Forest Information Manual 2017

Forest Management Planning Technical Specifications

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Crown Forests and Lands Policy Branch

Policy Division



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1.0 Introduction

The Forest Information Manual (FIM) sets out the mandatory requirements, standards, roles and responsibilities, timelines and conditions for providing information in respect of Crown forests. The requirements for information set out in the FIM complement the planning and operational requirements of the Forest Management Planning Manual 2017 (FMPM). The FMPM and the Forest Information Manual 2017 (FIM) describe information that must be prepared and submitted for consultation, information that will be included in a forest management plan (FMP), and information that will be used by the Ministry of Natural Resources and Forestry (MNRF) to fulfill its obligations under the *Crown Forest Sustainability Act* (CFSA).

The FIM provides a description of the information requirement, references the source of the requirement, describes the rationale for the requirement and, on a general level, discusses the format of the information and the party responsible for providing the information. It is organized into four sections, and references five associated technical specifications:

- FIM Base and Values Technical Specifications;
- FIM Forest Management Planning Technical Specifications (this document);
- FIM Forest Resources Inventory Technical Specifications;
- FIM Annual Work Schedule Technical Specifications; and
- FIM Annual Reporting Technical Specifications.

The FIM Forest Management Planning Technical Specifications as identified in the Forest Information Manual (FIM) describes the information standards (e.g. data attributes, format) for the information requirements, the conditions for provisions (e.g. naming conventions, exchange parameters, validation standards), and the implementation and first effective dates related to FMPs. This document describes the electronic exchange standards for the sustainable forest licensee (Sustainable Forest Licence (SFL) Holders, Plan holders or other forest resource licence holders with forest management responsibilities) and MNRF. These specifications

describe the data exchange standards only and do not affect how information may be stored or maintained by either the sustainable forest licensee or MNRF. Each party is expected to generate the required information products in the specified data exchange format from their proprietary system.

Technical specifications and any revisions are approved by the Director of the Crown Forests and Lands Policy Branch. FIM sets out the process and parameters for periodic revision of the technical specifications.

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 MNRF and sustainable forest licensee are required to use the technical specifications listed on the FI Portal.

2.0 Roles and Responsibilities

The roles and responsibilities as defined in the FIM and further in these technical specifications are the default. In limited circumstances direction on roles and responsibilities may be clarified in an FMP terms of reference as approved by the MNRF Regional Director. 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 MNRF and the sustainable forest licensee.

2.1 Sustainable Forest Licensee

The sustainable forest licensee prepares and submits the following at the appropriate stages of FMP production:

- Planning Inventory, Base Model Inventory and Operation Planning Inventory;
- Operational Planning Information;
- FMP Documents; and
- Forest Management Planning Maps.

If resubmission of a required information product is necessary, the sustainable forest licensee resubmits the entire information product, not just the changes. For example, if the submission is missing files, the resubmission would be not just the missing files, but all required files to make a complete submission.

2.2 Ministry of Natural Resources and Forestry

The MNRF will verify that all information products submitted by the sustainable forest licensee meet the standards defined in these FIM Forest Management Planning Technical Specifications. When the information product is determined to be non-compliant or inconsistent with requirements, MNRF will provide the sustainable forest licensee with a list of required alterations.

Some components/products of the FMP are normally the responsibility of the MNRF to prepare or have prepared, such as the values maps, French translations of the summary text, tables and map(s), Statement of Environmental Values briefing note, local citizens' committee (LCC) summary report, lists of required alterations, and public and First Nation and Métis communities consultation summaries.

3.0 Implementation

These FIM Forest Management Planning Technical Specifications are in effect upon regulation of the FIM 2017. These technical specifications apply until this document is replaced. The requirements of these FIM Forest Management Planning Technical Specifications will come into effect according to the following schedule:

- Planning (composite and forecast) inventory and base model inventory information Commencing with 2020 FMPs and contingency plans, FIM and the standards in this technical specification will be implemented.
- Proposed Long Term Management Direction Summary Commencing with 2020 FMPs and contingency plans, FIM and the standards in this technical specification will be implemented.
- Operational Planning Inventory Commencing with 2019 FMPs and contingency plans,
 FIM and the standards in this technical specification will be implemented.
- Operational Planning Information Commencing with 2019 FMPs, 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 Inventory;
 - Water Crossing Inventory;
 - Planned Aggregate Extraction Areas; and
 - Tree Improvement
- Electronic Submission of Draft FMP and Draft Summary Commencing with 2019 FMPs and contingency plans, FIM and the standards in this technical specification will be followed.

- Final FMP Commencing with 2019 FMPs and contingency plans, FIM and the standards in this technical specification will be followed.
- Mid-Plan Check Commencing with 2019 FMPs, FIM and the standards in this technical specification will be followed.
- FMP Amendments Commencing with amendments whose amendment request is received by the MNRF after the implementation of FIM 2017, FIM and the standards in this technical specification will be followed.

3.1 Revision Notes

Revisions to the FIM FMP Technical Specifications include:

2018 revisions

- Clarifications and corrections to validation logic statements;
- General formatting, clarification and typographical corrections;

2017 revisions

- General formatting, clarification, organizational and typographical corrections;
- Alignment to policy changes resulting from Declaration Order (MNR-75) order and FMPM and FIM removal of Planned Clearcut layer;
- Alignment of Planning Inventory and Base Model Inventory with FRI attributes;
- Addition of the Operational Planning Inventory;
- Renewal and Tending layer changed to Tree Improvement layer with tree improvement activities as the only attribute;
- Addition of block identifier to Planned Harvest Layer;
- Removal of the requirement for 100 meter location for AOC crossings;
- Addition of the LTMD summary information product;
- Addition of FMP extension information product;
- Addition of Mid-Plan check information product;

Implementation

- Addition of the LTMD and FMP extension summary maps;
- Addition of the Projected Distribution of Harvest map;
- Addition of the values maps and the symbology appendix that were previously in the Base and Values Technical Specifications;
- Improvements to attribute coding (stage of development, access, water crossing type, decommissioning); and
- Addition of the water crossing inventory layer.

4.0 Product Descriptions

4.1 Inventory Information Specifications

4.1.1 Description, Intent and Intended Use

There are three inventory products: the planning composite inventory (PCI); the base model inventory (BMI); and the operational planning inventory (OPI). The forecast depletion product is submitted as part of the planning composite inventory submission and at draft and final plan submission. The inventory products provide the stand level information required for forest management planning, including forest modeling, habitat modeling, forest diversity analyses, and operational planning.

4.1.2 Packaging and Naming Convention

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

Naming conventions for the individual inventory information products is discussed in the individual product sections (Sections 4.1.7 - 4.1.10).

Additional non-standard spatial information products should follow a similar naming convention and must only contain numeric values from 0 to 9, characters from A to Z and underscore.

File extensions are defined by the ESRI supported file exchange format chosen. Examples of ESRI supported file formats accepted by the FI Portal are:

Shapefiles: the shapefile consists of 4 mandatory file extensions (i.e. .shp, .shx, .dbf, .prj)
 Example:

- MU123 28PCI00.shp
- MU123_28PCI00.shx
- MU123 28PCI00.dbf
- MU123 28PCI00.prj
- 2. File Geodatabase (FGDB) is a container that can hold single or multiple feature classes.

 All feature classes must be in the root of the FGDB.

Example:

- MU123_28PCI.gdb (single feature class in a FGDB)
 - ➤ MU123 28PCI00
- MU123_2028_FMPDP.gdb (multiple feature classes in FGDB)
 - ➤ MU123_28PCI00
 - ➤ MU123 28BMI00
 - > MU123 280PI00
- 3. ESRI ArcInfo interchange file (E00) is a proprietary ESRI file format intended to support the transfer between ESRI systems of different types of geospatial data used in ESRI software.

Example:

MU123 28PCI00.E00

OR

MU123 28PCI01.E00 (first multiple layer submitted)

MU123 28PCI02.E00 (second multiple layer submitted)

4.1.3 Metadata

Metadata requirements include the use of standard naming conventions and submission details that are collected when FMP files are submitted to the FI Portal.

4.1.4 Format

- Geospatial information and associated tabular attributes are to be submitted in an ESRI supported file format. This format will be consistent with the formats defined by the FI Portal. A single ESRI supported file format will be used within the submission.
- Each geospatial data layer must contain a defined projection. The selected projection is
 to be used for all spatial products associated with a FMP (e.g., planning inventory,
 operational planning layers).
- Information managed in the UTM projection, where management units span more than one UTM zone, must be projected to a single UTM zone.
- Information is to be provided in a projection recognized by a well-known spatial reference system standards body. Typical projection choices will be EPSG:26915 EPSG:26918 (UTM Zones 15-18, NAD83 Datum), or EPSG:3161 (NAD83 / Ontario MNR Lambert).
- Geospatial 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 decision of the appropriate task team. It is
 recommended that a brief metadata be provided to describe the additional attribution.
- Geospatial data layers will respect spatial integrity.
- Format requirements specific to each product are discussed in the individual product sections.

Validation

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 non-compliance will result in a required alteration and resubmission.

Stage 2 validation routines assess FMP product submission files for anomalies and uncommon data relationships. These warnings will be provided in a Stage 2 report. Anomalies identified at Stage 2 do not result in an automatic rejection or required alterations of the submission. The MNRF will use the Stage 2 validation report to inform additional manual validation or a discussion if required.

Tabular Requirements

The tabular attributes associated with the PCI, BMI and OPI inventory layers are to be included in a feature attribute table based on the identified fields described below. The "X" indicator in the PCI, BMI and OPI columns indicate the mandatory fields that are required for the corresponding product. The "V" indicator in the PCI, BMI and OPI columns indicates which attributes are required to be validated for the corresponding product. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields, above the mandatory fields identified for the selected inventory, can be included as needed. The ESRI generated fields are not listed in the feature attribute table (e.g. area, perimeter, length,< cover name>#, <cover name>-ID).

field name	maximum width	field type	decimal places	attribute description	PCI	ВМІ	OPI
POLYID	25	character		polygon identification	XV	XV	XV
POLYTYPE	3	character		polygon type	XV	XV	XV
OWNER	1	character		ownership	XV	XV	XV
YRSOURCE	4	integer		year of data update	XV	XV	XV
SOURCE	8	character		source of data update	XV	XV	XV
FORMOD	2	character		productive forest	XV	XV	XV
				modifier			
DEVSTAGE	8	character		stage of development	XV	XV	XV
YRDEP	4	integer		year of last disturbance	XV	XV	XV
DEPTYPE	8	character		type of disturbance	XV	XV	XV
OYRORG	4	integer		overstorey year of	XV	Χ	
				origin for the stand			
OSPCOMP	120	character		overstorey species	XV	Х	
				composition			

field name	maximum width	field type	decimal places	attribute description	PCI	ВМІ	OPI
OLEADSPC	3	character		overstorey leading	XV	Х	
				species			
OAGE	3	integer		overstorey age	XV	Х	
OHT	4	double	1	overstorey height	XV	Х	
OCCLO	3	integer		overstorey crown	XV	Х	
OCTIVO		-1 - 1-1 -	2	closure)// /		
OSTKG	4	double	2	overstorey stocking	XV	X	
OSC	1	integer		overstorey site class	XV	Х	
UYRORG	4	integer		overstorey year of origin for the stand	XV	Х	
USPCOMP	120	character		understorey species composition	XV	Х	
ULEADSPC	3	character		understorey leading species	XV	Х	
UAGE	3	integer		understorey age	XV	Χ	
UHT	4	double	1	understorey height	XV	Х	
UCCLO	3	integer		understorey crown closure	XV	Х	
USTKG	4	double	2	understorey stocking	XV	Х	
USC	1	integer		understorey site class	XV	Х	
INCIDSPC	3	character		incidental species	XV	Х	Х
VERT	2	character		vertical stand structure	XV	Х	Х
HORIZ	2	character		horizontal stand structure	XV	Х	Х
PRI ECO	13	character		ELC primary ecosite	XV	Х	Х
SEC ECO	13	character		ELC secondary ecosite	XV	Х	Х
ACCESS1	3	character		accessibility indicator	XV	Х	XV
ACCESS2	3	character		accessibility indicator	XV	Х	XV
MGMTCON1	4	character		management consideration	XV	Х	XV
MGMTCON2	4	character		management consideration	XV	Х	XV
MGMTCON3	4	character		management consideration	XV	Х	XV

field name	maximum width	field type	decimal places	attribute description	PCI	ВМІ	OPI
YRORG	4	integer		model year of origin for		XV	XV
				the stand			
SPCOMP	120	character		model species		XV	XV
				composition			
LEADSPC	3	character		model leading species		XV	XV
AGE	3	integer		model age		XV	XV
HT	4	double	1	model height		XV	XV
CCLO	3	integer		model crown closure		XV	XV
STKG	4	double	2	model stocking		XV	XV
SC	1	integer		model site class		XV	XV
MANAGED	1	character		managed / unmanaged		XV	XV
				indicator			
SMZ	15	character		strategic management zone		XV	XV
PLANFU	15	character		plan forest unit		XV	XV
AU	25	character		analysis unit		XV	XV
AVAIL	1	character		availability indicator		XV	XV
SILVSYS	2	character		silviculture system		XV	XV
NEXTSTG	8	character		next stage		XV	XV
YIELD	10	character		yield		XV	XV
OMZ	15	character		operational			XV
				management zone			
SGR	25	character		silvicultural ground rule			XV

POLYID

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

Format:

For example: for geographic seamless data this may be a concatenation of UTM zone,
 mapsheet and stand number; or may be a sequential numbering of the stands.

Stage 1 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

POLYTYPE

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:

Code	Option	Definition	Туре
WAT	water	All water areas. Includes lakes, ponds,	water
		reservoirs (i.e., inland basin areas	
		containing water) and wide ("two	
		sided") rivers. These are rivers that	
		can be defined by area.	
		Smaller/narrower rivers and streams	
		are maintained as linear features in a	
		centre-line layer(s).	
DAL	developed	Lands which are cultivated for	non-forested
	agricultural land	growing crops, orchards, floral	
		gardens, etc. These areas may include	
		abandoned agricultural lands.	

Product Descriptions Inventory Information Specifications

Code	Option	Definition	Туре
GRS	grass and meadow	Farm areas devoted to pasture for	non-forested
		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,	non-forested
		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	non-forested
		created for specific uses other than	
		timber production, such as roads,	
		railroads, logging camps, mines,	
		utility corridors, logging camps, gravel	
		pits, airports, etc.	
BSH	brush and alder	Areas covered with "non-	non-productive
		commercial" tree species or shrubs.	forest
		These areas are normally associated	
		with wetlands or water features.	
RCK	rock	Areas of barren or exposed rock (e.g.,	non-productive
		bedrock, cliff face, talus slope) which	forest
		may support a few scattered trees,	
		but is less than 25% crown closure.	

Code	Option	Definition	Туре
TMS	treed wetland	Areas of dry or wet muskeg on which	non-productive
		stunted trees occur as widely spaced	forest
		individuals or in small groups.	
OMS	open wetland	Wet areas of mosses, grasses, sedges,	non-productive
		and small herbaceous plants, often	forest
		interspersed with small areas of open	
		water.	
FOR	productive forest	Areas that are capable of producing	productive forest
		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.

