Forest Information Manual **2009**

Forest Management Planning Technical Specifications 2009

Foreword

The *FIM Forest Management Planning Technical Specifications* are prescribed by *the Forest Information Manual* (FIM). FIM technical specifications describe information standards. Technical specifications are prepared to facilitate the provision of information prescribed by the FIM. They provide the direction for exchanging information between the MNR and the forest industry. They provide detailed, technical and product specific requirements and outline roles and responsibilities. The FIM technical specifications cover subjects such as:

- detailed data attribute descriptions;
- acceptable file and media formats;
- metadata requirements;
- information exchange parameters and protocol, and
- standards/procedures for quality control, error handling, and verification.

FIM technical specifications are effective upon regulation of the FIM or as they are developed. Technical specifications may be revised periodically to consider more effective and efficient ways of managing, transferring, and receiving information. Changes or revisions to technical specifications do not impact the requirements or direction for the provision of information as prescribed by the FIM. It is a requirement of the FIM that the FIM technical specifications (as revised from time to time) be followed.

A list of current FIM technical specifications and the scope of information to which they apply will be maintained and available on the Forest Information Portal (FI Portal). The MNR and forest industry are required to use the technical specifications listed on the FI Portal.

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1.0 Introduction

The requirements for consultation, creation and submission of forest management plans has its basis in the *Forest Management Planning Manual* (FMPM) which requires that a forest management plan (FMP) be prepared for each forest management unit. Forest management plans are prepared for a ten-year period with two five-year operational terms. The preparation of the long-term management direction for the ten-year period as well as operational planning for the first five-year term is performed during Phase I planning. The operational planning for the second five-year term, conducted in years four and five of a ten-year forest management plan, is performed during Phase II planning.

The FMPM and the *Forest Information Manual* (FIM) prescribe information that must be prepared and submitted for consultation, information that will be included in the forest management plan, and information that will be used by the Ministry of Natural Resources (MNR) to fulfill its obligations under the *Crown Forest Sustainability Act.*

The purpose of this technical specification is to support the FIM requirements for the exchange of forest management plan information in the standardized electronic format.

This document describes the electronic exchange standards for both MNR and the Licensee (Sustainable Forest Licence (SFL) Holders, Plan holders or other forest resource licence holders with forest management responsibilities). These specifications describe the data exchange standards only and do not affect how information may be stored or maintained by either the MNR or the Licensee. Each party is expected to generate the required information products in the specified data exchange format from their proprietary system.

2.0   Roles and Responsibilities

The roles and responsibilities as defined in the FIM and these *FIM Forest Management Planning Technical Specifications* are the norms. In limited circumstances direction on roles and responsibilities may be from the terms of reference associated with the production of a forest management plan (FMP). At the management unit level, roles and responsibilities may be adapted to best meet the circumstances of the unit and maintain the established relationships between the MNR and the Licensee. Terms of reference for the production of a FMP are approved by both the MNR District Manager and the MNR Regional Director.

2.1   Licensee

Normally it is the responsibility of the Licensee to prepare and submit:

- Planning Inventory and Base Model Inventory
- Operational Planning Information
- FMP Documents
- Forest Management Planning Maps

The Licensee is also responsible for updating and providing these products at applicable stages of plan production.

If resubmission of a required information product is necessary, the Licensee will provide the entire information product, not just the corrections. An example would be if there are files missing from the draft plan submission, the resubmission would be the entire draft plan, not just the files that were missed. The entire draft plan would be resubmitted in a new zip file.

2.2   Ministry of Natural Resources

The MNR will verify that all information products submitted by the Licensee meet the standards defined in these *FIM Forest Management Planning Technical Specifications* and are complete. When the information product is determined to be unacceptable, MNR will provide the Licensee with a list of required alterations.

Some components/products of the FMP are normally the responsibility of the MNR to prepare or have prepared, such as the values maps, French translations of the Summary text and map(s),

Statement of Environmental Values briefing note, local citizens committee (LCC) summary report, lists of required alterations, and public and Aboriginal consultation summaries.

3.0 Implementation

The requirements of these *FIM Forest Management Planning Technical Specifications* will come into effect as per the following schedule.

- **Planning (composite and forecast) inventory and base model inventory information** - Commencing with 2012 forest management plans and contingency plans, FIM and the standards in this technical specification will be implemented.

- **Operational Planning Information** - Commencing with 2011 forest management plans, FIM and the standards in this technical specification will be followed for operational planning information products:
    - Planned Harvest
    - Area of Concern
    - Planned Residual Patches
    - Planned Road Corridors
    - Operational Road Boundaries
    - Existing Road Use Management Strategy
    - Planned Aggregate Extraction Areas
    - Renewal and Tending
    - Planned Clearcuts

- **Electronic Submission of Draft FMP and Draft Summary** - Commencing with 2011 forest management plans and contingency plans, FIM and the standards in this technical specification will be followed.

- **Final FMP** - Commencing with 2011 forest management plans and contingency plans, FIM and the standards in this technical specification will be followed.

- **FMP Amendments** - Commencing with amendments whose amendment request is received by the MNR after the implementation of FIM 2009, FIM and the standards in this technical specification will be followed.

Product submission requirements by plan year is summarised in the following table:

Product	Current FMP	2011	2012
Planning Composite		X*	X
Forecast Depletions		X*	X
Base Model Inventory		X*	X
Planned Harvest		X	X
Area of Concern		X	X
Planned Residual Patches		X	X
Planned Road Corridors			
Operational Road Boundaries		X	X
Existing Road Use Management Strategy		X	X
Renewal and Tending Layer		X	X
Planned Clearcuts Layer		X	X
FMP Draft Plan		X	X
FMP Draft Plan Summary		X	X
FMP (final submission)		X	X
FMP Amendments	X	X	X

* Submitted with the Draft Plan and/or Final Plan.

3.1   Revision Notes

Notable changes and revisions from the June 2008 version of the FIM *Forest Management Planning Technical Specifications* include:

- General formatting, clarification, organizational and typographical corrections

- Option to provide maps in pdf format

- Validation rules used by the FI Portal to assess FMP submissions against the required standards have been included in the appendix

- Removal of requirement for Forest Management Planning Composite Maps

- Removal of requirement for Key Map

- Additional requirement for Index Map

- Mandatory requirements for the FMP FI Portal submission file have been enhanced

- Operating Area Boundaries has changed to Operational Road Boundaries

- Planned Road Corridors and Existing Road Use Management Strategy have additional attributes

- Planned Residual Patches, Planned Aggregate Extraction Areas and Planned Renewal and Tending layers have been added to the Operational Planning Layers.

- Adjustments and corrections were made to numerous attribute codes described in Appendix 1

4.0 Product Descriptions

4.1 Inventory Information Specifications

4.1.1 Description, Intent and Intended Use

There are two inventory product submissions; the planning inventory (which is comprised of the planning composite and forecast depletions), and the base model inventory. The planning inventory and base model inventory for the management unit provide information required for forest management planning, including forest modeling, habitat modeling, forest diversity analyses, and operational planning.

The planning inventory, required to meet the planning inventory checkpoint, is comprised of two separate information products that are described in this section; the planning composite (Section 4.1.7) and the forecast depletions (Section 4.1.8). The planning composite contains updated forest resources inventory information as a result of forest management activities and natural disturbances to the start of the planning process. The forecast depletions contains expected changes, based on planned operations from the current approved forest management plan (i.e., forest operations which have not yet been implemented) that are forecasted to be completed during the current term and natural disturbances that have occurred but have not yet been inventoried. The forecast depletions may change during plan preparation as better information is available. This revised information may be used for operational planning that has not been endorsed by the MNR Regional Director. Changes to forecast depletions, after regional director preliminary endorsement of the long-term management direction (LTMD), will not require the LTMD to be revisited or the base model inventory (BMI) to be recreated and resubmitted unless agreed to by the planning team. Changes to forecast depletions should not impact the LTMD; impact is limited to operational planning, or to spatial analysis conducted during operational planning such as planned clearcut analysis.

The BMI is a union of the planning composite and the forecast depletions into one spatial data layer. The creation of the BMI requires that forest stand description information from the planning composite be updated with information from the forecast depletions to reflect the estimated result of depletions planned for the remainder of the current plan term. Forest classification attributes, such as forest unit and silvicultural intensity, will also be populated for all forested polygons. If an aspatial model is being used for forest modeling (e.g., SFMM), the BMI will not be cleaned after the union process nor will any of the small polygons be removed/dissolved. If a spatial model is being used,

the union may be accomplished as described for aspatial models or by scheduling the activity (harvest) in the term prior to the start of the planning term to incorporate forecast operations. Due to the nature of the spatial model being used, the planning team may choose to clean the BMI after the union process and remove/dissolve small polygons. Further description of the BMI is found in Section 4.1.9.

This BMI provides the necessary information to generate the inputs for spatial and non-spatial models required for strategic modeling in the long-term management direction. The BMI will normally not be revised following the Regional Director preliminary endorsement of the long-term management direction.

The provision of the BMI will support the review and approval of the base model inventory and base model progress checkpoint

4.1.2   Packaging and Naming Conventions

The inventory information is to be packaged into a single compressed (zip) file for submission.

A standard naming convention is to be used when submitting the inventory information (i.e., to label the zip file). This naming convention will assist in the automated validation and use of this information product. The submission (zip) file is to be named using the following standard naming convention:

MU<management unit>_<year>_<product>_P1.ZIP

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the ten-year planning period (e.g., 2012).
_	Underscore character as a separator.
<product>	Letters representing the information product being submitted: 'INV' for *Planning Inventory* or 'BMI' for *Base Model Inventory*
_	Underscore character as a separator.
P1	Letter 'P1' representing Phase I.
.ZIP	File format extension for a compressed file.

Examples:

      MU123_2012_INV_P1.ZIP   (Planning Inventory – Phase I)
      MU123_2012_BMI_P1.ZIP   (Base Model Inventory – Phase I)

The submission (.zip) file for the planning inventory must contain the spatial and tabular files associated with the planning composite and the forecast depletions for the management unit. The submission (.zip) file for the BMI must contain the spatial and tabular files associated with it. FI Portal automated validation of product submissions requires that all the required files be in the root of the zip file, not organised into folders.

If either inventory product needs to be submitted more than once during the forest management plan development process due to changes/updates to the product, then the entire information product as described in this document must be re-submitted.

4.1.3   Metadata

Part of the metadata requirements will be met by use of the standard naming convention as well as the submission details that are collected when FMP submission files are submitted via the FI Portal.

4.1.4   Format

- Spatial information and associated tabular attributes are to be submitted as a double precision ArcInfo coverage, exported to a standard ESRI Interchange file format (.e00), with no compression. Where software versions enforce a maximum line limitation, multiple export files per coverage are acceptable (e.g., .e00, .e01, .e02, etc.).

- Each coverage must contain a defined projection. Choice of projection is a planning team decision. The selected projection is to be used for all spatial products associated with a forest management plan (e.g., planning inventory, operational planning layers).

- Information managed in the UTM projection where the management unit spans more than one UTM zone, must be projected to a single UTM zone. Choice of UTM zone is a planning team decision.

- Information is to be provided in NAD83 CNT datum.

- Spatial information will be submitted in a seamless format or as a map-joined product with or without the tile lines removed (dissolved).

- Additional attributes can be appended to the tabular file. The inclusion of additional attributes in the individual layers is a local planning team decision.

- Attributes are not required to be in a specific order. Attributes that are not required to be populated may be omitted from the layer. See Appendix 2 for the list of mandatory attributes for each layer.

Format requirements specific to each product are discussed in the individual product sections.

4.1.5   Data Transfer and Schedule

The information products will be submitted via the FI Portal.

Phase I

The planning inventory will be submitted three months prior to the invitation to participate for MNR review. The revised planning inventory will be submitted prior to the invitation to participate. The planning inventory with all tabular attribution completed will be re-submitted at the time of draft and final plan to reflect changes to the forecast depletions and the incorporation of new attribute information to the planning composite.

The BMI will be submitted prior to the base model inventory and base model progress checkpoint. The BMI will also be submitted in the LAYERS folder of the final plan for the purposes of data retention on the FI Portal.

Phase II

In Phase II planning, the planning inventory with all tabular attribution completed will be submitted at the time of draft and final operational plan submission.
In Phase II planning, the forecast depletions layer should be submitted to the MNR prior to Stage One information centre in order for MNR to provide review comments.
In Phase II, the forecast depletions layer includes;
- confirmation and any required adjustments resulting from actual depletions from the original forecast depletions layer
- actual depletions for the first five-year term, and

- forecast depletions for the balance of the first five-year term. This should include all harvest areas remaining unharvested from the planned harvest layer since these areas are not required to be re-planned for the second five-year term.

This information will be used to determine planned clearcut size required in table FMP-12, Planned Clearcuts >260 Ha.

4.1.6   Review and Approval

Phase I

The planning inventory will be reviewed by MNR and comments will be provided to the Licensee 30 days following submission. The Licensee will address the comments and submit the revised planning inventory prior to the invitation to participate. The MNR will endorse the planning inventory through the planning inventory progress checkpoint.

The Licensee will submit the BMI prior to the base model inventory and base model progress checkpoint for MNR review and endorsement. The planning inventory must be endorsed prior to the base model submission.

Phase II

Only the forecast layer will be reviewed by MNR and comments will be provided along with comments from the Stage One information centre. The Licensee will address the comments and resubmit the forecast layer if changes were required prior to Stage Two review of draft planned operations.

The planning composite inventory that was submitted in the LAYERS folder of the final plan for Phase I should not require a review in the development of the Phase II operational plan because it is the same.

4.1.7   Planning Composite

4.1.7.1   Description, Intent and Intended Use

The planning composite information represents conditions on the management unit at the start of planning and grown to the start of the planning term. The planning composite information product is a single spatial data layer created by combining updated base feature information, as described in the *FIM Base and Values Technical Specification*s, and an updated polygon forest. The polygon forest product may be as described in the *FIM Forest Resources Inventory Technical Specifications* or may be an earlier forest resources inventory product. The spatial layer and its associated tabular attributes provide a geographic location and a content description for each polygon in the layer.

The process for creating the planning composite can include:

- Combining buffered centreline features, such as roads, railways, and transmission, communications or other utility lines, with the polygon forest. Primary roads require polygon representation in the planning composite as either buffered features or digitized polygons.

- Combining administrative boundary data, such as ownership, MU boundary and parks, with the polygon forest.

- Growing the forest to the start of the planning term. Normally this involves altering the stand age and height information based on accepted growth algorithms.

- Incorporating the annual report data.

The planning composite also contains attributes which describe the forest classification information that is tracked at a stand-level. This forest classification information is described in Section 4.1.7.3. The FIM describes the forest classification information as being information that is included in the planning composite attributes. For technical and business reasons, this technical specification requires that the forest classification attributes are part of the planning composite, but acknowledges that not all forest classification attributes may be populated when the planning composite is submitted at the invitation to participate. Forest classification attributes, such as forest unit and silvicultural intensity, will be populated and included in the BMI submission (Section 4.1.9) for the base model inventory and base model progress checkpoint and will be populated and included in the planning composite when it is submitted with the draft and final plan.

4.1.7.2   Naming Convention

A standard naming convention will be used for the planning composite layer. This naming convention will facilitate the automated validation and improve the utility and ease of use of this information. The file name is composed of the following parts:

MU<management unit>_<year>PCM<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the 5-year planning term (e.g., 2012 is 12).
PCM	Letters "PCM" representing *Planning Composite*.
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
.E00	File format extension for coverages.

Examples: MU123_12PCM00.E00   (single layer submitted)

                     OR

             MU123_12PCM01.E00   (first multiple layer submitted)

             MU123_12PCM02.E00   (second multiple layer submitted)

4.1.7.3   Format

Spatial Requirements

The planning composite layer is a polygon coverage that must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with a planning composite inventory are to be submitted in a polygon attribute table (.pat) that is exported along with the associated coverage which is a standard ESRI Interchange format file (Arc Info .e00) with no compression. The polygon attribute table for the planning composite contains all attributes associated with the planning inventory and base model inventory. Attributes required by the planning composite will be populated. Attributes associated with the forest classification information may remain unpopulated when submitted for the planning inventory progress checkpoint.

Polygon attribute (.pat) layout

for the planning composite coverage
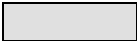
field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	--
PERIMETER	8	floating	5	perimeter	--
<cover_name>#	4	binary	--	ESRI assigned feature identifier	--
<cover_name>-ID	4	binary	--	user assigned feature identifier	--
FMFOBJID	13	integer	--	FMF object ID	A1.1.1
GEOGNUM	7	integer	--	geographic unit type number	A1.1.2
POLYID	25	character	--	polygon identification	A1.1.3
POLYTYPE	3	character	--	polygon type	A1.1.4
OWNER	1	character	--	ownership	A1.1.5
AUTHORTY	3	character	--	ownership designation	A1.1.6
YRUPD	4	integer	--	year of update	A1.1.7
SOURCE	8	character	--	source of data update	A1.1.8
FORMOD	2	character	--	productive forest modifier	A1.1.9
DEVSTAGE	8	character	--	stage of development	A1.1.10
YRDEP	4	integer	--	year of last disturbance	A1.1.11
SPCOMP	120	character	--	species composition	A1.1.12
WG	2	character	--	working group	A1.1.13
YRORG	4	integer	--	year of origin	A1.1.14
HT	4	numeric	1	height	A1.1.15
STKG	4	numeric	2	stocking	A1.1.16
SC	1	integer	--	site class	A1.1.17

field name	width	field type	decimal places	attribute description	appendix
ECOSRC	8	character	--	ecosite source of update	A1.1.18
ECOSITE1	10	character	--	ecosite 1	A1.1.19
ECOPCT1	3	integer	--	ecosite 1 percentage	A1.1.20
ECOSITE2	10	character	--	ecosite2	A1.1.19
ECOPCT2	3	integer	--	ecosite 2 percentage	A1.1.20
ACCESS1	3	character	--	accessibility indicator	A1.1.21
ACCESS2	3	character	--	accessibility indicator	A1.1.21
MGMTCON1	4	character	--	management consideration	A1.1.22
MGMTCON2	4	character	--	management consideration	A1.1.22
MGMTCON3	4	character	--	management consideration	A1.1.22
AGS_POLE	4	numeric	1	polewood acceptable growing stock	A1.1.23
AGS_SML	4	numeric	1	small sawlog acceptable growing stock	A1.1.23
AGS_MED	4	numeric	1	medium sawlog acceptable growing stock	A1.1.23
AGS_LGE	4	numeric	1	large sawlog acceptable growing stock	A1.1.23
UGS_POLE	4	numeric	1	polewood unacceptable growing stock	A1.1.24
UGS_SML	4	numeric	1	small sawlog unacceptable growing stock	A1.1.24
UGS_MED	4	numeric	1	medium sawlog unacceptable growing stock	A1.1.24
UGS_LGE	4	numeric	1	large sawlog unacceptable growing stock	A1.1.24
USPCOMP	120	character	--	understorey species composition	A1.1.25
UWG	2	character	--	understorey working group	A1.1.26
UYRORG	4	integer	--	understorey year of origin	A1.1.27
UHT	4	numeric	1	understorey height	A1.1.28
USTKG	4	numeric	2	understorey stocking	A1.1.29
USC	1	integer	--	understorey site class	A1.1.30
VERDATE	8	date	--	verification status date	A1.1.31
SENSITIV	3	character	--	data sensitivity indicator	A1.1.32

field name	width	field type	decimal places	attribute description	appendix
MANAGED	1	character	--	managed / unmanaged lidicator	A1.2.1
TYPE	2	integer	--	stand type	A1.2.2
MNRCODE	3	integer	--	MNR code	A1.2.3
SMZ	5	character	--	strategic management zone	A1.2.4
OMZ	8	character	--	operational management zone	A1.2.5
PLANFU	10	character	--	forest unit	A1.2.6
AGESTR	1	character	--	age structure indicator	A1.2.7
AGE	3	integer	--	stand age	A1.2.8
AVAIL	1	character	--	availability indicator	A1.2.9
SILVSYS	2	character	--	silviculture system	A1.2.10
NEXTSTG	8	character	--	next stage	A1.2.11
SI	5	character	--	silvicultural intensity	A1.2.12
SISRC	8	character	--	source of silvicultural intensity	A1.2.13
SGR	15	character	--	silvicultural ground rule	A1.2.14

White cells indicate fields that must be populated as part of the planning composite for the submission for the planning inventory progress checkpoint, in the base model inventory for the base model inventory and base model progress checkpoint, and as part of the draft and final plan submission.

Light gray cells (forest classification attributes) indicate fields that must be populated as part of the base model inventory for the base model inventory and base model progress checkpoint and the planning composite for the draft and final plan submission. These fields may be populated in the submission for the planning inventory progress checkpoint.

Dark gray cells (forest classification attributes) indicate fields that are to be populated as part of the planning composite for the draft and final plan submission only. These fields may be populated in the submission for the planning inventory progress checkpoint and / or the base model inventory in the submission for the base model inventory and base model progress checkpoint.

4.1.8   Forecast Depletions

4.1.8.1 Description, Intent and Intended Use

The forecast depletions layer contains the expected changes to the forest to the start of the planning term. The expected changes can be any combination of planned harvest areas that are not expected to be harvested before the end of the current plan term and any natural disturbances that have occurred since the last submitted annual report which was used in the development of the planning composite inventory. The natural disturbances that are added here help to provide a more accurate inventory without actually being a forecast activity.

The forecast depletions will be used to determine planned clearcut size required in table FMP-12, Planned Clearcuts >260 Ha.

Phase I

In Phase I, the forecast depletions will be provided as a separate component of the planning inventory. As better information is attained, the forecast of areas to be depleted may change. This will not require a resubmission of the forecast depletions layer as part of the planning inventory submission for the planning inventory progress checkpoint, nor will it impact the long-term management direction modeling since the base model inventory will not be recreated and resubmitted unless agreed to by the planning team. Instead, the changes will be used to facilitate operational planning and the selection of stands for operations in the new plan. The changes will also be used for spatial analysis during operational planning such as planned clearcut analysis. The updated forecast depletions layer will be submitted with the planning composite layer as part of the draft and final plan submissions.

Phase II

In Phase II, the forecast depletions layer includes;

- confirmation and any required adjustments resulting from actual depletions from the original forecast depletions layer
- actual depletions from the first five-year term, and
- forecast depletions for the balance of the first five-year term. This should include all harvest areas remaining unharvested from the planned harvest layer since these areas are not required to be re-planned for the second five-year term.

The updated forecast depletions layer will be submitted with the planning composite layer as part of the draft and final planned operations submissions.

4.1.8.2   Naming Convention

A standard naming convention will be used for the forecast depletions layer. This naming convention will assist in the automated validation and use of this information. The file name is composed of the following parts:

MU<management unit>_<year>FDP<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
FDP	Letters "FDP" representing *Forecast Depletions*.
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
.E00	File format extension for coverages.

Examples: MU123_12FDP00.E00   (single layer submitted)

OR

MU123_12FDP01.E00   (first multiple layer submitted)

MU123_12FDP02.E00   (second multiple layer submitted)

4.1.8.3   Format

Spatial Requirements

Forecast depletions information is reported spatially on a GIS data layer that contains only polygon features. The forecast depletions layer is a polygon coverage that must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The polygon attribute table for the forecast depletions contains attributes associated with the forecast depletions to the end of the current plan term for each polygon.

Polygon attribute (.pat) layout

for the forecast depletions coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
FSOURCE	8	character	--	source of forecast	A1.3.1
FYRDEP	4	integer	--	forecast year of disturbance	A1.3.2
FDEVSTAGE	8	character	--	forecast development stage	A1.3.3

4.1.9   Base Model Inventory

4.1.9.1   Description, Intent and Intended Use

The base model inventory is a union of the planning composite and the forecast depletions into one spatial data layer. This layer provides the necessary information to generate the inputs for spatial and non-spatial models required for strategic modeling in the long-term management direction. The base model inventory is a snapshot in time and is used as a starting point for the strategic model. After achieving the planning inventory checkpoint, the base model inventory product is to be created only once. Changes and modifications which may occur to either the planning composite or the forecast depletions will not result in the recreation of the base model inventory. Through the process of developing the strategic direction there may be issues and errors that come to light which affect the planning composite. The planning team will have to determine how best to address these types of issues. There is no requirement to maintain all the corrected information including the forecast depletions in the base model inventory. It is not recommended to recreate the base model inventory as the changes being made will likely have little effect on the strategic outcome of the model. It is recommended to be flexible and make the adjustments within the chosen model and simply flag these changes and adjustments through the development of the analysis package. The noted changes that pertain to the planning composite and forecast depletions should be made prior to submitting them as part of the draft and final plan if these edits become important during operational planning.

The base model inventory will not be cleaned after the union process nor will any of the small polygons be removed/dissolved if an aspatial model (e.g., SFMM) is being used for strategic modeling. If a spatial model is being used, the small polygons will have to be addressed if it is a software issue for the product being used. The tabular attributes associated with the base model inventory will be the same as those of the planning composite. The union requires that forest stand description information be updated to reflect the estimated result of activities planned for the remainder of the current plan term – this is a best approximation. Forest classification attributes, as identified in the planning composite coverage polygon attribute table, will be populated for forested polygons.

It is recommended that the planning composite layer have the forest classification fields populated prior to the union with the forecast depletions layer. This will reduce data entry later on as the planning inventory, with populated forest classification attributes, is required with the submission of the draft and final plan.

Any changes to the forecast depletions after the approval of the planning inventory checkpoint will not cause the base model inventory to be recreated and resubmitted unless agreed to by the planning team.

The provision of the base model inventory will support the review and approval of the base model inventory and base model progress checkpoint. The base model inventory will be used to update the FMP tables that were created based on the planning composite layer for the planning inventory checkpoint, in particular table FMP-1, Management Unit Land Summary.

4.1.9.2   Naming Convention

A standard naming convention will be used for the base model inventory layer. This naming convention will assist in the automated validation and use of this information. The file name is composed of the following parts:

MU<management unit>_<year>BMI<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator .
<year>	Two digit numeric start year of the 10-year planning period (e.g., 2012 is 12).
BMI	Letters "BMI" representing *Base Model Inventory*.
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
.E00	File format extension for coverages.

Examples: MU123_12BMI00.E00   (single layer submitted)
                      OR
             MU123_12BMI01.E00   (first multiple layer submitted)
             MU123_12BMI02.E00   (second multiple layer submitted)

4.1.9.3   Format

Spatial Requirements

The base model inventory is a union of the planning composite and the forecast depletions into one spatial data layer. It is a polygon coverage that must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The structure and content of the .pat file is the same as that of the planning composite coverage described in Section 4.1.7.3 with the forest classification attributes (except SGR) filled in for all forested polygons. The tabular attributes for the BMI .pat file will be adjusted to reflect the forecast depletions. The fields that require updating are the following; YRUPD, SOURCE, DEVSTAGE, YRDEP, SPCOMP, YRORG, HT, STKG, TYPE, AGE, NEXTSTG, SI, and SISRC. POLYID values will no longer be unique. The process to establish the unique polygon identifiers and maintain a link to planning composite POLYID will be a planning team decision. The mandatory unique POLYID is normally required for summarizing the data to be imported in a strategic model when using an approved or customized data preparation tool (e.g., MIST).

4.2 Operational Planning Information Specifications

4.2.1 Description, Intent and Intended Use

The operational planning information is a set of layers and/or selection criteria which provide information on:

- planned harvest,
- areas of concern (AOC),
- planned residual patches,
- planned road corridors,
- operational road boundaries,
- existing road use management strategy,
- planned aggregate extraction areas,
- renewal and tending, and
- planned clearcuts,

These products will be used to facilitate the MNR review of the forest management plan and identify stakeholders for public notification.

