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Manitoba Conservation and
Water Stewardship
Forest Practices Guidebook

Forestry Road Management

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Forestry Road Management

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Copies of this publication are available at:
www.manitoba.ca/conservation/forestry/
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Preface

Manitoba Forest Practices

This guidebook is part of Manitoba Conservation and Water Stewardship's Forest Practices Initiative. It provides essential Manitoba Forestry Branch direction for resource managers, timber operators, natural resource officers and auditors conducting or assessing forestry activities.

A primary goal of the initiative is to advance best practices using guidelines and standards for sustainable forest management activities in Manitoba. These guidelines present alternative procedures or standards that can be applied to satisfy principles the guidelines are based on. Guidelines are then used to develop prescriptions. Specific guidelines are enforceable when included as conditions of an operating permit or work permit. Forest practices guidebooks ensure all forest resource values are appropriately addressed for the full range of forest activities.

Forest practices guidebooks are references available for resource managers, timber operators, natural resource officers and auditors. Others include provincial guidelines, forest management plans, operating plans and standard operating procedures, which are developed independently by each forest industry company.

Committee membership consists of members from Manitoba Conservation and Water Stewardship branches, one regional resource manager, one forest industry member from each of forest management licensees, Spruce Products Ltd., and Fisheries and Oceans Canada. Standing invitations have been extended to the Forest Industry Association of Manitoba (FIAM) representing quota holders, the Manitoba Model Forest and Ducks Unlimited. Committee members co-operate in a consensus-seeking manner to develop forest practice guidebooks.

Each guidebook has a complete set of guidelines for a specific forest practice, pertinent references to science, legislation, policy, agreements and licences, as well as recommendations for planning, implementing, monitoring and enforcing the forest practice.

The recommendations, as much as possible, are:

- measurable
- practical
- based on scientific evidence, traditional knowledge and collective experience
- flexible and applicable in a variety of ecological conditions
- clearly presented for consistent interpretation and application
- supported by technical terminology and definitions

Forestry practices in Manitoba are continuously monitored and appropriately amended when necessary. Guidebooks are reviewed every five years or earlier, if required.

Guidebooks can be found on the Forestry Branch website of Manitoba Conservation and Water Stewardship, www.manitoba.ca/conservation/forestry/practices/guidelines.html.

The public is encouraged to submit comments and recommendations to forestguidelines@gov.mb.ca.

Table of Contents

List of Tables

List of Figures

Manitoba Forestry Road Management

Purpose

This guidebook provides general guidelines for forestry road planning, construction and access management. Developed for forestry operations, in some cases, it will apply to other forest access development.

Application and Implementation of Forestry Road Management Guidelines

Forest resource managers are expected to incorporate Manitoba's *Forestry Road Management* guidelines (2012) in timber harvest planning and operations. Manitoba contains a wide range of forest types, site conditions and other features. The *Forestry Road Management* guidelines provide flexibility to accommodate the various resource values and site conditions in Manitoba. In reviewing and approving the operating plans (OP), integrated resource management teams (IRMT) may vary the guidelines based on site-specific conditions.

Nothing in this document shall be construed so as to diminish, abrogate, infringe or derogate from existing Aboriginal or Treaty Rights as recognized and affirmed by section 35 of the *Constitution Act*, 1982.

The government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Metis communities and other Aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a Treaty or Aboriginal right of that First Nation, Metis community or other Aboriginal community. Consultation and accommodation will occur on the forest management plan (FMP) and OP as per the provincial consultation policy.

Background

This guidebook was originally published in 2005. At that time, there was a need to consolidate and refine previous recommendations, resolve outstanding issues and address new issues in one forestry road management guidebook. The Forestry Road Management guidebook has been in use since 2005 and has been reviewed and revised in 2012.

This guidebook consolidates requirements and references regarding forestry roads including:

- guiding principles that are expressed through goal and objective statements
- a classification system for forestry roads based upon function
- the process of planning the development of forestry roads
- general guidelines for forestry road construction
- the management of access during or following forestry operations

Goal

The goal of forestry road management is to manage access created for forestry while addressing the sustainability of other resource and social values.

Objectives

The objectives of forestry road management are to:

- facilitate sustainable harvest and renewal of timber resources
- minimize loss of productive forest land and area occupied by forest roads
- minimize the number of years that non-permanent roads are in operation
- minimize or avoid impacts to known resource values and issues during road development and management
- minimize effects on aquatic and terrestrial habitat
- avoid destroying historical or cultural sites
- protect natural areas and habitats where rare and endangered flora or fauna have received designation and protection under either Manitoba's *The Endangered Species Act* or the federal *Species at Risk Act* (SARA).
- encourage communication with affected Aboriginal peoples, local communities and stakeholders in the process of planning and managing forestry roads
- maintain the hydrological and biological integrity of wetlands
- co-ordinate resource road development between users

Forestry Road Classification

To facilitate the communication of provincial guidelines for forestry roads, a common set of descriptive terms for forestry roads has been developed. Four road classifications (Table 1) are used to describe forest roads within this guidebook and in the road planning review process. These classifications describe the basic functions of forest roads. Forest companies in Manitoba have historically maintained their own classification system for forestry roads (Appendix I). Forest companies may maintain unique road classification systems for internal purposes.

Definitions and requirements of each forestry road must be as detailed as possible while enabling appropriate application in unique forest conditions. Not all secondary or tertiary forest roads are alike. Two roads with the same description may have differences in duration of operation, season of use, access, use restrictions and requirements for decommissioning and roadway revegetation that are negotiated with a regional IRMT.