Stage 1 Validation:

Product Descriptions

Inventory Information Specifications

- 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

Stage 2 Validation:

• If POLYTYPE attribute does not equal FOR, then FORMOD, DEVSTAGE, OYRORG, OSPCOMP, OLEADSPC, OAGE, OHT, OCCLO, OSTKG, OSC, UYRORG, USPCOMP, ULEADSPC, UAGE, UHT, UCCLO, USTKG, USC, INCIDSPC, ACCESS1, ACCESS2, MGMTCON1, MGMTCON2, MGMTCON3, YRORG, SPCOMP, LEADSPC, AGE, HT, STKG, SC, MANAGED, PLANFU, AU, AVAIL, SILVSYS, NEXTSTG, YIELD, SGR attributes should be empty

OWNER

Definition:

This **ownership** attribute contains the value identifying the type of ownership or administrative category assigned to the area.

Format:

Code	Option	Definition
0	unknown / unassigned ownership	
1	Crown land	Crown Managed
2	Patent land - with timber rights	Patented – Crown Timber
	reserved to the Crown	
3	Patented land – fee simple (private)	Non Crown
4	Patented land- Company Freehold	Non Crown
5	Provincial Park	Crown Other
6	Indian Reserve	Non Crown
7	Recreation Reserve	Crown Other
8	Agreement/Municipal Forest	Non Crown
9	Federal Reserve	Crown Federal

The ownership designation attribute is derived from the ownership and land tenure, and parks

and reserves layers which are maintained in the MNRF's values information system. This attribute also identifies the managed Crown area in a forest management unit. The ownership information is used to create table FMP-1 (FMPM Part B, Section 8.0).

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

Stage 1 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

YRSOURCE

Definition:

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

Format:

YYYY

The year of data 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 data update should not be changed to reflect error corrections to tabular attributes.

Stage 1 Validation:

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

Product Descriptions

Inventory Information Specifications

- The attribute population must follow the correct format
- A zero or null value is not a valid code
- The YRSOURCE must be less than the plan period start year

SOURCE

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:

Code	Option	Definition
BASECOVR	planimetric "base"	Base feature information that is provided by the
	layer	MNRF (e.g., water or evaluated wetlands).
DIGITALA	multispectral	Digital analysis, automated processing of imagery
	scanning (digital	(e.g., Ecognition or Feature Analyst) to extract and
	image) –	delineate spatial features. In the FRI used to
	automated process	represent the source of water polygons and islands.
DIGITALP	multispectral	Photo-interpreted using softcopy systems.
	scanning (digital	
	image) – manual	
	process	
ESTIMATE	expected /	This source option is only for use in areas that have
	estimated	been recently renewed and have not been revisited
	outcome / result	since the renewal work was performed i.e., where a
		follow-up survey has not yet been performed (either
		an establishment or performance survey, free to
		grow 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.

Code	Option	Definition
FOC	forest operations	Inspection of a site after silvicultural treatment to
	compliance	determine whether an operator / operation conform
	inspection	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	This indicates a polygon description that was updated
	description	based on expected outcomes of planned operations
		(which have not yet been implemented) for the
		remainder of the current plan period.
		This code is only valid in the Base Model Inventory.
FRICNVRT	forest resources	The current polygon description is based on data
	inventory	conversion from a previous FRI product.
	conversion	
INFRARED	Infrared satellite	Note: This type of imagery is used to assess
	imagery	succession and distinguish hardwood versus conifer
		regeneration in young plantations.
MARKING pre-harvest site Assessment of the trees in a sta		Assessment of the trees in a stand for purpose of
	inspection /	establishing a silvicultural or operational prescription.
	marking	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 /	Visual assessment of a stand/polygon/ or
	reconnaissance	management area from a helicopter or fixed wing
		aircraft.
OCULARG	ocular estimate	Visual assessment of a stand/polygon/ or
	(ground)	management area using extensive ground survey
		methodologies (i.e., no detailed measurements).
OPC	operational cruise	Measurement of standing trees to determine the
		volume of wood on a given tract of land using an
		accepted sampling plan or design.
PHOTO	air photo	Photography at a conventional scale of 1:10,000 to
	interpretation	1:20,000.

Product Descriptions Inventory Information Specifications

Code	Option	Definition
PHOTOLS	large scale aerial	Photography at a scale larger than 1:10,000 (e.g.,
	photography	1:500, 1:1000).
PHOTOSS	small scale aerial	Photography at a scale smaller than 1:20,000 (e.g.,
	photography	1:100,000).
PLOTFIXD	fixed area plot	Data collected from a fixed area plot, or series of
		fixed area plots that represent the polygon (e.g., FRI –
		permanent inventory plot)
PLOTVAR	variable area	Data collected from a variable radius plot, or series of
	(radius) plot	variable radius plots that represent the polygon (e.g.,
		FRI calibration plot)
RADAR	radar satellite	Note: Radar imagery may provide for image
	imagery	separation among forest types when pre-existing
		forest and non-forest land cover classifications are
		incorporated.
REGENASS	regeneration	Survey data collected of a regenerated polygon area
	assessment	to determine the species composition, stand height,
		density, and condition of the regenerating forest. The
		surveys include seeding, survival, and stocking
		assessments.
SEMEXTEN	extensive	Generalized survey sampling methodologies used to
	silvicultural	determine if regeneration or management objectives
	effectiveness	have been met in relation to the Silviculture Ground
	monitoring survey	Rules (SGR) applied to the polygon (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	A rigorous survey sampling methodologies to
	silvicultural	determine if regeneration or management objectives
	effectiveness	have been met in relation to the Silviculture Ground
	monitoring survey	Rules (SGR) applied to the polygon (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.

Code	Option	Definition	
SPECTRAL	spectral satellite	Note: This type of imagery can be used to distinguish	
	imagery	and identify different forest and plantation types.	
SUPINFO	supplied	Spatial or tabular information provided by either the	
	information	MNRF or sustainable forest licensee that may include	
		natural or anthropogenic disturbance records and/or	
		silviculture activities on the polygon. The information	
		is incorporated into the polygon attributes and	
		provides a level of certainty to the polygon attributes,	
		like age. The information in the supplied data must be	
		updated to the year of the acquisition of imagery, i.e.,	
		a plant record of 2002 and the image acquisition date	
		is 2008, the age that has to be assigned to the	
		polygon is 2008 (YRSOURCE = 2008) and OYRORG =	
		2002 resulting in OAGE = 6.	

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

Stage 1 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 is NAT or starts with EST, then the SOURCE attribute will not equal ESTIMATE

FORMOD

Definition:

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

Format:

Code	Option	Definition
RP	Production	Productive forest areas at various stages of growth and
	Forest –	development, including areas that have been recently disturbed
	Regular	(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	Productive forest areas which are considered to be production
	Forest –	forest, but that are unavailable for timber production as
	Designated	determined through the forest management planning process.
	Management	That is, these areas have been identified as no-cut areas through
	Reserve	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
		period. 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	Productive forest land on which forest management activities
	Forest	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 (OSC, USC and SC) and the productive forest modifier (FORMOD) values assigned to a forested area. Through the development of a new FRI, areas assigned a site class value of 4 are also assigned a productive forest modifier value of PF (protection forest).

The productive forest modifier is a forest management decision that is based on more than just site class. Therefore, through the development of inventory products (PCI, BMI and OPI), areas may be re-assigned by the sustainable forest licensee or MNRF. Areas assigned a site class value other than 4 (e.g. 3) can 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 but this is quite rare.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then FORMOD must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

Stage 2 Validation: (when POLYTYPE is equal to FOR)

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

DEVSTAGE

Definition:

The **stage of development** attribute indicates the current state of growth and development for a productive forest stand. Note that some stands stages 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.

Product Descriptions Inventory Information Specifications

Format:

Code	Option	Definition	Туре
DEPHARV	recently	Productive forest area that was	recent
	disturbed by	recently disturbed by clearcut	disturbances
	harvest and has	harvesting and has not received a	
	received no	silvicultural treatment such as natural	
	regeneration/re	regeneration, seeding or planting.	
	newal treatment	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	Productive forest area that was	recent
	disturbed by	recently disturbed by natural causes	disturbances
	natural causes	(i.e., fire, blowdown, ice damage,	
	and has received	insect and disease) and has not	
	no regeneration	received a silvicultural treatment	
	/ renewal	such as natural regeneration, seeding	
	treatment	or planting. These areas do not have	
		advanced regeneration, or a distinct	
		or established regeneration layer.	

Code	Option	Definition	Туре
LOWMGMT	below	Productive forest stands which were	not
	regeneration	previously harvested and have not	satisfactorily
	standards due to	reached the regeneration standards	regenerated
	past	as described in an approved FMP.	
	management	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., crown	
		closure less than 25%).	

Code	Option	Definition	Туре
LOWNAT	below	Productive forest stands which were	not
	regeneration	previously disturbed by natural	satisfactorily
	standards due to	causes and have not reached the	regenerated
	natural causes /	regeneration standards as described	
	succession	in an approved FMP. 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., crown	
		closure less than 25%).	
NEWPLANT	recently	Productive forest areas which have	below
	renewed: mainly	been regenerated predominantly by	regeneration
	planted	planting, but have not been assessed	standards -
		as established	renewed
NEWSEED	recently	Productive forest areas which have	below
	renewed: mainly	been regenerated predominantly by	regeneration
	seeded	seeding, but have not been assessed	standards -
		as established	renewed
NEWNAT	recently	Productive forest areas which have	below
	renewed: mainly	been regenerated predominantly by	regeneration
	natural	natural means, but have not been	standards -
	regeneration	assessed as established (e.g. CLAAG, HARP)	renewed
ESTPLANT	established	Productive forest areas which were	regenerated
	mainly planted	regenerated predominantly from	forest stands
		planted stock and which have been	
		assessed as established.	

Code	Option	Definition	Туре
ESTSEED	established	Productive forest areas which were	regenerated
	mainly seeded	regenerated predominantly by	forest stands
		seeding and which have been	
		assessed as established.	
ESTNAT	established	Productive forest harvest areas which	regenerated
	mainly natural	were regenerated predominantly by	forest stands
	regeneration	natural means and which have been	
		assessed as established.	
NAT	natural stands	This classification will be used to	regenerated
		describe the natural forest areas that	forest stands
		have never been treated to date	
		(original forest).	
THINPRE	received pre-	Established productive forest areas	regenerated
	commercial	which have received a mid-rotation	forest stands
	thinning/spacing	thinning/spacing to promote the	
	treatment	growth of the best quality trees. The	
		trees selected for removal do not	
		result in a harvest of merchantable	
		volume.	
THINCOM	received	Established productive forest areas	forest stands
	commercial	which have received a mid-rotation	regenerated -
	thinning/spacing	partial harvest designed to promote	clearcut
	treatment	the growth of the best quality trees.	
		The harvested trees are removed	
		from the site and used for	
		commercial purposes.	

Product Descriptions Inventory Information Specifications

Code	Option	Definition	Туре
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	forest stands regenerated - clearcut
		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.	
SEEDTREE	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 seedbearing trees that are left singly or in small groups. The objective is to create an even-aged stand.	forest stands regenerated - clearcut

Code	Option	Definition	Туре
FRSTPASS	modified cut:	A partial harvest where the first	forest stands
	first pass	harvest operation removes	regenerated -
		target/specific merchantable tree	clearcut
		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.	
PREPCUT	received a	A shelterwood silvicultural system	forest stands
	preparatory cut	stage of management designed to	regenerated -
		remove undesirable species of any	shelterwood
		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	A shelterwood silvicultural system	forest stands
	cut	stage of management where trees	regenerated -
		are removed from a mature stand to	shelterwood
		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	A shelterwood silvicultural system	forest stands
	removal harvest	stage of management where	regenerated -
		overstorey trees are removed in one	shelterwood
		or more harvests in order to release	
		the established seedlings from	
		competition.	

Code	Option	Definition	Туре
LASTCUT	received a last	A shelterwood silvicultural system	forest stands
	removal harvest	stage of management where most of	regenerated -
		the remaining trees in the overstorey	shelterwood
		are removed. This is the removal of	
		the seed or shelter trees after the	
		regeneration has been effective.	
IRREGULR	received an	An irregular shelterwood stage of	Forest stands
	irregular	management where overstorey trees	regenerated -
	shelterwood	are removed in successive	shelterwood
	harvest	regeneration cuts with a long and	
		indefinite regeneration period	
		typically resulting in a multi-aged	
		stand.	
IMPROVE	received an	A selection silvicultural system stage	forest stands
	improvement	of management where a cut is made	regenerated -
	cut	in an uneven-aged stand primarily to	selection
		improve stand composition,	
		distribution and quality by removing	
		less desirable trees of any species.	
SELECT	received a	A selection silvicultural system stage	forest stands
	selection	of management where individual	regenerated -
	harvest	trees or groups of trees are selected	selection
		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.	

The stage of development attribute is not a derived attribute and is commonly modified from the first submission in the FRI. The population of this field requires a management decision based on both the current state and the past treatments. As an example, a forest stand was planted and the plantation failed (e.g. ingress, insect damage) yet it eventually met the regeneration standards and was declared established. The forest manager will now need to decide whether this stand receives a code of ESTPLANT or ESTNAT depending on the presence and potential influence of the planted stems that may still remain. The development stage

assignment will be independent of the yield assignment despite the fact that there may be a connection between the two.

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

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then DEVSTAGE must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

Stage 2 Validation: (when POLYTYPE is equal to FOR)

- If the DEVSTAGE attribute is NAT, starts with EST, IMPROVE, SELECT, SNGLTREE,
 THINCOM, FIRSTCUT, SEEDCUT, PREPCUT, FRSTPASS, BLKSTRIP, THINPRE then the
 stocking attribute should be greater than or equal to forty percent (OSTKG >= 0.40)
- If crown closure is less than 25% (UCCLO + OCCLO < 25) and silvicultural system is equal
 to CC (SILVSYS = CC) then the DEVSTAGE attribute should be low stocked or disturbed
 (NEWPLANT or NEWSEED or NEWNAT or LOWMGMT or LOWNAT or DEPHARV or
 DEPNAT)

YRDEP

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:

- 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 inventories will be populated with all disturbances (harvest and natural) which are identified in annual reports. The year of last disturbance for each productive forest stand should 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 regeneration standards.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then YRDEP must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct format
- The YRDEP must be less than the plan period start year

Stage 2 Validation: (when POLYTYPE is equal to FOR)

The value should be greater than or equal to 1900

DEPTYPE

Definition:

The **type of disturbance** attribute identifies the disturbance that occurred in the year recorded in the companion attribute YRDEP (year of disturbance). The disturbance may have affected the entire stand or only a portion of it.