The details of each of these operational planning information products are described in the individual product sections starting with Section 4.2.7.

4.2.2 Packaging and Naming Convention

The operational planning information will be included in the draft plan submission and the final plan submission zip files. Refer to Chapter 5.

Naming conventions for the individual operational planning information products is discussed in the individual product sections (Sections 4.2.7 – 4.2.15).

4.2.3 Metadata

Part of the metadata requirements will be met by use of the standard naming convention as well as the submission details that are collected when FMP submission files are submitted via the FI Portal.

4.2.4 Format

The format of the individual operational planning information products is discussed in the individual product sections (Sections 4.2.7 – 4.2.15).

4.2.5   Data Transfer and Schedule

Operational planning information is included with the draft plan and final plan submissions and is subject to those timelines. Refer to Chapter 5 Submission File for more information.

4.2.6   Review and Approval

Review and approval of the operational planning information is performed as part of draft plan and final plan review. Refer to Chapter 5 Submission File for more information.

4.2.7   Planned Harvest

4.2.7.1   Description, Intent and Intended Use

The planned harvest layer will serve as the stand list when united with the planning inventory. The association of approved yield curves in forest models such as the Strategic Forest Management Model (SFMM) can be used to generate volume information for the stand list at the discretion of the planning team. This layer will also include the fuelwood attribute which identifies areas of special public interest.

Phase I

The planned harvest layer for Phase I contains planned harvest areas for the ten-year period.

The planned harvest layer will include and distinguish between: regular, surplus, salvage, contingency, bridging, redirected, accelerated, and second-pass harvesting for the first five-year term and planned harvest areas for the second five-year term.

Phase II

This layer includes the area identified for planned harvest in the second five-year term. This area is normally the planned area for the second five-year term from the Phase I planned harvest layer with any required modifications. This area is represented as planned harvest areas for the second five-year term. Normally it is not required to include, in this layer, area planned for harvest from the first five-year term which has not yet been harvested. If there are changes to the planned harvest from the first five-year term (e.g., contingency harvest has been changed to regular harvest), this will be identified.

The planned harvest for Phase II will include and distinguish between: regular, surplus, salvage, redirected, accelerated, second-pass, and contingency harvest areas for the second five-year term.

4.2.7.2   Naming Convention

A standard naming convention will be used for the planned harvest layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

MU<management unit>_<year>PHR<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.

<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PHR	Letters "PHR" representing *Planned Harvest*.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Examples:

MU123_11PHR00.E00   (Planned Harvest Phase I)

MU123_16PHR00.E00   (Planned Harvest Phase II)

4.2.7.3 Format

Spatial Requirements

The planned harvest layer contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the planned harvest layer are to be included in the polygon attribute table (.pat) described below.

Polygon Attribute Table (.pat) layout

for the Planned Harvest coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
SILVSYS	2	character	--	silviculture system	A1.4.1
HARVCAT	8	character	--	harvest category	A1.4.2
FUELWOOD	1	character	--	fuelwood area indicator	A1.4.3

4.2.8   Area of Concern

4.2.8.1   Description, Intent and Intended Use

The area of concern (AOC) information is submitted as one or more geospatial layers. The number of layers used to organize and submit the AOC information is at the discretion of the Licensee and planning team. Examples of multiple layers may include but are not limited to:

- individual layers based on the area of concern identification, or
- individual layers based on the area of concern type.

The AOC layer includes areas of concern associated with areas of operations (harvest, renewal, tending and maintenance), road corridors, operational road boundaries and aggregate extraction areas. In Phase I, the layer includes detailed AOCs for the first five-year operational term. The planning team may choose to complete their ten-years worth of AOC planning at the level of detail required for Phase I planning.

In Phase II planning, the layer includes the areas for the second five-year operational term and may include new areas from the first five-year operational term. AOC prescriptions may also need to be developed for areas selected for stand improvement activities or areas that have been naturally depleted.

Areas of concern for renewal and maintenance activities are normally only required for modified operations or where a value may be impacted by renewal and maintenance activities (e.g., timing restrictions, herbicide application restrictions or site disturbance restrictions). The water buffers for aerial tending will not be provided in this layer and are not required to be portrayed in the FMP.

Phase I

For areas identified for bridging and second-pass harvest operations, the AOCs identified in the current plan will apply and therefore these AOCs are not required to be included in this layer. The AOCs from the current plan that are associated to the areas identified for bridging or second-pass must however be displayed on the applicable operations maps. Planning teams may choose to produce a separate set of operations maps for bridging and second-pass in order to avoid confusion with the new AOCs associated to the remaining harvest areas. It is important to note that in some cases the same AOC identifier may exists for both new harvest areas and for bridging and second-pass harvest areas but the definition, intent and prescription for the AOC may be different between the current plan and the plan in development.

Phase II

For AOC planning associated with areas of operation planned for the second five-year term, the areas of concern identified in the first five-year term (normally five-years of operations) will apply and are not required to be included in this layer. They will be represented on the applicable operations maps. Where planned harvest areas from the first five-year operational term have changed and are being submitted in Phase II (Section 4.2.7.1) then the associated AOCs should also be updated and submitted. Where harvesting did not occur Phase I, the planning teams may choose to submit the AOCs from the first five-years of operations due to changes in operational planning (e.g., the incorporation of new forest management guides).

4.2.8.2   Naming Convention

A standard naming convention will be used for the AOC layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

MU<management unit>_<year>AOC<layer number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
AOC	Letters "AOC" representing *Area of Concern*.
<layer number>	This value is used when several AOC layers are submitted. The default value is 00 where the product is submitted as a single entity.
.E00	File format extension for coverages.

Examples: MU123_11AOC00.E00   (single layer submission)

OR

MU123_11AOC01.E00   (first multilayer submission)

MU123_11AOC02.E00   (second multilayer submission)

4.2.8.3   Format

Spatial Requirements

The area of concern coverage contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the area of concern layer are to be included in the polygon attribute table (.pat) described below.

Polygon Attribute Table (.pat) layout

for the Area of Concern coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
AOCID	15	character	--	AOC identifier	A1.5.1
AOCTYPE	1	character	--	AOC type	A1.5.2

4.2.9   Planned Residual Patches

4.2.9.1   Description, Intent and Intended Use

The planned residual patches layer will enable MNR to verify the information in table FMP-11, Planned Harvest Area, when united with the planned harvest layer, the area of concern layer, and the planning inventory. The association of approved yield curves in forest models such as the Strategic Forest Management Model (SFMM) can be used to generate volume information for table FMP-13, Planned Harvest Volume by Species (10-year).

The planned residual patches layer will identify areas within the planned harvest that are not part of the strategic model's allowable harvest area. The text of the FMP will describe the conditions applied to the residual areas and their requirement to remain in a specific location or be moved at the time of operations. The planned residual patches layer may account for these differences based on the planning team's decision to record this information.

Phase I

The planned residual patches layer for Phase I contains planned residual patches areas for the first five-year term and may contain residual areas for the second five-year term.

Phase II

This layer includes the area identified for residual in the second five-year term. This area is normally the residual area for the second five-year term from the Phase I planned residual patches layer with any required modifications. This area is represented as planned residual patches areas for the second five-year term. Normally it is not required to include area planned for residual from the first five-year term where the adjacent harvest has not occurred. If there are changes to the planned residual patches from the first five-year term, this will be identified.

4.2.9.2   Naming Convention

A standard naming convention will be used for the planned residual patches layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

MU<management unit>_<year>PRP<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).

_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PRP	Letters "PRP" representing _Planned Residual Patches_.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Examples:

MU123_11PRP00.E00   (Planned Residual Patches Phase I)

MU123_16PRP00.E00   (Planned Residual Patches Phase II)

4.2.9.3 Format

Spatial Requirements

The planned residual patches layer contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the planned residual patches layer are to be included in the polygon attribute table (.pat) described below.

Polygon Attribute Table (.pat) layout

for the Planned Residual Patches coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
RESID	10	character	--	residual patch identifier	A1.6.1

4.2.10   Planned Road Corridors

4.2.10.1   Description, Intent and Intended Use

This layer contains planned primary and branch road corridors. It also includes planned road reconstruction/re-alignment corridors when a corridor is required to identify eligible areas for harvest of trees for road construction. Existing roads will not be buffered 500 metres and included in this layer as this does not meet the intent of road reconstruction or re-alignment as described above.

If a primary or branch road traverses an AOC, a 100 metre-wide location for each crossing of the AOC, and where practical, restrictions on the location of the crossing will be identified. Restriction locations may be identified for various reasons including, but not limited to, AOCs or operational reasons that would prohibit the installation of a water crossing. Areas where restrictions are not identified will be interpreted as the acceptable variations on the crossing location for the five-year term. This layer will also be used to update approved primary road corridor information from the current FMP which is to be included on values maps as described in the FMPM.

Phase I

In Phase I the layer will identify the selected corridors including reconstruction/re-alignment corridors for the 20-year planning horizon and identify the roads to be constructed during the ten-year plan period and the first five-year term of the forest management plan. At a minimum, the AOC crossing information for roads to be constructed during the first five-year term will be included in this layer.

Phase II

In Phase II the layer will identify the selected corridors including reconstruction/re-alignment corridors for the 20-year planning horizon and will identify the corridors that will be constructed in the second five-year term and their associated AOC crossing information. Information produced for roads that were planned to be constructed in the first five-year term but were not constructed does not need to be reproduced in the Phase II layer.

4.2.10.2   Naming Convention

A standard naming convention will be used for the planned road corridor layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

MU<management unit>_<year>PRC<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PRC	Letters "PRC" representing *Planned Road Corridor*.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Example: MU123_11PRC00.E00

4.2.10.3   Format

Spatial Requirements

The planned road corridors coverage contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the planned road corridors layer are to be included in the polygon attribute table (.pat) described below.

Polygon attribute table (.pat) layout

for the Planned Road Corridors coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
TERM	1	integer	0	plan term	A1.7.1
ROADID	30	character	--	road identification	A1.7.2
ROADCLAS	1	character	--	road class	A1.7.3
AOCXID	15	character	--	AOC crossing identification	A1.7.4
NOXING	15	character	--	crossing prohibited	A1.7.5
TRANS	4	integer	0	road transfer	A1.7.6
ACYEAR	4	integer	--	access control year	A1.7.7

field name	width	field type	decimal places	attribute description	appendix
ACCESS	1	character	--	access control	A1.7.8
DECOM	1	character	--	decommissioning	A1.7.9
INTENT	30	character	--	MNR intent	A1.7.10
MAINTAIN	1	character	--	maintenance identifier	A1.7.11
MONITOR	1	character	-	monitoring identifier	A1.7.12
CONTROL1	4	character	--	road access control or decommissioning type	A1.7.13
CONTROL2	4	character	--	road access control or decommissioning type	A1.7.13

4.2.11   Operational Road Boundaries

4.2.11.1 Description, Intent and intended Use

The operational road boundaries layer includes areas of operations planned for harvest operations and may also include areas of retention. The delineation of operational road boundaries will establish the limits within which operational roads and forestry aggregate pits can be constructed for the ten-year period of the FMP. This layer may also include area between harvest operations or between planned/existing roads and harvest operations.

The operational road boundary name (ORBID) will be linked to the road use management strategy. The operational road boundaries for the applicable Phase I or Phase II five-year operational term must be identified in the layer and the operational road boundaries for the full ten-year period may be identified in the layer. If changes to areas of operations are required for the second five-year term, the operational road boundaries layer will be resubmitted in Phase II.

Operational road boundaries for the applicable Phase I or Phase II five-year term of the ten-year forest management plan, will be portrayed on operations maps.

4.2.11.2 Naming Convention

A standard naming convention will be used for the operational road boundaries layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

>   MU<management unit>_<year>ORB<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
ORB	Letters "ORB" representing *Operational Road Boundaries*.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Examples:

>   MU123_11ORB00.E00

MU123_16ORB00.E00

4.2.11.3   Format

Spatial Requirements

The operational road boundaries coverage contains only polygon features. The coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the operational road boundaries layer are to be included in the polygon attribute table (.pat) described below.

Polygon attribute table (.pat) layout

for the Operational Road Boundaries coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
ORBID	20	character	--	operational road boundaries identifier	A1.8.1

4.2.12   Existing Road Use Management Strategy

4.2.12.1   Description, Intent and Intended Use

This layer identifies existing roads or road segments that will have access controls applied during the ten-year period of the forest management plan. It will also identify existing roads that are planned to be transferred to MNR and/or decommissioned during the twenty-year planning horizon. The attributes and characteristics which classify the roads are specific to the existing roads or road segments which does not necessarily reflect or represent the characteristics of the water crossings on those roads. There is not always a one-to-one relationship between the roads and the water crossings which means that the party responsible for the road may be different than the party responsible for the water crossing.

Phase I

In Phase I the layer will identify the existing road use management strategy for the 20-year planning horizon and the access controls applied during the 10-year period.

Phase II

In Phase II the layer will identify the existing road use management strategy for the 20-year planning horizon and the access controls applied during the 5-year term.

4.2.12.2   Naming Convention

A standard naming convention will be used for the existing road use management layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

MU<management unit>_<year>ERU<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
ERU	Letters "ERU" representing *Existing Road Use Management Strategy*
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.

.E00	File format extension for coverages.

Example: MU123_11ERU00.E00

4.2.12.3   Format

Spatial Requirements

The existing road use management strategy coverage contains only line features. The line coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the existing road use management strategy layer are to be included in the arc attribute table (.aat) described below.

Arc attribute table (.aat) layout

for the Existing Road Use Management Strategy coverage

field name	width	field type	decimal places	attribute description	appendix
FNODE#	4	binary	--	from node	
TNODE#	4	binary	--	to node	
LPOLY#	4	binary	--	left polygon	
RPOLY#	4	binary	--	right polygon	
LENGTH	8	floating	5	length	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
ROADID	30	character	--	road identifier	A1.9.1
ROADCLAS	1	character	--	road class	A1.9.2
TRANS	4	integer	--	road transfer year	A1.9.3
ACYEAR	4	integer	--	access control year	A1.9.4
ACCESS	1	character	--	access control	A1.9.5
DECOM	1	character	--	decommissioning	A1.9.6
INTENT	30	character	--	MNR intent	A1.9.7
MAINTAIN	1	character	--	maintenance identifier	A1.9.8
MONITOR	1	character	--	monitoring identifier	A1.9.9
RESPONS	3	character	--	road responsibility	A1.9.10
CONTROL1	4	character	--	road access control or decommissioning type	A1.9.11
CONTROL2	4	character	--	road access control or decommissioning type	A1.9.11

4.2.13   Planned Aggregate Extraction Areas

4.2.13.1 Description, Intent and Intended Use

The planned aggregate extraction areas layer contains areas where forestry aggregate pits are planned to be established. Aggregate extraction areas are areas outside of road corridors and areas of operations where the Licensee has planned to extract aggregate material. An aggregate extraction area is defined as an individual polygon depicting a planned pit location within 500 meters of an existing access road.

Phase I

In Phase I the layer will identify the aggregate extraction areas for the 10-year period.

Phase II

In Phase II the layer will identify the aggregate extraction areas for the 5-year period.

4.2.13.2 Naming Convention

A standard naming convention will be used for the planned aggregate extraction area layer. The file name is composed of the following parts:

MU<management unit>_<year>PAG<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PAG	Letters "PAG" representing *Planned Aggregate Extraction Area*.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Example: MU123_11PAG00.E00

4.2.13.3 Format

Spatial Requirements

The planned aggregate extraction areas layer contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with a planned aggregate extraction areas layer are to be included in the polygon attribute table (.pat) described below.

Polygon attribute table (.pat) layout

for the Planned Aggregate Extraction Area coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
AGAREAID	15	character	--	aggregate extraction area identifier	A1.10.1

4.2.14　Renewal and Tending

4.2.14.1　Description, Intent and Intended Use

The FMPM requires that areas identified for renewal and/or tending for the ten-year plan period, be portrayed on the FMP operations maps. These areas identified in the plan portray eligibility based upon specific criteria established by the FMP planning team

This information will facilitate MNR review of FMP submissions, and subsequent annual work schedule and annual report submissions.

Phase I

In Phase I the layer will identify the renewal and tending areas for the 10-year period.

Phase II

In Phase II the layer will identify the renewal and tending areas for the 5-year term.

4.2.14.2　Naming Convention

A standard naming convention will be used for the renewal and/or tending information. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

    MU<management unit>_<year>PRT<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PRT	Letters "PRT" representing *Planned Renewal and Tending*.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Example:　　　MU123_11PRT00.E00

4.2.14.3 Format

Spatial Requirements

The renewal and tending coverage contains only polygon features. The coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the renewal and tending layer are to be included in the polygon attribute table (.pat) described below.

Polygon attribute table (.pat) layout

for the Renewal and Tending coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
TERM	1	integer	0	plan term	A1.11.1
HERB	1	character	--	herbicide application	A1.11.2
INSECT	1	character	--	insecticide application	A1.11.3
PB	1	character	--	prescribed burn	A1.11.4
PEST	1	character	--	insect pest management	A1.11.5
IMPROVE	1	character	--	tree improvement activities	A1.11.6

4.2.15   Planned Clearcuts

4.2.15.1   Description, Intent and Intended Use

This layer provides the identification of the specific clearcuts summarized in table FMP-12, Planned Clearcuts > 260 Ha (5-year). The planned clearcuts layer provides planned clearcut identification information to allow MNR to confirm FMP clearcut analysis presented in table FMP-12.

Phase I

In Phase I, the clearcuts planned for harvest during the first five-year term will be assessed to determine the extent of each planned clearcut greater than 260 hectares using the current MNR planned clear cut definition. Each planned clearcut greater than 260 hectares will be assigned a unique planned clearcut identifier. The assessment will not include the planned area for the second five-year term.

Phase II

In Phase II, the forest inventory will be grown five-years; the clearcuts planned for harvest during the second five-year term will be assessed to determine the extent of each planned clearcut greater than 260 hectares using the current MNR planned clear cut definition. The analysis will be of clearcut areas greater than 260 hectares that include new planned harvest area. The Phase II planned clearcut assessment will be calculated using the planning composite inventory and the Phase II forecast depletions layer. Each planned clearcut greater than 260 hectares will be assigned a unique planned clearcut identifier.

4.2.15.2   Naming Convention

A standard naming convention will be used for the planned clearcuts layer. The naming convention will assist in the automated validation and use of the information. The file name is composed of the following parts:

        MU<management unit>_<year>PCC<part number>.E00

where:

MU	Letters "MU" representing *Forest Management Unit*.
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the five-year planning term (e.g., 2012 is 12).
PCC	Letters "PCC" representing *Planned Clearcuts*

<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
.E00	File format extension for coverages.

Examples:

MU123_11PCC00.E00

MU123_16PCC00.E00

4.2.15.3 Format

Spatial Requirements

The planned clearcuts coverage contains only polygon features. The polygon coverage must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the planned clearcuts layer are to be included in the polygon attribute table (.pat) described below.

Polygon attribute table (.pat) layout

for the Planned Clearcuts coverage

field name	width	field type	decimal places	attribute description	appendix
AREA	8	floating	5	area	
PERIMETER	8	floating	5	perimeter	
<cover_name>#	4	binary	--	ESRI assigned feature identifier	
<cover_name>-ID	4	binary	--	user assigned feature identifier	
PCCID	20	character	--	clearcut identifier	A1.12.1

4.3 Map Specifications

4.3.1 Description, Intent and Intended Use

Maps are required for conveying forest management planning information and engaging stakeholders throughout the planning process. Although the final versions of required maps are contained in the approved forest management plan, many of the maps are required at different stages of the FMP process. Maps included in the draft and approved FMP will be submitted as described in Section 5, Submission Files. The submission format of maps required at other stages of the FMP process is at the discretion of the planning team as documented in the planning team terms of reference.

It is not a requirement to produce French language versions of all maps for areas designated under the *French Language Services Act*. Only the public notice map, and draft and final version of the FMP summary map require a French language version be available for all the forest management units in the province.

Information about when each map is required, and for what purpose, is provided in the detailed map descriptions, starting in Section 4.3.5.

4.3.2 Packaging and Naming Convention

Maps that are a required component of an FMP submission file will use a standard naming convention. A standard naming convention must be used to permit an automated validation of the information product. Standardized naming of files also facilitates internet viewing, file retention and data discovery. The file name is composed of the following parts:

MU<management unit>_<year>_<info product>_P<phase>_MAP_<description>_<file number>.<extension>

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.

<info product>	Letters representing the information products being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan
_	Underscore character as a separator.
P	Letter "P" representing Phase
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
MAP	Letters "MAP" for map.
_	Underscore character as a separator.
<description>	Text representing the required standard component being submitted. For non-standard additional maps, the description is user defined.
_	Underscore character as a separator.
<file number>	A two-digit numeric place holder for identifying situations where maps have been split into more than one file, based on map extent or theme. If only one map file exists, the file number will remain at "00". If more than one map file exists, the first map will contain "01" in the file number, the second map "02", and so on. If operational scale maps have been produced with a consistent theme split, all of the maps showing the same theme should have the same file number. For example, if harvest operations are displayed on one set of maps and renewal and maintenance operations are on a second set of maps, all of the harvest maps would have a file number of "01" and all of the renewal and maintenance maps would have a file number of "02", even if there is not both a "01" and a "02" for all areas.
<extension>	File format extension of .eps or .pdf as is appropriate for the map product. (Refer to Section 4.3.4)

Sample naming conventions for the individual map file components are provided in the detailed map descriptions in the following sections.

For maps that are not a required component of an FMP submission file, a standard name has not been provided.

4.3.3   Metadata

Metadata requirements for map products are met by the required information contained in the map surround, use of a standard naming convention, as well as the submission details that are captured when FMP submission files are submitted via the FI Portal.

4.3.4 Format

Maps that are a required component of an FMP submission file will be produced in one of the following 3 formats. All three format options can be utilized within a single product submission. All three formats must be created with fonts successfully imbedded.

a) As a raster image single-layer Adobe portable document file (PDF) that does not exceed 25 MB in file size. The validation of the size limitation will be performed by the FI Portal at the time of product submission. If the product submission contains a pdf formatted map file greater than 25 MB in size it will result in a submission failure for the final plan submission (Stage 1 failure). Successful map files will be available to FI Portal users for downloading and on the MNR website for viewing and/or downloading by the public.

b) As a vector-layered Adobe portable document file (PDF) that does not exceed 10 MB in file size. The validation of the size limitation for vector layered pdf files will be performed manually by MNR District staff after the product has been submitted for review. There will be no conversion process conducted on these map files in the FI Portal. The map files will be available to FI Portal users for downloading and on the MNR website for viewing and/or downloading by the public.

c) As an encapsulated postscript (EPS) file at a resolution of 300 dots per inch (dpi). There is no size limitation on map files submitted in this format. Map files within the product submission that have an EPS extension will be processed by the FI Portal to produce raster image single-layer Adobe portable document files (PDF). The EPS map files and the converted map files will be available to FI Portal users for downloading. Only the converted (PDF) map files will be available on the MNR website for viewing and/or downloading by the public .

Note: Some problems have been encountered with the use of custom font files in ArcGIS. It is recommended that when generating EPS files, postscript language level 2 (PS2) be used. Similar problems will occur if generating PDF files from ArcGIS but the PS Language cannot be adjusted. If vector-layered PDF files are to be submitted to the FI Portal and custom fonts have been used, ensure that the fonts have been imbedded properly by viewing the file on a computer that does not have the font file installed.

The format for maps required at public consultation Stages 1, 2 and 3 of the FMP process is at the discretion of the planning team as documented in the planning team terms of reference. These maps are not required to be submitted to the FI Portal nor available on the MNR website. One exception to this is the public notice map which has a specific format requirement identified in the detailed map description in Section 4.3.5.1.

4.3.4.1 Map Scale Standards

Each map produced for inclusion in the FMP, or produced for public consultation purposes, must be prepared according to one of three map scale ranges:

Operational Map Scale

Acceptable operational map scales range from 1:10,000 to 1:50,000. Operational scale maps are also referred to as large scale maps.

Composite Map Scale

Acceptable composite scales range from 1:50,000 to 1:250,000. The composite scale chosen must allow for easy, clear interpretation of map themes and ease of reproduction. The scale chosen for these small scale maps should be one that minimizes the number of maps required to display the entire management unit.

Summary Map Scale

Acceptable summary map scales generally allow for portrayal of the target area on an 11x 17" or 8.5 x 11" sheet of paper and allow for the appropriate resolution of information and ease of reproduction. These very small scale maps are designed and created for public distribution.

The detailed map descriptions (in Sections 4.3.5 and 4.3.6) identify a required map scale range for each map as operational, composite, or summary. Planning teams must determine one scale from each of the operational and composite scale ranges and then apply the chosen map scale for each map required at that map scale. For example, if 1:100,000 is the chosen map scale from the composite scale range, then all composite maps must be produced at a scale of 1:100,000. Additional maps, maps not required by the FMPM or FIM, may be produced at scales other than one of the three selected scales. These additional maps are not to be included in the draft and final plan submission. Use of a consistent scale for the summary map(s) is not required.

4.3.4.2 Map Surround Standards

All maps will have a similar map surround. Where particular features of these map surround standards do not apply to a map, it will be noted in the detailed map descriptions. Additional guidance can be obtained from the MNR publication *Cartographic Guidelines and Standards,* available on the FI Portal.

Map surround components are as follows:

- *Logo* - Ontario Government logo or forest company logo (or combination) as appropriate.

  Example:

- *Title Block* - includes the management unit name, the term of the forest management plan, and the map name. For operational maps, the user-defined description (<extent>) must also be included. The naming standard for the map is indicated in the detailed map descriptions. If maps have been split as identified by the file number in the file name, the title block must identify the reason for the split.

- *Key Map* - indicates the extent of the area shown on the map in relation to a larger area. Composite maps will show their extent in relation to the rest of Ontario. Operational scale maps (1:20,000, 1:10,000) will show their extent in relation to the management unit.

- *Legend* - provides a list of map symbols used for theme and base features.

- *Disclaimer* - required for safeguarding against liability on the part of the MNR or the forest industry companies. A disclaimer is of particular importance with the take-home summary maps.
  Example:

  > *This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.*

- *Scale bar and/or statement* - provides the relationship between map distance and true (ground) distance. Both a scale bar and text scale statement are required.

ORIGINAL DOCUMENT SCALE 1:150,000

Example:

Kilometers

4   2   0   4   8   12
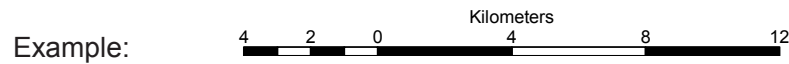
- *Map Publication Date* - indicates the date the map was created. The date will display the month in text and the year in four digits.

    Examples: March 22, 2012

                        22/MAR/2012

- *Copyright* - indicates who maintains ownership of the data/information or a contact name for more information on copyright applicable to the map data.

    Example: © Queen's Printer for Ontario, 2012

- *Datum* - identifies the projection and datum of the map information

    Example: NAD83 UTM Zone 17

- *Notes* - includes general information not provided elsewhere, such as sources for data used to create the map and contact names.

- *North Arrow* - grid north direction indicator. This information is not required if map is oriented with north to the top of page.

- *Border* - map frame

4.3.4.3 Symbology

The MNR and Licensees must use the values symbology prescribed in the *FIM Base and Values Technical Specifications* for all FMP maps which portray values information. Some symbols may need to be adjusted to improve the readability of the map if conflict with other symbols occurs. The MNR will make digital symbol files available on the FI Portal for use in producing FMP maps. If the symbol files are not compatible with the Licensee's map producing system, the use of standard symbols is not required but an attempt should be made to use symbols that resemble the standards as closely as possible.