Table 1 Forestry road classification

	Primary	Secondary	Tertiary	Winter
Description	General access throughout the forest	Access to and within operating areas	Access to and within harvest blocks	Access to and within harvest blocks
Duration	Permanent	Three or more years	Generally short term	Generally short term or may be a permanent winter road
Season of Use	All weather	All weather	Usually seasonal or winter	Winter

Forestry Road Management Planning Process

The forestry road planning process involves three planning phases:

Forest management plans (FMP) describe in general the company's strategies and activities for the duration of the long-term plan (20 years) including harvest operations, proposed road access and standard operating procedures.

Operating plans (OP) describe in greater detail planned harvest operations and the forestry roads to be developed in association with these operations during the planning term and standard operating procedures.

Forestry road development plans (FRDP) include maps, tables and text that describe the planning for all the existing and proposed roads. They include road retirement and decommissioning within distinct geographic areas of a forest management licence (FML) area. Significant amendments (as identified by the IRMT) to the FRDP will be appended to existing plans. FRDP are required for all new operating areas.

Forestry Road Planning

The planning process will include information sharing with Aboriginal peoples, local communities and stakeholders. The planning process must identify all available resource values that may require protection. It must also address the concerns of Aboriginal peoples, local communities and stakeholders. Discussion should identify consequences of road development. Other potential uses of each road should be studied to satisfy more than one purpose, identify safety concerns and consider potential fees for other commercial users.

During the planning process, other issues addressed should include:

- access management, including retirement strategies with details of road decommissioning
- the timing and sequencing of harvest
- volume of harvest operations within the road network
- future forest management responsibilities (ex: reforestation, surveys, fire protection)
- options to mitigate potential impacts

Forest Management Plans

The proponent discusses the forest development activities to be carried out during the term of the forest management plan (FMP). Each primary, secondary and long-term winter road is discussed in terms of road development and access management. The planning process in the FMP includes the identification, on a map, of one-kilometre wide corridors of the primary, secondary and long-term winter roads and alternatives. These roads will access the identified operating areas in the FMP. The proponent will forecast the length and class of the new and existing roads in tabular form in the FMP. This table also includes the management strategies for these roads. More details are available in Manitoba's Submission Guidelines for Twenty Year Forest Management Plans, which can be found at www.manitoba.ca/conservation/forestry/pdf/practices/20_year_forest_plan_2007.pdf

Operating Plans

These plans indicate the location of all primary and secondary forestry roads planned to be constructed, improved or decommissioned during the operating period. The proposed location of all forestry roads between blocks should be indicated in OP at least one year prior to construction. The proponent supplies the planned length of the primary and secondary road construction, including the planned number and type of water crossings in tabular form. Guidelines for the development of OP are provided by Forestry Branch at: www.manitoba.ca/conservation/forestry/practices/guidelines.html.

The FRDP is an effective tool for communicating road development and mitigating impacts on resource values in a given operating area. These plans take into consideration the network of existing and proposed roads.The distinction between FRDP and FMP is that FRDP provide more detail for a specific operating area. FRDP will cover the active period of timber harvesting until temporary road closure or road decommissioning are complete. FRDP will include:

- a general description of the road development and timber harvest strategy
- the proposed periods of activity within the operating area (ex: 2015 to 2025)
- a map showing the road system and indicating the designation of each primary, secondary and long-term winter forestry road
- an indication of the active period for each road
- a list of proposed surface water crossing methods, (with a list of water features visible on an aerial photo, see Appendix VI – Water and Wetland Feature Definitions)
- a table identifying the length of each class of forestry road to be constructed
- the access management strategy of the operating area, including plans for road decommissioning
- existing forestry roads
- known resource values within the operating area

FRDP are required for all new operating areas. FRDP for existing operating areas may be developed and prioritized to address areas of particular concern.

Manitoba Conservation and Water Stewardship (CONWS) will provide comments to the proponent on the activity proposed by each FRDP. The establishment of an acceptable FRDP provides an expectation of the extent of forestry road development in a specific operating area. At the start of the planning process, CONWS will provide a list of known resource values for the operating area.

FRDP approval process will generally involve IRMT review and mitigation of a draft FRDP followed by submission of a finalized FRDP for final review.

IRMT will provide specific comments to each proponent on forestry roads to be constructed or improved during the operating year, and in general, for those projected during the next two years. IRMT will also identify roads and operating areas where special road management conditions will be required (ex: caribou wintering areas).

Operating permits and work permits may contain specific conditions for road construction and access management proposed in the operating year. Timber inspections will determine if operating and work permit conditions have been fulfilled on forestry roads.

Occasionally, situations develop or resource values are discovered after plans have been approved, which will require a change in an OP. All amendment requests should be submitted to the IRMT. The IRMT or Forestry Branch will grant approval depending upon the scope of change requested.

The forest resource inventory will be updated periodically to reflect the construction or decommissioning of primary and secondary roads.

Provincial Guidelines

As part of the development of this Forestry Road Management guidebook, road related references found in other guideline documents have been reviewed and applicable references have been incorporated into this document. Other provincial guidelines documents with road related references are listed in Appendix II.

The Forest Management Guidelines for Riparian Management Areas (2008), *Forest Management Guidelines for Terrestrial Buffers* (2010), *Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat* (1996) and *Wildlife Guidelines for Forest Management in Manitoba* (1989; available in print format only) are more comprehensive and have many road related guidelines. Forest road developers should continue to refer to these documents as required.