Format:

Code	Option	Definition
BLOWDOWN	wind /	25% or greater of the basal area, crown closure or 25% or
	blowdown	greater of the polygon area has been modified by an
		identifiable blowdown event, either visual evidence or from
		supplemental information
DISEASE	disease	25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable disease event, either visual evidence or from
		supplemental information
DROUGHT	drought	25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable drought event, either visual evidence or from
		supplemental information
FIRE	fire	25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable fire event, either visual evidence or from
		supplemental information
FLOOD	flood	25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable flood event, either visual evidence or from
		supplemental information
HARVEST	harvest	Partial or full stand removal of timber. This includes mid-
		rotation or stand improvement operations where
		merchantable timber is removed. Further clarification is
		25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable fire event, either visual evidence or from
		supplemental information
ICE	ice damage	25% or greater of the basal area, crown closure or 25% or
		greater of the polygon area has been modified by an
		identifiable ice event, either visual evidence or from
		supplemental information

Code	Option	Definition
INSECTS	insects	25% or greater of the basal area, crown closure or 25% or greater of the polygon area has been modified by an identifiable insect event, either visual evidence or from supplemental information
SNOW	snow	25% or greater of the basal area, crown closure or 25% or greater of the polygon area has been modified by an identifiable snow event, either visual evidence or from supplemental information
UNKNOWN	unknown	Unknown is the default value where YRDEP is not equal to zero.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then DEPTYPE must be null

Stage 1 Validation: (where YRDEP ≠ 0)

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

Stage 2 Validation:

 If the development stage is depleted, new or established (DEVSTAGE = DEP, NEW or EST) then the disturbance type should not have a value of unknown (DEPTYPE = UNKNOWN)

OYRORG

Definition:

The **overstorey 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:

YYYY

The overstorey year of origin can be 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 established, 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 the regeneration standards from the forest management plan), 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 is established, 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 overstorey year of origin have a corresponding change to the year of data update attribute as this indicates the currency/vintage of the information and when the overstorey year of origin value was determined.

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

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OYRORG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- The attribute population must follow the correct format
- A zero or null value is not a valid code
- The OYRORG attribute value must be greater than or equal to 1600
- The OYRORG attribute must be less than the plan period start year

Stage 2 Validation: (when POLYTYPE is equal to FOR)

The OYRORG attribute value should not be greater than YRSOURCE attribute value

OSPCOMP

Definition:

This overstorey 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:

- 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

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	
Ве	Beech, American	Fagus grandifolia	
Bw	birch, white (or paper)	Betula papyrifera	
Ву	birch, yellow	Betula alleghaniensis	
Bn	Butternut	Juglans cinerea	
CE	cedar, all	Thuja spp.	
Cr	cedar, eastern red (redcedar)	Juniperus virginiana	
СН	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	
ОН	hardwoods, other		
He	hemlock, eastern	Tsuga canadensis	
Hi	hickory, all	Carya spp.	

Code	Common Name	Scientific Name
lw	ironwood (also called Eastern hop-hornbeam)	Ostrya virginiana
La	larch, eastern (also called Tamarack or American	Larix laricina
	Larch)	
Mh	Maple, hard (= sugar maple)	
Mr	Maple, red (also called soft maple)	Acer rubrum
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

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OSPCOMP is null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

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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 above 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.

OLEADSPC

Definition: The overstorey leading species attribute indicates the most prevalent species in

the forest stand (or in just the uppermost canopy layer if the stand canopy

contains two or more distinct layers) based on its percentage of crown closure.

Format:

use the same coding as is listed in the OSPCOMP (species composition) attribute

description

must be species listed in the overstorey species composition (OSPCOMP)

Note: This leading species attribute replaces the working group attribute (WG) that was

present in previous inventory products for determining the major species to manage for in a

forest stand.

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then OLEADSPC must be null

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Stage 1 Validation: (when POLYTYPE is equal to FOR)

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- The population of this attribute is mandatory
- The attribute population must follow the correct coding scheme
- The attribute value must be a species listed in the overstorey species composition (OSPCOMP)
- The attribute value must be the species with the greatest percentage or tied for the greatest percentage in the species composition (OSPCOMP)

OAGE

Definition: The **overstorey age** attribute contains the average age of the leading species in the overstorey canopy layer of the forest stand.

Format:

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OAGE must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- The attribute population must follow the correct format
- Zero or null values are only a valid code when DEVSTAGE is a depletion (DEPHARV or DEPNAT)

OHT

Definition:

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

Format:

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• Valid numeric values are from 0 through 40.0

Height is usually determined for the overstorey leading species.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OHT must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- The attribute population must follow the correct format
- The attribute value must be less than or equal to forty and greater than or equal to zero
 (OHT <= 40.0 and OHT >= 0.0)
- If the DEVSTAGE attribute does not start with DEP, NEW, or LOW, then the OHT attribute must be greater than zero (OHT > 0.0)

OCCLO

Definition:

The **overstorey crown closure** attribute contains the percent of crown closure of the forest stand (or of just the uppermost canopy layer if the stand canopy contains two or more distinct layers). Crown closure is defined as the percentage of ground area covered by the vertical projection of the tree crowns onto the ground.

Format:

The maximum crown closure value is 100%.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OCCLO must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The population of this attribute is mandatory

 If the DEVSTAGE attribute is not DEP or NEW then OCCLO must be greater than zero and less than or equal to 100 (OCCLO > 0 and OCCLO <= 100)

Stage 2 Validation: (when POLYTYPE is equal to FOR)

If DEVSTAGE attribute starts with DEP or NEW, then zero or null are valid codes

OSTKG

Definition:

The **overstorey 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:

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.

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

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regeneration survey, this information must be converted to a stocking value for the purpose of

updating the forest stand description information.

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then OSTKG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The population of this attribute is mandatory

• The attribute population must follow the correct format

If the DEVSTAGE attribute does not start with DEP or NEW or is not SEEDTREE then the

stocking attribute must be greater than zero and less than or equal to four (STKG > 0.00

and STKG <= 4.00)

Stage 2 Validation: (when POLYTYPE is equal to FOR)

If DEVSTAGE attribute starts with DEP or NEW, then zero or null are valid codes

The attribute value should be less than 2.5 (OSTKG <= 2.50)

OSC

Definition:

The **overstorey site class** attribute indicates a site quality estimate for a stand.

Overstorey site class is an indicator of site productivity and is determined using

the average overstorey height, overstorey age, and leading species, 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:

a number from 0 through 4

Code	Option
0	Best
1	Better
2	Good
3	Poor
4	Very poor

A value of 4 is 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 (OSC, USC and SC) and the productive forest modifier (FORMOD) values assigned to a forested area. Through the development of a new FRI, areas assigned a site class value of 4 (very poor) are also assigned a productive forest modifier value of PF (protection forest).

The productive forest modifier is a forest management decision that is based on more than just site class. Therefore, through the development of inventory products (PCI, BMI and OPI), areas may be re-assigned by the sustainable forest licensee or MNRF based on new field information. Areas assigned a site class value other than 4 (e.g., 3) can 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.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then OSC must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

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- The attribute population must follow the correct format
- The site class value must be greater than or equal to 0 and less than or equal to 4 (OSC
 >= 0 and OSC <= 4)

UYRORG

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:

- YYYY
- For additional information see OYRORG

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then UYRORG must equal zero or null
- If DEVSTAGE is DEPHARV and DEPNAT then UYRORG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR, VERT is equal to, TU, MO or MU)

- The attribute population must follow the correct format
- The value must be greater than or equal to 1800
- The UYRORG attribute must be less than the plan period start year

Stage 2 Validation: (when POLYTYPE is equal to FOR, VERT is equal to, TU, MO or MU)

- The UYRORG attribute value should not be greater than YRSOURCE attribute value
- The value should be greater than OYRORG (UYRORG > OYRORG)

USPCOMP

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:

- 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

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then USPCOMP must be null
- If DEVSTAGE is DEPHARV or DEPNAT then USPCOMP must be null.

Stage 1 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 OSPCOMP.
- Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey species composition must be entered (USPCOMP ≠ null).

ULEADSPC

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Definition:

The **understorey leading species** attribute indicates the most prevalent species in the forest stand (or in just the lower most predominant canopy layer if the stand canopy contains two or more distinct layers) based on its percentage of crown closure.

Format:

 use the same coding as is listed in the overstorey species composition attribute description

• must be species listed in the understorey species composition

Note: This leading species attribute replaces the working group attribute (WG) that was present in previous inventory products for determining the major species to manage for in a forest stand.

Stage 1 Validation:

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

• When POLYTYPE is not equal to FOR then ULEADSPC must be null

If DEVSTAGE is DEPHARV and DEPNAT then ULEADSPC must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

 The tree species in the understorey leading species are to be coded using the scheme listed in OSPCOMP.

 Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey leading species value must be entered (ULEADSPC ≠ null).

 The attribute value must be a species listed in the understorey species composition (USPCOMP)

 The attribute value must be the species with the greatest percentage or tied for the greatest percentage in the species composition (USPCOMP)

UAGE

Definition: The **understorey age** attribute contains the average age of the leading species in

the understorey canopy layer of the forest stand.

Format:

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then UAGE must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

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

 Zero or null values are only a valid code when DEVSTAGE is a depletion (DEPHARV or DEPNAT)

 Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey age value must be entered (UAGE > 0)

UHT

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 canopy or field samples, or from growth algorithms.

Format:

Valid numeric values are from 0 through 40.0

For additional information see OHT

Stage 1 Validation:

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

• When POLYTYPE is not equal to FOR then UHT must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct format
- Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey height value must be entered (UHT > 0)
- The attribute value must be less than or equal to forty and greater than or equal to zero
 (UHT <= 40.0 and UHT >= 0)

UCCLO

Definition:

The understorey crown closure attribute represents the percent of crown closure of the visible high intermediate, co-dominate, and dominate tree layer within the polygon for the understorey layer of trees. Crown closure for the understorey is the percentage of ground area covered by the vertical projection of the tree crowns onto the ground. Each defined layer within a stand requires a crown closure; however, for a polygon that is being solely interpreted with no applicable supplemental information, the combined crown closure of the two layers cannot exceed 100 percent (100%) . In the case of multi-layered or two-tiered stands where there is applicable field or supplemental information then, the total of crown closure for the two tiers must never exceed 200 percent (i.e., OCCLO + UCCLO <= 200%).

Format:

The maximum crown closure value is 100%.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then UCCLO must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• A zero value is a valid code

- Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey crown closure value must be entered (UCCLO > 0)
- The attribute value must be greater than zero and less than or equal to 100 (UCCLO > 0 and UCCLO <= 100), if entered

USTKG

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:

- 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 OSTKG.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then USTKG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The attribute population must follow the correct format

Stage 2 Validation:

- The attribute value should be less than 2.5 (USTKG <= 2.50)
- Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey stocking value should be entered (USTKG > 0)

USC

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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:

a number from 0 through 4

Code	Option
0	Best
1	Better
2	Good
3	Poor
4	Very poor

A value of 4 is 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 OSC.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then USC must equal zero or null
- If DEVSTAGE is DEPHARV and DEPNAT then USC must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR

• The attribute population must follow the correct format

- The site class value must be greater than 0 and less than or equal to 4 (USC > 0 and USC
 <= 4), if entered
- Where the stand canopy has been determined to be two-tiered (VERT = TO, TU, MO, or MU), then an understorey site class value must be entered (USC > 0)

INCIDSPC

Definition:

The **incidental species** attribute represents a species that is identified within the polygon but does not represent ten percent of the basal area in order to be included in the overstorey species composition attribute (OSPCOMP). The tree species represents a tree species that is present and is important to note.(e.g. important for wildlife assessment, high market value, or significant ecological value).

Format:

- use the same coding as is listed in the OSPCOMP (species composition) attribute description
- if an incidental species is not identified within the polygon then a value of NON will be entered

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then INCIDSPC must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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.

Stage 2 Validation: (when VERT is not equal to SV)

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• The INCIDSPC can be in the SPCOMP but should have value of less than 10 percent

VERT

Definition: The vertical stand structure attribute is intended to describe the number of

distinct tree layers (storeys) that can be identified within a forested polygon.

Format:

Code	Option	Definition
SI	single storey	Mainly a single story stand.
SV	single storey with	Mainly a single story stand with a veteran (super
	veterans	canopy) component representing less than 10% of the
		total crown closure for the stand.
TO	two-tiered	The stand canopy is composed of mainly two distinct
	overstorey used to	layers that have at least 3 meters in height difference or
	set DEVSTAGE	20 years of age difference, and each layer represents at
		least 10% of the total canopy crown closure for the
		stand. The overstorey is the layer used to assign the
		DEVSTAGE value during photo interpretation / inventory
		creation.
TU	two-tiered -	The stand canopy is composed of mainly two distinct
	understorey used to	layers that have at least 3 meters in height difference or
	set DEVSTAGE	20 years of age difference, and each layer represents at
		least 10% of the total canopy crown closure for the
		stand. The understorey is the layer used to assign the
		DEVSTAGE value during photo interpretation / inventory
		creation.
MO	two-tiered with	Mainly a two-tiered canopy with an additional veteran
	veterans - overstorey	(super canopy) component of less than 10% of the total
	used to set	stand canopy crown closure. The overstorey is the layer
	DEVSTAGE	used to assign the DEVSTAGE value during photo
		interpretation / inventory creation.
MU	two-tiered with	Mainly a two-tiered canopy with an additional veteran
	veterans-	(super canopy) component of less than 10% of the total
	understorey used to	stand canopy crown closure. The understorey is the layer
	set DEVSTAGE	used to assign the DEVSTAGE value during photo
		interpretation / inventory creation.

Code	Option	Definition
CX	complex or	A stand with a wide range of heights and ages to the
	continuous	point of no distinct layers being identifiable.

If the vertical stand structure is set to single story or complex (VERT = SI, SV, or CX), then a description of the stand is entered using only the overstorey attributes (e.g. OSPCOMP, OHT, OSC).

If the vertical stand structure is set to, TU, MO, or MU, then a separate description must be entered for each of the main canopy layers using the overstorey and understorey sets of attributes accordingly.

Stage 1 Validation:

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

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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
- Where VERT is equal to TO, TU, MO, and MU the OHT UHT must be greater than or equal to 3 or OAGE – UAGE must be greater than or equal to 20

HORIZ

Definition:

The **horizontal stand structure** attribute represents the distribution of the forest layers over the polygon area and is a solely interpreted attribute. The distribution of each tree layer and the associated presence of openings are assessed. If more than one condition is present, only the most prevalent one is recorded. The standard used for the interpretation of the attribute is an opening.

Format:

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Code	Option	Definition
SS	single stem	mainly single stem canopy structure
SP	single patch	single patch distinct from the rest of the canopy
FP	few patches	two or three distinct patches
MP	multiple patches	several distinct patches
OC	openings common	openings common – 3 or more
OU	openings uncommon	openings uncommon - 1or 2

Stage 1 Validation:

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

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

PRI_ECO and SEC_ECO

Definition: The ELC primary ecosite and ELC secondary ecosite contain the ecosite information that is defined as an ecological unit comprised of relatively uniform geology, parent material, soils, topography, and hydrology and consists of related vegetation conditions. An ecosite description is a vegetation description related to major vegetative attributes influencing site productivity and biological legacy, and should be relatively stable over moderate periods (20-40 years). Ecosite is the primary unit for delineation for both the forested and non-forested land. A complex of two forested ecosites is allowed to be recorded when more than one ecosite is present as long as the secondary ecosite represents at least 20% of the area of the polygon and the area associated with the secondary ecosite does not exist in a manner suitable for meeting the minimum polygon size for creating a new polygon. The PRI_ECO attribute indicates the primary or dominant ecosite

present with in the stand.

