

**Draft Guidelines for the Preparation of an
Effects Assessment for a
Twenty Year Forest Management Plan for
Forest Management Licence Area # 3**

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1.0 INTRODUCTION

Louisiana-Pacific Canada Ltd. (LP) is proposing to develop a new Twenty Year Forest Management Plan (FMP) for continued forest management activities within Forest Management Licence Area # 3 pursuant to The Forest Act. The activities include harvesting, road construction, access development, and reforestation. The FMP will be developed in accordance with the Manitoba Sustainable Development document, “Manitoba’s Submission Guidelines for Twenty Year Forest Management Plans (2007)”.

All environmentally significant developments, proposed or operating in Manitoba, are regulated by The Manitoba Environment Act (Chapter E125, CCSM). The Classes of Development Regulation (164/88) sets out the types of developments that are subject to an assessment and licensing process prior to construction and operation. The forest management activities being proposed by LP are identified as Class 2 developments in the regulation, and are therefore subject to the assessment and licensing process set out in Section 11 of The Act. Section 11(9)(b) of The Environment Act stipulates that, for the purposes of assessing the environmental effects of a proposed Class 2 development, the director may issue guidelines and instructions for the assessment. The purpose of this document is to provide LP with guidelines for the environmental assessment of the forest management activities described in the FMP.

In a letter dated September 13, 2017, LP requested approval from Manitoba Sustainable Development for the submission of an Effects Assessment, included within the FMP rather than submitting a separate environmental assessment document, to reduce duplication. Manitoba Sustainable Development approved this request in a letter dated October 5, 2017.

2.0 INTENT AND SCOPE OF THE EFFECTS ASSESSMENT

The Effects Assessment for the proposal will:

- to the extent possible, apply an ecosystem-based approach to forest management at the landscape level, and employ adaptive management strategies;
- reference the proposed forest management activities as described in the FMP;
- describe the public and Indigenous community engagement programs undertaken for the proposal, including the results of the engagement;
- describe the existing biophysical and socio-economic conditions within the areas to be managed by the FMP;
- describe the need and justification for the proposal;
- identify any potential environmental effects of the proposal;
- identify any potential social, cultural, health and economic effects directly related to any environmental effects of the proposal;

- identify any potential direct or indirect environmental effects on designated protected areas (i.e. ecological reserves, national parks, provincial parks, park reserves, wildlife management areas, provincial forests, and private lands); other designated Crown lands (i.e. special conservation areas, community pastures, and wildlife refuges); and lands under conservation easement, or owned by conservation agencies and managed for conservation purposes;
- describe proposed measures intended to mitigate and/or compensate for any adverse effects to the environment including terrestrial and aquatic ecosystems on designated or open Crown land, human health, and present or currently planned resource use;
- propose mechanisms for monitoring environmental effects of the proposed activities and subsequent research that may be necessary;
- evaluate whether forest ecosystems will be sustainable if the activities proposed in the FMP are carried out; and
- propose mechanisms to involve the affected public, Indigenous communities, and resource users in the effect assessment of site specific activities and the development of mitigation plans.

The Effects Assessment would incorporate, consider and directly reflect, where applicable, the Principles and Guidelines of Sustainable Development as contained in the Manitoba Sustainable Development Act, and the policies which have been developed under the “The Manitoba Water Strategy” (2003). The Effects Assessment should also show how the policies and/or principles encompassed in provincial and federal documents related to forestry best practices and climate change will be addressed.

3.0 EXISTING ENVIRONMENT

Provide a description of the existing biophysical and socio-economic setting as well as the past and existing forest management activities within areas to be managed by the FMP. Include a description of relevant monitoring programs that have been carried out within Forest Management Licence Area # 3. Use maps or graphical representation where appropriate. If information on specific components is not available, indicate how and when the required data will be gathered. Sensitive information such as the location of sensitive habitats and heritage/cultural resources should be kept confidential and addressed outside of the Effects Assessment document. The information provided shall include, but not be limited to the following components.

3.1 Biophysical Environment

- a) General climate conditions.
- b) Geology, topography, and landforms:
 - an enduring features description on a natural region or ecoregion basis, indicating which enduring features are currently contained within the designated lands, and what protection standards and management regime are in place for the sites.