The FIM does not prescribe standards for the symbology of features other than values. Map symbology will be selected based on the clear portrayal of map features with consideration for reproducibility and display on computer monitors.

4.3.4.4 Sensitive and Confidential Information

Direction on the portrayal of values classified as sensitive on forest management planning maps will be provided by the custodian of the specific data set and reflected in the standards for values symbology as prescribed in the *FIM Base and Values Technical Specifications*. If direction has not been provided, the plan author will ensure that representation of sensitive data on FMP maps is not detrimental to the conservation of the value.

The method for portraying area of concern prescriptions for values classified as sensitive on the operations maps is described in Section 4.3.6, Operational Planning Maps.

4.3.4.5 Page Size Standards

Summary maps are to be designed for tabloid size paper (11x17") or smaller.

Operational scale maps will be designed with the horizontal border width fitting a standard paper roll size of 36 inches. There is no maximum limit on the length for operational scale maps.

Composite scale maps will be designed to fit standard paper roll sizes of 36, 42, or 60 inches, in either the horizontal or vertical direction. There is no maximum limit on the length (portrait) or width (landscape) for composite scale maps.

4.3.5 Strategic Planning Maps

4.3.5.1 Public Notice Map

4.3.5.1.1 Description, Intent and Intended Use

The Public Notice Map is a map of the management unit, containing sufficient detail to allow for the identification of the location of the management unit. This map presents the general location of the management unit boundary in relation to large, well known features such as highways, large lakes/rivers, and communities.

This map accompanies all public notices, including direct written notices and media notices, for all stages of the FMP process, minor and major amendments, contingency plans, and annual work schedules.

A French language version of the map is required for designated areas under the *French Language Services Act.*

Map Name: Public Notice Map (not required in map surround)

Scale: summary

Map Surround Components: none

Information Displayed:

Theme Features	Base Features
Management Unit Boundary	Communities (labels)
	Highways/Major Roads (labels)
	Large lakes and rivers

4.3.5.1.2 Packaging and Naming Convention
None

4.3.5.1.3 Format
The Public Notice Map must be designed in black and white with textual components readable when the map is produced at a size of 2 by 3 inches.

The digital file must be in an encapsulated postscript file format (EPS) in order for the Advertising Coordinator of MNR's Communications Services Branch to generate the public notices for advertisement in the relevant local media. A copy of this public notice will also be issued to interested and affected persons and organizations on MNR's mailing list.

4.3.5.1.4 Data Transfer and Schedule

A minimum of two weeks is required by the Communications Services Branch to generate the public notice. Additional time prior to each stage of public consultation must be allotted for, depending on the stage of public consultation, the publication schedule of the local media being used and the desired mail out date of direct written notices. Public notices for information centres (Phase I - Stage 3 & 4, and Phase II – Stage 1) will normally be issued 30 days prior to the information centre.

If the digital map file is produced by the Licensee, it must be provided to MNR on the agreed upon schedule. If no changes or corrections are made to this map following the original submission then subsequent submissions are not required.

The Public Notice Map is not a required component of FMP submissions (e.g., draft plan submission).

4.3.5.1.5 Review and Approval

MNR is responsible for submitting the digital map file to the Advertising Coordinator of MNR's Communications Services Branch. If the production of the digital map file is the responsibility of the Licensee, MNR will review and approve the map prior to submitting it to the Advertising Coordinator.

4.3.5.2   Forest Management Plan Index Map

4.3.5.2.1   Description, Intent and Intended Use

The FMP Index Map provides an overview of planned operations for the ten-year period of the forest management plan and provides an index/grid for identifying specific FMP operations maps. This map will aid the public in accessing specific operations maps on the MNR website. The amount of information to be displayed and differentiated on this composite scale map should be kept to a minimum.

In order for this map to be effective as an index map on the MNR website, the Operational Map Grid label must coincide with the user-defined description (<extent>) part of the operations maps file names and be easily identifiable on the map (Section 4.3.2).

The FMP Index Map is also used for other public consultation purposes, especially with Aboriginal communities, local citizen's committees, trapper associations, bear management area operators, and local fire centres.

Map Name: Forest Management Plan Index Map

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features	Base Features	
Harvest Areas (Regular) (1st Term)	Communities (labels)	
Harvest Areas (Regular) (2nd Term)	Highways/Major Roads (labels)	
Renewal & Maintenance Areas (10-year plan)	Large lakes and rivers (labels)	
Primary & Branch Road Corridors (10-year plan)		
	Administrative Boundary Features	
	Parks and Reserves	
	Federal Land	
	Operational Map Grid (label)	
	Management Unit Boundary	

4.3.5.2.2   Packaging and Naming Convention

The <description> component of the file name for this map is **Index**. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_MAP_Index_00.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_MAP_Index_00.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P2_MAP_Index_00.EPS   (Draft Plan – Phase II)

MU123_2012_FMP_P2_MAP_Index_00.EPS   (Final Plan – Phase II)

MU123_2012_FMPDP_P0_MAP_Index_00.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_MAP_Index_00.PDF   (Final Contingency Plan)

4.3.5.2.3 Format

For the format for this map product, as a component of the FMP submission file, refer to Section 4.3.4.

4.3.5.2.4 Data Transfer and Schedule

The FMP Index Map is a mandatory component of all draft and final FMP submission files. It is a mandatory component of the contingency plan submission files if operational planning maps are included in the contingency plan submissions.

4.3.5.2.5 Review and Approval

The review and approval of this map product will occur as part of the normal review and approval process for the FMP.

4.3.5.3   Values Maps

4.3.5.3.1   Description, Intent and Intended Use

The values maps provide a summary of the location(s) of known natural resource features, land uses, and values which must be considered in forest management planning and about which further information is available. The specifications for the following values maps are detailed in the *FIM Base and Values Technical Specifications*:

- Natural Resource Features – Flora and Fauna
- Natural Resource Features – Fisheries & Wetlands
- Resource Uses
- Land Values (includes Existing Roads responsibility & use management information)
- Bear Management Areas
- Trapline Areas
- Resource-Based Tourism Values
- Cultural Heritage Values

4.3.5.4   Aboriginal Values Map(s)

4.3.5.4.1   Description, Intent and Intended Use

A map(s) which identifies the locations of natural resource features, land uses, and values which are used by, or of importance to, Aboriginal communities (e.g., traditional or recreational activities; trapline areas; reserves; potential reserve areas; sites of archaeological, historical, religious or cultural significance; areas of archaeological potential). The specifications for the Aboriginal Values Map(s) are detailed in the *FIM Base and Values Technical Specifications*.

4.3.5.5   Forest Landscape Pattern Map(s)

4.3.5.5.1   Description, Intent and Intended Use

The Forest Landscape Pattern maps are maps of the current forest landscape patterns and are to be available for discussions pertaining to the desired forest and benefits. They are not required to be available at other public consultation opportunities.

Map Name: Forest Landscape Pattern (sub-title required if more than one map is produced)

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Forest landscape pattern classification	Roads
	Railways
	Utility Lines
	Communities (labels)
	Water (lakes, rivers, streams)
	Administrative Boundary Features
	Parks and Reserves
	Federal Land
	Other non-Crown Land
	Management Unit Boundary

4.3.5.5.2   Packaging and Naming Convention

The <description> component of the file name for this map is **LandPat**. Forest Landscape Pattern maps must be named according to the convention in Section 4.3.2.The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_MAP_LandPat_00.EPS   (Draft FMP – Phase I)
MU123_2012_FMP_P1_MAP_LandPat_00.EPS   (Final Plan – Phase I)
MU123_2012_FMPDP_P0_MAP_Land Pat_00.PDF   (Draft Contingency Plan)
MU123_2012_FMP_P0_MAP_LandPat_00.PDF   (Final Contingency Plan)

4.3.5.5.3   Format

The format of this map product, when exchanged between the MNR and the Licensee at times other than those related to FMP submissions, will be as identified in the planning team terms of reference.

For the format for this map product, as a component of the FMP submission file, refer to Section 4.3.4.

4.3.5.5.4 Data Transfer and Schedule

This map is to be available at meetings to discuss desired forest and benefits during Phase I planning. It is not required to be available at other consultation opportunities.

The Forest Landscape Pattern map(s) is a mandatory component of the draft and final FMP submission files for Phase I only. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.3.5.5.5 Review and Approval

The review and approval of this map product will occur as part of the normal review and approval process for the FMP.

4.3.5.6   Preferred and Optional Harvest Areas Map

4.3.5.6.1   Description, Intent and Intended Use

The Preferred and Optional Harvest Areas map portrays areas that are eligible for harvest during the ten-year period of the forest management plan. The preferred areas for harvest for the ten-year period will be identified and mapped up to the level of the available harvest area for each forest unit, and portrayed separately for each five-year term. All eligible areas that are not preferred areas for harvest are considered to be optional harvest areas for the ten-year period and may be ranked in order of preference on the map. The past and approved areas of harvest operations for the current forest management plan and for the previous ten-years (15 years of harvest depletions prior to the start of the new plan) will be identified and mapped. The confirmed primary road corridors from the previous forest management plan, and the alternative primary corridors for each new primary road, for the next 20 years, will also be identified on the map.

Map Name: Preferred and Optional Harvest Areas

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Preferred Harvest Areas (1st Term)	Roads
Preferred Harvest Areas (2nd Term)	Railways
Optional Harvest Areas (may be ranked)	Utility Lines
Confirmed Primary Road Corridors (20-years)	Communities (labels)
Primary Road Corridors (20-year alternatives)	Water (lakes, rivers, streams)
Past & Approved Areas of Harvest (15 years)	
	Administrative Boundary Features
	Parks and Reserves
	Federal Land
	Other non-Crown Land
	Township*
	Operational Map Grid (label or key)
	Management Unit Boundary

*Optional

4.3.5.6.2   Packaging and Naming Convention

None

4.3.5.6.3　Format

The format of this map product, when exchanged between the MNR and the Licensee, will be as identified in the planning team terms of reference.

4.3.5.6.4　Data Transfer and Schedule

This map is required to be available for display and review at the appropriate MNR district or area office and the office of the Licensee when the public notice is issued for the review of proposed long-term management direction at Phase I, Stage 2 of the public consultation process.

The Preferred and Optional Harvest Areas Map is not a required component of FMP submission files.

4.3.5.6.5　Review and Approval

The review of this map product will occur during Phase I, Stage 2 of public consultation.

4.3.6   Operational Planning Maps

4.3.6.1   Areas Selected for Operations Maps

4.3.6.1.1 Description, Intent and Intended Use

The Areas Selected for Operations maps display the areas of operations for the 10-year period of the plan and detailed operations for the applicable five-year term. The amount of information to be displayed and differentiated on these operational scale operations maps is significant. Planning teams have the option of transferring any of the themes identified by an asterisk (*) in the Information Displayed sections below, onto composite scale maps, in order to improve the readability of the operational scale operations maps. Those themes that are transferred to the composite scale maps are no longer required on the operational scale operations maps. Planning teams must insure that these transferred themes are easily identifiable on the composite scale maps.

Planned harvest areas for the 1st operational term may include harvest categorized as regular, surplus, salvage, bridging, 2nd pass, accelerated, and re-directed. Planned harvest areas at Phase II for the 2nd operational term may include harvest categorized as regular, surplus, salvage, accelerated, and re-directed. Other categories of harvest areas are not considered planned harvest but are required to be shown on the operations maps (i.e., optional, contingency).

The silvicultural system must be identified on the operations maps if more than one silvicultural system is being used to manage the forest.

Renewal and tending areas, to be portrayed on the operations maps, are only those areas not already identified on the maps as harvest or silvicultural activities of special public interest.

The proposed areas of operations for the five-year plan term will be identified with the applicable silvicultural ground rule(s). For candidate areas of bridging operations and second-pass harvest areas, the applicable silvicultural ground rules from the current approved forest management plan will be used.

Areas of concern (AOC) will be portrayed on the operations maps for all areas of operations for the five-year term. This includes all harvest areas, primary and branch road corridors, aggregate extraction areas, operational road boundaries, existing roads to be used during the plan, and renewal and maintenance areas. Areas of concern will be differentiated on the map as reserve or modified operations. Areas of concern will be labelled and/or symbolized in such a way as to identify

their AOC or AOC group as documented in table FMP-10, Operational Prescriptions for Areas of Concern.

Areas of concern for renewal and maintenance activities are normally only required for modified operations or where a value may be impacted by renewal and maintenance activities (e.g., timing restrictions, herbicide applications, or site disturbance restrictions) or road activities.

For areas of concern for values classified as sensitive, the AOC identifier and the corresponding prescription should not directly identify the value that is being protected. For example, all values classified as sensitive that are to receive a reserve of 250 meters and modified operations of an additional 250 meters could have a CV1 identifier on the operations maps and a corresponding AOC prescription in table FMP-10 called CV1. Alternately, individual AOCs could have unique identifiers (e.g., CV1, CV2, CV3, etc.) and the identifiers will be listed in table FMP-10 with the appropriate prescription. The confidential detailed information about the value will be available at the MNR district office and will be shared with the Licensee on a need-to-know basis in order to conduct operations as prescribed. If the planning team considers the portrayal of an AOC as detrimental to the conservation of the sensitive value, it is not required on the operations maps available to the public. Detailed documentation on the type and location of the AOC will be kept on file at the MNR district and/or area office and at the office of the Licensee and made available on a need-to-know basis.

All road corridors, operational road boundaries and existing roads with planned activities must be labelled with the identifier documented in table FMP-18, Road Construction and Use Management.

All proposed primary and branch road corridor AOC crossing locations must be labelled with the location identifier as documented in table FMP-19, Road Crossings, Landing and Forestry Aggregate Pits in Areas of Concern. Acceptable variations on the location of the crossing may be explicitly identified on the operations maps, or be inferred by identifying unacceptable variation locations resulting in the remaining AOC area within the corridor being the acceptable variation location.

Roads, proposed or existing, which will have access controls (under the *Public Lands Act* or any other form of regulation) implemented during the 10-year period of the plan, will be differentiated on the operations maps. Access control is the closure of a road to public travel or the restricted access to a road for certain specified uses for given periods of time.

Roads that will be rendered impassable by decommissioning activities planned to occur during the 10-year period of the plan, will be identified on the maps.

Aggregate extraction areas are areas outside of road corridors and operational road boundaries where the Licensee plans to extract aggregate. An aggregate extraction area is defined as an individual polygon depicting a planned pit location within 500 meters of an existing access road.

PHASE I, STAGE 3

Map Name: Areas Selected for Operations - 1st term

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Planned Harvest Areas (1st Term)	Communities (labels)
Harvest Areas by Harvest Category	Highways/Major Roads (labels)
AOC reserves (IDs) (1st Term)	Other roads
AOC modified operations (IDs) (1st Term)	Railways
Stand-level Residual Areas (1st Term)	Utility Lines
*Renewal & Tending Areas (10-year plan)	Lakes, rivers and streams (labels)
*Candidate High Complexity Prescribed Burns	Forest Stand Boundaries**
*Areas Proposed for Aerial Application of Herbicides	
*Areas Eligible/Proposed for Aerial Application of Insecticides	Administrative Boundary Features
*Fuelwood Areas	Parks and Reserves
Planned Harvest Areas (2nd Term)	Federal Land
Primary & Branch Corridors (IDs) (10-year plan)	Other non-Crown Land
Primary & Branch Corridor 100 metre-wide AOC Crossing Locations (IDs) (1st Term)	Management Unit Boundary
Acceptable Variations on the Location of 100 metre-wide AOC Crossing Locations (1st Term)	Township**
Operational Road Boundaries (IDs) (1st Term)	Operational Map Grid (label or key)
Aggregate Extraction Areas (IDs) (10-year plan)	

* May be transferred to a composite scale map.
** Optional

PHASE I, STAGE 4 and 5

Map Name: Areas Selected for Operations – 1st term

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Silvicultural System (1st Term)***	Communities (labels)
Harvest Areas by Harvest Category (10-year plan)	Highways/Major Roads (labels)
AOC reserves (IDs) (1st Term)	Other roads
AOC modified operations (IDs) (1st Term)	Railways
Stand-level Residual Areas (1st Term)	Utility Lines
*Renewal & Tending Areas (10-year plan)	Lakes, rivers and streams (labels)
*Tree Improvement Activities (1st Term)	Forest Stand Boundaries**
*Candidate High Complexity Prescribed Burns	
*Areas Proposed for Aerial Application of Herbicides	**Administrative Boundary Features**
*Areas Eligible/Proposed for Aerial Application of Insecticides	Parks and Reserves
*Fuelwood Areas	Federal Land
Primary & Branch Corridors (IDs) (1st Term)	Township**
Primary & Branch Corridors (IDs) (2nd Term)	Operational Map Grid (label or key)
Primary & Branch Corridor 100 metre-wide AOC Crossing Locations (IDs) (1st Term)	
Acceptable Variations on the Location of 100 metre-wide AOC Crossing Locations (1st Term)	
Operational Road Boundaries (IDs) (1st Term)	
Road Access Control to be Implemented (1st Term)	
Roads Planned to be Decommissioned (1st Term)	
Roads with Use Management Strategy Changes	
Aggregate Extraction Areas (IDs) (10-year plan)	

* *May be transferred to a composite scale map.*
** *Optional*
*** *If more than one silvicultural system is being used to manage the forest*

PHASE II STAGE 1

Map Name: Areas Selected for Operations - 2nd Term

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Planned Harvest Areas (2nd Term)	Communities (labels)
Harvest Areas by Harvest Category	Highways/Major Roads (labels)
AOC reserves (IDs) (10-year plan)	Other roads
AOC modified operations (IDs) (10-year plan)	Railways
Stand-level Residual Areas (2nd Term)	Utility Lines
*Renewal & Tending Areas (2nd Term)	Lakes, rivers and streams (labels)
*Candidate High Complexity Prescribed Burns	Forest Stand Boundaries**
*Areas Proposed for Aerial Application of Herbicides	
*Areas Eligible/Proposed for Aerial Application of Insecticides	**Administrative Boundary Features**

*Fuelwood Areas	Parks and Reserves
Primary & Branch Corridors (IDs) (1st Term)	Federal Land
Primary & Branch Corridors (IDs) (2nd Term)	Other non-Crown Land
Primary & Branch Corridor 100 metre-wide AOC Crossing Locations (IDs) (2nd Term)	Management Unit Boundary
Acceptable Variations on the Location of 100 metre-wide AOC Crossing Locations (2nd Term)	Township**
Operational Road Boundaries (IDs) (2nd Term)	Operational Map Grid (label or key)

* *May be transferred to a composite scale map.*
** *Optional*

PHASE II, Stage 2 and 3

Map Name: Areas Selected for Operations - 2nd Term

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features	*Base Features*
Planned Harvest Areas by Harvest Category (2nd Term)	Communities (labels)
Silvicultural System (2nd Term)***	Highways/Major Roads (labels)
Harvest Area changes from planned harvest area in FMP	Other roads
AOC reserves (IDs) (10-year plan)	Railways
AOC modified operations (IDs) (10-year plan)	Utility Lines
Stand-level Residual Areas (2nd Term)	Lakes, rivers and streams (labels)
*Renewal & Tending Areas (10-year plan)	Forest Stand Boundaries**
*Tree Improvement Activities (2nd Term)	
*Candidate High Complexity Prescribed Burns	*Administrative Boundary Features*
*Areas Proposed for Aerial Application of Herbicides	Parks and Reserves
*Areas Eligible/Proposed for Aerial Application of Insecticides	Federal Land
*Fuelwood Areas	Other non-Crown Land
Primary & Branch Corridors (IDs) (1st Term)	Management Unit Boundary
Primary & Branch Corridors (IDs) (2nd Term)	Township**
Primary & Branch Corridor Changes (2nd Term)	Operational Map Grid (label or key)
Primary & Branch Corridor 100 metre-wide AOC Crossing Locations (IDs) (2nd Term)	
Acceptable Variations on the Location of 100 metre-wide AOC Crossing Locations (2nd Term)	
Operational Road Boundaries (IDs) (10-year plan)	
Operational Road Boundaries Changes (2nd Term)	
Road Access Control to be Implemented (2nd Term)	
Roads to be Decommissioned (2nd Term)	
Roads with Use Management Strategy Changes	
Aggregate Extraction Areas (IDs) (10-year plan)	

* *May be transferred to a composite scale map.*

*** Optional*
**** *If more than one silvicultural system is being used to manage the forest*

4.3.6.1.2 Packaging and Naming Convention

The <description> component of the file name for this map is **Ops**<*extent*> where <*extent*> is user-defined and gives an indication of the map extent, such as an OBM tile number (54530), township, or operational road identifier and is to be used as the Operational Grid label on the FMP Index Map. The map files must be named according to the convention in Section 4.3.2.

The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_MAP_Ops54530_00.PDF	(Draft FMP – Phase I)
MU123_2012_FMP_P1_MAP_Ops54530_00.PDF	(Final Plan – Phase I)
MU123_2012_FMPDP_P2_MAP_OpsKLOCK_01.EPS	(Draft Plan – Phase II)
MU123_2012_FMPDP_P2_MAP_OpsKLOCK_02.EPS	(Draft Plan – Phase II)
MU123_2012_FMP_P2_MAP_OpsKLOCK_01.EPS	(Final Plan – Phase II)
MU123_2012_FMP_P2_MAP_OpsKLOCK_02.EPS	(Final Plan – Phase II)
MU123_2012_FMPDP_P0_MAP_Ops1234_00.PDF	(Draft Contingency Plan)
MU123_2012_FMP_P0_MAP_Ops1234_00.PDF	(Final Contingency Plan)

4.3.6.1.3 Format

The format of this map product, when exchanged between the MNR and the Licensee at public consultation stages other than those related to plan submissions, will be as identified in the planning team terms of reference.

For the format for this map product, as a component of the FMP submission file, refer to Section 4.3.4.

4.3.6.1.4 Data Transfer and Schedule

The Areas Selected for Operations maps are required to be available for display and review at the Phase I, Stage 3 and Phase II, Stage 1 information centres and at the appropriate MNR district or area office and the office of the Licensee for a period of 60 days following the Phase I, Stage 3 information centre and for 30 days following the Phase II, Stage 1 information centre.

The Areas Selected for Operations Maps are a mandatory component of all draft and final FMP submission files. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.3.6.1.5 Review and Approval

The review and approval of this map product will occur as part of the normal review and approval process for the FMP.

4.3.6.2   FMP Summary Map

4.3.6.2.1   Description, Intent and Intended Use

The FMP Summary map is intended to be a take-home style map available to the public at each stage of public consultation, with the exception of the invitation to participate (Phase I, Stage1). Each stage requires updates to be made to the summary map to reflect the decisions made up to that point.

The planning team may choose to display some themes on separate summary maps to facilitate readability. In these cases, the separate theme of each map must be reflected in the title block. Although this map is to be designed with ease of reproduction in mind, it is recommended that colour be used to best communicate the information required on these maps.

A French language version of the map is required for all areas within the Province, regardless of whether the forest management unit is located within a *French Language Services Act*-designated area.

Phase I, Stage 2

The summary map at this stage is a summary of the Preferred and Optional Harvest Areas map (Section 4.3.5.6) and portrays preferred and optional harvest areas for each five-year term, the alternative one kilometre-wide corridors for each new primary road which is required for the next 20 years, and past and approved areas of harvest operations for the current forest management plan and for the previous ten-years (15 years of harvest depletions prior to the start of the new plan).

This map is a required component of the summary of the proposed long-term management direction for the forest.

Map Name: FMP Summary – Long-Term Management Direction

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Preferred Harvest Areas (1st Term)	Communities (labels)
Preferred Harvest Areas (2nd Term)	Highways/Major Roads (labels)
Optional Harvest Areas	Large lakes and rivers
Confirmed Primary Road Corridors	
Primary Road Corridors (20 year alternatives)	Administrative Boundary Features

Past & Approved Areas of Harvest (15 years)	Parks and Reserves
	Federal Land
	Township or OBM grid (labels)
	Management Unit Boundary

Phase I, Stage 3

The summary map at this stage is a summary of the proposed areas for harvest for the five-year term of the plan; preferred areas for harvest for the second five-year term of the plan; renewal and maintenance areas for the 10-year period of the plan; optional harvest areas; proposed primary road corridors required for the next 20 years; proposed new primary and branch road corridors for the 10-year period of the plan; and past and approved areas of harvest for the current forest management plan and for the previous ten-years (15 years of harvest depletions prior to the start of the new plan).

Map Name: FMP Summary – Proposed Operations, 1st Term

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features	*Base Features*
Harvest Areas (1st Term)	Communities (labels)
Harvest Areas (2nd Term)	Highways/Major Roads (labels)
Renewal & Tending Areas (10-year plan)	Large lakes and rivers
Optional Harvest Areas	
Primary Corridors (20 years)	*Administrative Boundary Features*
Primary & Branch Corridors (10-year plan)	Parks and Reserves
Past & Approved Areas of Harvest (15 years)*	Federal Land
	Township or OBM grid (labels)
	Management Unit Boundary

* *Past and approved areas of harvest are normally represented by renewal and tending areas in which case they do not need to be duplicated.*

Phase I, Stage 4 and Stage 5

The summary map at this stage is a summary of the planned areas for harvest for the five-year term of the plan; preferred areas of harvest for the second five-year term of the plan; renewal and maintenance areas for the 10-year period of the plan; and planned new primary and branch road corridors for the 10-year period of the plan.

This map is a required component of the draft and final forest management plan summary. The draft forest management plan summary is a required component of the final Report on Protection of Identified Aboriginal Values.

Map Name: FMP Summary – Planned Operations, 1st Term

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features	Base Features	
Harvest Areas (1st Term)	Communities (labels)	
Harvest Areas (2nd Term)	Highways/Major Roads (labels)	
Renewal & Tending Areas (10-year plan)	Large lakes and rivers	
Primary & Branch Corridors (10-year plan)		
Primary Corridors (20 years)	Administrative Boundary Features	
	Parks and Reserves	
	Federal Land	
	Township or OBM grid (labels)	
	Management Unit Boundary	

Phase II, Stage 1

The summary map at this stage is a summary of the proposed areas for harvest for the second five-year term of the plan; renewal and maintenance areas for the 10-year period of the plan; optional harvest areas; proposed primary road corridors required for the next 15 years; proposed new primary and branch road corridors for the second five-year term of the plan; and past and approved areas of harvest for the current forest management plan and the previous ten-years (15 years of harvest depletions prior to the start of the new plan).

Map Name: FMP Summary – Proposed Operations, 2nd Term

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
Harvest Areas (2nd Term)	Communities (labels)
Optional Harvest Areas	Highways/Major Roads (labels)
Renewal & Tending Areas (10-year plan)	Large lakes and rivers
Primary Corridors (20 years)	
Primary & Branch Corridors (2nd Term)	Administrative Boundary Features
Past & Approved Areas of Harvest (15 years)*	Parks and Reserves
	Federal Land
	Township or OBM grid (labels)
	Management Unit Boundary

* Past and approved areas of harvest are normally represented by renewal and tending areas in which case they do not need to be duplicated.

Phase II, Stage 2 and Stage 3

The summary map at this stage is a summary of the planned areas of harvest for the second five-year term of the plan; renewal and maintenance areas for the 10-year period of the plan; and planned new primary and branch road corridors for the second five-year term of the plan. This map is a required component of the draft and final planned operations summary.