- Simple ecosite: (i.e. only PRI_ECO completed) A polygon assigned a single
 ecosite label and assumed to have as much as 20% of the polygon consisting of
 acceptable inclusions (as defined by the fact sheet) or eco-elements other than
 those considered "diagnostic" of the ecosite.
- Complex ecosite: (i.e. PRI_ECO and SEC_ECO are completed) A polygon is assigned two ecosite attributes when one ecosite condition exceeds 50% of the polygon (primary ecosite) and another ecosite condition exceeds 20% of the polygon (secondary ecosite), and the secondary ecosite does not exist in a manner suitable for representation meeting minimum polygon size. A common example of complex ecosites for a polygon would be a very shallow pine/spruce mix not large enough to differentiate from the surrounding dominant stand of moderately deep aspen/birch mix.

For more information about ecosites, including a fact sheet for each ecosite description, refer to: "Ecosystems of Ontario: Provincial Ecosites", May 21st, 2008, Ecological Land Classifications Working Group.

Format:

Ecosites are a maximum of 13 characters long. There are up to seven parts to each ecosite description; a series of case-sensitive codes and a number that are concatenated in a specific order. Each part has its own coding rules. The parts are concatenated together in the following order:

Information # of Characters

Geographic range 1

Ecosite number 3

Vegetative modifier 2*

substrate **D**epth modifier 2*

substrate Moisture modifier 1

substrate Chemistry modifier 1

vegetative cover clas**S** modifier 3

So the pattern is: GEEEVVDDMCSSS

*The vegetative modifier and depth modifier codes may be either 1 or 2 characters long. If only one character is entered, the second position is left blank. (The 13 character pattern must be maintained.) Likewise, the vegetative cover class modifier may be 1, 2 or 3 characters long.

If a particular section of information is not relevant to the ecosite, that position in the string is left blank. For example, substrate depth modifier information is not applicable for permanently flooded sites. In this situation, blanks will be inserted in the ecosite code string in the depth position so that the code maintains its overall 13 character length.

The minimum ecosite description is a combination of the first three parts: a geographic range, an ecosite number, and a vegetative modifier. Imagery interpretation can usually only determine the minimum ecosite description. Field sampling is required to determine some parts of an ecosite description. Note that this minimum description rule does not apply to ecosites having a geographic range of "U"; unclassified. These are generally just a range and number.

Information is recorded in each of the parts of an ecosite description as follows.

Geographic range (G): The province is divided into four areas primarily along ecoregion and eco-district boundaries. This division permits the use of a single ecosite key throughout Ontario. A single letter, uppercase code is used to represent each geographic range. A map of these geographic ranges is included after the description of the chemistry modifier. Areas having evidence of human presence (e.g., residential areas, commercial/industrial areas) are also identified. These areas are marked as "unclassified" regardless of their geographic location within the province.

Map of Geographic Ranges for Ecosite Coding



Code	Option
Α	Sub-arctic
В	Boreal
G	Great Lakes St. Lawrence (GLSL)
S	Southern
U	Unclassified (a special case scenario used by photo interpreters
	only)

Ecosite number (E): A three digit number representing the ecosite. Values range from 001 to

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224, plus 997 to 999 for unclassified areas. Refer to the list of codes following the geographic range map. Numbers less that 100 are right justified and zero filled to maintain proper positioning within the overall ecosite description pattern (e.g., 075)

Vegetative modifier (V): A one or two character code used to describe, in general terms, the conditions existing at the site. Single character code values are uppercase; two character code values are mixed case.

Code	Option	Definition
Tt	Tall Treed	Tree species ≥ 10m tall
TI	Low Treed	Tree species <10m tall
S	Shrub	tall or low shrub species
N	Not Woody	Any herbaceous or non-vascular vegetation
Х	Not Vegetated	<2% vascular cover, <10% bryophyte or foliose
		lichen cover, and unlimited crustose lichen cover

substrate depth modifier (D): A one or two character code representing the depth of the material above bedrock. All code values are uppercase.

Code	Option	Definition
R	Rock	
VS	Very Shallow	
S	Shallow	Depth of unconsolidated mineral material > 15 cm
		to ≤ 30 cm over rock or bedrock
M	Moderate	Depth of unconsolidated mineral material > 30 cm
		to ≤ 60 cm over rock or bedrock
MD	Moderately	Depth of unconsolidated mineral material > 60 cm
	Deep	to ≤ 120 cm over rock or bedrock
D	Deep	Depth of unconsolidated mineral material > 120
		cm over rock or bedrock

substrate moisture modifier: A single character code indicating the amount of water that the material above bedrock is capable of holding. Imagery interpretation cannot determine this value. Information collected from field sampling has this value as part of the ecosite description. All code values are lowercase.

Code	Option
d	dry
f	fresh
h	humid
m	moist
S	saturated
V	very moist
W	wet
Х	xeric

substrate chemistry modifier (C): A single character code representing the general chemical characteristic of the material above bedrock. Field sampling or other mapped data-sources are the only methods of collecting this information. Imagery interpretation cannot determine this value. All code values are lowercase.

Code	Option
а	acidic
b	basic
k	calcareous
n	non calcareous
Z	saline

Chemistry modifier information is not applicable to Keys 12a and 12b, Anthropogenic ecosites (i.e., codes 189 -200 and 997-999).

All ecosites in Key 10, Permanently Flooded or Hydric ecosites (i.e., codes 126 -156 and 222 - 224), are assigned the chemistry modifier "n" (for non-calcareous) unless ground data supports a calcareous call for mineral soils within the hydric ecosites.

vegetative cover class modifier (S): A one, two or three character code providing a general indication of site productivity, percent cover and vegetation type. Imagery interpretation cannot determine this value. Single character code values are upper case; two and three character code values are mixed case.

Code	Option
cTt	closed tall treed

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Code	Option
oTt	open tall treed
sTt	sparse tall treed
Tt	greater than 25% tall treed
TI	greater than 25% low treed
sTl	sparse low treed
St	tall shrub
sSt	sparse tall shrub
SI	low shrub
sSl	sparse low shrub
Н	herbaceous
sH	sparse herbaceous
Nv	non vascular
Х	not vegetated

An example of a full ecosite description would be:



which is: Boreal (geographic range), 055 (ecosite number), tall treed (vegetative modifier), moderate (substrate depth modifier), fresh (substrate moisture modifier), calcareous (substrate chemistry modifier), closed tall tree (vegetative cover class modifier); where 055 represents an aspen-birch hardwood.

Stage 1 Validation:

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

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- A blank or null value is not a valid code for PRI_ECO

Stage 2 Validation: (when POLYTYPE is equal to FOR)

• The attribute population should follow the correct coding scheme

ACCESS1 and **ACCESS2**

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:

Code	Option	Definition
GEO	geography	Area is not accessible due to geographic reasons. *
LUD	land use	An area is not accessible for forest management purposes due
	designation	to land use designation (e.g. a provincial or federal park,
		agreement forest, mining claim, native lands, federal lands).
NON	no accessibility	The area is accessible/reachable.
	considerations	
OWN	surrounding	An area of Crown land that is unreachable because it is
	ownership	surrounded by lands owned by another 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	An area of land that is owned by a party/parties other than the
	ownership	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.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory (ACCESS1 and ACCESS2)
- When POLYTYPE is not equal to FOR then ACCESS1 and ACCESS2 must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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
- The attribute value in ACCESS1 must not be equal to the attribute value in ACCESS2 unless both are NON

Stage 2 Validation: (when POLYTYPE is equal to FOR)

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

MGMTCON1, MGMTCON2 and MGMTCON3

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:

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).

Code	Option	Definition
COLD	Permafrost	Poor growing conditions due to the trees in the
		polygon area being subject to permafrost
		conditions.
DAMG	physical/natural	A stand which contains trees that are damaged,
	disturbance/damage	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 –	The trees within a polygon that are exhibiting
	no indicator	stagnated growth where there is no discernible
		cause for the poor growing condition.
ROCK	exposed bedrock / rocky	A forested polygon where the rocky conditions
	outcrops	may limit accessibility for forestry equipment
		and/or present a potential for soil erosion due to
		operations.
SAND	blow sand / exposed fine sand,	A forested polygon where forest regeneration
	shallow or no humus	may be difficult due to the potential for wind
		caused soil erosion or from a significant reduction
		of available soil moisture for a regenerating tree
		layer.
SHRB	heavy shrub / brush	A forested polygon where forest regeneration
		may be difficult due to the potential for shrub or
		brush competition.
SOIL	shallow soils	A forested polygon where forest regeneration or
		harvesting operations may be difficult due to
		shallow soils being identified and interpreted.
		Values within the PRI_ECO and SEC_ECO should
		also indicate a shallow soil conditions with the
		appropriate ecosite code.

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Code	Option	Definition
STEP	steep slopes	A forested polygon where the entire or partial area of the polygon contains steep slopes that
		may influence forest regeneration and operations.
		Slope conditions that are considered to be "steep"
		are ≥ 35 percent. PRI_ECO and SEC_ECO should
		also indicate hydric conditions with the
		appropriate ecosite codes.
UPFR	unknown concern – historic	Productive forest land containing obvious physical
	production forest reserve (PFR)	features which may limit, but does not prevent,
	area	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	Productive forest land on which forest
	protection forest (PF) area	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
WATR	vertical or horizontally	A forested polygon where the entire or partial
WAIN	fluctuating ground water	A forested polygon where the entire or partial area of the polygon may be influenced by
	nuctuating ground water	fluctuating groundwater or open water that may
		negatively influence forest regeneration and/or
		operations. PRI ECO and SEC ECO should also
		indicate hydric conditions with the appropriate
		hydric ecosite codes.
WETT	poorly drained – high water	A forested polygon where the entire or partial
	table and the potential to	area of the polygon may be influenced by
	reduce water table depth	fluctuating groundwater that may negatively
		influence forest regeneration and/or operations
		commonly associated with hydric conditions.
		PRI_ECO and SEC_ECO should also indicate hydric
		conditions with the appropriate hydric ecosite
		codes.

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.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
 (MGMTCON1 and MGMTCON2 and MGMTCON3)
- When POLYTYPE is not equal to FOR then MGMTCON1 (and MGMTCON2 and MGMTCON3) must be null or ISLD

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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 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
- If the FORMOD attribute equals PF, then the MGMTCON1 attribute should not equal
 NONE
- The attribute value in MGMTCON1 must not be equal to the attribute value in MGMTCON2 or the attribute value in MGMTCON3 unless all are NONE

Inventory Information Specifications

Stage 2 Validation;

If the SC attribute equals 4, then the MGMTCON1 attribute should not equal NONE

YRORG

Definition:

The model year of origin attribute indicates the average year that the species having the greatest relative abundance (in terms of basal area) within the species composition field (SPCOMP), came into existence.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value will be used in the modelling and analysis of the forest management plan and provided with the submission of the BMI and OPI.

Format:

YYYY

For additional information see OYRORG

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then YRORG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

The population of this attribute is mandatory

The attribute population must follow the correct format

A zero or null 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

Stage 2 Validation: (when POLYTYPE is equal to FOR)

- The YRORG attribute value should be greater than or equal to OYRORG
- The YRORG attribute value should be less than or equal to UYRORG
- The YRORG attribute value should not be greater than YRSOURCE

SPCOMP

Definition:

This **model species composition** attribute indicates the tree species that are present in the forest stand canopy and the proportion of cover that each species occupies.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value will be used in the modelling and analysis of the forest management plan and provided with the submission of the BMI and OPI.

Format:

- 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

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then SPCOMP must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

Inventory Information Specifications

• proportion values in the string must sum to 100

• The tree species are to be coded using the scheme listed in OSPCOMP.

LEADSPC

Definition: The model leading species attribute indicates the most prevalent species in the

forest stand canopy.

Note: The population of this field is a management decision based on the information found in

the overstorey and understorey attributes delivered in the FRI. This value will be used in the

modelling and analysis of the forest management plan and provided with the submission of the

BMI and OPI.

Format:

use the same coding as is listed in the OSPCOMP attribute description

must be species listed in SPCOMP

Note: This leading species attribute replaces the working group attribute (WG) that was

present in previous inventory products for determining the major species to manage for in a

forest stand.

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then LEADSPC must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The population of this attribute is mandatory

The attribute population must follow the correct coding scheme

• The attribute value must be a species listed in the species composition (SPCOMP)

• The attribute value must be the species with the greatest percentage or tied for the

greatest percentage in the species composition (SPCOMP)

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AGE

Definition:

The **model age** attribute indicates the average age of the dominant and codominant trees based on the leading species in the forest stand canopy 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.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value will be used in the modelling and analysis of the forest management plan and provided with the submission of the BMI and OPI.

Format:

• 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, 2028 and the year of origin for a forest stand is 1948, 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 FMP tables, schedules, and reports. Age class, similar to age, must also be determined based on the start date of the plan period.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then AGE must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- The attribute population must follow the correct format

Inventory Information Specifications

• Zero or null values are only a valid code when DEVSTAGE is a depletion (DEPHARV or

DEPNAT)AGE must be equal to the plan period start year minus YRORG

HT

Definition: The **model height** attribute indicates the estimated average tree height (in

meters).

Note: The population of this field is a management decision based on the information found in

the overstorey and understorey attributes delivered in the FRI. This value will be used in the

modelling and analysis of the forest management plan and provided with the submission of the

BMI and OPI.

Format:

• Valid numeric values are from 0 through 40.0

For additional information see OHT

Stage 1 Validation:

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

• When POLYTYPE is not equal to FOR then HT must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The population of this attribute is mandatory

• The attribute population must follow the correct format

The attribute value must be less than or equal to forty and greater than or equal to zero

 $(HT \le 40.0 \text{ and } HT \ge 0)$

If the DEVSTAGE attribute does not start with DEP, NEW, or LOW, then the HT attribute

must be greater than zero (HT > 0)

Stage 2 Validation: (when POLYTYPE is equal to FOR)

The HT attribute value should be greater than or equal to UHT

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The HT attribute value should be less than or equal to OHT

CCLO

Definition: The **model crown closure** attribute contains the percent of crown closure of the

forest stand. Crown closure is defined as the percentage of ground area covered

by the vertical projection of the tree crowns onto the ground.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value may be used in the modelling and analysis of the forest management plan and provided with the submission of the

BMI and OPI.

Format:

The maximum crown closure value is 100%.