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c) Air:

- local air quality.

d) Water:

- streams, rivers, lakes and surface drainage;
- wetlands;
- stream classification;
- water quality that includes nutrients (nitrogen and phosphorus species), organic carbon species, and sediment load;
- runoff and infiltration regimes;
- locations of groundwater use when these are within 100 m of logging areas; and
- shallow aquifers that may be affected by the harvesting operations (spills from machinery and fuel tanks, road construction, etc.).

e) Soils:

- soil type and depth, including physical, chemical and biological properties;
- soil stability as it relates to the potential for erosion;
- soil structure as it relates to the potential for compaction;
- nutrient status; and
- moisture regime.

f) Vegetation:

- forest land by site classification (based on soil characteristics and moisture status), age class, species, area, and volume);
- classification and area (km²) of forest land and non-forested land (use ecological land classification where feasible);
- plant biodiversity;
- threatened or endangered plant species or plant communities;
- plant species at the extent of their range;
- medicinal plants;
- unique and protected ecosystems;
- unique and non-protected ecosystems; and
- harvesting and gathering sites that are locally important.

g) Wildlife:

- animal species (birds and mammals, plus available data for micro-organisms, insects, reptiles and amphibians), populations, habitat and seasonal use patterns;
- threatened or endangered animal species and associated habitats;
- Species of conservation concern or cultural importance as determined through consultations with Wildlife and Fisheries Branch and Regional Wildlife staff;

- animal species at the extent of their range;
 - wildlife habitat, including sensitive habitats; and
 - habitat features including but not limited to nesting, denning and calving sites, molting areas, wintering areas, and mineral licks. (Note: the locations of these sensitive sites should be kept confidential to protect sensitive resources. The locations should be disclosed only to provincial wildlife staff for direction on mitigation and monitoring actions. However, the Effects Assessment must describe in detail how harvest and access planning has incorporated the presence of sensitive sites, what mitigation tactics will be employed (in the absence of avoidance, which is preferred), and how their effectiveness will be monitored.
- h) Aquatic species:
- aquatic species, specifying non-native species;
 - aquatic habitat that sustains or supports, or has a potential to sustain or support fish stocks for commercial, recreational or traditional fishing activities;
 - threatened or endangered aquatic species and habitats; and
 - aquatic species at the extent of their range.

3.2 Socioeconomic Environment

- a) Traditional land and resource use, including:
- traditional hunting, fishing for sustenance, trapping, and gathering; and
 - sacred, ceremonial, and burial sites.
- b) Local economies and industries in the area.
- c) Local and regional infrastructure, including health care facilities, communities and human habitation, emergency services, and roads.
- d) Community values (aesthetic, visual landscape, cultural and spiritual sites, as well as traditional lifestyles).
- e) Employment.
- f) Wild rice production.
- g) Mining claims and leases.
- h) Hydro and natural gas distribution systems.
- i) Commercial trapping, including existing trapper's trails.
- j) Commercial guiding.
- k) Commercial fishing, including existing fishermen's portages.
- l) Recreational hunting and fishing, including existing recreational portages.
- m) Crown Lands.
- n) Parks and special places:

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- Provincial Parks;
 - ecological reserves;
 - protected areas;
 - wildlife management areas;
 - unique or sensitive areas;
 - any adjacent protected areas (including protected private lands);
 - areas of special interest;
 - designated Crown lands (i.e. wildlife refuges, special conservation areas, and community pastures); and
 - lands under conservation easement, or owned by conservation agencies and managed for conservation purposes.
- o) Recreation, including campgrounds and trails (i.e. hiking, ATV, snowmobile).
- p) Tourism, including remote lodges and out camps.
- q) Wildlife outfitting.
- r) Public, non-commercial use of forest resources, including:
- hunting, trapping, and fishing;
 - local use of timber; and
 - all other non-harvesting forest uses.
- s) Heritage and cultural resources, including sites or objects of archaeological, paleontological, historical or architectural value, as well as burial sites.
- t) Highways and roads.
- u) Hiking, skiing, mountain bike, canoe routes, and snowmobile trails.
- v) Existing agreements and claims, including:
- co-management agreements;
 - treaty land entitlements;
 - Indigenous/specific land claims; and
 - Crown land designations.
- w) Demographics:
- general population measures and trends; and
 - settlement patterns.
- x) Public and workplace health.