Water Crossings

The proponent is responsible for submitting a project proposal regarding water crossings to Fisheries and Oceans Canada (DFO) for review and assessment. DFO preference is to avoid harm to fish and fish habitat wherever possible. DFO staff review project proposals to assess for negative effects and risks to fish and fish habitat. Where impacts cannot be avoided, the proposed project may require a Fisheries Act authorization. This authorization process places added responsibilities on the proponent with respect to mitigation measures, monitoring of effects and compensation plans. For further information regarding project proposals for water crossing or other work near water, visit the Fisheries and Oceans Canada web page Working Near Water. The proponent is also responsible for contacting Transport Canada's Navigable Waters Protection Program (NWPP) for a review of proposed water crossings deemed navigable. Authorization is required under the NWPP for crossings deemed navigable. For further information visit www.tc.gc.ca/eng/marinesafety/oep-nwpp-menu-1978.htm

Manitoba's *The Water Rights Act* defines water control works as:
"... any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that
(a) temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, or
(b) changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage;"

Where water control works are employed, the proponent should contact the Water Control Works and Drainage Licensing section to determine if a water rights licence will be required. Links to a water rights license application form and a list of water resource officers are provided below.

Application for a water rights licence:
www.manitoba.ca/waterstewardship/licensing/wcwdl_licence_app.pdf

Contact information for water resource officers:
www.manitoba.ca/waterstewardship/licensing/wcwdl_contacts.pdf

Provincial Roads and Highways

Manitoba Infrastructure and Transportation must be consulted to gain approval for the construction of access connecting forestry roads to provincial roads and highways.

Hydro Line Right of Way

Manitoba Hydro must be consulted for approval to develop forestry roads that pass underneath or along hydro line right-of-ways.

Forest Roads Outside of Forest Management Licence Area

Forest operators outside of FML areas require an operating permit and work permit to develop forestry roads.

General Construction Guidelines

General construction guidelines are provided to influence the planning and placement of forestry roads. Exceptions to these guidelines may be considered on a case-by-case basis. Wherever feasible, existing roads should be used to gain access to operating areas.

The IRMT may identify additional resource values depending on road development and harvest areas projected in the OP. Knowledge about the location and extent of the resource values will be used to refine a subsequent OP. Proponents will communicate with Manitoba, Aboriginal peoples, local communities and stakeholders to determine the measures required to mitigate potential impacts.

All roads should be constructed to the minimum specifications required to transport harvested wood, while protecting the environment. Specific road construction details are not provided in this document. Unless otherwise stated, the following guidelines will apply as determined in discussion with the IRMT.

Road Location

- Every effort will be made to ensure there is a single point of access where primary and secondary roads enter an operating area or harvest block. Every effort will be made to ensure that tertiary and winter roads do not provide access between adjacent operating areas.
- Tertiary roads should be restricted to one entrance and located to minimize visibility into the cut block.
- Primary, secondary and tertiary roads should be constructed at least 100 metres from the normal high water mark of streams, rivers, ponds and lakes unless a greater distance requirement is identified on specific water bodies to account for concerns such as:
  - the limiting habitat of species of special concern, or threatened and endangered species
  - areas with special designation (ex: wildlife management areas, parks)
  - areas that are culturally sensitive
  - high value recreation areas
  - sensitive water quality

Figure 1 Forestry road used for the transportation of wood

Visual Barriers

- Visual barriers to minimize disturbance of wildlife will usually be required on primary and secondary roads.
- Visual barriers to obstruct the view of the cut block may consist of regenerated forest stands (softwood taller than two metres or hardwood taller than three metres), a topographic feature, merchantable and non-merchantable stands and non-productive forest cover.
- Visual barriers left along primary and secondary roads may be harvested when:
  - regeneration in the cut block reaches sufficient height (softwood taller than two metres or hardwood taller than three metres)
  - operations in the area are completed, provided the road will be closed immediately after the harvest and prompt renewal
  - a forest health condition persists in the visual barrier that would affect forest renewal (such as dwarf mistletoe). Removal may be limited to a portion, or single species, within a barrier or a renewal block
- On secondary roads where access management occurs, visual barriers may not be required.
- An alternative to leaving visual barriers would be to construct roads and harvest the forest located 100 to 200 metres along the road. Harvesting the adjacent cut blocks may commence when visual barrier reaches sufficient height (softwood taller than two metres or hardwood taller than three metres).

Water Crossings

- All water crossings must be designed in accordance with Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (1996). These crossing guidelines apply to any water body used by migratory or resident fish during any period of the year, as well as any water body linked to downstream waters that support fish.
- For wetland crossings that are not fish bearing or fish habitat, construction practices should sustain natural drainage.
- Appropriate methods will be used to control erosion and prevent environmental harm.
- Where the proponent determines that a water crossing construction plan, as identified in the OP, is not feasible and must be altered, an amendment request should be filled out for review and approval.
- Operating and work permits may contain specific conditions for road construction or access management proposed in the operating year. Timber inspections will determine if operating and work permit conditions have been fulfilled on forestry roads.

Clearing Roadway and Salvage

- The preferred method for clearing centerline timber is to harvest it.
- The proponent will request approval for alternative centreline clearing methods on primary and secondary roads. The approved centreline clearing methods will be identified on operating and work permits. Damaging merchantable wood in centreline clearing should be minimized.
- If the forest officer determines during planning that trees are merchantable and there is a potential market (ex: commercial product or public fuel wood), those tree species should be salvaged and piled roadside during road development.
- If timber salvage is not required, alternative methods of disposing debris may be permitted.
- If merchantable trees are destroyed during road construction, the forest officer may assess timber dues and charges according to waste of merchantable timber provisions of The Forest Use and Management Regulation.

Impact on Productive Forest Land

- The width of a primary and secondary right-of-way (ROW) should be minimized to prevent unnecessary loss of productive forest. Proponents will identify ROW widths in the OP.
- The network of roads should be minimized to prevent unnecessary impact or loss of productive forest.
- The size of a borrow pit or stockpile area should be minimized to prevent unnecessary loss of productive forest. The IRMT may require rehabilitation of these sites.