Stage 1 Validation:

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

• When POLYTYPE is not equal to FOR then CCLO must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• The population of this attribute is mandatory

• A zero or null value is a valid code

 If the DEVSTAGE attribute is not DEP or NEW crown closure must be greater than zero and less than or equal to 100 (OCCLO > 0 and OCCLO <= 100)

Stage 2 Validation: (when POLYTYPE is equal to FOR)

If DEVSTAGE attribute starts with DEP or NEW, then zero or null are valid codes

Inventory Information Specifications

STKG

Definition:

The **model stocking** attribute indicates a qualitative measure of the density of tree cover. 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.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value will be used in the modelling and analysis of the forest management plan and provided with the submission of the BMI and OPI.

Format:

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then STKG must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The population of this attribute is mandatory
- The attribute population must follow the correct format
- If the DEVSTAGE attribute does not start with DEP or NEW or is not SEEDTREE then the stocking attribute must be greater than zero and less than or equal to four (STKG > 0.00 and STKG <= 4.00)

Stage 2 Validation: (when POLYTYPE is equal to FOR)

- If DEVSTAGE attribute starts with DEP or NEW, then zero or null are valid codes
- The attribute value should be less than 2.5 (STKG <= 2.50)

SC

80

Definition: The **model site class** attribute indicates a site quality estimate of the forest stand.

Note: The population of this field is a management decision based on the information found in the overstorey and understorey attributes delivered in the FRI. This value will be used in the modelling and analysis of the forest management plan and provided with the submission of the BMI and OPI.

Format:

• a number from 0 through 4

Code	Option
0	Best
1	Better
2	Good
3	Poor
4	Very poor

A value of 4 is 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 OSC.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then SC must equal zero or null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- The attribute population must follow the correct coding scheme
- The site class value must be greater than or equal to 0 and less than or equal to 4 (SC >= 0 and SC <= 4)

Inventory Information Specifications

MANAGED

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:

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.	

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then MANAGED must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR)

- 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

SMZ

Definition:

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

Format:

user defined

A strategic management zone is a geographical separation or sub-division of the area within a forest management unit. A strategic management zone may influence strategic analysis, and operational planning. Strategic management zones may represent either strategic objectives

(e.g. caribou habitat objectives, achieve landscape pattern objectives) or areas with distinct ecological characteristics.

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

Strategic management zone information may influence forest modelling and landscape diversity analysis. Strategic management zones are also used to assess the spatial distribution of harvest over the first four FMP periods (FMPM Part A, Section 1.2.5.2).

Note: Sustainable forest licensees 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 (i.e. every polygon with a POLYID).

Stage 1 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

PLANFU

Definition:

The **plan 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:

user defined

Inventory Information Specifications

Sustainable forest 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 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 FMP tables, schedules, and reports as

well as to support forest modeling, landscape diversity analysis, and the development of a

management strategy.

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then PLANFU must be null or blank

Stage 1 Validation: (when POLYTYPE is equal to FOR)

The population of this attribute is mandatory

A blank or null value is not a valid code

AU

Definition:

The analysis units are refined forest units used in modelling to more accurately project forest development. The degree to which forest units and analysis units are represented in the models depends on the strategic models used in the decision support system (i.e. spatial versus non-spatial).

Format:

user defined

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then AU must be null or blank

Stage 1 Validation: (when POLYTYPE is equal to FOR)

• A blank or null value is a valid code

AVAIL

Definition: The availability indicator attribute identifies which portions of the managed

Crown production forest are available for timber production or not.

Format:

Code	Option	Definition	
Α	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 FMP	
		(e.g., area of concern prohibition of operations reserve).	

Sustainable forest 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 prohibitions of operation 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 (RF), production forest – designated management reserve (MR), or protection forest (PF). 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.

Inventory Information Specifications

The decision regarding the availability of a forest stand area for forest 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 table FMP-3, Summary

of Managed Crown Productive Forest by Forest Unit.

Stage 1 Validation:

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

When POLYTYPE is not equal to FOR then AVAIL must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR and OWNER is equal to 1)

• 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 MANAGED attribute equals U, then the AVAIL attribute must be U

Stage 2 Validation: (when POLYTYPE is equal to FOR and OWNER is equal to 1)

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

SILVSYS

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:

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, in narrow strips, or in irregular patterns. 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. Sustainable forest 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, sustainable forest licensees may identify a more appropriate silvicultural system based on the forest unit for the purposes of the new FMP. 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.

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Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then SILVSYS must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR and AVAIL = A)

- 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

NEXTSTG

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:

Code	Option	Option Definition	
THINPRE	will receive a	Established productive forest areas which receive a mid-	
	pre-	rotation partial harvest (reduction in the growing stock)	
	commercial	that is designed to meet various objectives such as	
	thinning/spaci	improving tree spacing, removing trees not suited to the	
	ng treatment	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	Established productive forest areas which receive a mid-	
	commercial	rotation partial harvest (reduction in the growing stock)	
	thinning/spaci	that is designed to meet various objectives such as	
	ng treatment	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.	

Code	Option	Definition
CONVENT	will receive a	The removal of most or all of the existing trees in a stand
	conventional	(or a number of adjacent stands) in one operation, so
	clearcut	that new seedlings become established in a fully exposed
		micro-environments. Harvesting patterns include
		conventional clearcuts, block cuts and patch cuts.
BLKSTRIP	will receive a	The removal of a portion of the existing trees in a stand in
	modified cut:	progressive strips in more than one operation so that the
	block or strip	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	An even-aged, silvicultural system that retains mature
	modified cut:	standing trees scattered throughout the cut block to
	seed tree	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.

Code	Option	Definition
Code SCNDPASS	Option will receive a modified cut: next / second- pass	Pofinition 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/ sustainable forest 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.
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.
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 most 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.

Code	Option	Definition		
IRREGULR	will receive an	An irregular shelterwood stage of management where		
	irregular	overstorey trees are removed in successive regeneration		
	shelterwood	cuts with a long and indefinite regeneration period		
	harvest	typically resulting in a multi-aged stand.		
IMPROVE	will receive an	A selection silvicultural system stage of management		
	improvement	where a cut is made in an uneven-aged stand primarily to		
	cut	improve stand composition, distribution and quality by		
		removing less desirable trees of any species.		
SELECT	will receive a	A selection silvicultural system stage of management		
	selection	where individual trees or groups of trees are selected for		
	harvest	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.		

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. Sustainable forest 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 period. 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).

Stage 1 Validation:

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

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When POLYTYPE is not equal to FOR then NEXTSTG must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR and AVAIL = A)

- 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

YIELD

Definition:

The **yield** attribute contains the user defined label that identifies the projected yield curve. Yield is defined by the FMPM as the actual or estimated amount of product from a tree or a forest stand, or other specified area.

Format:

user defined (e.g. PRSNT, HIGH, MED, LOW)

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then YIELD must be null

Stage 1 Validation: (when POLYTYPE is equal to FOR and AVAIL = A)

- The population of this attribute is mandatory
- A blank or null value is not a valid code

OMZ

Definition:

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

Format:

user defined

An operational management zone represents areas with distinct operational constraints (e.g. accessibility, other constraints on harvest operations, fisheries, 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 FMP. If the sustainable forest licensee populates operational management zone, they must provide the operational management zone identification code or a name that describes the operational management zone for all licenced Crown lands (i.e. every polygon with a POLYID) within the perimeter of the operational management zone.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code

SGR

Definition: The **silviculture ground rule** attribute information is a unique code assigned to each available forest stand during preparation of the FMP.

Format:

- user defined
- must be a code from table FMP-4, Silvicultural Ground Rules, and must be consistent
 with the Areas Selected for Operations maps for stands greater than equal to 30 years
 of age.

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- When POLYTYPE is not equal to FOR then SGR must be null

4.1.5 Data Transfer and Schedule

Inventory information is included with the planning inventory submission, BMI submission, the draft and final plan submissions and is subject to those timelines. Refer to Chapter 5 Submission File for more information.

4.1.6 Review and Approval

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

4.1.7 Planning Composite Inventory

4.1.7.1 Description Intent and Intended Use

The planning composite inventory is required to meet the planning inventory checkpoint.

The forest resources inventory product as described in the FIM Forest Resources Inventory Technical Specifications is the foundation for the planning composite inventory product. The planning composite inventory contains updates to the forest resources inventory as a result of actual forest management activities and natural disturbances that occurred between the delivery of the forest resources inventory and the start of the planning process. The source of forest management activities information and natural disturbance information is found in approved annual reports.

The planning composite inventory is a single spatial data layer created by combining the updated forest resources inventory and the updated base information, as described in the FIM Base and Values Technical Specifications.

The approved PCI will be included as part of the draft and final plan submissions as per Section 5.

The following are examples of updates that may be considered in the development of a planning composite inventory:

- Combining buffered centreline features, such as roads, railways, and transmission, communications or other utility lines, with the forest resource inventory. 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 forest resource inventory.
- 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.

4.1.7.2 Naming Convention

A standard naming convention will be used for the planning composite inventory layer. This naming convention will facilitate the 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>PCI<part number>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10-year planning period (e.g.,
	2028 is 28).
PCI	Letters "PCI" representing P lanning C omposite I nventory.
<part number=""></part>	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.
<file extension=""></file>	Include a file extension if required as described in Section 4.1.2

4.1.7.3 Format

Spatial Requirements

The planning composite inventory layer is a polygon feature that must be created in accordance with the direction specified in Section 4.1.4. The PCI must not have gaps or overlapping polygons.

Tabular Requirements

The feature attributes associated with the planning composite inventory are to be submitted in ESRI supported file format feature attribute table. The fields listed in the table in Section 4.1.4 and identified in the PCI field are a minimum requirement for this feature attribute table and additional fields can be included as needed.

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 period. The expected changes can be any combination of planned harvest areas that are expected to be harvested before the end of the current plan period 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 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 may be used to facilitate operational planning and the selection of stands for operations in the new plan. The changes may also be used for any spatial analysis (e.g., Ontario Landscape Tool) during operational planning. The updated forecast depletions layer will be submitted with the planning composite layer as part of the draft and final plan 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>.<file extension>

where:

Inventory Information Specifications

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10-year plan period (e.g., 2028 is
	28).
FDP	Letters "FDP" representing Forecast Depletions.
<part number=""></part>	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.
<file extension=""></file>	Include a file extension if required as described in Section 4.1.2

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 feature that must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The feature attribute table contains attributes associated with the forecast depletions .The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table(e.g. area, perimeter, length,< cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
FSOURCE	8	character		source of forecast
FYRDEP	4	integer		forecast year of disturbance
FDEVSTAGE	8	character		forecast development stage

FSOURCE

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:

For codes and additional information see SOURCE.

The FSOURCE attribute code that will most commonly be used is FORECAST for all of the forecast depletions that will occur by the end of the 10 year plan period.

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

Stage 1 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

FYRDEP

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:

YYYY - For additional information see YRDEP

Product Descriptions Inventory Information Specifications

Stage 1 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 or null value is not a valid code

Stage 2 Validation:

• The value should not be less than the plan period start year minus 4

FDEVSTAGE

Definition: The forecast development stage attribute indicates the expected state of

growth and development for a productive forest stand.

Format: 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 the strategic planning. The most critical change in forest structure will be the disturbance activity.

Stage 1 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

4.1.9 Base Model Inventory

4.1.9.1 Description, Intent and Intended Use

The provision of the BMI will support the review and approval of the base model inventory and base model progress checkpoint. The BMI will be used to update the FMP tables that were created based on the PCI, in particular table FMP-1, Management Unit Crown Land Summary. The BMI will be used to populate table FMP-3.

The approved PCI layer will be updated with the forecast depletions layer and any other spatial or tabular data that will be required for modelling purposes (e.g. Caribou Conservation Plan(CCP) range line, Dynamic Caribou Habitat Schedule (DCHS), strategic management zones (SMZ)) into one spatial data layer that is the BMI layer. The creation of the BMI requires that forest stand description information from the PCI be updated with information from the forecast depletions to reflect the estimated result of depletions planned for the remainder of the current plan period.

This BMI provides the necessary information to generate the inputs for spatial and non-spatial models required for strategic modeling. The BMI will normally not be revised following the Regional Director preliminary endorsement of the long-term management direction (LTMD) unless new, changed or corrected information is available that significantly alters the LTMD. The appropriate task team and plan advisors will determine if updates to the base model inventory and a resubmission of the base model inventory are required.

The forest management decision of selecting a managed forest stand canopy from the planning composite inventory will be populated in the appropriate forest classification attributes (e.g. SPCOMP, AGE, SC, YIELD). The forest classification attributes will be populated for forested polygons with the exception of operational management zones.

The approved BMI will be included as part of the draft and final plan submissions as per Section 5.

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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator .
<year></year>	Two digit numeric start year of the ten-year plan period (e.g., 2028 is
	28).
BMI	Letters "BMI" representing Base Model Inventory.
<part number=""></part>	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.
<file extension=""></file>	Include a file extension if required as described in Section 4.1.2

4.1.9.3 Format

Spatial Requirements

The base model inventory layer is a polygon feature that must be created in accordance with the direction specified in Section 4.1.4. The BMI must not have gaps or overlapping polygons.

Tabular Requirements

The tabular attributes associated with the base model inventory layer are to be included in the feature attribute table. The fields listed in the table in Section 4.1.4 and identified in the BMI field are a minimum requirement for this feature attribute table and additional fields can be included as needed.

4.1.10 Operational Planning Inventory

4.1.10.1 Description, Intent and Intended Use

The operational planning inventory is required to be submitted with the draft and final plan. This product will be used to support operational planning and FMP table development. Information contained in the operational planning inventory (OPI) is required to be used in conjunction with the information in the operational layers in order to populate FMP tables (e.g. the planned or contingency harvest areas and volumes.) The OPI will not be used to update the landbase FMP tables (i.e. FMP-1, FMP-3) since these are populated with the data from the BMI.

The PCI and BMI are submitted prior to the endorsement of the long term management direction (LTMD) and therefore do not reflect all of the management decisions that are necessary to implement the forest management plan. An example of the forest management decisions to be included is the SGR and operational management zone values that are only required to be submitted in the OPI.

This management decision information from the approved LTMD will be incorporated with the appropriate planning inventory information (i.e. BMI, PCI) in order to create the OPI. The process of incorporating the information is not described in the FIM technical specifications since it may be performed in many different ways.

Actual forest management activities and natural disturbances that occurred between the delivery of the approved planning composite inventory and plan start are not required to be included in the OPI and any forecast depletions information will not be included in the OPI.

4.1.10.2 Naming Convention

A standard naming convention will be used for the operational planning 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>OPI<part number>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator .
<year></year>	Two digit numeric start year of the ten-year plan period (e.g., 2028 is
	28).
OPI	Letters "OPI" representing O perational P lanning I nventory.
<part number=""></part>	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.
<file extension=""></file>	Include a file extension if required as described in Section 4.1.2

4.1.10.3 Format

Spatial Requirements

The operational planning inventory is a polygon feature that must be created in accordance with the direction specified in Section 4.1.4. The OPI layer must not have gaps or overlapping polygons.

Tabular Requirements

The tabular attributes associated with the operational planning inventory layer are to be included in the feature attribute table. The fields listed in the table in Section 4.1.4 and identified in the OPI field are a minimum requirement for this feature attribute table and additional fields can be included as needed.