Map Name: FMP Summary– Planned Operations, 2nd Term

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features	Base Features	
Harvest Areas (2nd Term)	Communities (labels)	
Renewal & Tending Areas (10-year plan)	Highways/Major Roads (labels)	
Primary & Branch Corridors (2nd Term)	Large lakes and rivers	
Primary Corridor (20 years)		
	Administrative Boundary Features	
	Parks and Reserves	
	Federal Land	
	Township or OBM grid (labels)	
	Management Unit Boundary	

4.3.6.2.2   Packaging and Naming Convention

The <description> component of the file name for this map is **Sum** for the English language version and **SumFR** for the French language version. The planned operations map files must be named according to Section 4.3.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_MAP_Sum_00.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_MAP_Sum_00.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P2_MAP_Sum_01.EPS   (Draft Plan – Phase II)

MU123_2012_FMPDP_P2_MAP_Sum_02.EPS   (Draft Plan – Phase II)

MU123_2012_FMP_P2_MAP_Sum_01.EPS   (Final Plan – Phase II)

MU123_2012_FMP_P2_MAP_Sum_02.EPS   (Final Plan – Phase II)

MU123_2012_FMPDP_P0_MAP_Sum_00.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_MAP_Sum_00.PDF   (Final Contingency Plan)

MU123_2012_FMPDP_P1_MAP_SumFR_00.PDF   (Draft FMP – Phase I, French)

MU123_2012_FMP_P1_MAP_SumFR_00.PDF   (Final Plan – Phase I, French)

MU123_2012_FMPDP_P2_MAP_SumFR_01.EPS   (Draft Plan – Phase II, French)

MU123_2012_FMPDP_P2_MAP_SumFR_02.EPS   (Draft Plan – Phase II, French)

MU123_2012_FMP_P2_MAP_SumFR_01.EPS   (Final Plan – Phase II, French)

MU123_2012_FMP_P2_MAP_SumFR_02.EPS   (Final Plan – Phase II, French)

MU123_2012_FMPDP_P0_MAP_SumFR_00.PDF   (Draft Contingency Plan, French)

MU123_2012_FMP_P0_MAP_SumFR_00.PDF   (Final Contingency Plan, French)

4.3.6.2.3   Format

The format of this map product, when exchanged between the MNR and the Licensee at public consultation stages other than those related to plan submissions, will be as identified in the planning team terms of reference.

For the format for this map product, as a component of the FMP submission file, refer to Section 4.3.4.

4.3.6.2.4   Data Transfer and Schedule

This map product is required to be available for distribution at all public consultation opportunities, with the exception of the invitation to participate.

The Licensee will submit to the MNR the draft plan summary map(s) 30 days before the information centre. The map(s) will be provided in Adobe's portable document format (PDF). MNR will prepare a French language version and will provide it to the Licensee for inclusion in the Draft FMP Summary submission file.

This FMP Summary Map is a mandatory component of all draft and final FMP submission files. It is a component of the draft forest management plan summary, and therefore is also a component of the final Report on Protection of Identified Aboriginal Values. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.3.6.2.5   Review and Approval

The review and approval of this map product will occur as part of the normal review and approval process for the FMP.

4.3.6.3   Other Maps Used for Forest Management Planning Purposes

4.3.6.3.1   Description, Intent and Intended Use

Not all of the maps which may be used during the preparation or implementation of forest management plans are listed in the previous sections or detailed in the technical specifications. The planning team and/or Licensee may create and utilize additional map products for the purpose of preparing a forest management plan. Other maps may also be prescribed by guidelines and other manuals relevant to the preparation and implementation of the FMP. The planning team must approve the use of other maps which are used for forest management planning purposes. The planning team will determine the requirement for provision of other map products and information used in forest management planning. These decisions will be identified in the terms of reference for the forest management plan.

Map Name: as identified in the FMP terms of reference

Scale: same operational or composite scale as selected for required maps

Map Surround Components: all

Information Displayed:

Theme Features	Base Features
	Roads
	Railways
	Utility Lines
	Communities (labels)
	Lakes, rivers and streams (labels)
	Administrative Boundary Features
	Parks and Reserves
	Federal Land
	Other non-Crown Land
	Township or OBM grid
	Management Unit Boundary

4.3.6.3.2   Packaging and Naming Convention

There are no packaging and naming requirements if the maps are exchanged between the MNR and the Licensee for public consultation stages.

If the additional map products are to be included in FMP submission files, then the maps must be named using the standardized file naming convention (Section 4.3.2).

4.3.6.3.3 Format

The format of this map product, when exchanged between the MNR and the Licensee at public consultation stages other than those related to plan submissions, will be as identified in the planning team terms of reference.

For the format for this map product, as a component of the FMP submission file, refer to Section 4.3.4.

4.3.6.3.4 Data Transfer and Schedule

Non-standard map products will be available as identified in the planning team terms of reference.

4.3.6.3.5 Review and Approval

The review and approval of this map product, if required, will occur as part of the normal review and approval process for the FMP.

4.4 Plan Text, Tables and Supplementary Documentation

4.4.1 Description, Intent and Intended Use

The mandatory text and table components of FMP submission files have been structured to facilitate efficient organization, retention, access and use of the information on the FI Portal and MNR website. The following rules apply to text and table components of FMP submission files:

- FMP text submitted as a single file
- FMP tables submitted as a single file
- Analysis package submitted as an individual file, although normally considered part of the supplementary documentation section
- Summary text submitted as a separate file
- LCC statement with figure B-3 of the FMPM
- Preliminary list of required alterations
- Supplementary documentation (remaining components*)

The public correspondence related to the development of the plan will be retained on file at the appropriate MNR district or area office. The Report on the Protection of Identified Aboriginal Values will be retained at a location as agreed to in consultation with the Aboriginal communities.

* The remaining components of the supplementary documentation are those items identified in Part B Section 6 of the FMPM less those listed above. When submitted with the draft plan, the remaining components will include the full LCC report (without the discussion on the general agreement or disagreement of the FMP) as it is described in Part A Section 3.2.6 of the FMPM. When submitted with the final plan, the remaining components will include the full LCC report without any omissions.

4.4.2 Packaging and Naming Convention

FMP text and tables will be included in FMP submission files according to the standards described in Section 5.0.

FMP text and table files will be submitted using the standardized naming convention. A standard naming convention must be used to permit an automated validation of the information product. Standardized naming of files also facilitates internet viewing, file retention and data discovery. The file name is composed of the following parts:

MU<management unit>_<year>_<info product>_P<phase>_<product type>_<description>.PDF

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product>	Letters representing the information product being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
_	Underscore character as a separator.
<product type>	Letters representing the type of product being submitted, either "TXT" for text or "TBL" for table.
_	Underscore character as a separator.
<description>	Letters representing the required standard component being submitted. For non-standard additional files that are being submitted, the description is user defined.
.PDF	File format extension of .PDF.

Sample naming conventions for the individual file components are provided in the detailed file descriptions below (Section 4.4.7 to 4.4.13).

4.4.3   Metadata

Mandatory metadata information which is considered to be standard for any FMP information product includes: the management unit number, plan term, plan period, product being submitted, submission date, and contact information for the product submitter. These standard metadata elements will be captured at the time of the draft plan and final plan product submissions via the FI Portal and will apply to all components contained within the submission.

4.4.4   Format

All FMP text and table files, as components of submission files to the FI Portal, will be submitted as Adobe portable document files (PDF).

Additional format requirements for specific files are noted in the detailed descriptions below (Section 4.4.7 to 4.4.13).

4.4.5   Data Transfer and Schedule

FMP text and tables are included in the draft and final FMP submission files and are subject to those timelines. Refer to Section 5.0 for more information.

4.4.6   Review and Approval

Review and approval of FMP text and tables is performed as part of draft and final FMP review. Refer to Section 5.0 for more information.

4.4.7   Plan Text

4.4.7.1   Description, Intent and Intended Use

The plan text, as described in Part B of the FMPM, will be incorporated into a single file. The file will include a version of the title, certification and approval page identifying the names and titles of the signatories, and details on where the original signed hard copies are filed. This is not meant to be a scanned version of the original page with signatures.

This file is a mandatory component of all draft and final FMP submission files. The contingency plan proposal will identify if this is a required component of contingency plan submission files.

4.4.7.2   Packaging and Naming Convention

The <description> component of the file name for this file is **PlanText** (no spaces). The plan text file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_PlanText.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_TXT_PlanText.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P2_TXT_PlanText.PDF   (Draft Plan – Phase II)

MU123_2012_FMP_P2_TXT_PlanText.PDF   (Final Plan – Phase II)

MU123_2012_FMPDP_P0_TXT_PlanText.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_TXT_PlanText.PDF   (Final Contingency Plan)

4.4.8   Tables

4.4.8.1   Description, Intent and Intended Use

All FMP tables, as described in Part B, Section 9.0 of the FMPM, will be incorporated into a single file.

This is a mandatory component of all draft and final FMP submission files. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.4.8.2   Packaging and Naming Convention

The <description> component of the file name for this file is **Tables**. The tables file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TBL_Tables.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_TBL_Tables.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P2_TBL_Tables.PDF   (Draft Plan – Phase II)

MU123_2012_FMP_P2_TBL_Tables.PDF   (Final Plan – Phase II)

MU123_2012_FMPDP_P0_TBL_Tables.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_TBL_Tables.PDF   (Final contingency Plan)

4.4.9   Analysis Package

4.4.9.1   Description, Intent and Intended Use

The analysis package, as described in Part A and Appendix II of the FMPM, will be incorporated into a single file. This information is supplementary documentation but is required to be submitted as a separate file due to the fact that it is usually large in size and normally of interest to a limited number of MNR staff and public.

This file is a mandatory component of all draft and final FMP submission files for Phase I only. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.4.9.2   Packaging and Naming Convention

The <description> component of the file name for this file is **AnPack** (no spaces). The analysis package file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_AnPack.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_TXT_AnPack.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P0_TXT_AnPack.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_TXT_AnPack.PDF   (Final Contingency Plan)

4.4.10   Summary Text

4.4.10.1   Description, Intent and Intended Use

The summary, FMP Summary as described in Part B, Section 7.0 of the FMPM and Planned Operations Summary as described in Part B, Section 8.11 of the FMPM, is to be prepared as a single text file. The summary text available with the draft FMP and draft Planned Operations will not contain the LCC statement of general agreement or disagreement. The LCC Report will be submitted as a separate file at the draft FMP and draft Planned Operations stage as described in Section 4.4.11.

A French language version of the summary text is required for all areas within the Province. The Licensee will submit the draft plan summary text to the MNR 30 days before the information centre. The text will be provided as a Microsoft Word document (.doc). MNR will prepare a French language version and will provide it to the Licensee for inclusion in the Draft Summary submission file. Any updates to the summary text file that accompanies the final FMP submission must also be provided to the MNR for French language translation. The amount of time required by MNR for the translation will depend on the significance of the updates.

Summary files are a mandatory component of the draft FMP Summary submission file and final FMP submission file as well as a component of the final Report on Protection of Identified Aboriginal Values. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.4.10.2   Packaging and Naming Convention

The <description> component of the file name for this file is **Sum** for the English language version and **SumFR** for the French language version. Summary text files must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_Sum.PDF	(Draft FMP – Phase I)
MU123_2012_FMP_P1_TXT_Sum.PDF	(Final Plan – Phase I)
MU123_2012_FMPDP_P2_TXT_Sum.PDF	(Draft Plan – Phase II)
MU123_2012_FMP_P2_TXT_Sum.PDF	(Final Plan – Phase II)
MU123_2012_FMPDP_P0_TXT_Sum.PDF	(Draft Contingency Plan)
MU123_2012_FMP_P0_TXT_Sum.PDF	(Final Contingency Plan)
MU123_2012_FMPDP_P1_TXT_SumFR.PDF	(Draft FMP – Phase I, French)

MU123_2012_FMP_P1_TXT_SumFR.PDF   (Final Plan – Phase I, French)

MU123_2012_FMPDP_P2_TXT_SumFR.PDF   (Draft Plan – Phase II, French)

MU123_2012_FMP_P2_TXT_SumFR.PDF   (Final Plan – Phase II, French)

MU123_2012_FMPDP_P0_TXT_SumFR.PDF   (Draft Contingency Plan, French)

MU123_2012_FMP_P0_TXT_SumFR.PDF   (Final Contingency Plan, French)

4.4.11   Local Citizen's Committee Report

4.4.11.1   Description, Intent and Intended Use

The Local Citizen's Committee (LCC) report will be prepared as a single text file as a component of the draft FMP Summary submission file. At the time of the final FMP submission, this text requirement will be incorporated into the FMP text file and the summary text file.

This is a mandatory component of the draft FMP Summary submission file. The contingency plan proposal will identify if this is a required component of the draft contingency plan summary submission file.

4.4.11.2   Packaging and Naming Convention

The <description> component of the file name for this file is **LCCReport** (no spaces). The LCC report file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_LCCReport.PDF   (Draft FMP – Phase I)
MU123_2012_FMPDP_P2_TXT_LCCReport.PDF   (Draft Plan – Phase II)
MU123_2012_FMPDP_P0_TXT_LCCReport.PDF   (Draft Contingency Plan)

4.4.12   Preliminary List of Required Alterations

4.4.12.1   Description, Intent and Intended Use

The preliminary list of required alterations will be prepared as a single text file as a component of the draft FMP Summary submission file. At the time of the final FMP submission, this text requirement will be incorporated into the supplementary documentation text file.

This is a mandatory component of the draft FMP Summary submission file. The contingency plan proposal will identify if this is a required component of the draft contingency plan summary submission file.

4.4.12.2   Packaging and Naming Convention

The <description> component of the file name for this file is **PrelimAlt** (no spaces). The list of alterations file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_PrelimAlt.PDF   (Draft FMP – Phase I)
MU123_2012_FMPDP_P2_TXT_PrelimAlt.PDF   (Draft Plan – Phase II)
MU123_2012_FMPDP_P0_TXT_PrelimAlt.PDF   (Draft Contingency Plan)

4.4.13   Supplementary Documentation

4.4.13.1   Description, Intent and Intended Use

All supplementary documentation, as described in Part B, Section 6.1 (Phase I planning) and 8.9 (Phase II planning) of the FMPM, will be incorporated into a single file, except for the analysis package and the summary text and map(s). For draft FMP submissions only, the LCC Report and the preliminary list of required alterations are submitted separately with the plan summary files. Refer to Section 5.8 for more information.

This is a mandatory component of all draft and final FMP submission files. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.4.13.2   Packaging and Naming Convention

The <description> component of the file name for this file is **SuppDoc** (no spaces). The supplementary documentation file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1_TXT_SuppDoc.PDF   (Draft FMP – Phase I)

MU123_2012_FMP_P1_TXT_SuppDoc.PDF   (Final Plan – Phase I)

MU123_2012_FMPDP_P2_TXT_SuppDoc.PDF   (Draft Plan – Phase II)

MU123_2012_FMP_P2_TXT_SuppDoc.PDF   (Final Plan – Phase II)

MU123_2012_FMPDP_P0_TXT_SuppDoc.PDF   (Draft Contingency Plan)

MU123_2012_FMP_P0_TXT_SuppDoc.PDF   (Final contingency Plan)

4.5   Modeling Files

4.5.1   Description, Intent and Intended Use

The modeling files are included in the FMP submission files in order to have a complete copy of the plan on the FI Portal, the official repository. The modeling files will not be available on the MNR website.

4.5.2   Packaging and Naming Convention

Modeling files will be included in FMP submission files according to the standards described in Section 5.0.

Modeling files will be submitted using a standardized naming convention. A standard naming convention must be used to permit an automated validation of the information product. Standardized naming of files also facilitates file retention and data discovery. The file name is composed of the following parts:

MU<management unit>_<year>_<info product>_P<phase>_MDL_<description>.<extension>

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product>	Letters representing the information product being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
_	Underscore character as a separator.
MDL	Letters representing the type of product being submitted; "MDL" for model.
_	Underscore character as a separator.

<description>	The description is user defined.
.<extension>	Appropriate file format extension such as .inp, .dat or .ZIP.

Example: MU123_2011_FMPDP_P1_MDL_SFMMruns.zip

4.5.3   Metadata

Mandatory metadata information which is considered to be standard for any FMP information product includes: the management unit number, plan term, plan period, product being submitted, submission date, and contact information for the product submitter. These standard metadata elements will be captured at the time of the draft plan and final plan product submissions via the FI Portal and will apply to all components contained in the submission.

4.5.4   Format

All modeling files, as components of a submission file to the FI Portal, will be submitted in the format agreed to by the planning team (e.g., .dat, .inp, .zip).

4.5.5   Data Transfer and Schedule

Modeling files are included in the draft and final FMP submission files and are subject to those timelines. Refer to Section 5.0 for more information.

4.5.6   Review and Approval

Review and approval of new modeling files is performed as part of draft and final FMP review. The remaining modeling files will usually be the same as those endorsed as part of the Long-Term Management Direction and will not require additional review and approval. Refer to Section 5.0 for more information.

4.6   Amendment Files

4.6.1   Description, Intent and Intended Use

The amendment request decision file is the only mandatory amendment file. Other amendment files will be dependent on the category, classification and significance of the amendment. All of the amendment files will be located in the root of the amendment submission zip file. The approved amendments will be available on the MNR website.

4.6.2   Packaging and Naming Convention

Amendment files will be included in the amendment submission file according to the standards described in Section 5.0.

Amendment files will be submitted using a standardized naming convention. A standard naming convention must be used to permit an automated validation of the information product. Standardized naming of files also facilitates file retention and data discovery. The file name is composed of the following parts:

MU<management unit>_<year>_FMPAM_P<phase>_<sequence number>_
<product type>_<description>.<extension>

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
FMPAM	Letters "FMPAM" representing FMP Amendment.
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
_	Underscore character as a separator.
<sequence number>	A three digit consecutive numbering system for organizing and tracking amendments (amendment number), padded left with zeros (e.g., 001) and numbered consecutively for the 10-year period of the plan.

_	Underscore character as a separator.
<product type>	Letters representing the type of product being submitted, either "TXT" for text, "TBL" for table, or "MAP" for map.
_	Underscore character as a separator.
<description>	Letters representing the required component being submitted: a user defined description for non-standard components or the following "Decision" for Amendment Request Decision "Text" for Amendment Text "Tables" for Amendment FMP Tables "Ops<extent>_<file number> for operational scale operations maps "SEV" for statement of environmental values (for major amendments only) For operational scale operations maps, the description is the letters "OPS" followed by a user-defined extent component, an underscore character, and a file number (i.e., OPS<extent>_<file number>). The user-defined extent component will link to the FMP Index Map grid label. The <file number> is a two-digit place holder which identifies if the map has been split into more than one file or not. If only one map file exists, the file number is "00". If the map is split into more than one file, the first map file will contain "01" in the file name, the second map "02", etc.
.<extension>	File format extension of .PDF or .EPS as is appropriate.

Example: MU123_2012_FMPAM_P1_019_TXT_Text.PDF

4.6.3   Metadata

Mandatory metadata information which is considered to be standard for any FMP information product includes: the management unit number, plan term, plan period, product being submitted, submission date, and contact information for the product submitter. These standard metadata elements will be captured at the time of the amendment submission via the FI Portal and will apply to all components contained in the submission.

4.6.4   Format

Amendment files are to be submitted following the same general rules as for submitting FMP components. For example, text, including the consultation components, will be submitted as a single PDF file. Tables will be submitted as a single PDF file. Each map will be submitted as a separate EPS or PDF file.

4.6.5   Data Transfer and Schedule

Amendment files are included in their own submission file The transfer of the amendment files for their review is to occur outside of the FI Portal's product submission category and the planning team will decide on an appropriate mechanism to transfer the files (i.e., FI Portal information posting, email). Only the final amendment files, which will be approved and posted to the MNR website, are to be submitted as a product submission through the FI Portal. Refer to Section 5.0 for more information.

4.6.6   Review and Approval

Review and approval of amendment files is performed based on the timelines associated to the classified amendment.

5.0 Submission File

5.1 Description, Intent and Intended Use

All FMP documentation, including draft, final and contingency forest management plans and amendments, will be submitted in an electronic format, through the Forest Information Portal (FI Portal), to improve the efficiency of production, distribution, and storage of the information. The official copy of all FMP documentation is the electronic version submitted through the FI Portal. Amendments will be maintained individually (Section 5.9); there will be no replacement or substitution of original sections of the FMP documentation.

The intent is to reduce the requirement for paper copies of forest management plans and the costs associated with printing and storing. The electronic submission of products is intended to aid MNR's strategic direction to move toward electronic service delivery and improved access to information by the public via the internet. To facilitate this, standards must be in place to ensure files can be handled efficiently and meet standards for internet accessibility.

FMP documentation will be available for public viewing and/or downloading on the MNR website. Some data/information components included in the submission files will not be available to the public on the MNR website. These include the modeling files and geospatial data layer files. All files available on the MNR website will be in Adobe's portable document file format (PDF).

Documentation of information that contains, or is considered to be, private or classified as sensitive **must not** be included in the submission files.

For all documents requiring a title, certification and approval page, an original hard copy with all required signatures and the FI Portal Submission Identifier will be kept on file at the appropriate MNR office(s) and the office of the Licensee. The submission files of all documents requiring a title, certification and approval page will contain an electronic version of this page which identifies the names and titles of the signatories, and details on where the original signed hard copies are filed. This is not meant to be a scanned version of the original page with signatures.

The public correspondence related to the development of the plan will be retained on file at the appropriate MNR district or area office. The Report on the Protection of Identified Aboriginal Values will be retained at a location as agreed to in consultation with the Aboriginal communities.

5.2   Packaging and Naming Convention

Each FMP submission is to be packaged into a single compressed (zip) file. The standardized naming convention is to be used when creating each zip file. A standard naming convention must be used to permit an automated validation of the information product. Standardized naming of files also facilitates internet viewing, file retention and data discovery. The standard name for the submission files is provided in the detailed submission file descriptions (Section 5.7 – 5.9).

All text, table and map files are to be located at the root level of the zip file. Additional non-mandatory files are to be located at the root level as well and will be accessible on the MNR website if they are provided in PDF or EPS format. Non-standard components must also follow the standard file naming convention. Duplicate file names are not permitted and will result in the rejection of the forest management plan submission to the FI Portal. The file extension is ignored during the verification of duplicate file names, such that "Extra.doc" and "Extra.xls" would result in rejection of the submission.

Geospatial files are to be organized into a single folder located at the root of the zip file. Likewise, modeling information is organized into a folder located at the root of the zip file. Refer to Section 5.7.3 for more information.

5.3   Metadata

Mandatory metadata information which is considered to be standard for any FMP information product submission includes: the management unit, plan term, plan period, product being submitted, submission date, and contact information for the submission package. These standard metadata elements are captured when a product is submitted via the FI Portal. There will be additional metadata information required for amendments which will capture the classification, category and sequence number of amendments that is required to generate the list of amendments. This additional metadata is also captured during submission via the FI Portal.

5.4   Format

Mandatory file components of the submission files have been structured to facilitate efficient organization, retention, access and use of the information on the FI Portal and MNR website, as follows:

- FMP text submitted as a single PDF file
- FMP tables submitted as a single PDF file
- FMP maps submitted as individual files in PDF or EPS format as per Section 4.3.4, although normally considered part of the supplementary documentation section
- Analysis package submitted as an individual file in PDF format, although normally considered part of the supplementary documentation section
- Summary text submitted as two separate PDF files (English & French)
- Supplementary documentation (remaining components)
- LCC Report as a single PDF file
- List of Required Alterations as a single PDF file
- Modeling input files in the format agreed to
- Geospatial data layer files in E00 format

All files relevant to the FMP document will be compressed into a single compressed (zip) file for submission.

5.5   Data Transfer and Schedule

All FMP documentation will be submitted via the FI Portal.

The information is submitted as per the requirements and schedule in the FMPM and the planning team terms of reference.

5.6   Review and Approval

The MNR will ensure that information contained in the submitted products meet the standards of the FIM and the associated technical specifications and that the information is consistent with the requirements of the FMPM.

5.7   Draft and Final Forest Management Plans

5.7.1   Description, Intent and Intended Use

The draft and final plan submission files are to be organized in the same manner and, for the most part, contain the same product components. The main difference between the two submissions is the requirement for a separate Draft Plan Summary submission file (Section 5.8) in order to accommodate the different timeline requirements of specific product components and sub-components of the draft FMP. The draft FMP will not be available on the MNR website until a Draft Summary has been successfully submitted. Before preparing a draft FMP submission file, refer to Section 5.8, Draft Forest Management Plan Summary, to become familiar with the FMP product components that are to be submitted separately from the draft FMP submission.

5.7.2   Packaging and Naming Convention

The submission is to be packaged into a single compressed (zip) file using a standardized naming convention. The file name is composed of the following parts:

MU<management unit>_<year>_<info product_P<phase>.zip

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product>	Letters representing the information product being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
.zip	File format extension.

The following are samples of the mandatory file naming convention:

MU123_2012_FMPDP_P1.zip   (Draft FMP – Phase I)

MU123_2012_FMP_P1.zip   (Final FMP – Phase I)

MU123_2012_FMPDP_P2.zip   (Draft FMP – Phase II)

MU123_2012_FMP_P2.zip   (Final FMP – Phase II)

MU123_2012_FMPDP_P0.zip   (Draft Contingency Plan)

MU123_2012_FMP_P0.zip   (Final Contingency Plan)

5.7.3   Folder Requirements

FMP submission files will contain only two mandatory folders. One folder will contain the analysis model runs and the other folder will contain the inventory and operational planning geospatial data layers. These folders are required to be present, even if empty of contents, and must be in the root of the zip file. This applies to contingency plan submissions as well.

Any additional folders included within the LAYERS folder or at the root directory level will result in a failure of the submission. Additional geospatial information may be included in the LAYERS folder and this will not result in a submission failure.

A standardized naming convention is to be used to name the folders. The folder name is composed of the following parts:

MU<management unit>_<year>_<info product>_P<phase>_<folder name>

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product>	Letters representing the information products being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.