Miscellaneous

- Brush piles resulting from road construction may be compacted and buried or kept at least five metres away from the edge of standing timber. Brush piles may be retained for use to decommission secondary and tertiary roads.
- Primary and secondary forestry road systems should have signs placed at the start that indicate they are logging roads and that drivers should exercise caution. An additional sign must indicate when major haul operations are in progress.
- Infilling wetlands must not take place.

Where the protection of the environment, resource values or public safety are of particular concern, the IRMT may require any combination of access management, visual barriers, specific road location or harvest sequencing (ex: back to front) to regulate use of secondary roads.

Access Management

Relevant legislation and forest management licence agreements regulate the use and management of resource roads. Access management may be required at any time for the protection of the environment, resource values or public safety. Special conditions may be necessary in areas where species listed by the federal *Species at Risk Act* exist. A species at risk strategy will override forestry road management guidelines.

There are several provisions for restricting access on forestry roads:

- *The Provincial Parks Act* Section 27 (l) authorizes posting signs to restrict travel or close any road or trail which includes for the protection of resource values.
- *The Crown Lands Act* Manitoba Regulation 145/91 (Section 3 (1) & (2)) provides for posting signs to close a road to vehicle travel and the erection of gates or barricades as required.
- *The Forest Act* Forest Use and Management Regulation (78) provides for closure of forest access roads when, because of conditions such as weather, vehicle use could result in damage to the roads.
- *The Wildfires Act* (Section 20 (l)) provides for closure of an area to protect land, property or public safety during the wildfire season.
- Subsection 2.1 (2) of the General Hunting Regulation, Manitoba Regulation 351/87, made under *The Wildlife Act* provides for posting signs to prohibit hunting within three hundred metres of a resource road, a timber operation or forest harvested area for public safety or for management, conservation or enhancement reasons. Although Subsection 2.1 (2) prohibits hunting during the active period of a timber harvesting operation, and in the forest harvested area, it does not close roads.

The IRMT and the proponent will determine the appropriate method of access management. Appropriate signage will be developed and signs erected governing the restriction of vehicles on the road.

Access management may be required during forestry operations, during periods of inactivity such as breaks in harvest operations, between initial harvesting operations and silvicultural treatments, between silvicultural treatments and future harvesting, or after all uses of the road for forestry have ended. The access management strategy for specific roads in an operating area will be included in the FRDP or the OP.

Figure 2 Road use restriction

Road Use Restrictions

Road use restrictions are used to restrict or impede motor vehicle access and normally involve blocking access at strategic locations, but would not involve the amount of work that a full decommissioning would require.

Signs, gates, barricades and other methods may be employed to restrict road use. Road use restrictions may be short or long term and may restrict all or some vehicle access.

The reasons for applying road use restrictions include:

- for the better management, conservation or enhancement of resource values
- for worker and public safety
- for access control when high forest fire hazard conditions exist
- to prevent damage to the road
- when forestry roads must be closed and are expected to be reused

Proponents or the IRMT may propose road use restrictions for specific forestry roads. Local communities or other developers of forest roads may also propose road use restrictions through a similar process. Discussion with affected Aboriginal peoples, local communities and stakeholders and notification of road use restrictions is required, normally through the OP process. Final recommendations from the proponent, incorporating input from the planning process, will be reviewed for approval by the IRMT.

Maintenance of roads during periods of inactivity

Roads are maintained by the proponent to meet the travel and use requirements for company operations at any particular time. During seasonal periods of operational inactivity, maintenance to the standard to support general vehicle traffic may not be required. There will be no requirement to maintain travel surfaces for general (third party) access. During these periods, the proponent should continue to assess the condition of features such as culverts, bridges and crossings to ensure the integrity of water flow. At the start of any unmaintained sections, appropriate signage indicating that the road is not maintained and travel is not recommended should be posted.

Water crossing removals will be included in the OP. The proponent will notify DFO for review and assessment of the project proposal (see appendix IV for contact information). Water crossing maintenance for structures left in place

will continue to be the proponent's responsibility. Periodic inspection and potential maintenance of water crossings must occur. Sites of particular concern would include the current and former locations of culverts and bridges, and portions of roads where erosion risks are significant.

Effective access restrictions at strategic locations may include, but are not limited to:

- erecting gates and signage at appropriate locations
- placing barricades such as logging debris or boulders
- constructing berms or ditches
- making sections of roads impassable
- removing culverts or bridges at some or all locations
- removing highway access points

The agency that constructed each forestry road or water crossing will be responsible for implementation, maintenance and signage of these works.

The forestry officer will inspect crossings that have been removed and the measures implemented to prevent subsequent erosion. If these activities have been satisfactorily completed, a final inspection report will be completed and the IRMT will not require the proponent to be responsible for any future maintenance on these sites.

Decommissioning

In general, any forestry road no longer required for forestry purposes should be decommissioned. This activity should be undertaken when operating areas or harvest blocks will not be re-entered for forest management activities for an extended period. Road decommissioning is similar to road use restriction, but uses more aggressive strategies.

Decommissioning forestry roads may be necessary to provide long-term protection of resource values, the environment and public safety. Decommissioning intends to deter any vehicle travel on the road and may involve returning the road to a vegetated state. Decommissioning also involves rehabilitating water crossings to prevent erosion. It is recognized that revegetation with appropriate vegetation mixes will occur.

Initial road designs should incorporate intent to decommission roads. The location and design of forestry roads should consider future access management requirements. For example, the use of impassable natural topography at the start of a road may assist in implementing future access management.