Note: It is a best practice to submit the OPI with the overstorey and understorey attributes to provide a more complete picture of the stand. This additional detail can be useful during operational planning.

4.2 Operational Planning Information Specifications

4.2.1 Description, Intent and Intended Use

The operational planning information is a set of layers which provide information on:

- planned harvest;
- areas of concern (AOC);
- planned residual patches;
- planned road corridors;
- operational road boundaries;
- existing road use management strategy inventory;
- existing water crossing inventory;
- planned aggregate extraction areas; and
- tree improvement.

These products will be used to facilitate the MNRF review of the FMP and used to inform the stakeholders as part of public consultation.

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).

Additional non-standard spatial information products should follow a similar naming convention and must only contain numeric values from 0 to 9, characters from A to Z and underscore.

File extensions are defined by the ESRI supported file exchange format chosen. Examples of ESRI supported file formats accepted by the FI Portal are:

1. Shapefiles: the shapefile consists of 4 mandatory file extensions (i.e. .shp, .shx. .dbf, .prj)

Example:

- MU123 28PHR00.shp
- MU123 28PHR00.shx
- MU123_28PHR00.dbf
- MU123_28PHR00.prj
- 2. File Geodatabase (GDB) is a container that can hold single or multiple feature classes. All feature classes must be in the root of the File GDB.

Example:

- MU123_28PHR.GDB (single feature class in a FGDB)
 - MU123_28PHR00
- MU123_2028_FMP.GDB (multiple feature classes in FGDB)
 - ➤ MU123 28PHR00
 - > MU123_28AOC00
- 3. ESRI ArcInfo interchange file (E00) is a proprietary ESRI file format intended to support the transfer between ESRI systems of different types of geospatial data used in ESRI software.

Example:

MU123_28PHR00.E00

OR

- MU123 28PHR01.E00 (first multiple layer submitted)
- MU123 28PHR02.E00 (second multiple layer submitted)

4.2.3 Metadata

Metadata requirements include the use of standard naming conventions and submission details that are collected when FMP files are submitted to 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).

Validation

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 non-compliance will result in a required alteration and resubmission.

Stage 2 validation routines assess FMP product submission files for anomalies and uncommon data relationships. These warnings will be provided in a Stage 2 report. Anomalies identified at Stage 2 **do not result in an automatic rejection** or required alterations of the submission. The MNRF will use the Stage 2 validation report to inform additional manual validation or a discussion if required.

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 unioned with the operational planning inventory.

The planned harvest layer contains planned harvest areas with associated unique harvest block identifier(s) for the ten-year plan period. The planned harvest layer will include and distinguish between: regular, salvage, contingency, bridging, redirected, accelerated, and second-pass harvesting for the ten-year plan period.

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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10 year plan period (e.g., 2028 is
	28).
PHR	Letters "PHR" representing Planned Harvest.
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not
	permissible and therefore multiple layers will not exist.
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.7.3 Format

Spatial Requirements

The planned harvest layer contains only polygon features. This layer 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 feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table (e.g. area, perimeter, length,< cover name>#, <cover name>-ID).

field name	maximum width	field type	decimal places	attribute description
BLOCKID	25	character		harvest block identifier
SILVSYS	2	character		silviculture system
HARVCAT	8	character		harvest category

BLOCKID

Definition:

The harvest block identifier attribute is a unique user defined label for the tenyear plan period associated with polygons planned for harvest that are in proximity of each other for practical implementation of operations.

Format:

user defined

- 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

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SILVSYS

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:

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, in narrow strips, or		
		in irregular patterns. Regeneration is natural or artificial.		

- 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

HARVCAT

Definition: The harvest category attribute is an indication of the general type of harvest

activity that is planned to occur on an area.

Format:

Code	Option	Definition		
BRIDGING	bridging	Areas which were scheduled for harvest in the current		
	operation	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	The area set aside to accommodate unforeseeable		
	harvest area	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		
REGULAR	planned	This is the "planned harvest area" for the 10 year plan		
	harvest	period. The planned harvest area is the total harvest area		
		that has been selected for normal harvest during the 10 year		
		plan period of the new forest management plan.		
SALVAGE	salvage	The salvage harvest is the areas where the recovery or		
	harvest area	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	Areas to be harvested under a pest management plan and		
	harvest	count against the available harvest area of the FMP.		
ACCELER	accelerated	Areas to be harvested under a pest management plan and		
	harvest	are areas in addition to the available harvest area of the		
		FMP.		

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Code	Option	Definition		
SCNDPASS	second-pass	For areas managed using the clearcut silvicultural system,		
	harvest	harvest may be planned in two passes. This is normally		
		when species within the stand are harvested and utilized by		
		different logger/contractor/ sustainable forest 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.		

- 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 harvest category is second pass (HARVCAT = SCNDPASS), then the silvicultural system must be clearcut (SILVSYS = CC).

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 sustainable forest licensee and appropriate task 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 AOCs associated with areas of operations, road corridors, operational road boundaries, existing roads planned to be used for forest management purposes, aggregate pits and aggregate extraction areas. The layer includes detailed AOCs for the ten-year plan period.

AOCs for tree improvement activities are normally only required for modified operations or where a value may be impacted by tree improvement 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.

For areas identified for bridging harvest operations, second-pass harvest operations and plan extensions, the AOCs identified in the current plan may 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 exist 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.

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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management unit=""></management>	The three digit FMU number, pad left with zeros as required (e.g.,
	001).
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028
	is 28).
AOC	Letters "AOC" representing A rea o f C oncern.
<layer number=""></layer>	This value is used when several AOC layers are submitted. The
	default value is 000 where the product is submitted as a single
	entity.
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.8.3 Format

Spatial Requirements

The area of concern layer contains only polygon features. This layer must be created in accordance with the direction specified in Section 4.1.4. This layer may contain overlapping features when submitted as a shapefile or as a feature class in a file geodatabase.

Tabular Requirements

The tabular attributes associated with the area of concern layer are to be included in the feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table (e.g. area, perimeter,length,< cover name>#, <cover name>-ID).

field name	maximum width	field type	decimal places	attribute description
AOCID	15	character		AOC identifier
AOCTYPE	1	character		AOC type

AOCID

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-11 and the supplementary documentation of the FMP. 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:

user defined

Stage 1 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

AOCTYPE

Definition:

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

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Format:

Code	Option	Definition
М	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.

- 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

4.2.9 Planned Residual Patches

4.2.9.1 Description, Intent and Intended Use

The planned residual patches layer will enable MNRF to verify the information in table FMP-12, Planned Harvest Area, when united with the planned harvest layer, the area of concern layer, and the operational planning inventory.

The planned residual patches layer will identify areas within the planned harvest that are not part of the allowable harvest area. The text of the FMP will describe the conditions applied to the residual areas.

The planned residual patches layer contains planned residual patches areas for the ten-year plan period.

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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028 is
	28).
PRP	Letters "PRP" representing Planned Residual Patches.
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not
	permissible and therefore multiple layers will not exist.

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Part	Description
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.9.3 Format

Spatial Requirements

The planned residual patches layer contains only polygon features. This layer 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 feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table(e.g. area, perimeter, length,< cover_name>+#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
RESID	10	character		residual patch identifier

RESID

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: user defined

- 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

4.2.10 Planned Road Corridors

4.2.10.1 Description, Intent and Intended Use

This layer contains planned primary and branch road corridors for new construction. It also includes planned road re-alignment corridors to identify eligible areas for harvest of trees outside of the existing road right of way to enable road construction. Existing roads not being re-aligned will not have corridors. The layer will identify the selected corridors including re-alignment corridors for the 20-year planning horizon and identify the roads to be constructed during the ten-year plan period.

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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10 year plan period (e.g., 2028 is
	28).
PRC	Letters "PRC" representing Planned Road Corridor.
<part number=""></part>	This value will always be 00 (default).
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.10.3 Format

Spatial Requirements

The planned road corridors layer contains only polygon features. This layer must be created in accordance with the direction specified in Section 4.1.4. This layer may contain overlapping features when submitted as a shapefile or as a feature class in a file geodatabase.

Tabular Requirements

The tabular attributes associated with the planned road corridors layer are to be included in the feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table(e.g. area, perimeter, length,< cover name>#, <cover name>-ID).

field name	maximum	field type	decimal	attribute description
	width		places	
ROADID	30	character		road identification
ROADCLAS	1	character		road class
TRANS	4	integer		road transfer year
ACYEAR	4	integer		access control year
ACCESS	8	character		road access control
DECOM	4	character		decommissioning type
INTENT	30	character		MNRF intent
MAINTAIN	1	character		road maintenance
MONITOR	1	character	-	road monitoring
CONTROL1	4	character		road access control type
CONTROL2	4	character		road access control type

ROADID

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:

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

Stage 1 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

ROADCLAS

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:

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.	
В	branch	A branch road is a road, other than a primary road, that branches	
Ь	Dianch	off an existing or new primary or branch road, providing access to, through or between areas of operations on a management unit	

- 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

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TRANS

Definition:

The **road transfer year** attribute indicates a four-digit number representing the first year of the 10 year planning period that the transfer of responsibility to the MNRF is anticipated to take effect. If there is no intent to transfer responsibility to MNRF during the future 20-year period there is no need to specify a year.

Format:

YYYY

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A zero or null value is a valid code
- If TRANS value is not equal to zero (TRANS ≠ 0), then INTENT must be populated
- The value must be greater than or equal to the 10 year plan period start year

ACYEAR

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:

YYYY

- The presence of this attribute in the file structure of the layer is mandatory
- The population of this attribute is mandatory
- A zero or null value is a valid code

- The value must be greater than or equal to the plan period start year and less than or equal to the plan end year
- If access control year does not equal zero (ACYEAR ≠ 0) then access control must be populated with apply, remove or Both. (ACCESS = (APPLY OR BOTH or REMOVE))

ACCESS

Definition:

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

Format:

Code	Option	Definition
APPLY	apply new	This indicates that a new access control is being
		applied to the road segment.
REMOVE	remove	This indicates that an access control is being
		removed from the road segment.
ВОТН	apply new and remove	This indicates that a new access control is being
		applied and removed from the road segment in the
		same plan period.

- The presence of this attribute in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control
 must occur for each record (DECOM IS NOT NULL or MAINTAIN = Y or MONITOR = Y or
 [ACCESS = APPLY or ACCESS = REMOVE OR ACCESS = BOTH])

Stage 2 Validation:

 When the road access control status is remove (ACCESS = REMOVE) then the control type should be null (CONTROL1 = null and CONTROL2 = null)

DECOM

Definition:

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

Format:

Code Option	
BERM	berm and/or ditch
SCAR	scarify and/or plant and/or seed road
SLSH	pile slash
WATX	water crossing removal

- The presence of DECOM in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code

INTENT

Definition: The MNRF Intent attribute indicates the MNRF's future management intent for

the road corridor as identified in table FMP-18.

Format:

user defined

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code
- If TRANS value is populated, then INTENT must be populated

MAINTAIN

Definition: The **road maintenance** attribute is a field used to identify where road

maintenance activities are planned to occur during the 10 year planning period.

Format:

• Y (for yes) or N (for no)

Stage 1 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

MONITOR

Definition: The **road monitoring** attribute is a field used to identify where road monitoring

activities are planned to occur during the 10 year planning period.

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Format:

• Y (for yes) or N (for no)

Stage 1 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

CONTROL1 and **CONTROL2**

Definition:

The **road access control type** attributes indicate the method of control to be implemented on primary or branch roads that will be constructed during the tenyear planning period.

Format:

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

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).

- The presence of CONTROL1 and CONTROL2 in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code
- The population of CONTROL1 or CONTROL2 is mandatory where ACCESS = BOTH or ACCESS = APPLY

4.2.11 Operational Road Boundaries

4.2.11.1 Description, Intent and intended Use

The operational road boundaries (ORB) layer includes the planned harvest area plus the area from an existing road or planned road corridor to the same harvest area within which an operational road is planned to be constructed. The delineation of ORBs will establish the limits within which operational roads and forestry aggregate pits can be constructed for the ten-year plan period of the FMP. Operational roads within an operational road boundary 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.

This layer may also include area between harvest operations or between planned/existing roads and harvest operations. The road construction that occurs within the ORBs is defined by the road use management strategy and the AOC prescriptions. Therefore, the intent is not to remove or exclude the AOC areas from the ORB layer. This layer only includes Crown land and ORBs will not contain other land ownership designations (e.g. private, federal). The operational road boundary name (ORBID) will be linked to the road use management strategy.

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>.<file extension>

where:

Part Description	
MU Letters "MU" representing Forest M anagement U nit.	
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).

Part	Description		
_	Underscore character as a separator.		
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028 is		
	28).		
ORB	Letters "ORB" representing O perational R oad B oundaries.		
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not		
	permissible and therefore multiple layers will not exist.		
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2		

4.2.11.3 Format

Spatial Requirements

The operational road boundaries layer contains only polygon features. This layer 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 feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table(e.g. area, perimeter,length,< cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
ORBID	20	character		operational road boundaries identifier

ORBID

Definition:

The **operational road boundary identifier** attribute indicates the user defined unique number, label or name assigned to the operational road boundary. The operational road boundary includes the planned harvest area, the area from an existing road or planned road corridor to the same harvest area within which an

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operational road is planned to be constructed. The intent is not to remove water or AOC areas from the ORB layer. This layer only includes crown land.

Format:

user defined

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

- 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

4.2.12 Existing Road Use Management Strategy Inventory

4.2.12.1 Description, Intent and Intended Use

This layer identifies all existing roads or road networks that are the responsibility of the sustainable forest licensee as described in the FMPM Part A , Section 1.1.8.10, and other existing roads that will be the used for forest management purposes and which are under the jurisdiction and control of MNRF. The layer identifies planned and existing access controls, maintenance and monitoring for the identified road segments for the ten-year plan period of the FMP.

It will also identify existing roads that are planned to be transferred to MNRF and/or decommissioned during the ten-year planning period. 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. The water crossing attributes and characteristics can be found in the Existing Road Water Crossing Inventory layer.

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>.<file extension>

where:

Part	Description	
MU	Letters "MU" representing Forest M anagement U nit.	
<management unit=""></management>	> The three digit FMU number, pad left with zeros as required (e.g.,	
	001).	
_	Underscore character as a separator.	

Part	Description	
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028 is	
	28).	
ERU	Letters "ERU" representing E xisting R oad U se Management Strategy	
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not	
	permissible and therefore multiple layers will not exist.	
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2	

4.2.12.3 Format

Spatial Requirements

The existing road use management strategy layer contains only line features. This layer 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 feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table (e.g. length,< cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
ROADID	30	character		road identifier
ROADCLAS	1	character		road class
TRANS	4	integer		road transfer year
ACYEAR	4	integer		access control year
ACCESS	9	character		access control
DECOM	4	character		decommissioning type
INTENT	30	character		MNRF intent
MAINTAIN	1	character		road maintenance
MONITOR	1	character		road monitoring
RESPONS	3	character		road responsibility
CONTROL1	4	character		road access control type
CONTROL2	4	character		road access control type

ROADID

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:

user defined

- must match corresponding road identifications as portrayed on the Areas Selected for Operations maps.
- for plans prepared under the 2009 and the 2017 Forest Management Planning Manual, this value must match a ROADID in table FMP-18, Road Construction and Use
 Management

Stage 1 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

ROADCLAS

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:

Code	Option	Definition			
Р	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.			
В	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			

Code	Option	Definition
0	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.