_	Underscore character as a separator.
<folder name>	Letters representing the name of folder, either: "LAYERS" for planning layers "MODEL" for analysis modelling runs

The following are samples of the mandatory folder naming convention:

MU123_2012_FMPDP_P1_LAYERS   (Draft Plan – Phase I – planning layer folder)

MU123_2012_FMPDP_P1_MODEL   (Draft Plan – Phase I - model folder)

MU123_2012_FMP_P1_LAYERS   (Final Plan – Phase I – planning layer folder)

MU123_2012_FMP_P1_MODEL   (Final Plan – Phase I - model folder)

MU123_2012_FMPDP_P2_LAYERS   (Draft Plan – Phase II – planning layer folder)

MU123_2012_FMPDP_P2_MODEL   (Draft Plan – Phase II - model folder)

MU123_2012_FMP_P2_LAYERS   (Final Plan – Phase II – planning layer folder)

MU123_2012_FMP_P2_MODEL   (Final Plan – Phase II - model folder)

MU123_2012_FMPDP_P0_LAYERS   (Draft Contingency Plan – planning layer folder)

MU123_2012_FMPDP_P0_MODEL   (Draft Contingency Plan – model folder)

MU123_2012_FMP_P0_LAYERS   (Final Contingency Plan – planning layer folder)

MU123_2012_FMP_P0_MODEL   (Final Contingency Plan – model folder)

5.7.4   Product Components

The following is a list of mandatory file components for a draft and final plan submission with sample file names:

Draft Plan – Phase I

MU123_2012_FMPDP_P1_TXT_PlanText.PDF

MU123_2012_FMPDP_P1_TXT_SuppDoc.PDF

MU123_2012_FMPDP_P1_TXT_AnPack.PDF

MU123_2012_FMPDP_P1_MAP_ValWild_00.EPS

MU123_2012_FMPDP_P1_MAP_ValFish_00.EPS

MU123_2012_FMPDP_P1_MAP_ValRec_00.EPS

MU123_2012_FMPDP_P1_MAP_ValLand_00.EPS

MU123_2012_FMPDP_P1_MAP_ValBMA_00.EPS

MU123_2012_FMPDP_P1_MAP_ValTrap_00.EPS

MU123_2012_FMPDP_P1_MAP_ValRBT_00.EPS

MU123_2012_FMPDP_P1_MAP_LandPat_00.EPS

    MU123_2012_FMPDP_P1_MAP_Index_00.EPS

    MU123_2012_FMPDP_P1_MAP_Ops54530_00.EPS

    MU123_2012_FMPDP_P1_TBL_Tables.PDF

    📂 MU123_2012_FMPDP_P1_LAYERS

        MU123_12PCM00.E00*

        MU123_12FDP00.E00*

        MU123_12BMI00.E00*

        MU123_12PHR00.E00*

        MU123_12AOC00.E00*

        MU123_12PRP00.E00*

        MU123_12PRC00.E00*

        MU123_12ORB00.E00*

        MU123_12ERU00.E00*

        MU123_12PAG00.E00*

        MU123_12PRT00.E00*

        MU123_12PCC00.E00*

    📂 MU123_2012_FMPDP_P1_MODEL

        MU123_2012_FMPDP_P1_MDL_SFMMbase.dat*

        MU123_2012_FMPDP_P1_MDL_SFMMscope.dat*

<u>Final Plan Phase I</u>

    MU123_2012_FMP_P1_TXT_PlanText.PDF

    MU123_2012_FMP_P1_TXT_SuppDoc.PDF

    MU123_2012_FMP_P1_TXT_AnPack.PDF   *(not required in Phase II submission)*

    MU123_2012_FMP_P1_MAP_ValWild_00.EPS

    MU123_2012_FMP_P1_MAP_ValFish_00.EPS

    MU123_2012_FMP_P1_MAP_ValRec_00.EPS

    MU123_2012_FMP_P1_MAP_ValLand_00.EPS

    MU123_2012_FMP_P1_MAP_ValBMA_00.EPS

    MU123_2012_FMP_P1_MAP_ValTrap_00.EPS

    MU123_2012_FMP_P1_MAP_ValRBT_00.EPS

    MU123_2012_FMP_P1_MAP_LandPat_00.EPS   *(not required in Phase II submission)*

    MU123_2012_FMP_P1_MAP_Index_00.EPS

    MU123_2012_FMP_P1_MAP_Ops54530_00.EPS

    MU123_2012_FMP_P1_TXT_Sum.PDF

    MU123_2012_FMP_P1_MAP_Sum_00.EPS

MU123_2012_FMP_P1_TXT_SumFR.PDF

MU123_2012_FMP_P1_MAP_SumFR_00.EPS

MU123_2012_FMP_P1_TBL_Tables.PDF

📂 MU123_2012_FMP_P1_LAYERS

       MU123_12PCM00.E00*

       MU123_12FDP00.E00*

       MU123_12BMI00.E00*

       MU123_12PHR00.E00*

       MU123_12AOC00.E00*

       MU123_12PRP00.E00 *

       MU123_12PRC00.E00*

       MU123_12ORB00.E00*

       MU123_12ERU00.E00*

       MU123_12PAG00.E00*

       MU123_12PRT00.E00*

       MU123_12PCC00.E00*

📂 MU123_2012_FMP_P1_MODEL

       MU123_2012_FMP_ P1_MDL_SFMMbase.dat*

       MU123_2012_FMP _P1_MDL_SFMMscope.dat *

* Not a mandatory product component of an FMP submission zip file.

5.8 Draft Forest Management Plan Summary

5.8.1 Description, Intent and Intended Use

The Draft Forest Management Plan Summary as it is described here can relate to either the submission file for the draft FMP in Phase I or for the draft Planned Operations in Phase II.

The draft FMP Summary submission file contains components of the draft FMP that are not available when the draft FMP is submitted for MNR review. These components are the LCC report, the preliminary list of required alterations, and the draft plan summary. The components of the draft FMP Summary submission file will be available for public review on the MNR website at the same time as the draft FMP.

The Licensee will submit the draft plan summary product in time for it to be available for the start of public review of the draft FMP.

5.8.2 Packaging and Naming Convention

The draft FMP Summary submission is to be packaged into a single compressed (zip) file using a standardized naming convention. The file name is composed of the following parts:

MU<management unit>_<year>_FMPDPSUM_P<phase>.zip

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
FMPDPSUM	Letters representing the information product being submitted: "FMPDPSUM" for FMP Draft Plan Summary
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
.zip	File format extension.

The following are samples of the mandatory file naming convention:

      MU123_2012_FMPDPSUM_P1.zip   (Draft FMP Summary – Phase I)

      MU123_2012_FMPDPSUM_P2.zip   (Draft FMP Summary – Phase II)

      MU123_2012_FMPDPSUM_P0.zip   (Draft Contingency Plan Summary)

5.8.3   Product Components

The following is a list of **mandatory** file components with sample file names:

For Phase I

    MU123_2012_FMPDP_P1_TXT_Sum.PDF

    MU123_2012_FMPDP_P1_MAP_Sum_00.EPS

    MU123_2012_FMPDP_P1_TXT_SumFR.PDF

    MU123_2012_FMPDP_P1_MAP_SumFR_00.EPS

    MU123_2012_FMPDP_P1_TXT_LCCReport.PDF

    MU123_2012_FMPDP_P1_TXT_PrelimAlt.PDF

For Phase II

    MU123_2012_FMPDP_P2_TXT_Sum.PDF

    MU123_2012_FMPDP_P2_MAP_Sum_00.EPS

    MU123_2012_FMPDP_P2_TXT_SumFR.PDF

    MU123_2012_FMPDP_P2_MAP_SumFR_00.EPS

    MU123_2012_FMPDP_P2_TXT_LCCReport.PDF

    MU123_2012_FMPDP_P2_TXT_PrelimAlt.PDF

Note: Although the information product identified in the submission file name is FMPDPSUM (Forest Management Plan Draft Plan Summary), the individual files contained in the submission file are to be identified with the information product FMPDP as per the direction in their individual product description Sections (4.4.10 – 4.4.12).

5.9   FMP Amendments

5.9.1   Description, Intent and Intended Use

Only amendments that have been granted approval to proceed are required to be submitted to the FI Portal. The submission file will include the written decision on the granting of the amendment request and all files required by the amendment. This submission file will be the official copy of the amendment. Amendments will be numbered sequentially for the 10-year period of the plan. Amendments will be available for public viewing on the MNR website.

5.9.2   Packaging and Naming Convention

The FMP Amendment information will be packaged into a single compressed (zip) file. A standardized naming convention is to be used when creating the zip file. The file name is composed of the following parts:

MU<management unit>_<year>_FMPAM_P<phase>_<sequence number>.zip

where:

MU	Letters "MU" representing Forest Management Unit.
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Four digit numeric start year of the 10-year planning period (e.g., 2012) or the start year of the Contingency Plan.
_	Underscore character as a separator.
FMPAM	Letters representing the information product being submitted: "FMPAM" for FMP Amendment
_	Underscore character as a separator.
P	Letter "P" representing Phase.
<phase>	A "1" or a "2" indicating which phase of the 10-year planning period the documentation is for, or a "0" for a contingency plan.
_	Underscore character as a separator.
<sequence number>	A three digit consecutive numbering system for organizing and tracking amendments (amendment number), padded left with zeros (e.g., 001) numbered consecutively for the 10-year period of the plan.
.zip	File format extension.

The following are samples of the mandatory file naming convention:

MU123_2012_FMPAM_P1_018.ZIP   (Plan Amendment #18 – last in Phase I)

MU123_2012_FMPAM_P2_019.ZIP   (Plan Amendment #19 – first in Phase II)

5.9.3   Product Components

The following are samples of the mandatory file naming convention:

MU123_2012_FMPAM_P1_019_TXT_Decision.PDF*

MU123_2012_FMPAM_P1_019_TXT_Text.PDF

MU123_2012_FMPAM_P1_019_TBL_Tables.PDF

MU123_2012_FMPAM_P1_019_MAP_Ops54530_00.EPS

MU123_2012_FMPAM_P1_019_TXT_SEV.PDF (for major amendments only)

* Mandatory product components of an FMP amendment submission zip file.

Appendix 1   Tabular Attribute Descriptions

The material in this appendix is organized based on order of presentation in Chapter 4, Product Descriptions. Use this appendix in conjunction with Appendix 2 for a better understanding of FI Portal automated validations.

Attribute descriptions for the ESRI standard attributes associated with coverages is not included here. The tabular attribute descriptions for each of the geospatial products begin with the attribute after the "<covername>_ID" field.

A1.1   Planning Composite

A1.1.1   FMFOBJID

Attribute Name: FMF Object Identifier

Definition: The *FMF Object Identifier* attribute information is supplied by MNR and is intended to be used to identify / track change data in the future. This is a numeric value supplied by MNR.

Format: integer 13

Validation:

- This field is optional and will be blank for new SFL maintained polygons.

A1.1.2   GEOGNUM

Attribute Name: Geographic Unit Type Number

Definition: The *geographic unit type number* attribute information is supplied by MNR. This is a numeric value supplied by MNR.

Format: integer 7

Validation:

- This field is optional and will be blank for new SFL maintained polygons.

A1.1.3   POLYID

Attribute Name: Polygon Identifier

Definition: The *polygon identifier* attribute is a unique identifier / label for the polygon which is often based on geographic location.

Format: character 25

- For example: for geographic seamless data this may be a latitude longitude number (geo-referenced); for tiled data, this may be a concatenation of UTM zone, mapsheet and stand number; or may be a sequential numbering of the stands.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code
- The POLYID attribute must contain a unique value

A1.1.4   POLYTYPE

Attribute Name: Polygon Type

Definition: The *polygon type* attribute indicates the classification of the area within the polygon boundaries into one of several generalized water and land types.

Format   character 3

CODE	OPTION	DEFINITION
water types		
WAT	Water	All water areas. Includes lakes, ponds, reservoirs (i.e., inland basin areas containing water) and wide ("two sided") rivers. These are rivers that can be defined by area. Generally, these rivers/streams are consistently wider than 20 meters when portrayed at a mapping scale of 1:10,000 or consistently wider than 40 meters when portrayed at a mapping scale of 1:20,000. Smaller/narrower rivers and streams are maintained as linear features in a centre-line layer(s).
non-forested types		

CODE	OPTION	DEFINITION
DAL	Developed agricultural land	Lands which are cultivated for growing crops, orchards, floral gardens, etc. These areas may include abandoned agricultural lands.
GRS	grass and meadow	Farm areas devoted to pasture for domesticated animals. These areas may also include abandoned grass and meadows, but are not part of the productive forest land base and do not include "barren and scattered" areas. These areas are similar to barren and scattered, but are located near developed agriculture land or unclassified areas and are usually fenced.
ISL	small island	Islands less than 8 hectares in size, down to a lower limit of 0.0025 hectares or 25 square meters in size (e.g., 5 meters X 5 meters) are recorded during the inventory production process, but are not interpreted/typed for practicality and cost considerations. Only islands 8 hectares and larger are interpreted and assigned an appropriate POLYTYPE code, such as FOR or BSH. *
UCL	unclassified	Non-forested areas which were created for specific uses other than timber production, such as roads, railroads, logging camps, mines, utility corridors, logging camps, gravel pits, airports, etc.
non-productive forest types		
BSH	brush and alder	Areas covered with "non-commercial" tree species or shrubs. These areas are normally associated with wetlands or water features.
RCK	Rock	Areas of barren or exposed rock (e.g., bedrock, cliff face, talus slope) which may support a few scattered trees, but is less that 25% stocked.
TMS	treed wetland	Areas of dry or wet muskeg on which stunted trees occur as widely spaced individuals or in small groups.
OMS	open wetland	Wet areas of mosses, grasses, sedges, and small herbaceous plants, often interspersed with small areas of open water.
productive forest types		
FOR	Productive forest	Areas that are capable of producing trees and can support tree growth. These areas may or may not be capable of supporting the harvesting of timber on a sustained yield basis. Some areas may have physical and/or biological characteristics which effect land use. Thus this polygon type includes both production and protection forest areas.

* If a delineated polygon is located on an island or is an island, the management consideration attribute is set to island (MGMTCON1 = ISLD). This applies to all polygon types. This apparent redundancy for polygons having a type of island (POLYTYPE = ISL   and MGMTCON1 = ISLD) allows resource managers to easily identify all polygons located on islands regardless of type (MGMTCON1 = ISLD) and to identify just the small non-interpreted islands (POLYTYPE = ISL) depending upon the analysis being run.

The polygon type is determined from the classification of area on a forest management unit into different water and land types. Some polygon types are derived from inventory base features, while other polygons must be created from a classification process.

All remaining land areas within a designated forest management unit are classified into various non-forested or forested lands.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code
- If POLYTYPE attribute does not equal FOR, then FORMOD, DEVSTAGE, YRDEP, SPCOMP, WG, YRORG, HT, STKG, SC, ECOSRC, ECOSITE1, ECOPCT1, ECOSITE2, ECOPCT2, ACCESS1, ACCESS2, MGMTCON1, MGMTCON2, MGMTCON3, AGS_POLE, AGS_SML, AGS_MED, AGS_LGE, UGS_POLE, UGS_SML, UGS_MED, UGS_LGE, USPCOMP, UWG, UYRORG, UHT, USTKG, USC, MANAGED, TYPE, MNRCODE, SMZ, OMZ, PLANFU, AGESTR, AGE, AVAIL, SILVSYS, NEXTSTG, SI, and SISRC attributes should be empty

A1.1.5   OWNER

Attribute Name: Ownership

Definition: This *ownership* attribute contains the traditional FRI ownership information as assigned by the Office of the Surveyor General.

Format: character 1

CODE	OPTION
0	unknown / unassigned ownership
1	Crown land
2	Patent land - with timber rights reserved to the Crown
3	Patent land – fee simple (private)
4	Patent land– Company Freehold
5	Provincial Park
6	Indian Reserve
7	Recreation Reserve
8	Agreement Forest
9	Federal Reserve

The ownership designation attribute is derived from the ownership and land tenure, and parks and reserves layers which are maintained in the MNR's values information system. This attribute also identifies the managed Crown area in a forest management unit.

Any discrepancies regarding the information contained in the ownership designation attribute should be reported to the appropriate MNR district office. The most accurate source for ownership information is located in the appropriate regional Land Registry Office.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.1.6 AUTHORTY

Attribute Name: Ownership Designation

Definition: The *ownership designation* attribute indicates the custodian responsible for providing the inventory information about the polygon. (The party responsible for maintaining and providing the forest resources inventory information in accordance with the *Forest Information Manual*; that is, for determining the polygon description.)

Format: character 3

CODE	OPTION
SFL	Licensee
MNR	Ministry of Natural Resources

As of 2006 the forest resource inventory is the responsibility of MNR and therefore the default value for the inventory is MNR.

Validation:

- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code

A1.1.7   YRUPD

Attribute Name: Year of Update

Definition: The *year of update* attribute contains a four-digit number representing the **calendar** year (January 1 to December 31) of the source data used to determine / update the polygon description, in particular the height attribute (A1.1.15).

Format: integer 4

- YYYY
- Must be a year greater than or equal to 1975
- Must be a year less than the plan period start year

The year of update identifies the calendar year that information about a polygon was last confirmed or modified based on field inspection, photo interpretation, analysis of satellite imagery, or conversion or update to spatial or tabular data. The year of update should not be changed to reflect error corrections to tabular attributes.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct format
- A zero value is not a valid code

A1.1.8   SOURCE

Attribute Name: Source of Data Update

Definition: The *source of data update* attribute identifies the methodology by which the information stored in the other tabular attributes that are associated with the same polygon was determined (i.e., how the polygon description was determined).

Format: character 8

CODE	OPTION	DEFINITION
BASECOVR	planimetric "base" layer	Information that is provided by the MNR (e.g., water or evaluated wetlands).

CODE	OPTION	DEFINITION
DIGITALA	multispectral scanning (digital image) – automated process	Digital analysis, automated processing. (e.g., Ecognition)
DIGITALP	multispectral scanning (digital image) – manual process	photo-interpreted by softcopy systems
ESTIMATE	expected / estimated outcome / result	This source option is only for use in areas that have been recently renewed and have <u>not</u> been revisited since the renewal work was performed. That is, where a follow-up survey has not yet been performed (e.g., regeneration survey, FTG survey). Therefore, the description of the newly regenerated stand is a "best estimate" of the expected outcome / result of the renewal treatment that was applied to the area based on past silvicultural successes.
FOC	forest operations compliance inspection	Inspection of a site after silvicultural treatment to determine whether an operator / operations conforms to the approved plan or permit. The evaluation of any harvest, renewal, maintenance, or access forest management activity (e.g., post-harvest site inspection) can be included here.
FORECAST	forecasted description	This indicates a polygon description that was updated based on expected outcomes of planned operations (which have not yet been implemented) for the remainder of the current plan term. **This code is only valid in the Base Model Inventory.**
FRICNVRT	forest resources inventory conversion	current polygon description based on data conversion from traditional FRI
INFRARED	Infrared satellite imagery	
MARKING	pre-harvest site inspection / marking	Assessment of the trees in a stand for purpose of establishing a silvicultural or operational prescription. Selecting and marking the trees to be harvested and/or the trees to be left to grow; to sustain and enhance the stand for timber management, wildlife habitat management, aesthetics, recreation, biodiversity and other environmental and heritage concerns.
OCULARA	aerial survey / reconnaissance	Visual assessment of a stand from a helicopter or fixed wing aircraft.
OCULARG	ocular estimate (ground)	Visual assessment of a stand using extensive ground survey methodologies (i.e., no detailed measurements).
OPC	operational cruise	Measuring standing trees to determine the volume of wood on a given tract of land.
PHOTO	air photo interpretation	Photography at a conventional scale of 1:10,000, 1:15,840, or 1:20,000
PHOTOLS	large scale aerial photography	Photography at a scale larger than 1:10,000 (e.g., 1:500, 1:1000).
PHOTOSS	small scale aerial photography	Photography at a scale smaller than 1:20,000 (e.g., 1:100,000).
PLOTFIXD	fixed area plot	
PLOTVAR	variable area (radius) plot	
RADAR	radar satellite imagery	
REGENASS	regeneration assessment	Survey of a regenerated area to determine how well the new stand is growing. This includes seeding, survival, and stocking assessments.

CODE	OPTION	DEFINITION
SEMEXTEN	extensive silvicultural effectiveness monitoring survey	An appraisal of a forest stand's structure and composition using generalized survey sampling methodologies to determine if regeneration or management objectives have been met (i.e., determine if the expected results were achieved). Extensive survey methods are generally used where there are obvious successes or failure, or to identify problem areas requiring more intensive assessment.
SEMINTEN	intensive silvicultural effectiveness monitoring survey	An appraisal of a forest stand's structure and composition using rigorous survey sampling methodologies to determine if regeneration or management objectives have been met (i.e., determine if the expected results were achieved). Intensive survey methods are intended for stands where the status of regeneration is uncertain or specific quantitative data is required to determine the silvicultural effectiveness for operational treatments.
SPECTRAL	spectral satellite imagery	

The source of data update attribute does not apply to the changes or updates made to the ecosite attribute.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- A value of FORECAST is only valid for the SOURCE attribute in the Base Model Inventory

- If the DEVSTAGE attribute starts with FTG, then the SOURCE attribute should not equal ESTIMATE

- If the DEVSTAGE attribute starts with NEW, then the SOURCE attribute should be ESTIMATE

A1.1.9   FORMOD

Attribute Name: Productive Forest Modifier

Definition: The *productive forest modifier* attribute represents a further classification (sub-division) of productive forest areas based on the presence or absence of physical or biological factors which may influence the ability to practice timber management.

Format: character 2

CODE	OPTION	DEFINITION
RP	Production Forest – Regular	Productive forest areas at various stages of growth and development, including areas that have been recently disturbed (by harvest or natural causes) or renewed (by artificial or natural means), that are capable of producing adequate growth of timber to support harvesting on a sustained yield basis. These areas have no significant physical or biological limitations on the ability to practice forest management, but may include areas which pose an operational challenge in terms of harvest, access, protection, silviculture, or renewal.
MR	Production Forest – Designated Management Reserve	Productive forest areas which are considered to be production forest, but that are unavailable for timber production as determined through the forest management planning process. That is, these areas have been identified as no-cut areas through area of concern planning for the purpose of protecting values (e.g., reserve buffers applied to protect tourism values). Designated management reserves are areas that were managed as an operational reserve during previous forest management plan terms. That is, they are actual operational or management reserve areas created by the implementation of forest management operations around them. As guides are updated, these areas should be reviewed as some may return to production forest.
PF	Protection Forest	Productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitation such as steep slopes or shallow soils over bedrock.

The productive forest modifier must be identified for every productive forest stand and must be used in conjunction with the management consideration attribute.

There is a relationship between the site class (SC) and the productive forest modifier (FORMOD) values assigned to a forested area. Generally, areas assigned a site class value of 4 (protection forest) are also assigned a productive forest modifier value of PF (protection forest), but it is not a requirement. Areas assigned a site class value other than 4 (e.g., 3) can also be assigned the productive forest modifier value of PF. Conversely areas assigned a site class value of 4 may be assigned a productive forest modifier value of production forest (RP) instead of protection forest.
 The apparent discrepancy in the protection forest assignment between the site class attribute and the productive forest modifier attribute reflects the difference between a calculated assessment of site conditions (SC) versus a timber management decision (FORMOD) that is based on more than just site class.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If the SC attribute equals 4, then the FORMOD attribute should be PF

A1.1.10 DEVSTAGE

Attribute Name: Stage of Development

Definition: The *stage of development* attribute indicates the current state of growth and development for a productive forest stand. Note that some states are best described based on the last major silvicultural treatment that was applied to a stand, if the stand is being managed for timber production.

Format: character 8

CODE	OPTION	DEFINITION
Recent Disturbances		
DEPHARV	recently disturbed by harvest and has received no regeneration/renewal treatment	Productive forest area that was recently disturbed by clearcut harvesting and has not received a silvicultural treatment such as natural regeneration, seeding or planting. These areas do not have advanced regeneration, or a distinct or established regeneration layer that would be released and/or protected as part of the depletion operation.
DEPNAT	recently disturbed by natural causes and has received no regeneration / renewal treatment	Productive forest area that was recently disturbed by natural causes (i.e., fire, blowdown, ice damage, insect and disease) and has not received a silvicultural treatment such as natural regeneration, seeding or planting. These areas do not have advanced regeneration, or a distinct or established regeneration layer.
Below Regeneration Standards **Not Satisfactorily Regenerated**		
LOWMGMT	Below regeneration standards due to past management	Productive forest stands which were previously harvested and have not reached the regeneration standards as described in an approved forest management plan within the estimated timeframe. Further, these areas require additional silvicultural treatment to bring them up to regeneration standards. This does not include areas that have been recently disturbed or recently renewed. However, it may include areas which have received renewal treatments in the past that have failed to produce a regenerated forest to the applicable regeneration standards. This option may also include those areas which have traditionally been designated as barren and scattered (i.e., stocking less than 25%).

CODE	OPTION	DEFINITION
LOWNAT	Below regeneration standards due to natural causes / succession	Productive forest stands which were previously disturbed by natural causes and have not reached the regeneration standards as described in an approved forest management plan within the estimated timeframe. Further, these areas require additional silvicultural treatment to bring them up to regeneration standards. This does not include areas that have been recently disturbed or recently renewed. However, it may include areas which have received renewal treatments in the past that have failed to produce a regenerated forest to the applicable regeneration standards. This option may also include those areas which have traditionally been designated as barren and scattered (i.e., stocking less than 25%).

Below Regeneration Standards
Renewed

CODE	OPTION	DEFINITION
NEWPLANT	recently renewed : mainly planted	Productive forest areas which have been regenerated predominantly by planting, but have not been assessed as free-to-grow
NEWSEED	recently renewed : mainly seeded	Productive forest areas which have been regenerated predominantly by seeding, but have not been assessed as free-to-grow
NEWNAT	recently renewed : mainly natural regeneration	Productive forest areas which have been regenerated predominantly by natural means, but have not been assessed as free-to-grow

Forest Stands
Free Growing (not disturbed)

CODE	OPTION	DEFINITION
FTGPLANT	free-to-grow mainly planted	Productive forest areas which were regenerated predominantly from planted stock and which have been assessed as free-to-grow.
FTGSEED	free-to-grow mainly seeded	Productive forest areas which were regenerated predominantly by seeding and which have been assessed as free-to-grow.
FTGNAT	free-to-grow mainly natural regeneration	Productive forest areas which were regenerated predominantly by natural means and which have been assessed as free-to-grow. This classification will also be used to describe the forested areas that have never been treated to date (original forest) that would be considered as free growing.
THINPRE	received pre-commercial thinning/spacing treatment	Free-growing productive forest areas which have received a mid-rotation thinning/spacing to promote the growth of the best quality trees. The trees selected for removal do not result in a harvest of merchantable volume.

Forest Stands
Free Growing (disturbed) – Clearcut

CODE	OPTION	DEFINITION
THINCOM	received commercial thinning/spacing treatment	Free-growing productive forest areas which have received a mid-rotation partial harvest designed to promote the growth of the best quality trees. The harvested trees are removed from the site and used for commercial purposes.

CODE	OPTION	DEFINITION
BLKSTRIP	modified cut: block or strip	The removal of the stand in progressive strips or blocks in more than one operation. Strip and block harvest methods are prescribed to encourage natural regeneration, provide wildlife habitat, protect fragile sites, or for aesthetics. The removal of trees in one or more passes in a system of strips of various widths; where each strip is less than or equal to 100 meters wide. It is designed to encourage regeneration on difficult and/or fragile sites. **Note:** Harvesting where the cut strips are greater than 100 meters wide (> 5 chains) should be recorded as clearcut.
FRSTPASS	modified cut: first pass	A partial harvest where the first harvest operation removes target/specific merchantable tree species from a forest stand. The remaining species are merchantable and are intended to be harvested by another logger/contractor/forest resource licence holder in the next pass. A first pass should be recorded if merchantable tree species remain in the forest stand which have been allocated for harvest - but have not yet been harvested.

Forest Stands
Free Growing (disturbed) – Shelterwood

CODE	OPTION	DEFINITION
PREPCUT	received a preparatory cut	A shelterwood silvicultural system stage of management designed to remove undesirable species of any species from the stand and to select trees to remain that will provide the best seed source and to improve conditions for seed production and natural regeneration.
SEEDCUT	received a seed cut	A shelterwood silvicultural system stage of management where trees are removed from a mature stand to create openings in the canopy / create spaces and to prepare sites for natural regeneration while maintaining the seed-bearing trees and protecting any existing advance regeneration.
FIRSTCUT	received a first removal harvest	A shelterwood silvicultural system stage of management where overstorey trees are removed in one or more harvests in order to release the established seedlings from competition.
THINCOM	received commercial thinning/spacing treatment	Free-growing productive forest areas which have received a mid-rotation partial harvest designed to promote the growth of the best quality trees. The harvested trees are removed from the site and used for commercial purposes.

Forest Stands
Free Growing (disturbed) – Selection

CODE	OPTION	DEFINITION
IMPROVE	received an improvement cut	A selection silvicultural system stage of management where a cut is made in an uneven-aged stand primarily to improve stand composition, distribution and quality by removing less desirable trees of any species.
SELECT	received a selection harvest	A selection silvicultural system stage of management where individual trees or groups of trees are selected for cutting in order to recover the yield and develop a balanced uneven-aged structure, while providing the cultural measures required for tree growth and seeding establishment.
SNGLTREE	Selection: single-tree	The stand canopy is (periodically) opened uniformly throughout the entire stand to achieve a post-harvest, basal area target.