Tertiary forestry roads will normally be constructed shortly before harvest and decommissioned promptly after forest management activities, including silviculture, are finished. Primary and secondary roads tend to be used over a longer period to access additional blocks of timber in an operating area. However, if a primary or secondary road will not be required over a long period, it should be decommissioned. The decommissioning of forestry roads may include such things as:

- removal of water crossings to maintain natural hydrology and acceptable re-contouring of road approaches
- taking measures to prevent erosion at water crossings and along the road
- posting signs, for safety reasons, to indicate the road has been closed
- the revegetation of all tertiary roads (the revegetation of roads within provincial parks is to be done with native species only)
- ripping portions of roads
- site preparing specific portions of roads to render them impassable by vehicle
- removal of large bridge structures and arch culverts
- removal of railway crossings

If decommissioning has been satisfactorily completed CONWS will not require the proponent to be responsible for any future maintenance on these sites.

Proponents may propose to decommission specific forestry roads they manage. In some circumstances, the province may not want to decommission some forestry roads constructed by the proponent because of established public, Aboriginal peoples, local communities or commercial uses. In these circumstances

the province will release the proponent from responsibility and may take on or transfer to another party (ex: Aboriginal peoples community or other communities) the maintenance, responsibility and liability for the road. Future closure, when activities conclude, may require decommissioning. If forestry activities resume, the proponent may reacquire road maintenance responsibilities.

Re-activation of a decommissioned road by a forestry proponent:

- the proponent submits an updated FRDP
- the IRMT reviews the FRDP
- the re-activation may receive initial assessment to determine if Aboriginal peoples consultation is required
- approval of the new FRDP by IRMT

Re-activation on a decommissioned road by a third party:

- the proponent submits a proposal with timing, distance, etc.
- the IRMT reviews the proposal
- the re-activation may receive initial assessment to determine if Aboriginal peoples consultation is required
- work permit issued by IRMT

Figure 3
1992 – Forestry road prior to decommissioning

Figure 4
1998 – Forestry road post decommissioning

Figure 5
2010 – Forestry road post decommissioning

Relevant Legislation

Authorization for forestry road management planning is granted to each proponent by Manitoba. Manitoba also approves each proponent's FMP and issues licenses under *The Environment Act*. Several forms of authorizations regulate and guide forestry road management planning, construction and maintenance.

Provincial Legislation

The Forest Act, *The Crown Lands Act*, *The Wildlife Act* and *The Provincial Parks Act* are provincial legislation applicable to resource roads. In general, these acts provide the minister the authority to regulate the use and management of resource roads. The minister may restrict or prohibit the use of motorized vehicles, erect barricades or gates, prohibit activities such as hunting and post signs indicating these measures. These measures may be undertaken for public safety or to protect a variety of resource values. Pertinent sections of each act are found in Appendix III.

Federal Legislation

The Fisheries Act and *The Navigable Waters Protection Act* are both relevant to the development of forestry roads where there may be potential impacts from crossings and nearby roads. Pertinent sections of each act are found in Appendix IV. These acts provide for the protection of fish habitat and navigation in water bodies.

Forest Management Licence Agreements and Timber Sale Agreements

Through the authority of a forest management licence agreement or timber sale agreement, proponents can construct and maintain forestry roads to access timber for their operations. These agreements may also include provisions for constructing roads jointly with Manitoba, permit public use of forestry roads and enable Manitoba to designate resource roads as provincial roads or highways. More recently, agreements provide proponents with directions on tree use during road construction, allow them to close roads in specific conditions and allow them to carry out a road retirement program.

Environment Act Licences

Each proponent is also required to obtain an environmental licence for their FMP. Among other requirements, each licence contains specific references to the management of forestry roads. Links to examples of environment act licences are found in Appendix V.

Appendix I – Forest Management Licensee Road Classification System

FML Road Class	Season	Time (years)	ROW (metres)	Users	CONWS Class
CLASS 1					
FML # 3	All	20+	45m	All Users	Primary
FML # 2	All	20+	60m	"	"
FML # 1	All	Permanent	45m	"	"
CLASS 2					
FML # 3	All	20	30m	Access Throughout Forest	Secondary
FML # 2	All	3–20	50m	"	"
FML # 1	All	20+	40m	"	"
CLASS 3					
FML # 3	Seasonal	2–20	20m	Primarily Timber Harvesting	Tertiary
FML # 2	Seasonal	1–12	40m	"	"
FML # 1	Seasonal	1–10	35m	"	"
CLASS 4					
FML # 3	Seasonal	5+	10–20m	Primarily Timber Harvesting	Tertiary
FML # 2	Seasonal	1-12	40m	"	"
FML # 1	Winter	1-10	20–30m	"	"
CLASS 5					
FML # 3	Winter	2	8–20m	Primarily Timber Harvesting	Winter
FML # 2	Winter Ice	Variable	60m	"	Winter
FML # 1	——	——	——	——	——

Appendix II – Other provincial guideline documents with road related references

Forest Management Guidelines for Terrestrial Buffers (2010)
Forest Management Guidelines for Riparian Management Areas (2008)
Manitoba Submission Guidelines for Twenty Year Forest Management Plans (2007)
Manitoba Submission Guidelines for Forest Management Operating Plans (2011)
Wildlife Guidelines for Forest Management in Manitoba (1989)
Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (1996)

Guidelines in digital format are available on the Forestry Branch website at:
www.manitoba.ca/conservation/forestry/practices/guidelines.html

Appendix III – Provincial Legislation

***The Forest Act* F150**

Part I

8(2) The minister may, subject to other relevant legislation, maintain or build roads, winter roads and stream improvements on Crown land, designate any of them as resource roads or improvements, regulate and set charges for their maintenance and assess and recover the cost of any damage to them as a debt owed to the Crown from the person responsible for the damage.