3.3 Past and Existing Forest Management Activities

- a) Forestry road system:
- Location, description, and status of existing all weather and seasonal access forestry

roads;

- current reclamation and decommissioning of all weather and seasonal access forestry roads; and
- former road decommissioning success.

b) Water crossings:

- location, type, and condition of existing water crossings; and
- former water crossing decommissioning success.

c) Harvesting practices and associated activities:

- past and current harvest areas, including shape, size, harvest methods and equipment used, leave areas, riparian management areas, and buffers;
- species, volumes (compare to Annual Allowable Cut);
- wood storage and processing areas;
- storage, handling, and disposal of hazardous, non-hazardous, domestic, and recyclable solid and liquid waste, both on-site and off-site; and
- logging camps, included associated water supplies and wastewater storage and disposal.

d) Silvicultural practices:

- site preparation practices;
- forest renewal methods and regeneration success;
- pesticide application, including type and volume used, methods of application, and measures to protect human health, non-target species and the environment.

e) History of natural disturbances including fire, insects, and disease, and regeneration of these areas.

f) Forestry and ecological research:

- tree improvement program;
- methods testing, including harvesting methods, site preparation methods, and site improvement techniques; and
- research programs such as monitoring programs, forest succession research, pesticide research, etc.

4.0 PROJECT DESCRIPTION

Provide a description of the proposed forest management activities for the duration of the FMP. Describe the alternatives considered where applicable. The information provided shall include, but not be limited to the following components. Use maps or graphical representation where appropriate.

a) Road access:

- location and description of forestry access roads;

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- construction methods;
 - plans for access management;
 - maintenance activities, and
 - short and long term decommissioning and reclamation.
- b) Water crossings:
- location and type of water crossings; and
 - decommissioning.
- c) Harvesting practices and associated activities:
- harvesting methods, including methods to protect understory;
 - operating/cutting area design, including shape, size, harvest methods and equipment to be used, leave areas, riparian management areas, and buffers;
 - wood storage and processing areas;
 - storage, handling, disposal or reuse of hazardous, non-hazardous, domestic, and recyclable solid and liquid waste, both on-site and off-site; and
 - logging camps, included associated water supplies and wastewater, and decommissioning.
- d) Silvicultural practices:
- site preparation practices;
 - forest renewal method, including natural regeneration and assisted regeneration, and supporting activities such as seed collection and tree improvement operations;
 - methods to maintain and protect biodiversity;
 - stand tending, including thinning and pruning; and
 - pesticide application, including type, methods of application, and measures to protect human health, non-target species and the environment.
- e) Climate Change:
- consideration of climate change impacts, vulnerabilities, risks and opportunities as well as adaptation of importance to the forestry sector as provided in:
 - the NRCan publication “Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation (See Chapter 3, pp. 70-74): https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/assess/2014/pdf/Chapter3-Natural-Resources_Eng.pdf;
 - Canadian Council of Forest Ministers’ Climate Change Task Force (CCFM-CCTF): <http://www.ccfm.org/english/coreproducts-cc.asp>;
 - Manitoba’s new Made-in-Manitoba Climate and Green Plan (pp. 44-46): <http://mopia.ca/wp-content/media/2017-climategreenplandiscussionpaper.pdf>; and
 - Pan-Canadian Framework (PCF) on Clean Growth and Climate Change (see pp. 22-23 including but not limited to PCF carbon offset framework that may be put in place).

- f) Forestry and ecological research.

5.0 ENVIRONMENTAL ASSESSMENT

The environmental assessment should describe any potential environmental effects, both positive and negative, associated with the proposal. All potential sources of environmental effects to the biophysical environment should be considered. In addition, any potential effects to the socioeconomic environment directly related to the environmental effects of the proposal should be identified. A description of how traditional knowledge obtained from engagement of Indigenous communities was incorporated into the assessment of effects and development of mitigation measures must be included. The assessment also should consider potential trans-boundary effects and whether environmental stresses such as climate change, ozone depletion, and air borne pollutants may affect the degree of any effects from forestry activities.

Categorize all potential effects as significant or insignificant, direct or indirect, and describe the location and severity of any effects, as well as time frames within which they may occur. Where a range of effects may result, these should be noted. "Worst case scenarios" should be considered for assessment purposes, where applicable. All assessment conclusions should be supported by technical information based on experience in Manitoba and/or elsewhere. Any deficiencies in the information about potential effects should be clearly noted and addressed as stated in the monitoring and research section of the report.