CODE	OPTION	DEFINITION
GROUPSE	Selection: group	The stand canopy is (periodically) opened by harvesting trees in small groups. The resulting canopy opening usually occupies a fraction of a hectare.

The stage of development will be used to populate the stage of management in the landbase tables in the forest management plan (i.e., FMP-3 and FMP-5).

The stage of development represents the current development state, and/or the current stage of silvicultural management of a productive forest stand. Productive forest polygons can be described by the following ranges of forest stand development or management:

a) Recent Disturbances (harvest or natural disturbance, complete or partial)

b) Below Regeneration Standards

- Not Satisfactorily Regenerated

- Renewed (artificial or natural)

c) Forest Stands

- Free-growing (not disturbed)

- Free-growing (disturbed by silviculture system)

Forest stands identified by either IMPROVE, SELECT, SNGLTREE or GROUPSE – stage of development must include a complete description for the acceptable growing stock and unacceptable growing stock attributes.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If the YRDEP attribute equals 0, then the DEVSTAGE attribute should only contain LOWNAT or FTGNAT values

- If the STKG attribute equals 0.00, then the DEVSTAGE attribute should be either DEPHARV or DEPNAT

- If the DEVSTAGE attribute is either DEPHARV or DEPNAT, then the HT attribute should be 0.0

- If the SC attribute equals 4, then the DEVSTAGE attribute should not be DEPHARV

A1.1.11   YRDEP

Attribute Name: Year of Last Disturbance

Definition: The *year of last disturbance* attribute indicates a four digit number of the most recent
                  (or latest) **fiscal** year (April 1 to March 31) that a productive forest area was disturbed,
                  completely or partially, by harvest or by natural causes. This includes mid-rotation or
                  stand improvement operations where merchantable timber is removed. This is actual
                  and known disturbances and not calculated from year of origin.

Format: integer 4

- YYYY
- based on fiscal year so, for example, any disturbances occurring during the period
  of April 1, 2009 through March 31, 2010 would be recorded as 2009

The planning composite inventory must be updated with all disturbances (harvest and natural) which
are identified in annual reports. The year of last disturbance for each productive forest stand must
correspond to the year that the disturbance occurred, as recorded in the applicable annual reports.

Forest stands that are managed under the selection or shelterwood silvicultural systems must also
have a year of last disturbance. The year of last disturbance provides an estimate of the stage of
forest stand development within a cutting cycle for selection stands or within the current stage of a
shelterwood system.

In the case of a partial harvest where certain tree species have been removed, such as a first pass
where merchantable trees remain in a forest stand, the year that the first pass was carried out must
be entered as the year of last disturbance. If an additional harvest or pass is conducted, the year of
last disturbance is changed to the year in which the most recent harvest/pass operation was carried
out.

Commercial thinning is a mid-rotation treatment that is recorded as a disturbance and the stand area
is considered as disturbed area in forest management planning. Forest stands that have received a
commercial thinning must show the applicable year of last disturbance in the forest polygon
coverage.

The year of last disturbance is also used to identify other stand improvement operations. A stand improvement operation is normally associated with the selection system.

Year of last disturbance must not be used to indicate tending operations, such as a chemical or manual release which are required to bring a forest stand to free-to-grow standards.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The attribute population must follow the correct format
- The value must be greater than or equal to 1900
- If YRDEP attribute equals 0, then DEVSTAGE attribute should only contain LOWNAT or FTGNAT values
- The YRDEP attribute value should not be less than the YRORG attribute value

A1.1.12 SPCOMP

Attribute Name: Species Composition

Definition: This *species composition* attribute indicates the tree species that are present in the stand canopy and the relative proportion of the canopy that each species occupies.

Format: character 120

- repeating pattern of species code and corresponding proportion value
- each species code is 3 characters (including blanks) and is left justified
- each proportion is 3 characters which represents an integer value from 1 to 100 and is right justified.
- maximum of 20 species and proportions pairs in the string

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- pattern is SSSPPPSSSPPP   example: PJ 80PO 20 (there are two blanks between the species and the proportion)
- no duplicate species codes allowed in the string
- proportion values in the string must sum to 100

- The tree species in the composition are to be coded using the scheme listed here.

The most common species codes (based on all the inventories as of 2009) are listed below and for the full list of species see the coding list from OSPCOMP in the *FIM Forest Resource Inventory Technical Specifications*. In these tables, codes related to individual species are listed in mixed case (e.g., Bw, La) and codes related to 'groups' such as all conifer or all spruce are listed in uppercase (e.g., OC, SX). Even though the codes are listed this way, the letters may be entered in any case combination the data submitter desires. For example, white birch may be entered as BW, bw, Bw, or bW.

CODE	COMMON NAME	SCIENTIFIC NAME
AX	ash, any / mixed	Fraxinus spp.
Ab	ash, black	Fraxinus nigra
Aw	ash, white	Fraxinus americana
Pl	Aspen, largetooth	Populus grandidentata
Pt	Aspen, trembling	Populus tremuloides
Bd	Basswood	Tilia americana
Be	Beech, American	Fagus grandifolia
Bw	birch, white (or paper)	Betula papyrifera
By	birch, yellow	Betula alleghaniensis
Bn	Butternut	Juglans cinerea
CE	cedar, all	Thuja spp.
Cr	cedar, eastern red (redcedar)	Juniperus virginiana
CH	Cherry, any / mix	Prunus spp.
Cb	Cherry, black	Prunus serotina
OC	conifers, other	------------
EX	elm, any / mix.	Ulmus spp.
Ew	elm, white (or American)	Ulmus americana
Bf	fir, balsam	Abies balsamea
OH	hardwoods, other	------------
He	hemlock, eastern	Tsuga canadensis
Hi	hickory, all	Carya spp.
Iw	ironwood (also called Eastern hop-hornbeam)	Ostrya virginiana
La	larch, eastern (also called Tamarack or American Larch)	Larix laricina
Mh	Maple, hard (= sugar maple)	--------------
Mr	Maple, red (also called soft maple)	Acer rubrum

CODE	COMMON NAME	SCIENTIFIC NAME
Ms	Maple, silver	Acer saccharinum
Mr	Maple, soft (= red maple)	------------
Mh	Maple, sugar (also called hard maple)	Acer saccharum
Ob	oak, bur	Quercus macrocarpa
Or	oak, red (or northern red)	Quercus rubra
Ow	oak, white	Quercus alba
Pn	pine, Austrian or black	Pinus nigra
Pj	pine, jack	Pinus banksiana
Pr	pine, red	Pinus resinosa
Ps	pine, scots	Pinus sylvestris
Pw	pine, white *[eastern white]*	Pinus strobus
PO	Poplar, any / mix	Populus spp.
Pb	Poplar, balsam	Populus balsamifera
SX	spruce, any / mix	Picea spp.
Sb	spruce, black	Picea mariana
Sr	spruce, red	Picea rubens
Sw	spruce, white	Picea glauca
La	tamarack *[= eastern larch]*	Larix laricina

A1.1.13   WG

Attribute Name: Working Group

Definition: The *working group* attribute indicates a grouping of productive forest stands for timber management purposes. Stands which are grouped together have the same predominant species composition and are being managed under the same silvicultural system. The grouping of stands is generally labelled based on the species which dictates the management regime to be applied. Therefore, the working group normally indicates the dominant species in a forest stand based on the tree species that occupies the greatest canopy closure or the greatest amount of basal area in the stand as indicated by the species composition attribute.

Format: character 2

CODE	OPTION	DEFINITION
BF	balsam fir	
CE	cedar	cedar *and/or* red cedar
HE	hemlock	
LA	larch	
PJ	jack pine	
PR	red pine	
PS	scots pine	
PW	white pine	
SB	black spruce	
SW	white spruce	pure white spruce *or* red and white spruce mix
SX	spruce mix	combination of black, white and/or red spruce
OC	other conifer	any conifer species not listed above
AX	ash mix	combination of black and/or white ash
BG	gray birch	
BW	white birch	
BY	yellow birch	
MH	hard / sugar maple	
MR	soft / red maple	may also include silver maple
MX	maple mix	combination of hard/sugar and/or soft/red maple and/or other maple species
OX	oak mix	combination of red and/or white oak (and/or black oak)
PO	Poplar	
PB	balsam poplar	
OH	other hardwoods	beech, basswood, butternut, black cherry, chestnut, white elm, black gum, hickory, ironwood, locust, paw paw, sassafras, sycamore, tulip tree, black walnut, and/or willow.

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct coding scheme

A1.1.14 YRORG

Attribute Name: Year of Origin

Definition: The *year of origin* attribute contains a four digit number representing the average year that the predominant species (i.e., the species within the stand having the greatest relative abundance in terms of basal area), came into existence.

Format: integer 4

- YYYY

The year of origin is used to calculate the average age of a productive forest stand. The year of origin is determined in relation to the age of the trees and the year that regeneration (natural or

artificial) was established on a site. The year of origin is synonymous to the year of germination. If regeneration has not been established, then the year of origin will be the same as the year of last disturbance. Once trees are established on the site, the year of origin must be adjusted to reflect the average age of the established regeneration.

Once a forest stand has been assessed as free-to-grow, based on attaining the regeneration/management standards, the year of origin should be adjusted to reflect the average age of the growing stock on that site.

In determining the year of origin, age differences that result from natural and artificial growing stock, or age differences that occur due to modified clear-cut harvesting or shelterwood management, must be considered.

For example, if a productive forest stand is harvested in two strips/passes which occur in different years (e.g., a type of modified clear-cut), the forest stand will technically have two ages for a period of time; one age for the recently disturbed strip and another age for the non-disturbed strip. The eventual strategy is to produce an even-aged forest stand. Therefore, the year of origin will eventually be determined as one average value for the forest stand. If the remaining strip is not harvested for ten-years (assuming that the harvested strip requires the same time period to reach free-growing conditions), the harvested and regenerated strip will be described by the understorey forest stand characteristics and, therefore, have a separate year of origin. The year of origin and the forest stand characteristics for the overstorey will likely not change. Once the remaining strip has been harvested and the regeneration in that strip has achieved free-to-grow status, the average age of the dominant tree species in each of the strips should be determined and then used to calculate the appropriate year of origin for the entire stand. At this point, understorey forest stand characteristics are no longer required.

Normally, updates to the year of origin have a corresponding change to the year of update attribute as this indicates the currency/vintage of the information and when the year of origin value was determined.

Year of origin information is not required for non-forested and non-productive forest land types.

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory

- The attribute population must follow the correct format

- A zero value is not a valid code

- The YRORG attribute value must be greater than or equal to 1600

- The YRORG attribute must be less than the plan period start year

- The YRDEP attribute value should not be less than the YRORG attribute value

- The YRORG attribute value should not be greater than YRUPD attribute value

- In the Base Model Inventory the YRORG attribute value should not be greater than the YRUPD attribute value + 5

A1.1.15   HT

Attribute Name: Height

Definition: The *height* attribute indicates the estimated average tree height (in meters) of the predominant species as inventoried in the year of update. Estimates can be made from interpreted crown closure or field samples, or from growth algorithms.

Format: numeric 4.1

- Valid numeric values are from 0 through 40.0

Height is usually determined for the working group species.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct format

- If the DEVSTAGE attribute does not start with DEP, NEW, or LOW, then the HT attribute must be greater than zero

- The value of HT/(plan period start year – YRORG) should not be greater than 0.5

- If the DEVSTAGE attribute starts with FTG, then the HT attribute should be greater than or equal to 0.8

A1.1.16   STKG

Attribute Name: Stocking

Definition: The *stocking* attribute indicates a qualitative measure of the density of tree cover in a forest stand. It is expressed as a percentage value ranging from zero, for recently disturbed stands, to a maximum of 4.00, although 2.50 is the typical maximum value encountered in the field. Stocking of a forest stand refers to all species that make up the stand's canopy, but it is generally based on the species with the most basal area.

Format: numeric 4.2

- Valid numeric values are from 0 through 4.00

Stocking is determined by comparing the actual basal area measured from field sampling to the relative basal area of a fully-stocked stand using Plonski's Normal Yield Tables. (Plonski's Normal Yield Tables were developed from permanent sample plots established for several of the major tree species in Ontario.) Stocking can also be determined from aerial photography based on the degree of canopy closure, average age, height, and species composition. Actual basal area collected from field sampling is used to calibrate stocking assessments made from photo-interpretation.

The silvicultural ground rules in a forest management plan describe the standards for assessing the regeneration of forest stands, based on forest unit, desired species composition, age, height, and stocking. If the stocking of a productive forest stand does not meet the regeneration standards in the silvicultural ground rules of an approved forest management plan, the forest stand will be considered as NSR and must be classified into the appropriate below regeneration standards stage of development.

In some cases, the regeneration and/or management standards of a silvicultural ground rule may be expressed as a *density*, which usually describes the frequency or number of stems per hectare. Where density information (stems/hectare) has been collected or determined from a regeneration survey, this information must be converted to a stocking value for the purpose of updating the forest stand description information.

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct format
- If the DEVSTAGE attribute starts with FTG, then the STKG attribute must be greater than 0.00

- If the DEVSTAGE attribute starts with FTG, then the STKG attribute should be greater than or equal to 0.40
- If DEVSTAGE attribute starts with DEP, then STKG attribute should equal 0.00

A1.1.17   SC

Attribute Name: Site Class

Definition: The *site class* attribute indicates a site quality estimate for a stand. Site class is an indicator of site productivity and is determined using the average height, age, and working group, based on the dominant tree species in a forest stand. These attributes are compared against height and age growth curves in Plonski's Normal Yield Tables for different species to determine the relative growth rate for a forest stand.

Format: integer 1

- a number from 0 through 4

CODE	OPTION	DEFINITION
0	Best	
1	Better	
2	Good	
3	Poor	
4	Protection Forest	productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitation such as steep slopes or shallow soils over bedrock

Zero is the default value for an integer field. When performing a query to identify the best (site class = 0) stands be sure to include polygon type in the query (and POLYTYPE = FOR) in order to exclude non-productive forest stands in the query results.

There is a relationship between the site class (SC) and the productive forest modifier (FORMOD) values assigned to a forested area. Generally, areas assigned a site class value of 4 (protection forest) are also assigned a productive forest modifier value of PF (protection forest), but it is not a requirement. Areas assigned a site class value other than 4 (e.g., 3) can also be assigned the productive forest modifier value of PF. Conversely areas assigned a site class value of 4 may be assigned a productive forest modifier value of production forest (RP) instead of protection forest. The apparent discrepancy in the protection forest assignment between the site class attribute and the productive forest modifier attribute reflects the difference between a calculated assessment of

site conditions (SC) versus a timber management decision (FORMOD) that is based on more than just site class.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The attribute population must follow the correct format
- If the FORMOD attribute equals PF, then the SC attribute should equal 4

A1.1.18 ECOSRC

Attribute Name: Ecosite Source of Update

Definition: The *ecosite source of update* attribute identifies the methodology by which the ecosite information associated with the polygon was determined (i.e., how the polygon's ecosite description was determined).

Format: character 8

- Note that this attribute is similar to the SOURCE attribute which indicates the methodology by which the overall stand description was determined. The main difference between the SOURCE attribute and this ECOSRC attribute is that there are two additional methodologies that are commonly used when determining ecosite information. These additional methodologies are: determination of ecosite by algorithm and determination by supplementing air photo interpretation with soils data.

CODE	OPTION	DEFINITION
ALGO	algorithm / model	
DIGITALA	multispectral scanning (digital image) – automated process	Digital analysis, automated processing. (e.g., Ecognition)
DIGITALP	multispectral scanning (digital image) – manual process	photo-interpreted by softcopy systems
FOC	forest operations compliance inspection	Inspection of a site after silvicultural treatment was applied to determine whether an operator / operations conforms to the approved plan or permit. The evaluation of any harvest, renewal, maintenance, or access forest management activity (e.g., post-harvest site inspection) can be included here.
FRICNVRT	forest resources inventory conversion	The current polygon description is based on a data conversion from traditional FRI.

CODE	OPTION	DEFINITION
MARKING	pre-harvest site inspection / marking	Assessment of the trees in a stand for purpose of establishing a silvicultural or operational prescription. Selecting and marking the trees to be harvested and/or the trees to be left to grow; to sustain and enhance the stand for timber management, wildlife habitat management, aesthetics, recreation, biodiversity and other environmental and heritage concerns.
OCULARA	aerial survey/reconnaissance	Visual assessment of a stand from a helicopter or fixed wing aircraft.
OCULARG	ocular estimate (ground)	Visual assessment of a stand using extensive ground survey methodologies (i.e., no detailed measurements).
OPC	operational cruise	Measuring standing trees to determine the volume of wood on a given tract of land.
PHOTO	air photo interpretation	Photography at a conventional scale of 1:10,000, 1:15,840, or 1:20,000
PHOTOLS	large scale aerial photography	Photography at a scale larger than 1:10,000 (e.g., 1:500, 1:1000).
PHOTOPLS	air photo interpretation *PLUS* soils data	
PHOTOSS	small scale aerial photography	Photography at a scale smaller than 1:20,000 (e.g., 1:100,000).
PLOTFIXD	fixed area plot	
PLOTVAR	variable area (radius) plot	
REGENASS	regeneration assessment	Survey of a regenerated area to determine how well the new stand is growing. This includes seeding, survival, and stocking assessments.
SEMEXTEN	extensive silvicultural effectiveness monitoring survey	An appraisal of a forest stand's structure and composition using generalized survey sampling methodologies to determine if regeneration or management objectives have been met (i.e., determine if the expected results were achieved). Extensive survey methods are generally used where there are obvious successes or failure, or to identify problem areas requiring more intensive assessment.
SEMINTEN	intensive silvicultural effectiveness monitoring survey	An appraisal of a forest stand's structure and composition using rigorous survey sampling methodologies to determine if regeneration or management objectives have been met (i.e., determine if the expected results were achieved). Intensive survey methods are intended for stands where the status of regeneration is uncertain or specific quantitative data is required to determine the silvicultural effectiveness for operational treatments.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.1.19   ECOSITE1 and ECOSITE2

Attribute Name: Ecosite

Definition: The *ecosite* attribute identifies an ecological landscape type that is present in the polygon and the regional ecological land classification system being used to define the ecosite code. Soil depth modifier information may also be included, if relevant.

Format: character 10

- Refer to the appropriate ecosystem field guide for a list of valid ecosite codes and their definitions. Ecosite is also referred to as site type.

- When recording the ecosite information in this attribute, the regional land classification identifier code value (from table below) replaces the first 2 characters of the ecosite code (either "ES" or "ST"). For example, if the northwest regional ecosite code of ES11 was determined to be appropriate for the stand, it would be recorded as NW11. The regional land classification system identifiers are:

CODE	OPTION	DEFINITION
CE	Central	Ecosite codes used are from / defined in the SCSS Field Guide titled "Field Guide to the Forest Ecosystems of Central Ontario".
NE	Northeast	Ecosite (site type) codes used are from / defined in the NEST Field Guide titled "A Field Guide to the Forest Ecosystems of Northeastern Ontario".
NW	Northwest	Ecosite codes used are from / defined in the NWST Field Guide titled "Field Guide to the Forest Ecosystem Classification of Northwestern Ontario".

- Additionally, some ecosites, especially in the northwest region, can have soil depth modifier information associated with them. To record soil depth modifier information, add one of the codes from the table below to the end of the ecosite code. For example, northwest ecosite code of ES13 with a soil depth modifier of "shallow" would be recorded as: NW13S   The soil depth modifiers are:

CODE	OPTION
S	shallow
M	medium
D	deep

Ecosite information which is collected or created in accordance with an ecosystem classification (e.g., wetlands ecosystem classification) may also be entered for non-productive forest lands, if desired, but it is not required.

Determination of ecosite is a prerequisite of scheduling a forest stand for silvicultural treatment and is required for verifying the selected forest operations prescription in accordance with the silvicultural ground rules of an approved forest management plan. Ecosite must be identified for all free-growing, (free-to-grow) forest stands based on the pre-harvest condition, and must reflect the characteristics of the site in terms of vegetation, soils, drainage, and tree species in accordance with a forest ecosystem classification. Ecosite should not be determined after a forest stand has been subjected to forest management operations.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory for ECOSITE1
- The population of this attribute is only mandatory for ECOSITE1
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code for ECOSITE1

    Note: The ECOSITE2 attribute may not exist in the submitted coverage as this attribute is not mandatory. If this attribute exists, it may not be populated. Therefore, this validation will be performed on the ECOSITE2 attribute for the application of the correct coding scheme.

A1.1.20   ECOPCT1 and ECOPCT2

Attribute Name: Ecosite Percentage

Definition: The *ecosite percentage* attribute identifies the percentage of an ecological landscape type that is present in the polygon.

Format: integer 3

- Valid numeric values are from 0 through 100.
- The values of the two percentage fields must total 100.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory for ECOPCT1
- The population of this attribute is only mandatory for ECOPCT1
- The attribute population must follow the correct format
- A zero value is not a valid code for ECOPCT1
- Adding of all ECOPCT attributes should equal 100

> **Note:** The ECOPCT2 attribute may not exist in the submitted coverage as this attribute is not mandatory. If this attribute exists, it may not be populated. Therefore, this validation will be performed on the ECOPCT2 attribute for the application of the correct coding scheme.

A1.1.21   ACCESS1 and ACCESS2

Attribute Name: Accessibility Indicator

Definition: The *accessibility indicator* attribute specifies whether or not there are any restrictions to accessing a productive forest stand. These restrictions may be legal (i.e., ownership), political / land use policy (i.e., land use designation, road closures), and/or a natural barrier. The focus of this field is identification of Crown productive forest stands that are inaccessible and therefore are not considered as part of the managed landbase for forest management planning purposes, but the principle may be applied to any area.

Format: character 3

CODE	OPTION	DEFINITION
GEO	geography	Area is not accessible due to geographic reasons. *
LUD	land use designation	An area is not accessible for forest management purposes due to land use designation (e.g., a provincial or federal park, agreement forest, mining claim, native lands, federal lands).
NON	no accessibility considerations	The area is accessible/reachable.
OWN	surrounding ownership	An area of Crown land that is unreachable because it is surrounded by lands owned by an other party/parties (e.g., an area of Crown productive forest land that is not accessible for forest management because it is surrounded by private land).
PRC	road closure	An area that is no longer accessible due to the permanent closure of the only road leading into the area.
STO	subject to ownership	An area of land that is owned by a party/parties other than the Crown (e.g., a parcel of private land) and where the access conditions are applied by the land owner. Note that ownership and access conditions can change over time.

* **If** the code of GEO is entered, then a management consideration attribute (MGMTCON) must be completed with the appropriate associated explanation/details, such as island or natural barrier. Refer to the MGMTCON attribute description.

Validation: (when POLYTYPE is equal to FOR)

Note: The ACCESS2 attribute may not exist in the submitted coverage as this attribute is not mandatory. If this attribute exists, it may not be populated. Therefore, this validation will be performed on the ACCESS2 attribute for the application of the correct coding scheme.

- The presence of this attribute in the file structure of the layer is mandatory for ACCESS1

- The population of this attribute is mandatory for ACCESS1

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code for ACCESS1

- If ACCESS2 is not equal to NON then ACCESS1 must not be NON

- If ACCESS1 or ACCESS2 do not equal NON then AVAIL should be U

A1.1.22   MGMTCON1, MGMTCON2 and MGMTCON3

Attribute Name: Management Consideration

Definition: The *management consideration* attribute indicates whether or not ecological/landscape features or site conditions are present in productive forest stands which require special consideration during forest management planning.

Format: character 4

CODE	OPTION	DEFINITION
NONE	no management consideration	The are no physical or ecological "restrictions" in the site that need to be considered when determining management of the stand.
ISLD	Island	The area is or is located on an island (i.e., an area of land that is totally surrounded by water).
COLD	Permafrost	
DAMG	physical/natural disturbance/damage	A stand which contains trees that are damaged, dead and/or dying due to natural causes (e.g., ice damage, blowdown, insect/disease damage).
NATB	natural barrier	A productive stand that is unreachable due to the physical features of the surrounding area (e.g., the area is a mesa or is productive forest surrounded by non-forested wetland).
PENA	Peninsula	An area of land that is nearly surrounded by water and is connected to the mainland.
POOR	stagnated, poor tree growth – no indicator	
ROCK	exposed bedrock / rocky outcrops	
SAND	blow sand / exposed fine sand, shallow or no humus	
SHRB	heavy shrub / brush	
SOIL	shallow soils	
STEP	steep slopes	

CODE	OPTION	DEFINITION
UPFR	unknown concern – historic production forest reserve (PFR) area	Productive forest land containing obvious physical features which may limit, but does not prevent, the ability to practice forest management. The feature(s) must be considered during forest management planning, but does not make the stand unmanageable. The specific reason/limitation is not known.
U_PF	unknown concern – historic protection forest (PF) area	Productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes or shallow soils over bedrock. The specific reason/limitation is not known.
WATR	telluric / highly fluctuating, moving ground water	
WETT	poorly drained – high water table	

Note:

- If the related polygon is protection forest (FORMOD = PF), then the first management consideration attribute field must be set to something other than "NONE".

The management consideration attribute, which must be used in conjunction with the productive forest modifier, replaces the former production forest reserve and the protection forest stand types. As the former production forest reserve and protection forest stands are surveyed, inspected, harvested, and renewed through the implementation of forest management operations, the information collected will be used to update and/or verify the management consideration attributes for each site. Beware that the Modelling and Inventory Support Tool (MIST) may modify the available landbase based on the attribute coding from this field.

Validation: (when POLYTYPE is equal to FOR)
Note: MGMTCON2 and MGMTCON3 attributes may not exist in the submitted coverage as these attributes are not mandatory. If these attributes exist, they may not be populated. Therefore, this validation will be performed on MGMTCON2 and MGMTCON3 attributes for the application of the correct coding scheme.

- The presence of this attribute in the file structure of the layer is mandatory for MGMTCON1
- The population of this attribute is mandatory for MGMTCON1
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code for MGMTCON1
- If ACCESS1 or ACCESS2 is equal to GEO then MGMTCON1 must not be NONE
- If the FORMOD attribute equals PF, then the MGMTCON1 attribute should not equal NONE
- If the SC attribute equals 4, then the MGMTCON1 attribute should not equal NONE

- If MGMTCON2 is not NONE then the MGMTCON1 must not be NONE

- If MGMTCON3 is not NONE then the MGMTCON2 and MGMTCON1 must not be NONE

A1.1.23 AGS_POLE, AGS_SML, AGS_MED, and AGS_LGE

Attribute Name: Acceptable Growing Stock

Definition: The *acceptable growing stock* attributes indicate the amount of basal area (in meters per hectare) in the stand that is associated with trees of acceptable growing stock having a diameter at breast height (dbh);

- between 9.1 and 25.0 centimeters for AGS_POLE

- between 25.1 and 37.0 centimeters for AGS_SML

- between 37.1 and 49.0 centimeters for AGS_MED

- of 49.1 centimeters or greater for AGS_LGE

Format: numeric 4.1

- Valid numeric values are from 0.0 through 70.0

Validation: (when POLYTYPE is equal to FOR)

- A blank or null value is a valid code

- The attribute population must follow the correct format

- If the DEVSTAGE attribute is IMPROVE, SELECT, SNGLTREE or GROUPSE, then one of these attributes must be greater than zero

A1.1.24 UGS_POLE, UGS_SML, UGS_MED, and UGS_LGE

Attribute Name: Unacceptable Growing Stock

Definition: The *unacceptable growing stock* attributes indicates the amount of basal area (in meters per hectare) in the stand that is associated with trees of unacceptable growing stock having a diameter at breast height (dbh);

- between 9.1 and 25.0 centimeters for UGS_POLE

- between 25.1 and 37.0 centimeters for UGS_SML

- between 37.1 and 49.0 centimeters for UGS_MED

- of 49.1 centimeters or greater for UGS_LGE

Format: numeric 4.1

- Valid numeric values are from 0.0 through 70.0

Validation: (when POLYTYPE is equal to FOR)

- A blank or null value is a valid code
- The attribute population must follow the correct coding scheme
- If the DEVSTAGE attribute is IMPROVE, SELECT, SNGLTREE or GROUPSE, then one of these attributes should be greater than zero

A1.1.25   USPCOMP

Attribute Name: Understorey Species Composition

Definition: This *understorey species composition* attribute indicates the tree species that are present in the understorey portion of the forest stand canopy and the proportion of cover that each species occupies within the understorey.