Part III

23(2) Every road and highway, the title to which is vested in the Crown, and that lies between parcels of land contained in a provincial forest, shall, for the purposes of forest administration, be deemed to be part of the provincial forest.

Forest Use and Management Regulation 227/88R

9 Any timber cut in the construction of a road or in the clearing of a skidway, landing, or camp site shall be paid for in accordance with the dues and charges payable under the licence, timber sale agreement, or permit.

73(1) An operator shall allow other authorized users of the forest to use such roads as he has constructed or may construct and maintain in connection with his operations; but any such authorized users of the forest shall pay to the operator such part of the costs of construction and maintenance of the road as may be mutually agreed upon.

73(2) Where the director considers it necessary for an authorized user of the forest to have access to any part thereof, and for any use therein which may from time to time arise in an area held by an operator, the operator shall allow the said access and required use, but the authorized user shall pay to the operator a reasonable amount for any estimated loss that may be caused to the operator by virtue of said access and use.

73(3) Where, under subsection (1) or subsection (2) the persons concerned fail to agree on the amount payable, the director, upon being notified of the failure, may direct, and the operator when so directed shall allow, the authorized user of the forest to use the road or said access and required use, as the case may be; and the amount payable and any other matter in dispute shall be settled by arbitration.

78 Where, owing to weather or other conditions, the hauling of timber or other product is likely to cause damage to a forest access road or a road within a provincial forest, the minister may cause a notice to be posted

(a) closing any such road to traffic until the road, in his opinion, is fit for traffic; or
(b) imposing weight restrictions with respect to that road.

The Forest Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/f150e.php.

***The Crown Lands Act* C340**

Lands Resource Roads Regulation 145/91

3(1) The minister may cause signs to be posted on or adjacent to resource roads prohibiting controlling or governing the operation of vehicles on those roads.

3(2) The minister may cause signs to be posted on or adjacent to a resource road closing the road to the operation of vehicles, and in the event may cause gates or barricades to be erected.

The Crown Lands Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/c340e.php.

***The Wildlife Act* W130**

3(1) Unless otherwise provided by this Act or the regulations, the designation of an area for the better management, conservation or enhancement of the wildlife resource of the province in accordance with section 2 does not limit or affect the uses and activities that may be undertaken in the area, and the minister may make such regulations as the minister considers appropriate:

(a) respecting the use, control and management of an area;
(b) authorizing, regulating or prohibiting and use, activity or thing in an area;
(c) authorizing the construction, operation and maintenance of any building, structure or thing in a wildlife management area.

General Hunting Regulation 351/87

2.1(2) The minister may cause signs to be posted on Crown lands prohibiting hunting, the discharge of a firearm or bow or the possession of a loaded firearm on or within 300 metres of a resource road, timber operation, forest harvested area or mine that is located on Crown lands.

The Wildlife Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/w130e.php.

***The Provincial Parks Act* P20**

27(1) The director may, by posting signs or other suitable means

(a) open or close all or part of a provincial park; or
(b) restrict travel on or close any road or trail in a provincial park that is not under control of the Minister of Highways and Transportation.

The Provincial Parks Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/p020e.php.

***The Wildfires Act* W128**

In order to protect land, property or public safety during the wildfire season, the minister may order an area to be closed to entry or travel for a specified period of time, and shall make reasonable efforts to have the public notified immediately of the order.

The Wildfires Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/w128e.php.

***The Endangered Species Act* E111**

10(1) No person shall

(a) kill, injure, possess, disturb or interfere with an endangered species, a threatened species, or an extirpated species that has been reintroduced;
(b) destroy, disturb or interfere with the habitat of an endangered species, a threatened species or an extirpated species that has been reintroduced; or
(c) damage, destroy, obstruct or remove a natural resource on which an endangered species, a threatened species or an extirpated species that has been reintroduced depends for its life and propagation.

The Endangered Species Act can be found at: web2.gov.mb.ca/laws/statutes/ccsm/e111e.php

Appendix IV – Federal Legislation

***Fisheries Act* F-14**

35. (1) No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.

Alteration, etc., authorized

(2) No person contravenes subsection (1) by causing the alteration, disruption or destruction of fish habitat by any means or under any conditions authorized by the Minister or under regulations made by the Governor in Council under this Act.

R.S., c. F-14, s. 31; R.S., c. 17(1st Supp.), s. 2; 1976-77, c. 35, s. 5.

36. (1) No one shall

(a) throw overboard ballast, coal ashes, stones or other prejudicial or deleterious substances in any river, harbour or roadstead, or in any water where fishing is carried on;

(b) leave or deposit or cause to be thrown, left or deposited, on the shore, beach or bank of any water or on the beach between high and low water mark, remains or offal of fish or of marine animals; or

(c) leave decayed or decaying fish in any net or other fishing apparatus.

Disposal of remains, etc.

(2) Remains or offal described in subsection (1) may be buried ashore, above high water mark.

Deposit of deleterious substance prohibited

(3) Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.

The Fisheries Act can be found at: http://laws.justice.gc.ca/eng/F-14/index.html

Fisheries and Oceans Canada Manitoba Contact Information

Tammy Wruth
Fish Habitat Biologist | Biologiste, Habitat du poisson
Dauphin Office – Manitoba District | Bureau de Dauphin – District du Manitoba
Prairies Area | Secteur des Prairies
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Fisheries and Oceans Canada
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For more information go to the Fisheries and Oceans Canada website at:
http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm

***Navigable Waters Protection Act* Chapter N-22**

5. (1) No work shall be built or placed in, on, over, under, through or across any navigable water without the Minister's prior approval of the work, its site and the plans for it.

