the user groups. We need to know that we are being heard.
- CWS – We should continue to pursue citizen science. It is an opportunity to work together and build trust.

Moose updates – Dan Bulloch

- Surveys to be flown in the Duck Mountains and Porcupine Mountains this winter.
- The Minister planned to meet with the MMF today, not sure if wildlife issues were to be part of the discussion.

Discussion of the Agenda for the next meeting.

- Focus discussion on moose.

Consensus was to discuss target goals before re-opening and how to re-open if this winter's survey results are favourable.

Closing remarks from Dan Bulloch.

Next meeting date to be determined. Hopefully near the end of November.

Stakeholder Advisory Committee meeting

Monday Oct. 20th, 2014

location: **Swan Lake Watershed Conservation District office** (Hwy #10 bypass north)

6 pm - Supper

6:30 pm – Introductions – confirmation of contact information

1) Updates – LP Forest Resources Division

- **Planning** – Vern Bauman
 - 2 year operating plan, submitting block information for mitigation
 - Annual Report complete for last year's operations (2013-2014)
- **Fish & Wildlife** – Donna Kopecky
- **Operations** – Wade Cable
 - final blow down salvage logging
 - harvest & haul overview
 - wood yard inventory
- **Softwood Renewal** – Jeannette Coote (Mtn. For. Section Renewal Company)
 - 2014 spring tree plant overview
 - softwood plantation surveys
- **Hardwood Renewal** – Paul LeBlanc
 - hardwood surveys (2013 surveyed blocks certificate; 2014 surveys still in progress)
- **Certification** – Jeannette Coote
 - SPL now Sustainable Forestry Initiative (SFI) certified – Porcupine Mtn
 - 2nd party audit (by LP); then 3rd party independent audit

2) feedback and discussion on moose committee presentation – Vern Bauman

3) 20 Year Forest Management Plan – Paul LeBlanc

Terms of Reference for the Forest Management Plan has been agreed to in writing, except for two (2) unresolved issues:

- post-harvest transitions – after a stand is cut, what species mix (hardwood, mixedwood, softwood) does it become?
- volume over age (yield curves) – reluctance to utilize Riding Mountain data for stands aged 120 to 200 years old.

The FMP will not be started until these two issues are agreed upon in writing.

4) open question & answer period

Future SAC meetings

-set dates for SAC meetings until summer 2015

◀ October 2014							November 2014							December 2014 ▶						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
28	29	30	1	2	3	4							1		1	2	3	4	5	6
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31	1	2	3
							30							4	5	6	7	8	9	10

◀ January 2015							February 2015							March 2015 ▶						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
28	29	30	31	1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28
25	26	27	28	29	30	31								29	30	31	1	2	3	4

◀ April 2015							May 2015							June 2015 ▶						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
29	30	31	1	2	3	4						1	2		1	2	3	4	5	6
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
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26	27	28	29	30			24	25	26	27	28	29	30	28	29	30	1	2	3	4
							31							5	6	7	8	9	10	11

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Brad Epp – Forest Inventory and Resource Analysis
Andrew Grauman – A/Western Region Forester & Integrated Resource Management Team
Dan Bullock - Conservation & Water Stewardship (CWS) Wildlife Branch
Elise Dagdick – Environmental Assessment and Licencing Branch
Gord Falk – Silviculture section
David Chetyrbuk – GIS Western Region
Jianwei Liu – Forest Inventory & Resource Analysis
Jeannette Coote – Silviculture Forester (Mountain Forest Section Renewal Company)
Wade Cable – Area Forest Manager
Vern Bauman - Planner
Donna Kopecky - District Biologist
Paul LeBlanc - District Forester

AGENDA

1. Introductions; overview of FML3 FMP Planning Team

2. Draft moose harvest layout for consideration by the Planning Team – Vern Bauman

Comments on draft operating areas included:

- Landscape management, not just moose management
- There are potential efficiencies for silviculture and renewal
- Road development should be the driver – cut wood along the road, efficiently get the wood out
- Good way to go – have landscape metrics
- Recommend that LP and Wildlife H.Q. and regional staff meet
- [draft operating areas] are likely not an alteration
- Good direction. Concerns about access management and road rehabilitation. Concern about how wildlife regulates (e.g. regulated moose closure)
- Concern about trappers (e.g. potentially cut a large percentage of one person's trapline)

3. Present updated Terms of Reference (ToR) to the FMP Planning Team (Sept. 5th, 2014 version approved by Director of Forestry) – Paul LeBlanc
4. Ecosystem Based Management (EBM) overview -
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