Format: character 120

- repeating pattern of species code and corresponding proportion value
- each species code is 3 characters (including blanks) and is left justified
- each proportion is 3 characters which represents an integer value from 1 to 100 and is right justified.
- maximum of 20 species and proportions pairs in the string

Validation: (when POLYTYPE is equal to FOR)

- A blank or null value is a valid code
- pattern is SSSPPPSSSPPP   example: PJ 80PO 20 (there are two blanks between the species and the proportion)
- no duplicate species codes allowed in the string
- proportion values in the string must sum to 100
- The tree species in the understorey composition are to be coded using the scheme listed in A1.1.12 SPCOMP.

A1.1.26   UWG

Attribute Name: Understorey Working Group

Definition: The *understorey working group* attribute indicates a categorization of the understorey based on the predominant species.

Format: character 2

- For codes and additional information see WG.

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct coding scheme

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A1.1.27   UYRORG

Attribute Name: Understorey Year of Origin

Definition: The *understorey year of origin* attribute indicates the average year that the species having the greatest relative abundance (in terms of basal area) within the understorey, came into existence.

Format: integer 4

- YYYY
- For additional information see YRORG

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct format
- The value must be greater than or equal to 1600
- The value should be greater than YRORG

A1.1.28   UHT

Attribute Name: Understorey Height

Definition: The *understorey height* attribute indicates the estimated average tree height (in meters) of the species that has the most basal area as inventoried in the Year of Update. Estimates can be made from interpreted crown closure or field samples, or from growth algorithms.

Format: numeric 4.1

- Valid numeric values are from 0 through 40.0
- For additional information see HT

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct format
- The value should be less than HT

A1.1.29   USTKG

Attribute Name: Understorey Stocking

Definition: The *understorey stocking* attribute indicates a qualitative measure of the density of tree cover within the understorey. It is expressed as a percentage value ranging from zero to a maximum of 4.00, although 2.50 is the typical maximum value encountered in the field.

Format: numeric 4.2

- a percentage value ranging from zero to a maximum of 4.00, although 2.50 is the typical maximum value encountered in the field.
- For additional information see STKG.

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct format

A1.1.30   USC

Attribute Name: Understorey Site Class

Definition: The *understorey site class* attribute indicates a site quality estimate for the understorey of a forest stand. It is determined using the average height, age, and working group, based on the dominant tree species of the understorey. These attributes are compared against height and age growth curves in Plonski's Normal Yield Tables for different species to determine the relative growth rate for a forest stand.

Format: integer 1

- a number from 0 through 4

CODE	OPTION	DEFINITION
0	Best	
1	Better	
2	Good	
3	Poor	
4	Protection Forest	productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitation such as steep slopes or shallow soils over bedrock

For additional information see SC.

Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct coding scheme

A1.1.31 VERDATE

Attribute Name: Verification Status Date

Definition: The *verification status date* attribute contains the date that the geographic unit was verified/validated.

Format: date 8

The verification status date attribute information is supplied by MNR.

Validation:

- A blank or null value is a valid code

A1.1.32 SENSITIV

Attribute Name: Data Sensitivity Indicator

Definition: The *data sensitivity indicator* attribute contains an indication of whether the geographic unit is classified as sensitive or not.

Format: character 3

- contains "yes" or "no"

The data sensitivity indicator attribute information is supplied by MNR as a 3 character string.

Validation:

- The attribute population must follow the correct format
- A blank or null value is a valid code

A1.2 Forest Classification Attributes

A1.2.1 MANAGED

Attribute Name: Managed / Unmanaged Indicator

Definition: The *managed / unmanaged indicator* attribute applies to Crown forest areas only. The attribute indicates whether or not there is a legal or land use planning decision which prevents the land from being managed for timber.

Format: character 1

CODE	OPTION	DEFINITION
M	Managed	The Crown forest area can be managed for timber production.
U	Unmanaged	There exists a legal or land use planning decision which prevents the Crown forest from being managed for timber production.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.2.2 TYPE

Attribute Name: Stand Type

Definition: The *stand type attribute* is traditional/historic forest resources inventory attribute. This attribute contains a unique code which is used to classify and describe the area within a polygon.

Format: integer 2

The stand type is a user-defined value. The following list of codes includes traditional stand type codes used in inventory production as well as some forest management planning models. Other locally-defined codes may exist that are not included in this table.

CODE	OPTION
0	Unknown
1	Unknown
10	- - Available for Use - - -
11	- - Available for Use - - -
12	- - Available for Use - - -
13	- - Available for Use - - -
14	- - Available for Use - - -
15	- - Available for Use - - -
16	- - Available for Use - - -
20	Reg. Prod. (Even Aged)
21	Reg. Prod. (Selection)
22	Reg. Prod. (MultSt, Even Age)
23	Reg. Prod. (Plantation)
24	- - Available for Use - - -
25	PFR (Even Aged)
26	PFR (Selection)
27	PFR (Multi-Story, Even Age)
28	PFR (Plantation)
29	- - Available for Use - - -
30	B&S Reg. Prod. (Even Aged)
31	B&S Reg. Prod. (Selection)
32	B&S PFR (Even Aged)
33	B&S PFR (Selection)
34	- - Available for Use - - -
35	NSR II - Require Tending
36	NSR III - Low Stocking $
37	NSR IV - Low Stocking $$
38	NSR V - Untreatable
39	NSR VI - Young Plantations
40	Protection Site
41	Protection Islands
43	Bypass Or Inoperable Stands
44	Tourism Buffer
45	Habitat
46	Riparian Reserve
47	Ownership Reserve
48	FMA Exclusions
49	Parks & Rec Res
50	Treed Muskeg
52	Open Muskeg
54	Brush & Alder
56	Rock
60	DAL
63	Grass & Meadow
66	Unclassified Land
70	Water
71	Water
80	Unsurveyed (UCL)

Validation: (when POLYTYPE is equal to FOR)

- A zero value is a valid code

A1.2.3   MNRCODE

Attribute Name: MNR Code

Definition: The *MNR code* attribute is traditional/historic forest resources inventory (FRI) attribute. This attribute provides the basic identity for all topologic features by describing the spatial feature type, such as a polygon, point, or line, in combination with identifying the kind of geographic feature, such as lake polygon or a shoreline – line segment. MNR code was created to identify spatial and geographic feature types (topologic identity) for all spatial features maintained in the Ontario Geographic Database System or former Ontario Basic Mapping (OBM) that were utilized in the creation of a traditional FRI (PFOREST, ALLCL, OWNER and other former base layers), which in some cases have been maintained and incorporated into several of the forest polygon coverages.

Format: integer 3
- values 1 to 250 are used by the Provincial Mapping Office in the Ontario Digital Topographic Data Base (ODTDB)
- values 251 to 400 are used by the Natural Resources Inventories Section for the digital geographic database component of the Forest Resources Inventory (FRI)
- for a list of code values and their definitions, refer to the *FRI Database Manual, 1996*

Validation: (when POLYTYPE is equal to FOR)
- The attribute population must follow the correct format

A1.2.4   SMZ

Attribute Name: Strategic Management Zone

Definition: The *strategic management zone* attribute indicates the unique short form identifier given to a strategic management zone.

Format: character 5
- user defined

A strategic management zone is a geographical separation or sub-division of the area within a forest management unit. In relation to forest diversity and landscape classes, the strategic management zone refers to similar areas within a forest management unit which are physically or geographically separated from each other but are grouped for management purposes.

Examples of strategic management zones are ecological zones (eco-regions or ecodistricts), watershed zones, large landscape patches (LLP), wilderness zones, industrial working circles/operating units, and intensive forest management areas.

Strategic management zone information may be used in the preparation of forest management plan tables. Strategic management zone information may also influence forest modelling and landscape diversity analysis. If a forest management unit is divided into strategic management zones, Sustainable Forest Licence holders (plan holders) must provide the strategic management zone identification code and a name that describes the strategic management zone for all licenced Crown lands within a designated forest management unit.

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code

A1.2.5   OMZ

Attribute Name: Operational Management Zone

Definition: The *operational management zone* attribute indicates the unique short form identifier given to an operational management zone.

Format: character 8
- user defined

An operational management zone represents areas with distinct operational constraints (e.g., accessibility, other constraints on harvest operations, moose emphasis areas, deer yards). Operational management zones may be used on management units with significant variation in forest-level operational characteristics.

Operational management zone information is less likely to influence forest modelling and landscape diversity analysis at a strategic scale. The operational management zone information is more likely to be used during the operational planning of the forest management plan. If a forest management unit is divided into operational management zones, Sustainable Forest Licence holders (plan holders) must provide the operational management zone identification code or a name that describes the operational management zone for all licenced Crown lands within a designated forest management unit.

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code

A1.2.6   PLANFU

Attribute Name: Forest Unit

Definition: The *forest unit* attribute indicates the unique short form label / ID given to an aggregation of forest stands for management purposes which have similar species composition, develop in a similar manner (both naturally and in response to silvicultural treatments), and are managed under the same silvicultural system.

Format: character 10
- user defined

The technical specifications allow FU codes of up to 10 characters but the Modelling and Inventory Support Tool (MIST) can only handle forest unit codes that are a maximum of 5 characters. This field will be truncated to 5 characters on load to MIST. Therefore, the codes must be unique in the first 5 characters to maintain proper forest unit groupings.

Licensees must identify a forest unit for all productive forest areas on Crown lands within a forest management unit.

The forest unit information is used to create forest management plan tables FMP-2, Description of Forest Units, and FMP-3, Summary of Managed Crown Productive Forest by Forest Unit. Forest unit information is also used to support the preparation of several other forest management plan tables,

schedules, and reports as well as to support forest modeling, landscape diversity analysis, and the development of a management strategy.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code

A1.2.7 AGESTR

Attribute Name: Age Structure Indicator

Definition: The *age structure indicator* attribute designates whether the range of ages of the trees in a forest stand is narrow or wide spread.

Format: character 1

CODE	OPTION	DEFINITION
E	even-aged	An even-aged forest stand is composed of trees having no, or relatively small, differences in age, usually less than 10 to 20 years. Since the trees are approximately the same age, they generally represent one age class, however two distinct age classes may develop (be present) for a limited time, as a result of timber management techniques employed (e.g., shelterwood or modified clear-cut harvesting) or natural events.
U	uneven-aged	A forest stand is considered to be uneven-aged if there are considerable differences in the age of the trees in the stand, usually an age range of more than 10 to 20 years. Uneven-aged stands may contain trees representing three or more age classes, or a continuous range of ages that are spatially intermixed within the stand. These stands are also referred to as "all-aged" stands. Uneven-aged stands being managed for timber production purposes are normally managed under the selection silvicultural system.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code
- If the SILVSYS attribute equals CC, then the AGESTR attribute should be E
- If the SILVSYS attribute equals SE, then the AGESTR attribute should be U
- If the SILVSYS attribute equals SH, then the AGESTR attribute should be E

A1.2.8   AGE

Attribute Name: Age

Definition: The *age* attribute indicates the average age of the dominant and co-dominant trees based on the working group species in a forest stand as of the start date of the new plan period. This is a numeric value calculated on the difference between the plan start year and the YRORG value.

Format: integer 3

- The age attribute must be calculated based on the difference between the plan period start date and the forest stand year of origin. For example, if the start date of the plan period is April 1, 2013 and the year of origin for a forest stand is 1933, then the average age of the forest stand is 80 years.

Age must be determined for all productive forest areas on the forest management unit and is used to determine the age class information which is required in the preparation of several forest management plan tables, schedules, and reports. Age class, similar to age, must also be determined based on the start date of the plan period.

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct format
- A zero value is not a valid code
- The plan period start year minus the YRORG attribute value should equal the AGE attribute value

A1.2.9   AVAIL

Attribute Name: Availability Indicator

Definition: The *availability indicator* attribute identifies which portions of the managed Crown production forest are available for timber production or not.

Format: character 1

CODE	OPTION	DEFINITION
A	available	Crown production forest that can be managed for timber production.
U	unavailable	Managed Crown production forest that is not available for timber production as a result of reserve prescriptions developed in a forest management plan (e.g., area of concern reserve).

Licensees must identify the areas of managed Crown production forest, by forest stand, which are available or unavailable for timber production. The determination of availability is a management planning decision based on considering the productive forest modifier, recent changes to any operational guidelines since the last plan, and reserve areas that were identified during area of concern planning (both past and present).

The productive forest modifier attribute identifies whether a forest stand is designated as production forest, production forest – designated management reserve, or protection forest. Normally, productive forest areas which are designated as production forest are considered as forest stands which are available for timber production. Productive forest areas that are designated as protection forest are usually considered as forest stands which are not available for timber production. Productive forest areas which are designated as production forest – designated management reserve are also normally considered as forest stands which are not available for timber production.

The decision regarding the availability of a forest stand area for timber management must be identified in the availability indicator attribute as either "available" or "unavailable". The sum of the available production forest area, by forest stand and age class, as determined from the age attribute, should correspond to the forest unit and age class subtotals in forest management plan table FMP-3, Summary of Managed Crown Productive Forest by Forest Unit.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code
- If the FORMOD attribute equals PF, then AVAIL attribute should be equal to U
- If the SC attribute equals 4, then the AVAIL attribute should be U
- If the MANAGED attribute equals U, then the AVAIL attribute should be U

- If the ACCESS1 and ACCESS2 attributes are not equal to NON, then the AVAIL attribute should be U

A1.2.10   SILVSYS

Attribute Name: Silviculture System

Definition: The *silviculture system* attribute indicates the process by which a productive forest stand will be managed for timber production purposes. The process/system is classified according to the method of harvesting that will be used.

Format: character 2

CODE	OPTION	DEFINITION
CC	clearcut	A silvicultural system of regenerating an even-aged forest stand in which new seedlings become established in fully exposed micro-environments after most or all of the existing trees have been removed. Regeneration can originate naturally or can be applied artificially. Clearcutting may be done in blocks, strips or patches.
SE	selection	An uneven-aged silvicultural system where mature and/or undesirable trees are removed individually or in small groups over the whole area, usually in the course of a cutting cycle. Regeneration is generally natural.
SH	shelterwood	An even-aged silvicultural system where mature trees are harvested in a series of two or more cuts (preparatory, seed, first removal, final removal) for the purpose of obtaining natural regeneration under shelter of the residual trees, either by cutting uniformly over the entire stand area or in narrow strips. Regeneration is natural or artificial. The regeneration interval determines the degree of even-aged uniformity.

There are three basic silvicultural systems: clear-cut, shelterwood, and selection. Licensees must identify the applicable silvicultural system for those forest stands that have been identified as available for timber production in the availability indicator attribute.

The stage of development attribute provides an indication of the most recent silvicultural system that was applied to each forest stand. Therefore, the silvicultural system management decision attribute should normally correspond to the silvicultural system that is associated with the stage of development attribute. However, Licensees may identify a more appropriate silvicultural system based on the forest unit for the purposes of the new forest management plan. Therefore, the silvicultural system attribute represents the silvicultural system that will be applied to a forest stand. In some cases, this may differ from the silvicultural system that was employed in the past. The

silvicultural system must be identified for each stand, although it is normally assigned on a forest unit basis.

Validation: (when POLYTYPE is equal to FOR and AVAIL is equal to A)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.2.11   NEXTSTG

Attribute Name: Next Stage

Definition: The *next stage* attribute indicates the next harvest or cut treatment that is planned to occur in an available productive forest stand being managed for timber production.

Format: character 8

CODE	OPTION	DEFINITION
THINPRE	will receive a pre-commercial thinning/spacing treatment	Free-growing productive forest areas which receive a mid-rotation partial harvest (reduction in the growing stock) that is designed to meet various objectives such as improving tree spacing, removing trees not suited to the site, and promoting the growth of the best quality trees. The trees selected for removal do not result in a harvest of merchantable volume.
THINCOM	will receive a commercial thinning/spacing treatment	Free-growing productive forest areas which receive a mid-rotation partial harvest (reduction in the growing stock) that is designed to meet various objectives such as improving tree spacing, removing trees not suited to the site, and promoting the growth of the best quality trees. The harvested trees are removed from the site and used for commercial purposes.
CONVENTN	will receive a conventional clearcut	The removal of most or all of the existing trees in a stand (or a number of adjacent stands) in one operation, so that new seedlings become established in a fully exposed micro-environments. Harvesting patterns include conventional clearcuts, block cuts and patch cuts.

CODE	OPTION	DEFINITION
BLKSTRIP	will receive a modified cut: block or strip	The removal of a portion of the existing trees in a stand in progressive strips in more than one operation so that the non-disturbed portion of the stand is left primarily to provide a natural seed source for regeneration of the disturbed area. Several cutting patterns are available to achieve same goal. The removal of trees in one or more passes in a system of strips of various widths; where each strip is less than or equal to 100 meters (5 chains) wide. It is designed to encourage regeneration on difficult and/or fragile sites. **Note:** Harvesting where the cut strips are greater than 100 meters wide (> 5 chains) should be recorded as clearcut.
SEEDTREE	will receive a modified cut: seed tree	An even-aged, silvicultural system that retains mature standing trees scattered throughout the cutblock to provide seed sources for natural regeneration. A method of harvesting and regenerating a forest stand in which all trees are removed from the area except for a small number of seed-bearing trees that are left singly or in small groups. The objective is to create an even-aged stand.
SCNDPASS	will receive a modified cut: next / second-pass	For areas managed using the clearcut silvicultural system, harvest may be planned in two passes. This is normally when species within the stand are harvested and utilized by different logger/contractor/forest resource Licensee in different years (e.g., first pass is conifer and second-pass is hardwood). A first pass should have been recorded in the annual report if merchantable tree species remained in the forest stand which have been allocated for harvest - but not yet harvested. The second-pass option should be denoted when merchantable tree species are selected to be harvested from forest stands which have been previously recorded as harvested in a first pass.
HARP	will receive a harvest with regeneration protection	HARP is the removal of the dominant canopy layer in uneven-aged lowland black spruce ecosystems. HARP protects and retains stems below a set diameter limit, leaving a significant component of the overstorey. The resulting stand is uneven-aged and uneven-sized.
CLAAG	will receive a careful logging around advance growth / regeneration cut	An operational practice that can be applied with any harvest method under the clearcut silvicultural system, where the objective is to remove the overstorey, protect understorey advance growth, and regenerate an even-aged stand. The resulting stand develops under full light conditions, generally with a reduced rotation length.
PREPCUT	will receive a preparatory cut	A shelterwood silvicultural system stage of management designed to remove undesirable species of any species from the stand and to select trees to remain that will provide the best seed source. The removal of undesirable trees opens the canopy and enables the crowns of remaining seed-bearing trees to enlarge; to improve conditions for seed production and natural regeneration.

CODE	OPTION	DEFINITION
SEEDCUT	will receive a seed cut	A shelterwood silvicultural system stage of management where trees are removed from a mature stand in order to create openings in the canopy / create spaces and to prepare sites for natural regeneration while maintaining the seed-bearing trees and protecting any existing advance regeneration.
FIRSTCUT	will receive a first removal harvest	A shelterwood silvicultural system stage of management where overstorey trees are removed in one or more harvests in order to release the established seedlings from competition.
LASTCUT	will receive a last removal harvest	A shelterwood silvicultural system stage of management where all of the remaining trees in the overstorey are removed. This is the removal of the seed or shelter trees after the regeneration has been effective.
IMPROVE	will receive an improvement cut	A selection silvicultural system stage of management where a cut is made in an uneven-aged stand primarily to improve stand composition. distribution and quality by removing less desirable trees of any species.
SELECT	will receive a selection harvest	A selection silvicultural system stage of management where individual trees or groups of trees are selected for cutting in order to recover the yield and develop a balanced uneven-aged structure, while providing the cultural measures required for tree growth and seeding establishment.
SNGLTREE	Selection: single-tree	The stand canopy is (periodically) opened uniformly throughout the entire stand to achieve a post-harvest, basal area target.
GROUPSE	Selection: group	The stand canopy is (periodically) opened by harvesting trees in small groups. The resulting canopy opening usually occupies a fraction of a hectare.

The next stage attribute indicates the next harvest or cut treatment that is planned to occur for an available productive forest stand. The next stage depends on the silvicultural system employed. Licensees must identify the next harvest treatment that will occur for each forest stand which is available for timber production based on the availability indicator attribute.

The next stage often corresponds to the stage of development attribute. The stage of development attribute represents the current development state, and/or the current stage of silvicultural management for each productive forest stand.

The next stage is most applicable to the forest stands that have been selected for planned operations (harvest) within the new plan term. The next stage will be used to populate the stage of management in the operational tables in the forest management plan (i.e., FMP-11 and FMP-16).

Validation: (when POLYTYPE is equal to FOR)
- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If the AGESTR attribute equals E, then the NEXTSTG attribute cannot be IMPROVE or SELECT

A1.2.12   SI

Attribute Name: Silvicultural Intensity

Definition: The *silvicultural intensity* attribute contains a term used in forest modeling that provides an indicator of productivity and the expected growth and development pattern.

Format: character 5

- user defined

CODE	OPTION	DEFINITION
PRSNT	present	which represents existing natural forest growth and future forest growth following natural disturbances.
EXTEN	extensive	which represents yields resulting from silviculture successes based on the desired treatment intensity (effort and expenditure) or renewal successes where the treatment intensity did not achieve the desired outcome.
BASC1 or BASC2	basic	which represents yields resulting from silviculture successes based on the desired treatment intensity (effort and expenditure) or renewal successes where the treatment intensity did not achieve the desired outcome.
INTN1 or INTN2	intensive	which represents yields resulting from silviculture successes based on the desired treatment intensity (effort and expenditure) or renewal successes where the treatment intensity did not achieve the desired outcome.
ELITE	elite	which represents yields resulting from silviculture successes based on the desired treatment intensity (effort and expenditure).
DEPL	disturbed	which represents yields resulting from recent disturbances that have not received a silvicultural treatment or have a stage of development of LOWMGMT or LOWNAT.
DELAY	delayed	which represents yields resulting from disturbances that have received a silvicultural treatment and have not received a silvicultural effectiveness monitoring survey and have not been assessed as free-to-grow / free growing
SUCC	succession	which represents yields resulting from natural succession

Silvicultural intensities apply only to even-aged forest stands that are managed under the clear-cut silvicultural system and the shelterwood silvicultural system.

For forest stands that are managed under the shelterwood silvicultural system, the stage of development, understorey, and next stage attributes, describe the silvicultural regimes and provide equivalent information to indicate silvicultural intensity. Similarly, for stands managed under the selection silvicultural system, the stage of development, acceptable growing stock, unacceptable growing stock, and next stage attributes describe the silvicultural regimes and provide equivalent information to indicate silvicultural intensity.

Silvicultural intensity is normally assigned on a forest unit basis, therefore, it should be consistent with the silvicultural ground rules in the forest management plan and the information applied in forest modeling.

Silvicultural intensity may be separated into sub-intensities which allow more than one type of expected growth and development pattern, such as:

      INTN1: scarification, planting Sb, chemical tending
      INTN2: scarification, planting Sw, chemical tending

The above example may apply to the management of an upland spruce forest unit where the regime of silvicultural treatments are considered as intensive treatments, but future growth and development patterns may vary considerably based on the planted species. The above coding table only shows sub-intensities for intensive and basic treatments, however planning teams have the option to add more sub-intensities for any of the intensities or add new intensities not found in the table.

The silvicultural intensity information must be maintained from one plan period to the next, or updated as required with each successive planning inventory requirement.

Validation: (when POLYTYPE is equal to FOR and AVAIL = A and SILVSYS = CC or SH)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code
- The list of available codes provided above is only a suggestion

A1.2.13   SISRC

Attribute Name: Source of Silvicultural Intensity

Definition: The *source of silvicultural intensity* attribute indicates how the silvicultural intensity value was determined.

Format: character 8

CODE	OPTION	DEFINITION
ACTUAL	actual	The silvicultural intensity value is based on the silvicultural effectiveness monitoring survey results.
ASSIGNED	assigned	The silvicultural intensity value is the result of planning team manual assignments or data modeling preparation assignment.

Validation: (when POLYTYPE is equal to FOR and AVAIL = A and SILVSYS = CC or SH)

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.2.14   SGR

Attribute Name: Silviculture Ground Rule

Definition: The *silviculture ground rule* attribute information is a unique code assigned to each harvest area during preparation of the forest management plan.

Format: character 15
- user defined
- must be a code from table FMP-4, Silvicultural Ground Rules, and must be consistent with the Areas Selected for Operations maps.

Validation: (when POLYTYPE is equal to FOR)

- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is not a valid code

A1.3   Forecast Depletions

A1.3.1   FSOURCE

Attribute Name: Source of Forecast

Definition: The *source of forecast* attribute identifies the methodology by which the information stored in the other tabular attributes that are associated with the same polygon was determined (i.e., how the polygon description was determined).

Format: character 8

- For codes and additional information see SOURCE .

The FSOURCE attribute code that will most commonly be used in Phase I is FORECAST for all of the forecast depletions that will occur by the end of the plan term. The FSOURCE attribute may be populated with other codes;

- when the forecast depletions layer is being used to record natural disturbances from an annual report that was not used to update the planning composite inventory,
- when the forecast depletions layer is submitted with the Phase I draft and final plan, as some of the forecast depletions (submitted as part of the planning inventory checkpoint) may now be harvested areas from an annual report that was not used to update the planning composite inventory.
- as the Phase II requirements for the forecast depletions layer include several years worth of actual harvest area that would be populated with the appropriate FSOURCE attribute code.

The information provided for both Phase I and Phase II draft and final plan will be current and provide more accurate results for any spatial assessment that includes harvested areas.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme and FORECAST is an available code
- A blank or null value is not a valid code

A1.3.2   FYRDEP

Attribute Name: Forecast Year of Disturbance

Definition: The *forecast year of disturbance* attribute contains a four digit number that indicates the **fiscal** year (April 1 to March 31) that a productive forest area is planned to be or has been disturbed, completely or partially, by harvest or by natural causes. This includes mid-rotation or stand improvement operations where merchantable timber is removed.

Format: integer 4

- YYYY
- For additional information see YRDEP

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct format
- A zero value is not a valid code
- The value must not be less than the plan period start year minus 4 and it must not be greater than or equal to the plan term start year

A1.3.3   FDEVSTAGE

Attribute Name: Forecast Development Stage

Definition: The *forecast development stage* attribute indicates the expected state of growth and development for a productive forest stand.

Format: character 8

- For codes and additional information see DEVSTAGE

The two codes that are most likely to be used are DEPHARV and DEPNAT. Any other code will normally not provide any additional information for either the BMI and the strategic planning or the

operational planning for Phase I or Phase II. The most critical change in forest structure will be the disturbance activity.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.4   Planned Harvest

A1.4.1   SILVSYS

Attribute Name: Silviculture System

Definition: The *silviculture system* attribute indicates the process by which a productive forest
                   stand will be managed for timber production purposes. The process/system is
                   classified according to the method of harvesting that will be used.