Terms and conditions — substantial interference

(2) If the Minister considers that the work would substantially interfere with navigation, the Minister may impose any terms and conditions on the approval that the Minister considers appropriate, including requiring that construction of the work be started within six months and finished within three years of the day on which approval is granted or within any other period that the Minister may fix.

Terms and conditions — other interference

(3) If the Minister considers that the work would interfere, other than substantially, with navigation, the Minister may impose any terms and conditions on the approval that the Minister considers appropriate, including requiring that construction of the work be started and finished within the period fixed by the Minister.

Extension of period

(4) The Minister may, at any time, extend the period by changing the day on which construction of the work shall be started or finished.

Compliance with plans, regulations and terms and conditions

(5) The work shall be built, placed, maintained, operated, used and removed in accordance with the plans and the regulations and with the terms and conditions in the approval.

Classes of works and navigable waters

5.1 (1) Despite section 5, a work may be built or placed in, on, over, under, through or across any navigable water without meeting the requirements of that section if the work falls within a class of works, or the navigable water falls within a class of navigable waters, established by regulation or under section 13.

Compliance

(2) The work shall be built, placed, maintained, operated, used and removed in accordance with the regulations or with the terms and conditions imposed under section 13.

Non-application

(3) Sections 6 to 11.1 do not apply to works referred to in subsection (1) unless there is a contravention of subsection (2).

2009, c. 2, s. 321.

Ministerial orders respecting unauthorized works

6. (1) If any work to which this Part applies is built or placed without having been approved under this Act, is built or placed on a site not approved under this Act, is not built or placed in accordance with the approved plans and terms and conditions and with the regulations or, having been built or placed as approved, is not maintained, operated, used or removed in accordance with those plans, those terms and conditions and the regulations, the Minister may

(a) order the owner of the work to remove or alter the work;

(b) where the owner of the work fails forthwith to comply with an order made pursuant to paragraph (a), remove and destroy the work and sell, give away or otherwise dispose of the materials contained in the work; and

(c) order any person to refrain from proceeding with the construction of the work where, in the opinion of the Minister, the work interferes or would interfere with navigation or is being constructed contrary to this Act.

The Navigable Waters Protection Act can be found at: http://laws.justice.gc.ca/eng/N-22/index.html

Navigable Waters Protection Program Contact Information

Regional Manager
Navigable Waters protection Program – Prairie and Northern Region
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Canada Place
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Fax: 780-495-8607
Email: nwp-pen.pn@tc.gc.ca

The Species at Risk Act

In 2003, the *Species at Risk Act* (SARA) was proclaimed. The act protects wildlife species at risk in Canada. Within the act, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was established as an independent body of experts responsible for identifying and assessing species considered to be at risk. This is the first step towards protecting species at risk. Subsequent steps include COSEWIC reporting its results to the Canadian government and the public, and the minister of the environment's official response to the assessment results. Species that have been designated by COSEWIC may then qualify for legal protection and recovery under SARA.

Appendix V – Environment Act Licences

FML # 1

Licence No.: 1557 ER
Issue Date: November 1, 1993
Revised: December 21, 2001
TEMBEC INDUSTRIES INC.: "the Licensee"
www.manitoba.mb.ca/conservation/eal/archive/older/licences/1557er.pdf

FML # 2

Licence No.: 2302 ER
Issued Date: December 30, 1997
Revised: October 8, 1998, and
Revised: January 11, 1999 (Note: the only revision made on this date was to the company name.)
TOLKO INDUSTRIES LTD.: "the Licensee"
www.manitoba.ca/conservation/eal/archive/1997/licences/2302er.html

FML # 3

Licence No. 2191 E
Issue Date: May 27, 1996
Varied: December 10, 1996, for the period 1996 - 2005
LOUISIANA-PACIFIC CANADA LTD.: "the Licensee"
www.manitoba.ca/conservation/eal/archive/1996/licences/2191e.pdf

Appendix VI –Water and Wetland Feature Definitions

Wetland Definitions

Bog – Bogs are peatlands that have deep deposits (more than 40 centimetres) of poorly decomposed organic material (referred to as peat). They are elevated above the surrounding terrain and receive water and most nutrients from precipitation. Bogs are the most nutrient-poor wetlands in the western boreal forest. Cushion-forming sphagnum mosses are common, along with heath shrubs. Trees may be absent; if present, they form open-canopied forests of low, stunted trees (National Wetland Working Group 1997).

Fen – Fens are peatlands with deep organic (peat) deposits (more than 40 centimetres) influenced by slow, lateral water movement. Water sources have been in contact with nutrient-rich surface or groundwater, making fens more productive and biologically diverse than bogs. Fens can be treed, shrubby or open. Often referred to as muskeg, fens are the most extensive wetlands in the western boreal forest.

Marsh – Marshes are mineral wetlands with shallow organic deposits (less than 40 centimetres). Water levels fluctuate seasonally and water sources are precipitation and associated run-off, groundwater and stream inflow. They are characterized by an emergent vegetation of reeds, rushes or sedges (National Wetland Working Group 1997). Marshes in the western boreal forest are often found as a transition between open water and shorelines.

Shallow Open Water – Open Water wetlands that have water depths less than two metres but are too deep for emergent marsh vegetation to establish. Visually, these wetlands appear to be small lakes, although floating-leaved and submerged aquatic vegetation are common.

Swamp – A diverse group of wetlands with soils predominantly mineral based, although peat may be present in some settings. Swamps typically have hummocky ground that may contain pools of standing water or slow moving waters that occur seasonally or persist for long periods. The vegetation may consist of dense coniferous or deciduous forest, or tall shrub thickets (National Wetland Working Group 1997) often associated as shoreline areas of streams, lakes and floodplains.