6.0 SUSTAINABILITY ASSESSMENT

Although the principles of sustainable development should be addressed throughout the effects assessment, specific information is requested on the following:

- a) Evaluate how the proposed harvesting and regeneration practices will:
 - impact the forest age class structure and distribution at the landscape level;
 - protect the understory component (when present) of forest stands; and
 - produce a forest that will support ongoing harvesting at the proposed rate, in perpetuity.
- b) Evaluate whether sustainability of all forest values, including ecosystems and biological diversity, can be achieved in light of the proposed harvesting and regeneration practices, and proposed mitigation and protection measures.
- c) With respect to sustainability, assess the sensitivity of the preferred management approach to significant uncertainties such as:
 - increased or decreased amounts of natural disturbance (i.e. fire, wind, insects and disease); and
 - the influence of climate change.

7.0 MITIGATION

7.1 Mitigation Measures

Describe any steps that will be taken to avoid, eliminate, or reduce any effect identified by the Environmental Assessment, or to sensitive areas that may be identified in the future. This should include whether the proposed forestry practices will conform to the policies and principles encompassed in provincial and federal documents related to forestry best practices, and climate change. Mitigation of any effect may involve identification of areas where timber harvesting cannot occur until a more detailed assessment is complete, or where constraints are such that no timber harvesting should take place. It may also involve changes to scheduling and/or location as well as alternative methods and options for:

- road construction, access management, retirement and reclamation;
- harvesting practices and associated activities;
- silvicultural practices;
- forest protection practices;
- local employment and training; and
- research projects.

The Effects Assessment should also include a description of proposed measures to adjust forest management activities for any changes to the land base that may result from a land use review under The Provincial Parks Act.

7.2 Mitigation Plans

The following plans must be submitted with the Effects Assessment in draft form:

- a) **Access management plan:** to address how existing and new access will be managed to avoid impacts to wildlife (developed in consultation with the Wildlife and Fisheries Branch and Regional Wildlife staff of Manitoba Sustainable Development); and
- b) **Cultural and heritage resources management plan:** for the identification, mitigation, and monitoring of cultural and heritage resources.

8.0 RESIDUAL EFFECTS

Describe any effect which cannot be prevented, eliminated, or mitigated, and outline any planned compensation programs.

9.0 CUMULATIVE EFFECTS ASSESSMENT

Describe and assess the potential cumulative effects of the forest management activities and other activities in the area on the environment.

10.0 MONITORING AND RESEARCH

10.1 Monitoring Plan

Provide a draft monitoring plan, developed in consultation and cooperation with Manitoba Sustainable Development, which includes a description of the plans for:

- a) collection of baseline data;
- b) studies that may be required to clarify uncertainties regarding any effect of proposed activities;
- c) programs to determine the effectiveness of recommended mitigation measures;
- d) monitoring that may be required to fill any data gaps with respect to the biophysical environment, socioeconomic environment, and existing and past forest management activities; and
- e) sharing of data and reporting of results to Manitoba Sustainable Development.

10.2 Research

Describe any research which may be required to inform adaptive management processes.

11.0 PUBLIC INPUT

Describe plans to inform the public, Indigenous communities, and resource users of all future forest management activities in the areas managed by the FMP, and ways in which their concerns will be addressed. Include mechanisms to allow public input from affected resource users, e.g. community monitoring committee.

12.0 TECHNICAL REFERENCE

All assessment conclusions shall be supported by technical information. This information shall include:

- a) the credentials of the experts contributing to the Effects Assessment and comprising the study team;
- b) scientific reports and papers on topics relevant to the proposal, including technical studies of similar forest management activities conducted elsewhere; and
- c) original studies performed by qualified scientists or engineers, commissioned by the proponent, specific to the proposal.

13.0 TABLE OF CONCORDANCE

The Effects Assessment shall include a table of concordance that cross references the information requirements identified in these Effects Assessment Guidelines with the information presented in the FMP, which includes the Effects Assessment.

14.0 TABLE OF COMMITMENTS

A summary of the commitments made by the proponent in the proposal for the implementation of mitigation measures, plans, and monitoring shall be included in the Effects Assessment. The summary shall be provided in table format and include timing and responsible parties for each commitment, where applicable.

15.0 REPORT FORMAT

The Effects Assessment shall include an executive summary and be written with a minimum of technical terminology. Where highly technical portions are essential, definitions or explanations shall be included. A glossary of terms shall also be provided.

The Effects Assessment shall make optimal use of maps, charts, diagrams, and photographs for presentation. Maps and diagrams should be presented at a common scale, appropriate to represent the level of detail considered. Specifically, maps indicating zones of effect on land and water use and areas of habitat should be of a common scale.