Format: character 2

CODE	OPTION	DEFINITION
CC	clearcut	A system of regenerating an even-aged forest stand in which new seedlings become established in fully exposed micro-environments after most or all of the existing trees have been removed. Regeneration is artificial or natural.
SE	selection	An uneven aged system where mature and/or undesirable trees are removed individually or in small groups over the whole area. Regeneration is generally natural.
SH	shelterwood	An even-aged system where mature trees are harvested in a series of two or more cuts for the purpose of obtaining regeneration under the shelter of residual trees, whether by cutting uniformly over the entire stand area or in narrow strips or groups. Regeneration is natural or artificial.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.4.2   HARVCAT

Attribute Name: Harvest category

Definition: The *harvest category* attribute is an indication of the general type of harvest activity
                   that is planned to occur on an area.

Format: character 8

CODE	OPTION	DEFINITION
BRIDGING	bridging operation	Areas which were scheduled for harvest in the current forest management plan, but were not harvested. The bridging operations are limited to three months harvest area from the current approved forest management plan and harvest of bridging area must be completed by March 31 of the first year of the forest management plan.
CONTNGNT	contingency harvest area	The area set aside to accommodate unforeseeable circumstances (e.g., wildfire). Contingency area will serve as replacement for harvest area, and only be used if needed. The area must be sufficient to provide for a minimum of one year and a maximum of two years of harvest operations. If surplus harvest area has been identified, the contingency area must be identified from within the surplus harvest area plus whatever additional area, if any, is needed to meet the requirements.
REGULAR1	planned harvest 1st 5-year term	This is the "planned harvest area" for the first 5-year operational plan term. The planned harvest area 1st 5-year term is that portion of the total harvest area that has been selected for normal harvest during Phase I of the new forest management plan.
REGULAR2	planned harvest 2nd 5-year term	This is the "planned harvest area" for the second 5-year operational plan term. The planned harvest area 2nd 5-year term is that portion of the total harvest area that has been selected for normal harvest during Phase II of the new forest management plan.
SALVAGE	salvage harvest area	The salvage harvest is the areas where the recovery or harvesting of timber that has been killed or damaged by natural causes (such as fire, wind, flood, insects, and disease) are planned. The salvage area, as defined in the FMPM, does not contribute to the available harvest area.
REDIRECT	redirected harvest	Areas to be harvested under a pest management plan and count against the available harvest area of the FMP.
ACCELER	accelerated harvest	Areas to be harvested under a pest management plan and are areas in addition to the available harvest area of the FMP.
SCNDPASS	second-pass harvest	For areas managed using the clearcut silvicultural system, harvest may be planned in two passes. This is normally when species within the stand are harvested and utilized by different logger/contractor/forest resource Licensee in different years (e.g., first pass is conifer and second-pass is hardwood). Second-pass harvest should be identified when merchantable tree species will be harvested from forest stands which have been previously reported as harvested. The second-pass harvest operations are areas where only the first pass has occurred by the expiry of the current forest management plan.
SURPLUS	surplus harvest area	The areas from the selected harvest areas that are in excess of the projected industrial wood requirements and wood supply commitments for the ten-year period.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If the HARVCAT attribute is SCNDPASS then the SILVSYS attribute must be CC

- If the HARVCAT attribute is REGULAR1 or BRIDGING then the planning term must not be 2

A1.4.3   FUELWOOD

Attribute Name: Fuelwood Area Indicator

Definition: The *fuelwood area indicator* attribute identifies areas where non-commercial fuelwood can be obtained by the public for their personal use during the 5-year operational plan term.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.5   Area of Concern

A1.5.1   AOCID

Attribute Name: AOC Identifier

Definition: The *AOC identifier* attribute indicates the label assigned to a specific area of concern (AOC) prescription which must correspond with a prescription identified on Areas Selected for Operations maps and the area of concern prescriptions contained in table FMP-10 and the supplementary documentation of the plan. The prescription can represent either a group of areas of concern with a common prescription or an individual area of concern with a unique prescription.

Format: character 15
   • user defined

Validation:

   • The presence of this attribute in the file structure of the layer is mandatory
   • The population of this attribute is mandatory
   • A blank or null value is not a valid code
   • The value must be a code from table FMP-10 and the supplementary documentation

A1.5.2   AOCTYPE

Attribute Name: AOC Type

Definition: The *AOC type* attribute indicates the type of area of concern (AOC) prescription as either modified or reserved.

Format: character 1

CODE	OPTION	DEFINITION
M	modified	Areas which are planned for operations but have specific conditions or restrictions on operations as required by an AOC prescription.
R	reserved	Areas which are reserved (prohibited) from operations as required by an AOC prescription.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.6   Planned Residual Patches Layer

A1.6.1   RESID

Attribute Name: Residual Patch Identifier

Definition: The *residual patch identifier* attribute is a number, label or name assigned to a residual patch(es) as defined in the FMP text.

Format: character 10

- user defined

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code
- The value must be defined in the FMP
- The value must be consistent with the Areas Selected for Operations maps

A1.7 Planned Road Corridors

A1.7.1 TERM

Attribute Name: Plan Term

Definition: The *plan term* attribute indicates the five-year operational plan term or the next ten-year plan period in which the planned road activity and/or use strategy will occur.

Format: integer 1

CODE	OPTION
1	first 5-year operational plan term (1-5)
2	second 5-year operational plan term (6-10)
0	The next ten year plan period (11-20)

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A zero value is a valid code

A1.7.2 ROADID

Attribute Name: Road Identifier

Definition: The *road identifier* attribute indicates the number, label or name assigned to the forest access road that this polygon is a part of.

Format: character 30

- user defined
- must match corresponding road identifications as portrayed on the Areas Selected for Operations maps.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code

A1.7.3   ROADCLAS

Attribute Name: Road Class

Definition: The *road class* attribute identifies the class of the proposed forest access road in terms of the road use management strategy in the FMP.

Format: character 1

CODE	OPTION	DEFINITION
P	primary	Primary roads are roads that provide principal access for the management unit, and are constructed, maintained and used as part of the main road system on the management unit. Primary roads are normally permanent roads.
B	branch	A branch road is a road, other than a primary road, that branches off an existing or new primary or branch road, providing access to, through or between areas of operations on a management unit

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If TERM is zero then ROADCLAS must be P

A1.7.4   AOCXID

Attribute Name: Area of Concern Crossing Identifier

Definition: The *area of concern crossing identifier* attribute indicates the unique value assigned to the preferred 100 meter area where road crossings are permitted within an area of concern.

Format: character 15

- user defined

- must match crossing locations as portrayed on the Areas Selected for Operations maps and table FMP-19

Validation:

- A blank or null value is a valid code
- The AOCXID attribute must contain a unique value within and across layers if one or more Planned Road Corridors layer is submitted.

A1.7.5   NOXING

Attribute Name: Crossing Prohibited

Definition: The *crossing prohibited* attribute indicates the area where road crossings are prohibited within the road corridor. These areas may coincide with area of concern (AOC) boundaries where the AOC prescription identifies that the crossing is prohibited. These areas may represent other constraints that prohibit the road from crossing a water body which do not relate to an AOC prescription.

Format: character 15

- user defined
- must match the areas as portrayed on the Areas Selected for Operations maps.

Validation:

- A blank or null value is a valid code

A1.7.6   TRANS

Attribute Name: Road Transfer Year

Definition: The *road transfer year* attribute indicates a four-digit number representing the first year of the 5-year operational term that the transfer of responsibility to the MNR is anticipated to take effect. If there is no intent to transfer responsibility to MNR during the future 20-year period there is no need to specify a year.

Format: integer 4

- YYYY

Validation:

- A zero value is a valid code

- If TRANS value is populated, then INTENT must be populated
- The value must be greater than or equal to the plan term start year

---

A1.7.7   ACYEAR

Attribute Name: Access Control Year

Definition: The *access control year* attribute indicates a four-digit number representing the expected **fiscal** year (April 1 to March 31) that the access control is anticipated to take effect.

Format: integer 4

- YYYY

Validation:

- A zero value is a valid code
- The value must be greater than or equal to the plan term start year
- If access control year does not equal zero (ACYEAR ≠ 0) then access control must be yes (ACCESS = Y)

A1.7.8   ACCESS

Attribute Name: Road Access Control

Definition: The *road access control* attribute is a field used to identify where access control activities are planned to occur during the 10-year planning period on primary or branch roads that will be constructed during the 10-year planning period.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y) when plan term is not zero (TERM ≠ 0)
- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.7.9   DECOM

Attribute Name: Decommissioning

Definition: The *decommissioning* attribute is a field used to identify where decommissioning activities are planned to occur during the 10-year planning period on primary or branch roads that will be constructed during the 10-year planning period.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y) when plan term is not zero (TERM ≠ 0)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.7.10   INTENT

Attribute Name: MNR Intent

Definition: The *MNR Intent* attribute indicates the MNR's future management intent for the road corridor as identified in table FMP-18.

Format: character 30

- user defined

Validation:

- A blank or null value is a valid code
- If TRANS value is populated, then INTENT must be populated

A1.7.11   MAINTAIN

Attribute Name: Road Maintenance

Definition: The *road maintenance* attribute is a field used to identify where road maintenance activities are planned to occur during the term.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y) when plan term is not zero (TERM ≠ 0)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.7.12   MONITOR

Attribute Name: Road Monitoring

Definition: The *road monitoring* attribute is a field used to identify where road monitoring activities are planned to occur during the term.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y) when plan term is not zero (TERM ≠ 0)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.7.13 CONTROL1 and CONTROL2

Attribute Name: Road Access Control or Decommissioning Type

Definition: The *road access control or decommissioning type* attributes indicate the method of
control to be implemented on primary or branch roads that will be constructed during
the 10-year planning period. This attribute may also be used to identify the type of
decommissioning activities planned on primary or branch roads that will be constructed
during the 10-year planning period.

Format: character 4

CODE	OPTION
BERM	berm and/or ditch
GATE	gated / physical barrier
SCAR	scarify and/or plant road
SIGN	signed
PRIV	private land
SLSH	pile slash
WATX	water crossing

If there is only one access control type being applied to a road segment, then record it in the
CONTROL1 attribute and leave the CONTROL2 attribute blank.

If two access controls apply to the same road segment, then both access control types must be
recorded in the CONTROL1 and CONTROL2 attributes accordingly.

If there are more than two access control types on the same road segment, then choose two of the
controls and record them in the CONTROL1 and CONTROL2 attributes. When picking which two
controls to report on, choose the ones which are deemed to be the most restrictive (i.e., the most
physically limiting to accessibility).

Validation:

- The presence of CONTROL1 in the file structure of the layer is mandatory where ACCESS =
  Y
- The population of CONTROL1 is mandatory where ACCESS = Y

- The attribute population must follow the correct coding scheme

- A blank or null value is a valid code

- The second field must only have a control type when the first field has a control type (error when CONTROL1 = null and CONTROL2 ≠ null)

A1.8 Operational Road Boundaries

A1.8.1 ORBID

Attribute Name: Operational Road Boundaries Identifier

Definition: The *operational road boundaries identifier* attribute indicates the user defined unique number, label or name assigned to the operational road boundaries. The operational road boundary is the perimeter of, the planned harvest area plus the area from an existing road or planned road corridor to the harvest area within which an operational road is planned to be constructed.

Format: character 20

- user defined

Operational roads within an operational road boundaries will have the same use management strategy. The extent of the operational road boundaries defines the area in which a single use management strategy will apply and defines the area in which AOC planning is required.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code

A1.9   Existing Road Use Management Strategies

A1.9.1   ROADID

Attribute Name: Road Identifier

Definition: The *road identifier* attribute indicates the number, label or name assigned to the forest access road that this polygon is a part of.

Format: character 30

- user defined
- must match corresponding road identifications as portrayed on the Areas Selected for Operations maps.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code

A1.9.2   ROADCLAS

Attribute Name: Road Class

Definition: The *road class* attribute identifies the class of the existing forest access road or road network, in terms of the road use management strategy in the FMP.

Format: character 1

CODE	OPTION	DEFINITION
P	primary	Primary roads are roads that provide principal access for the management unit, and are constructed, maintained and used as part of the main road system on the management unit. Primary roads are normally permanent roads.
B	branch	A branch road is a road, other than a primary road, that branches off an existing or new primary or branch road, providing access to, through or between areas of operations on a management unit
O	operational	Operational roads are roads within operational road boundaries, other than primary or branch roads, that provide short-term access for harvest, renewal and tending operations. Operational roads are normally not maintained after they are no longer required for forest management purposes, and are often site prepared and regenerated.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.9.3   TRANS

Attribute Name: Road Transfer Year

Definition: The *road transfer year* attribute indicates a four-digit number representing the first year of the 5-year operational term that the transfer of responsibility to the MNR is anticipated to take effect. If there is no intent to transfer responsibility to MNR during the future 20-year period there is no need to specify a year.

Format: integer 4

- YYYY

Validation:

- A zero value is a valid code
- The value must be greater than or equal to the plan term start year
- If TRANS value is populated, then INTENT must be populated

A1.9.4   ACYEAR

Attribute Name: Access Control Year

Definition: The *access control year* attribute indicates a four-digit number representing the expected **fiscal** year (April 1 to March 31) that the access control is anticipated to take effect.

Format: integer 4

- YYYY

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- A zero value is a valid code

- The value must be greater than or equal to the plan term start year

- If access control year does not equal zero (ACYEAR ≠ 0) then access control must be yes (ACCESS = Y)

A1.9.5   ACCESS

Attribute Name: Access Control

Definition: The *access control* attribute is a field used to identify where access control activities are already in effect or planned to occur during the 10-year planning period.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y)

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

- If access control is yes (ACCESS = Y) then decommissioning must be no (DECOM = N)

A1.9.6   DECOM

Attribute Name: Decommissioning

Definition: The *decommissioning* attribute is a field used to identify where decommissioning activities are already in effect or planned to occur during the 10-year planning period.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code
- If decommissioning is yes (DECOM = Y) then access control must be no (ACCESS =N)

A1.9.7   INTENT

Attribute Name: MNR Intent

Definition: The *MNR Intent* attribute indicates the MNR's future management intent for the forest road or a road network as identified in table FMP-18.

Format: character 30
- user defined

Validation:
- A blank or null value is a valid code
- If TRANS value is populated, then INTENT must be populated

A1.9.8   MAINTAIN

Attribute Name: Road Maintenance

Definition: The *road maintenance* attribute is a field used to identify where road maintenance activities are planned to occur during the term.

Format: character 1
- Y (for yes) or N (for no)

Validation:
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.9.9   MONITOR

Attribute Name: Road Monitoring

Definition: The *road monitoring* attribute is a field used to identify where road monitoring activities are planned to occur during the term.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control must occur for each record (DECOM = Y or MAINTAIN = Y or MONITOR = Y or ACCESS = Y)
- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.9.10   RESPONS

Attribute Name: Road Responsibility

Definition: The *road responsibility* attribute indicates the custodian responsible for the maintenance and monitoring of road surface conditions for the road segment.

Format: character 3

CODE	OPTION
SFL	Licensee
MNR	Ministry of Natural Resources
*	see validation below

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme for roads that are the responsibility of the SFL or MNR.

- * Roads that are the responsibility of other parties are user defined (e.g., OTH for other, MTO for Ministry of Transportation, PRV for private, JNT for joint)

- A blank or null value is not a valid code

- At a minimum, one record should equal SFL

A1.9.11   CONTROL1 and CONTROL2

Attribute Name: Road Access Control or Decommissioning Type

Definition: The *road access control or decommissioning type* attributes indicate the method of control to be implemented during the 10-year planning period on existing roads. This may also be used to identify the type of decommissioning activities for an existing road during the 10-year planning period.

Format: character 4

CODE	OPTION	DEFINITION
BERM	berm and/or ditch	
GATE	gated / physical barrier	
SCAR	scarify and/or plant road	
SIGN	signed	
PRIV	private land	
SLSH	pile slash	
WATX	water crossing	

If there is only one access control type being applied to a road segment, then record it in the CONTROL1 attribute and leave the CONTROL2 attribute blank.

If two access controls apply to the same road segment, then both access control types must be recorded in the CONTROL1 and CONTROL2 attributes accordingly.

If there are more than two access control types on the same road segment, then choose two of the controls and record them in the CONTROL1 and CONTROL2 attributes. When picking which two controls to report on, choose the ones which are deemed to be the most restrictive (i.e., the most physically limiting to accessibility).

Validation:

- The presence of CONTROL1 in the file structure of the layer is mandatory where ACCESS = Y

- The population of CONTROL1 is mandatory where ACCESS = Y

- The attribute population must follow the correct coding scheme

- A blank or null value is a valid code

- The second field must only have a control type when the first field has a control type (error when CONTROL1 = null and CONTROL2 ≠ null)

A1.10 Aggregate Extraction Areas

A1.10.1   AGAREAID

Attribute Name: Aggregate Extraction Area Identifier

Definition: The *aggregate extraction area identifier* attribute indicates the unique identifier for the area where forestry aggregate pits may be established.

Format: character 15

- user defined content

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code

A1.11 Renewal and Tending

A1.11.1   TERM

Attribute Name: Plan Term

Definition: The *plan term* attribute indicates the five-year operational plan term in which the planned renewal and tending will occur.

Format: integer 1

CODE	OPTION
1	first 5-year operational plan term
2	second 5-year operational plan term

Validation:

- The presence of this attribute in the file structure of the layer is mandatory

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A zero value is not a valid code

A1.11.2   HERB

Attribute Name: Herbicide Application

Definition: The *herbicide application* attribute indicates the area as proposed for the aerial application of herbicide and identifies it as an area of special public interest.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The population of this attribute is mandatory

- The attribute population must follow the correct coding scheme

- A blank or null value is not a valid code

A1.11.3   INSECT

Attribute Name: Insecticide Application

Definition: The *insecticide application* attribute indicates the area as proposed for the aerial application of insecticide, as a result of the application of the planning procedure for insect pest management programs, and identifies it as an area of special public interest.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.11.4   PB

Attribute Name: Prescribed Burn

Definition: The *prescribed burn* attribute indicates the area as a candidate for a high complexity burn and identifies it as an area of special public interest.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.11.5   PEST

Attribute Name: Insect Pest Management

Definition: The *insect pest management* attribute indicates the area as eligible for insect pest management and identifies it as an area of special public interest.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.11.6   IMPROVE

Attribute Name: Tree Improvement Activities

Definition: The *tree improvement activities* attribute indicates the area to support the production of improved seed.

Format: character 1

- Y (for yes) or N (for no)

Validation:

- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is not a valid code

A1.12 Planned Clearcuts

A1.12.1 PCCID

Attribute Name: Clearcut Identifier

Definition: The *clearcut identifier* attribute indicates the unique number, label or name assigned to the planned clearcut area.

Format: character 20

- user defined value
- will be used as the Location ID in order to populate table FMP-12, Planned Clearcuts >260 Ha.

The information required to create this coverage may be extracted from a tool used to generate natural disturbance patterns and calculate planned clearcut areas.

Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A blank or null value is not a valid code

Appendix 2   FI Portal Validations

A2.1   Assumptions

- Validations are always case insensitive.
- Polygon "holes" will be ignored. Polygons are considered to be a "hole" if there are no values (is empty or contains a zero) in the non-ESRI standard attributes.

A2.2   Stage 1 Validations

Stage 1 validation routines assess FMP product submission files for meeting mandatory requirements. The process will assess the entire submission file (except in a few specific validations) to identify as many non-compliance instances as possible. These instances will be provided in a Stage 1 report. **A single non-compliance instance will result in a rejection of the submission (Stage 1 validation failure).**

Test	Result
Is the zip file named correctly?	If no, validation will stop.
Can the zip file be opened?	If no, validation will stop.
Is mandatory LAYERS and MODEL folder present?	If no, report and continue to end of Stage 1 validation.
Are there extra and/or sub-folders present?	If yes, report and continue to end of Stage 1 validation.
Are there duplicate file names (minus extension)?	If yes, report and continue to end of Stage 1 validation.
Are there special characters in files names?	If yes, report and continue to end of Stage 1 validation.
Are standard coverages contained in the folder named correctly?	If no, report and continue. to end of Stage 1 validation.
Are there pdf map files > 25 MB?	If yes, report and continue to end of Stage 1 validation.
Are mandatory files present (text, tables, maps)?	If no, report and continue to end of Stage 1 validation.

A2.3   Stage 2 Validations

Stage 2 validation routines assess FMP product submission files for anomalies and uncommon data relationships. The process will assess the entire submission file to identify as many unusual situations as possible. These instances will be provided in a Stage 2 report. Anomalies identified at

Stage 2 do not result in an automatic rejection of the submission. The MNR Quality Assurance staff at the district will use the Stage 2 report during the manual Stage 3 validation and provide required alterations, if required, to the Licensee.

Test	Result
Are standard coverages present in the LAYERS folder?	Missing coverages listed in Stage 2 report.
Are projection files present in coverages?	If no, errors listed in Stage 2 report.
Are mandatory attributes present?	Missing attributes listed in Stage 2 report.
Are the attribute data types correct?	Incorrect data types listed in Stage 2 report.
Are mandatory attributes populated?	Non-populated attributes listed in Stage 2 report.
Do the attributes contain correct codes?	Incorrect codes listed in Stage 2 report.
Do inter-dependent attributes contain correct values?	If no, possible errors listed in Stage 2 report.
What additional non-standard attributes have been included in the coverages?	Additional attributes listed in Stage 2 report.
What additional files have been submitted?	Additional files listed in Stage 2 report
Have additional files been named correctly?	If no, misnamed files listed in Stage 2 report.
Is the "file number" within the coverage file name 00 where multiple coverages can not exist?	If no, misnamed coverages listed in Stage 2 report.
Execute NODEERRORS and LABELERRORS ArcInfo commands.	Results presented in Stage 2 report
Are there pdf map files > 10 MB?	If yes, list file names in Stage 2 report.

A2.4 Stage 2 Attribute Validations

The following tables identify the coverage attribute validations to be performed in Stage 2 Validation, where Y is Yes, N is No and C is Conditional:

Planning Composite Coverage in Planning Inventory:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation	POLYTYPE = FOR
FMFOBJID	N	N	N		
GEOGNUM	N	N	N		
POLYID	Y	Y	N		
POLYTYPE	Y	Y	Y		
OWNER	Y	Y	Y		
AUTHORTY	N	N	Y		
YRUPD	Y	Y	N	Y – Must be >= 1975	
SOURCE	Y	Y	Y		
FORMOD	Y	Y	Y		Y
DEVSTAGE	Y	Y	Y		Y
YRDEP	Y	N	N	Y- Must be 0 or >= 1900	Y
SPCOMP	Y	Y	N		Y
WG	N	N	Y		Y
YRORG	Y	Y	N	Y – Must be >= 1600	Y
HT	Y	Y	N	Y – Must be 0 to 40.0	Y
STKG	Y	Y	N	Y – Must be 0 to 4.00	Y
SC	Y	N	N	Y – Must be 0, 1, 2, 3 or 4	Y
ECOSRC	Y	Y	Y		Y
ECOSITE1	Y	Y	Y		Y
ECOPCT1	Y	Y	N	Y – Must be 1 to 100	Y
ECOSITE2	N	N	Y		Y
ECOPCT2	N	N	N	Y – Must be 0 to 100	Y
ACCESS1	Y	Y	Y		Y
ACCESS2	N	N	Y		Y
MGMTCON1	Y	Y	Y		Y
MGMTCON2	N	N	Y		Y
MGMTCON3	N	N	Y		Y
AGS_POLE	N	N	N		Y
AGS_SML	N	N	N		Y
AGS_MED	N	N	N		Y
AGS_LGE	N	N	N		Y
UGS_POLE	N	N	N		Y
UGS_SML	N	N	N		Y
UGS_MED	N	N	N		Y
UGS_LGE	N	N	N		Y
USPCOMP	N	N	N		Y
UWG	N	N	Y		Y
UYRORG	N	N	N	Y – Must be 0 >= 1600	Y
UHT	N	N	N	Y – Must be 0 to 40.0	Y
USTKG	N	N	N	Y – Must be 0 to 4.00	Y
USC	N	N	Y		Y
VERDATE	N	N	N		
SENSITIV	N	N	Y		

Base Model Inventory Coverage in Base Model Inventory Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation	POLYTYPE = FOR
Planning Composite coverage validation plus the following					
MANAGED	Y	Y	Y		Y
TYPE	N	N	N		Y
MNRCODE	N	N	N	Y – Must be 0 to 400	Y
SMZ	Y	N	N		Y
OMZ	Y	N	N		Y
PLANFU	Y	Y	N		Y
AGESTR	Y	Y	Y		Y
AGE	Y	Y	N	Y – Must be 1 to 999	Y
AVAIL	Y	Y	Y		Y
SILVSYS	Y	Y	Y		Y
NEXTSTG	Y	Y	Y		Y
SI	Y	Y	N		Y
SISRC	Y	Y	Y		Y
SGR	Y	N	N		Y

Forecast Depletions Coverage in Planning Inventory, Planning Inventory Contingency, Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
FSOURCE	Y	Y	Y – valid codes include FORECAST	
FYRDEP	Y	Y	N	Y – Cannot be < plan period start year – 4 years – Cannot be >= plan period start year
FDEVSTAGE	Y	Y	Y	

Planned Harvest Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
SILVSYS	Y	Y	Y	
HARVCAT	Y	Y	Y	
FUELWOOD	Y	Y	Y	

Area of Concern Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
AOCID	Y	Y	N	
AOCTYPE	Y	Y	Y	

Planned Residual Patches Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
RESID	Y	Y	N	

Planned Road Corridors Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
TERM	Y	N	Y	
ROADID	Y	Y	N	
ROADCLAS	Y	Y	Y	
AOCXID	N	N	N	
NOXING	N	N	N	
TRANS	N	N	N	Y – Must be 0 or >= plan term start year
ACYEAR	Y	N	N	Y – Must be 0 or >= plan term start year
ACCESS	N*	Y	Y	
DECOM	N*	Y	Y	
INTENT	N	N	N	
MAINTAIN	N*	Y	Y	
MONITOR	N*	Y	Y	
CONTROL1	C	C	Y	ACCESS = Y
CONTROL2	N	N	Y	

*One of these attributes is required in order for the layer to be complete when TERM is not zero.

Operational Road Boundaries Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
ORBID	Y	Y	N	

Existing Road Use Management Strategies Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
ROADID	Y	Y	N	
ROADCLAS	Y	Y	Y	
TRANS	N	N	N	Y – Must be 0 or >= plan term start year
ACYEAR	Y	N	N	Y – Must be 0 or >= plan term start year
ACCESS	N*	Y	Y	
DECOM	N*	Y	Y	
INTENT	N	N	N	
MAINTAIN	N*	Y	Y	
MONITOR	N*	Y	Y	
RESPONS	Y	Y	Y	
CONTROL1	C	C	Y	ACCESS = Y
CONTROL2	N	N	Y	

*One of these attributes is required in order for the layer to be complete.

Aggregate Extraction Areas Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
AGAREAID	Y	N	N	

Planned Renewal and Tending Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
TERM	Y	Y	Y	
HERB	N	Y	Y	
INSECT	N	Y	Y	
PB	N	Y	Y	
PEST	N	Y	Y	
IMPROVE	N	Y	Y	

Planned Clearcuts Coverage in Draft Plan, Final Plan, Draft Contingency Plan, and Final Contingency Plan Product:

Attribute	Mandatory Attribute?	Mandatory to be Populated?	Must Follow Correct Coding Scheme?	Coding Validation
PCCID	Y	Y	N	