Wetlands – Land where the water table is at, near or above the surface, or that is saturated for a long enough period to promote such features as wet-altered soils and water-tolerant vegetation (National Wetlands Working Group 1988). Wetlands are broadly grouped into organic wetlands (peatlands) that have organic soil depths greater than 40 centimetres and mineral wetlands that have organic soil depths less than 40 centimetres.

Water Definitions

Ephemeral stream – A stream that flows briefly, only in direct response to precipitation in the immediate locality, and has a channel that is at all times above the water table (Dunster 1996).

Intermittent stream – Is a stream in contact with the groundwater table. It flows only at certain times of the year, such as when the groundwater table is high or when it receives water from springs or some surface source such as melting snow. It ceases to flow above the streambed when losses from evaporation or seepage exceed the available stream flow (Dunster 1996).

Lake – A lake is a sizable water body, generally greater than two metres in depth, surrounded by land and fed by rivers, springs or local precipitation (Environment Canada 2004). A lake has three zones:

- littoral zone, which is a sloped area that is close to land
- open water zone, where sunlight is abundant
- deep water zone, where little sunlight can reach

A lake may be deposited with minerals and sediment, and gradually, the lake becomes a wetland, such as a swamp or marsh. Because of this process of succession, it can be difficult to assign a water body to a particular class (Wetzel 2001).

Perennial or Permanent Stream – A stream that flows continuously throughout the year (Dunster 1996).

River – Rivers are natural drainage channels for surface waters, primarily from runoff and base flow. Runoff is that part of precipitation that flows toward the rivers or streams on the ground surface or within the soil (subsurface runoff or interflow). Base flow is the part of stream flow that enters the stream channel from groundwater. A river's watershed or drainage basin—the area supplying it with water—is separated from the watersheds of neighbouring rivers by higher lands called drainage divides (Environment Canada 2004).

Glossary of Terms

Aquatic Habitat – Ecosystems that contain plants and animals that require water to be present for at least part of the year. This includes lotic (moving) and lentic (non-flowing) systems such as rivers, streams, lakes, ponds and wetlands.

Berm – An artificial ridge or embankment used to stop vehicle traffic or to block line of sight.

Block – The geographic area of trees scheduled for harvest or other treatment (ex: cut block, spray block) (Dunster 1996).

Borrow pit – A small quarry or excavation that provides material for use in road construction.

Crown-Aboriginal Consultation
The government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations and Aboriginal communities when a proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Aboriginal right of the Aboriginal community.

Consultation is a process of two-way communication in which advice and opinions of the consulted party are sought prior to government action, for the purposes of ensuring that both parties are better informed and have attempted to avoid infringing on a right. If infringement on a right is unavoidable, ensure that mitigative measures have been agreed upon including measures to accommodate the infringement of the right. For more information on Crown-Aboriginal Consultation see the Interim Provincial Policy for Crown Consultations with First Nations, Métis Communities and Other Aboriginal Communities at: www.manitoba.ca/ana/pdf/interim_aboriginal_consultation_policy_and_guidelines.pdf

Forest Management Licence (FML) – An area-based agreement, granted under The Forest Act, between the province and a company that provides a long-term fibre supply to a wood using industry in exchange for accepting many forest management responsibilities including planning, allocating, supervising and administrating of both timber depletions and forest renewal activities.

Forest Practices – Activities conducted during all stages of forest management. Examples are surveys, harvesting, road construction and silviculture.

Guidebook – A collection of policies, guidelines, procedures and standards related to a specific forest practice.

Guideline – Alternative procedures or standards that can be applied to satisfy the principle upon which the guidelines are based. Specific guidelines are enforceable when identified on operating permits or work permits.

Integrated Resource Management Team (IRMT) – a regional management team organized to review natural resource issues (The IRMT is made up of members of Manitoba Conservation and Water Stewardship – director, regional services superintendent, chief natural resource officer and resource managers representing forestry, wildlife, parks, fisheries and lands interests .)

Landings – The place where logs are yarded and stored pending loading and transport to a processing facility.

Mitigate – Actions taken during the planning, design, construction and operation of works and undertakings to alleviate potential adverse effects on the land base.

Navigable Water – In general, navigable waters include all bodies of water useable by **any type of floating vessel for transportation, recreation or commerce.**
*Note: Frequency of navigation may not be a factor in determining a navigable waterway. If it has the potential to be navigated, it will be determined navigable.

Operating Area – A contiguous area upon which forest development activities are planned. Impacts of proposed harvesting activities on various resource concerns (ex: ecological diversity, habitat management, access, water management) are assessed based on the entire operating area.

Operating Block – A specific area within the operating area planned for harvest, usually in one season.

Policy – A deliberately chosen course of action. Policy in this document refers to governing principles and corresponding procedure and standards of the Manitoba government.

Procedures – A step or series of steps taken to put into practice a policy or guideline.

Resource – Anything that is useful for something, be it animal, vegetable, mineral or an abstract concept, such as aesthetics.

Resource Value – A recognized and desired resource, existing or potential, including environmental, commercial, recreational, social or cultural function or uses.

Right-of-Way (ROW) – The cleared area along a road alignment, which contains the roadbed, ditches, road slopes and back slopes.

Road Decommissioning – Is intended to deter any vehicle travel on a road and may involve returning the road to a vegetated state.

Stakeholder – Any person who feels their interests will be affected by the outcome of a decision making process. These interests do not have to be of a financial nature, but may include a whole range of human values, such as the need for natural justice, religious value, ecological principles and a longing for environmental protection (Dunster 1996).

Standards – Descriptions of targets or goals used to measure the success of procedures. They may be general or specific.

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