Stage 1 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

TRANS

Definition:

The road transfer year attribute indicates a four-digit number representing the first year of the 10 year plan period that the transfer of responsibility to the MNRF is anticipated to take effect. If there is no intent to transfer responsibility to MNRF during the future 20-year period there is no need to specify a year.

Format:

YYYY

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A zero or null value is a valid code
- If road transfer year does not equal zero (TRANS ≠ 0) then the value must be greater than or equal to the plan period start year
- If TRANS value does not equal zero (TRANS ≠ 0) then INTENT must be populated

Road transfer year should not be greater than plan start year plus twenty years

ACYEAR

Definition:

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

Format:

YYYY

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A zero or null value is a valid code
- If access control year does not equal zero (ACYEAR ≠ 0) and access control is not
 EXISTING or REMOVE (ACCESS ≠ EXISTING OR ACCESS ≠ REMOVE) then the value must
 be greater than or equal to the plan period start year
- If access control year does not equal zero (ACYEAR ≠ 0) then access control must not be
 null

ACCESS

Definition:

The **access control** attribute is a field used to identify where access control activities are already in effect or planned to change (i.e. application, removal) during the ten-year planning period.

Format:

Code	Option	Definition	
APPLY	apply new	This indicates that a new access control is being	
		applied to the road segment.	
REMOVE	remove	This indicates that an access control is being	
		removed from the road segment.	

Code	Option	Definition
ADD	additional	This indicates that an access control exists on the
		road segment and that a new access control is being
		applied to the road segment.
EXISTING	existing	This indicates that an access control exists on the
		road segment.
вотн	apply new and	This indicates that a new access control is being
	remove	applied and removed from the road segment in the
		plan period.
ADDREMOVE	additional with	This indicates that an access control exists on the
	removal	road segment, that a new access control is being
		applied to the road segment and that an access
		control is being removed from the road segment in
		the plan period

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code
- When the road access control status is apply, additional, both, or additional with removal (ACCESS = APPLY or ADD or BOTH or ADDREMOVE) then the control type must be a code other than null (CONTROL1 is not null)
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control
 must occur for each record (DECOM is not null or MAINTAIN = Y or MONITOR = Y or
 ACCESS is not null)

Stage 2 Validation:

 When the road access control status is remove (ACCESS = REMOVE) then the control type should be null (CONTROL1 = null and CONTROL2 = null)

DECOM

Definition:

The **decommissioning type** attribute is a field used to identify where decommissioning activities are already in effect or planned to occur during the ten-year planning period to meet the requirements of the FMPM Part A section 1.3.6.7.

Format:

Code	Option
BERM	berm and/or ditch
SCAR	scarify and/or plant and/or seed road
SLSH	pile slash
WATX	water crossing removal

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control
 must occur for each record (DECOM is not null or MAINTAIN = Y or MONITOR = Y or
 ACCESS is not null)

INTENT

Definition:

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

Format:

• user defined (e.g., MNRF maintain, MNRF transfer of responsibility to a third party, decommission, or no longer maintain).

Stage 1 Validation:

- The presence of this attribute in the file structure of the layer is mandatory
- A blank or null value is a valid code
- If TRANS value is not equal to zero (TRANS ≠ 0), then INTENT must be populated

MAINTAIN

Definition: The **road maintenance** attribute is a field used to identify where road

maintenance activities are planned to occur during the term.

Format:

• Y (for yes) or N (for no)

Stage 1 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
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control
 must occur for each record (DECOM is not null or MAINTAIN = Y or MONITOR = Y or
 ACCESS is not null)

MONITOR

Definition: The road monitoring attribute is a field used to identify where road monitoring

activities are planned to occur during the term.

Format:

• Y (for yes) or N (for no)

Stage 1 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
- At a minimum, one of Decommissioning, Maintenance, Monitoring or Access Control
 must occur for each record (DECOM is not null or MAINTAIN = Y or MONITOR = Y or
 ACCESS is not null)

RESPONS

Definition:

The **road responsibility** attribute indicates the custodian responsible for the maintenance and monitoring of road surface conditions for the road segment.

Format:

Code	Option
SFL	Sustainable forest licensee
MNR	Ministry of Natural Resources and Forestry
OTH	other(e.g. Ministry of Transportation, joint, local
	roads board, private)

Stage 1 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

Stage 2 Validation:

At a minimum, one record should equal SFL (except for Crown managed Units)

CONTROL1 and **CONTROL2**

Definition:

The **road access control type** attributes indicate the method of control to be established during the ten-year planning period on existing roads.

Format:

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

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).

- The presence of CONTROL1 and CONTROL2 in the file structure of the layer is mandatory
- The attribute population must follow the correct coding scheme
- A blank or null value is a valid code

4.2.13 Existing Road Water Crossing Inventory

4.2.13.1 Description, Intent and Intended Use

Using the most up-to-date information available, this point layer will identify all known existing water crossings for roads identified in the existing road use management strategy inventory layer. Responsibility assignment of the water crossing will be identified in the layer which does not necessarily reflect or represent the characteristics of the Existing Road Use Management Strategy layer.

4.2.13.2 Naming Convention

A standard naming convention will be used for the existing water crossing inventory 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>WXI<part number>.<file extension>

where:

Part	Description	
MU	Letters "MU" representing Forest M anagement U nit.	
<management unit=""></management>	The three digit FMU number, pad left with zeros as required (e.g.,	
	001).	
_	Underscore character as a separator.	
<year></year>	Two digit numeric start year of the ten-year plan period(e.g., 2028 is	
	28).	
WXI	Letters "WXI" representing Existing Water Crossing Inventory	
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not	
	permissible and therefore multiple layers will not exist.	
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2	

4.2.13.3 Format

Spatial Requirements

The existing water crossing inventory layer contains only point features. This layer must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the existing water crossing inventory layer are to be included in the feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table (e.g. area, perimeter, length, < cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
WATXID	12	character		water crossing identifier
WATXTYPE	5	character		water crossing type
RESPONS	3	character		water crossing responsibility
ROADID	30	character		road identifier

WATXID

Definition: The **water crossing identifier** attribute is a unique identifier for the water crossing feature.

Format:

• user defined content

- 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

WATXTYPE

Definition: The water crossing type attribute identifies the type of water crossing structure

existing at the time of the inventory.

Format:

Code	Option
BRID	bridge
TEMP	temporary bridge
CULV	culvert (span <3m)
MULTI	multiple culvert
FORD	engineered ford
ICE	ice crossing
ВОХ	box culvert
ARCH	open bottom arch
	culvert

Stage 1 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

RESPONS

Definition: The water crossing responsibility attribute indicates the custodian responsible

for the maintenance and monitoring of water crossing conditions.

Format:

Code	Option
SFL	sustainable forest licensee
MNR	Ministry of Natural Resources and Forestry
OTH	other (e.g. private, joint)

Operational Planning Information Specifications

Stage 1 Validation:

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

Stage 2 Validation:

At a minimum, one record should equal SFL(except for crown managed units)

ROADID

Definition: The **road identifier** attribute is the unique number, label or name assigned to the road or network of roads that the water crossing feature is located on.

Format:

User defined content

- 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

4.2.14 Planned Aggregate Extraction Areas

4.2.14.1 Description, Intent and Intended Use

The planned aggregate extraction areas layer contains areas where forestry aggregate pits are planned to be established. An aggregate extraction area is defined as an individual polygon depicting a planned pit location within 500 meters of an existing access road that is outside: an approved harvest area; an operational road boundary; a primary road corridor; or a branch road corridor. The layer will identify the aggregate extraction areas for the ten-year plan period.

4.2.14.2 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>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management unit=""></management>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028 is 28).
PAG	Letters "PAG" representing Planned Aggregate Extraction Area.
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not
	permissible and therefore multiple layers will not exist.
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.14.3 Format

Spatial Requirements

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

Tabular Requirements

The tabular attributes associated with the planned aggregate extraction areas layer are to be included in the feature attribute table(.pat) described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table (i.e. area, perimeter, length,< cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
AGAREAID	15	character		aggregate extraction area identifier

AGAREAID

Definition:

The **aggregate extraction area identifier** attribute indicates the unique identifier for the area where forestry aggregate pits may be established.

Format:

user defined content

Stage 1 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

4.2.15 Tree Improvement

4.2.15.1 Description, Intent and Intended Use

The Tree improvement layer contains the attributes and characteristics of tree improvement activities for the 10-year plan period to support the production of improved seed.

4.2.15.2 Naming Convention

A standard naming convention will be used for the Tree Improvement layer 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>IMP<part number>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Forest M anagement U nit.
<management< td=""><td>The three digit FMU number, pad left with zeros as required (e.g.,</td></management<>	The three digit FMU number, pad left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Two digit numeric start year of the 10 year plan period(e.g., 2028 is
	28).
IMP	Letters "IMP" representing Tree Improvement.
<part number=""></part>	This value will always be 00 (default). Overlapping areas are not
	permissible and therefore multiple layers will not exist.
<file extension=""></file>	Include a file extension if required as described in Section 4.2.2

4.2.15.3 Format

Spatial Requirements

The Tree Improvement layer contains only polygon features. This layer must be created in accordance with the direction specified in Section 4.1.4.

Tabular Requirements

The tabular attributes associated with the Tree Improvement layer are to be included in the feature attribute table described below. The fields listed in the table below are a minimum requirement for this feature attribute table and additional fields can be included as needed. The ESRI generated fields are not listed in the feature attribute table(e.g. area, perimeter, length,< cover_name>#, <cover_name>-ID).

field name	maximum width	field type	decimal places	attribute description
IMPROVE	1	character		tree improvement activities

IMPROVE

Definition:

The **tree improvement activities** attribute indicates the area to support the production of improved seed.

Format:

• Y (for yes) or N (for no)

Stage 1 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

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 FMP, many of the maps are required at different stages of the FMP process. Maps included in the draft and final FMP will be submitted as described in Section 5, Submission Files.

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, proposed LTMD summary 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:

 $\label{lem:mu} MU < management\ unit > _ < year > _ < info\ product > _ MAP _ < description > _ < file\ number > . PDF$

where:

Parts	Description
MU	Letters "MU" representing Forest Management Unit.
<management< td=""><td>The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,
unit>	001).

Product Descriptions Map Specifications

Parts	Description
_	Underscore character as a separator.
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,
	2028) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product=""></info>	Letters representing the information products being submitted:
	"FMPDP" for FMP Draft Plan
	"FMP" for FMP Final Plan
	"FMPDPC" for Draft Contingency Plan
	"FMPC" for Final Contingency Plan
	"LTMD" for Proposed LTMD summary "FMPEX" for FMP Extensions
_	Underscore character as a separator.
MAP	Letters "MAP" for map.
_	Underscore character as a separator.
<description></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=""></file>	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
	tree improvement operations are on a second set of maps, all of the
	harvest maps would have a file number of "01" and all of the tree
	improvement maps would have a file number of "02", even if there is
	not both a "01" and a "02" for all areas.
.PDF	Portable document format (PDF)

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 an Adobe portable document format (PDF) that does not exceed 100 MB in file size with the fonts and symbols successfully imbedded.

Note: Some problems have been encountered when generating PDF files, ensure that the ESRI fonts and symbols 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 or appropriate task team. These maps are not required to be submitted to the FI Portal nor available on the Ontario Government website. There are two exceptions, the first is the public notice map which has a specific format requirement identified in the detailed map description in Section 4.3.5.1 and the second is the LTMD summary map at stage 2 as described in Section 4.3.6.2.

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. Base feature information will be represented at the appropriate resolution to ensure that the map depicts the location and shape of the geographic feature. 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 smaller 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, except for values maps (in section 4.3.5.2.2). 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 MNRF publication Map Design Considerations for Accessibility.

Map surround components are as follows:

Logo - Ontario Government logo or sustainable forest licensee logo (or combination) as appropriate.



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 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 MNRF or the sustainable forest licensee. 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 and Forestry shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

Product Descriptions

Map Specifications

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.

Map Publication Date - indicates the date the map was created. The date will display the month in text and the year in four digits.

Example: March 22, 2028

22/MAR/2028

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, 2028

Datum - identifies the projection and datum of the map information

Example: NAD83 UTM Zone 17

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

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The MNRF must use the values symbology in Appendix 1 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.

A Radia package is available to Government of Ontario staff through IT by either a SODO request or by calling the helpdesk and asking for CAC_TBS_GISFONTS_10_00 and the name of

the application GIS Fonts V.1.0 in order to have it installed. The MTO and FMP fonts will be installed locally on the C:\ windows\fonts folder and IT will create a folder on the C:\ Symbols for the symbols sets. If a user brings in the current existing layer files (hosted within the district/region servers) the correct symbology will be displayed.

If the symbol files are not compatible with the sustainable forest 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 sustainable forest licensee may request the symbol sets from MNRF.

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 digital media.

4.3.4.4 Sensitive and Confidential Information

The portrayal of sensitive values information on forest management planning maps will be specific to individual data sets. Portrayal will reflect the standards for values symbology in Appendix 2 and be in accordance with the FIM, Part B, Section 3.1.4 Requirements Respecting Classified Values Information and Section 3.1.5 Requirements Respecting Personal Information.

Direction on the portrayal of sensitive values on forest management planning maps will be provided by the Information Owner of the specific data set. If direction has not been provided for a specific data set, it is the responsibility of the appropriate task team to ensure that representation of sensitive data on FMP maps is not detrimental to the conservation of the value.

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

MNRF shall seek advice from each First Nation and Métis community regarding the public availability of First Nation and Métis values information in FMP documentation.

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 or vertical border width fitting a standard paper roll size of 36 inches. There is no maximum limit on the length (portrait) or width (landscape) 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.

There is no page size standard for the First Nation and Métis Values map(s). The page size will be dependent on the map extent and map scale identified in the consultation approach with the First Nation and Métis community or as agreed to by the planning team and the First Nation and Métis community.

4.3.5 Values Maps

4.3.5.1 Description, Intent and Intended Use

The values maps provide a summary of the geographical location(s) of known natural resource features, land uses and values for the management unit, including parks and protected areas on the management unit, which will be considered in forest management planning, and about which further inventory information is available. The values maps do not portray all known information and there is considerable additional information that is used in managing and making resource management decisions. For example: the values map portrays the location of a nest and it might portray a species attribute, but it would not convey additional attribution such as year of discovery, when the nest was last used, whether it was a primary or secondary nest, etc.

The values maps are intended primarily as background information for planning. They will be used for display purposes and to solicit additional information about natural resource features, land uses and values.

Information on natural resource features, land uses and values will be generally available to the public. When publication of the location of particular natural resource features, land uses and values may be detrimental to their conservation, they will not be portrayed on the values maps.

The values maps consist of a set of maps based on the following themes:

- Natural Resource Features Wildlife & Forestry (Flora & Fauna);
- Natural Resource Features Fisheries & Wetlands;
- Resource Uses;
- Land Values;
- Bear Management Areas;
- Trapline Areas;
- Resource-Based Tourism Values;
- Cultural Heritage Values; and

First Nations and Métis Values Maps.

The values maps will be produced and maintained at the appropriate MNRF office. The values maps will be continually updated as information is assembled during the production and implementation of the forest management plan. MNRF will update and provide the most current, relevant information available on natural resource features, land uses and values, including cultural resource values, for use in forest management planning.

It is not a requirement to produce French language versions of the values maps for designated areas under the *French Language Services Act*.

4.3.5.2 Values Map Format

The format of values maps, when exchanged between the sustainable forest licensee and the MNRF at public consultation stages other than those related to plan submissions, will be as identified in the planning team terms of reference.

4.3.5.2.1 Values Map Extent

The map extent required for values maps is the forest management unit plus an additional 2000 metres beyond the forest management unit boundary. This will ensure that values outside of the forest management unit, which may be adversely affected by forest operations within the forest management unit, are considered during planning.

The map extent required for the First Nation and Métis Values map(s) will be as identified in the consultation approach with the Aboriginal community or as agreed to by the planning team and the Aboriginal community.

4.3.5.2.2 Values Map Scale Standards

Values maps will be produced at the composite scale chosen for the forest management plan by the planning team. Each composite scale map produced for inclusion in the FMP, or produced for public consultation purposes, must be prepared according to a chosen map scale that may be different from all other composite scale maps. If the planning team feels it appropriate to produce some values maps at scales other than the chosen one, these values maps will be in addition to the ones produced at the chosen scale.

Acceptable composite scales range from 1:100,000 to 1:200,000 for values maps. 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. The composite scale chosen will have to accommodate a minimum 2000 metre buffer around the management unit.

There is no map scale standard for the First Nation and Métis Values map(s). The map scale will be as identified in the consultation approach with the First Nation and Métis community or as agreed to by the planning team and the First Nation and Métis community. Maps may be produced at more than one scale to accommodate the review and consultation activities by the First Nation and Métis community. For example, the map that is available at a special information centre may be at a different map scale than the ones required for updating of values.

4.3.5.2.3 Values Map Symbology

The standards for symbols used on values maps are described in Appendix 2. The MNRF must use the standard values symbology described in Appendix 2 for all maps that portray values information, and are produced for the purpose of forest management planning. Some symbols may need to be adjusted to improve the readability of the map if conflict with other symbols occurs.

The standard values symbols are a minimum standard only. Planning teams may wish to include more themes or symbolize a theme on a more specific attribute. New symbols should be consistent and complimentary to the standard symbols, avoiding conflict with all other symbols, not just the ones on the map upon which they appear. Additional themes should be mapped on the appropriate "theme" map, avoiding clutter. If too many themes are being added to a standard map, a separate map may be more appropriate.

All standard and available, template symbols are to appear in the legend whether data exists for that value or not. Legends will be added as a graphic. If a theme has been symbolized differently than the standard symbol, the legend must be adjusted accordingly.

There may not be a standard symbol available for many of the First Nation and Métis values identified. The planning team and the First Nation and Métis community will determine appropriate symbology to use in these instances.

4.3.5.3 Data Transfer and Schedule

The most up-to-date versions of the values maps will be available for public distribution from the appropriate MNRF office, and the office of the sustainable forest licensee, upon request, at the time the first public notice of the formal public consultation process is issued.

Values maps are part of the background information that will be available for the entire period of plan preparation, including all information centres.

The values maps are a component of the Report on the Protection of Identified First Nation and Métis Values. A preliminary report will be available for public review at Stage 3.

The values maps will be available for viewing at the information centre for the review of the Proposed Insect Pest Management Program.

The values maps are to be included in the electronic draft and final FMP submissions. (Refer to the FIM Forest Management Planning Technical Specifications.) The MNRF will provide the sustainable forest licensee with the most up to date values maps, in the required digital format, no later than one week prior to the scheduled date for the submission of the FMP.

The First Nation and Métis Values map(s) is a component of the First Nation and Métis

Background Information Report and the preliminary (Stage3) and final (Stage 4) Report on the

Protection of Identified First Nation and Métis Values.

4.3.5.4 Review and Approval

The values maps and the First Nation and Métis Values map(s) will be produced and continually updated by MNRF as information is assembled during the production and implementation of the forest management plan.

4.3.5.5 Natural Resource Features Values Map – Wildlife & Forestry

4.3.5.5.1 Description, Intent and Intended Use

A summary of the location of known natural resource features and values which must be considered in forest management planning and about which further inventory information is available.

Map Name: Natural Resource Features Values – Wildlife & Forestry

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Calving Sites (Caribou, Deer, Moose)
- Wintering Areas (Caribou, Deer, Moose)
- Staging Areas (Deer, Waterfowl)
- Nesting Sites (Heronries, Raptors, Waterfowl, Other)
- Nesting Areas (Waterfowl)
- Moose Aquatic Feeding Areas
- Mineral Licks
- Mast Producing Areas
- Migration Corridors (Caribou)
- Species at Risk Habitat
- ANSI
- Old Growth Red & White Pine Forest Communities
- Significant Ecological Areas
- Significant Communities of Flora & Fauna
- Forest Research Areas

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.5.2 Packaging and Naming Convention

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

- MU123 2028 FMPDP MAP ValWild 00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValWild_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValWild_00.PDF (Draft Contingency Plan)
- MU123 2028 FMPC MAP ValWild 00.PDF (Final Contingency Plan)

4.3.5.6 Natural Resource Features – Fisheries & Wetlands

4.3.5.6.1 Description, Intent and Intended Use

A summary of the location of known natural resource features and values which must be considered in forest management planning and about which further inventory information is available.

Map Name: Natural Resource Features Values – Fisheries & Wetlands

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Cold Water (lakes, rivers, streams)
- Cool Water (lakes, rivers, streams)
- Warm Water (lakes, rivers, streams)
- Baitfish Areas
- Spawning Areas (fish)
- Nursery Areas (fish)
- Migration Routes (fish)
- Wetlands (Provincially Significant, Classified)

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways

- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.6.2 Packaging and Naming Convention

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

- MU123 2028 FMPDP MAP ValFish 00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValFish_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValFish_00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_ValFish_00.PDF (Final Contingency Plan)

4.3.5.7 Resource Uses Values Map

4.3.5.7.1 Description, Intent and Intended Use

A summary of the location of known resource use features and values which must be considered in forest management planning and about which further inventory information is available.

Map Name: Resource Uses Values

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Recreation Access Points
- Recreation Trails
- Boat Caches (approved, commercial)
- Recreation Camps (under LUP)
- Main Base Lodges (remote, semi-remote, drive-in)
- Outpost Camps (remote, semi-remote, drive-in)
- Tourism Areas (potential, designated)
- Cottages/Residences (remote, non-remote, proposed)
- Waste Disposal Sites
- Waste Management Attenuation Zone
- Potable Water Sources
- Towers
- Work Camps
- Other Camps
- Utility Sites

- Forest Processing Facilities
- Peat Production Areas
- Wild Rice Production Areas
- Special Land Uses of Local Significance

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.7.2 Packaging and Naming Convention

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

Product Descriptions

Map Specifications

MU123_2028_FMPDP_MAP_ValRec_00.PDF (Draft Plan)

MU123_2028_FMP_MAP_ValRec_00.PDF (Final Plan)

MU123_2028_FMPDPC_MAP_ValRec_00.PDF (Draft Contingency Plan)

MU123_2028_FMPC_MAP_ValRec_00.PDF (Final Contingency Plan)

4.3.5.8 Land Values Map

4.3.5.8.1 Description, Intent and Intended Use

A summary of the location of known resource land uses, and values which must be considered in forest management planning and about which further inventory information is available.

Primary roads, approved primary road corridors, roads that are the responsibility of the sustainable forest licensee and roads with access controls will be differentiated on the Land Values Map, described below. Each road or road network documented in the Existing Roads Table will be cross-referenced to the Land Values map.

Map Name: Land Values

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Patented Land
- Crown Land Leases (includes land use permits, licenses of occupation, orders in council, etc.)
- Aggregate Permit/Licenses (active, non-active)
- Active Mining Claims
- Municipal Boundaries
- Primary Road Corridors (Current FMP 20 years)
- SFL Responsible Roads (labels)
- Roads with Access Controls

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.8.2 Packaging and Naming Convention

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

- MU123 2028 FMPDP MAP Valland 00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_Valland_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValLand_00.PDF (Draft Contingency Plan)
- MU123 2028 FMPC MAP Valland 00.PDF (Final Contingency Plan)

4.3.5.9 Bear Management Areas Map

4.3.5.9.1 Description, Intent and Intended Use

A summary of the location of known bear management areas and values which must be considered in forest management planning and about which further inventory information is available.

Map Name: Bear Management Areas

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Bear Management Areas
- Bear Management Area Numbers

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.9.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_ValBMA_00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValBMA_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValBMA_00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_ValBMA_00.PDF (Final Contingency Plan)

4.3.5.10 Trapline Areas Map

4.3.5.10.1 Description, Intent and Intended Use

A summary of the location of trapline areas which must be considered in forest management planning and about which further inventory information is available.

Map Name: Trapline Areas

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Trapline Areas
- Trapper Cabins
- Trapline Area Numbers

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.10.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_ValTrap_00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValTrap_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValTrap_00.PDF (Draft Contingency Plan)
- MU123 2028 FMPC MAP ValTrap 00.PDF (Final Contingency Plan)

4.3.5.11 **Resource-Based Tourism Values Map**

4.3.5.11.1 Description, Intent and Intended Use

The values map for resource-based tourism (RBT) values will support the review and/or

development of resource stewardship agreements. This means that the initial versions of this

map may contain many of the values already portrayed on the Resource Uses Values map. The

values map included in the Draft and Final plan submissions will reflect the progress made with

the licensed resource-based tourism operators in identifying existing or new values that are

important to the viability of their business. Those values that were initially on the Resource-

Based Tourism Values map, but do not contribute a business interest to tourism operators, may

be removed.

An up-to-date list of licensed resource-based tourism operators with facilities on the

management unit, and licensed resource-based tourism operators without facilities who use

the natural resources of the management unit, will be provided to MNRF and sustainable forest

licensees by the Ontario Ministry of Tourism, Culture and Sport.

Map Name: Resource-Based Tourism Values

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

Licensed RBT Main Base Lodges (remote, semi-remote, drive-in)

Licensed RBT Outpost Camps (remote, semi-remote, drive-in)

Recreation Access Points

Recreation Trails (by use type)

Boat Caches (commercial)

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Product Descriptions Map Specifications

- Examples of possible types of RBT values:
 - Camping Sites
 - Hunting Station
 - Swimming Beach
 - o Fish & Wildlife Viewing Site
 - Lookout
 - Navigable Waterway
 - Shore Lunch/Picnic Sites
 - RBT Access Route

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.11.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_ValRBT_00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValRBT_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValRBT_00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_ValRBT_00.PDF (Final Contingency Plan)

Cultural Heritage Values Map 4.3.5.12

4.3.5.12.1 Description, Intent and Intended Use

The Ontario Ministry of Tourism, Culture and Sport is the information owner of registered archaeological sites, which are classified as medium sensitivity. They will not appear on the cultural heritage map available to the public, but will be considered in forest management planning.

Map Name: Cultural Heritage Values

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Archaeological Potential Areas
- Cultural Heritage Landscapes
- Traditional Use Sites
- Built Heritage Resources
- Cemeteries
- Registered Archaeological Sites (classified as medium sensitivity, will not appear on maps)

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways

- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.12.2 Packaging and Naming Convention

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

- MU123 2028 FMPDP MAP ValCult 00.PDF (Draft Plan)
- MU123_2028_FMP_MAP_ValCult_00.PDF (Final Plan)
- MU123_2028_FMPDPC_MAP_ValCult_00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_ValCult_00.PDF (Final Contingency Plan)

4.3.5.13 First Nation and Métis Values Map(s)

4.3.5.13.1 Description, Intent and Intended Use

The First Nation and Métis Values map(s) identifies the locations of values that are used by, or of importance to, First Nation and Métis community(s). In particular, the following values will be mapped:

- local governance body(s) or reserve(s) in or near the management unit;
- areas used by First Nation and Métis communities, particularly with respect to hunting,
 fishing, trapping, harvesting wood for domestic purposes, and gathering;
- lands that have been identified as potential reserve lands for social, economic or capital development projects, or in connection with land claims or litigation;
- sites of First Nation and Métis archaeological, social, cultural, and sacred significance,
 including First Nation and Métis cemeteries and burial sites;
- areas identified by the First Nation and Métis communities during the archaeological predictive modelling process as having archaeological potential; and
- lands or resources over which the community has made assertions of Aboriginal or treaty rights, including assertions of Aboriginal title.

Where assertions are included as part of First Nation and Métis values information or appear on the First Nation and Métis Values map, they will be accompanied by the following statement: The inclusion/depiction of this information does not necessarily reflect the position of Ontario regarding the nature or strength of the assertion or constitute any admission or limit Ontario's rights in any way. In particular, the inclusion/depiction of this information does not constitute an admission by Ontario that the assertion engages the Crown's duty to consult or accommodate.

The First Nation and Métis Values map(s) is a component of the First Nation and Métis

Background Information Report (FMPM Part A Section 3.6.1) and the preliminary and final

Report on the Protection of Identified First Nation and Métis Values (FMPM Part A Section

3.6.3). MNRF shall seek advice from each First Nation and Métis community regarding the public availability of First Nation and Métis values information in those documents.

The format of this map product will be as identified in the consultation approach with the First Nation and Métis community or as agreed to by the planning team and the First Nation and Métis community.

Map Name: First Nation and Métis Values Map (sub-titled with First Nation and Métis community name)

Scale: various, non-standard

Map Surround Components: all

Information Displayed:

Theme Features

- Traditional Activities
- Recreational Activities
- First Nation and Métis trapline boundaries
- First Nation and Métis trapper cabins
- Reserves and other Aboriginal communities
- Areas required as Reserve lands
- Economic/capital development project areas
- Areas used for fuelwood
- Areas used for building materials
- First Nation and Métis archaeological sites
- First Nation and Métis historical sites
- First Nation and Métis religious sites
- First Nation and Métis cultural heritage sites
- First Nation and Métis archaeological potential areas

Product Descriptions Map Specifications

Additional themes as required

Base Features

- Highways
- Primary Roads
- Other Existing Roads
- Airports
- Railways
- Utility Lines
- Communities (labels)
- Water (lakes, rivers, streams)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Enhanced Management Areas
- Other non-Crown Land
- Townships (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.5.13.2 Packaging and Naming Convention

The First Nation and Métis Values map(s) is not a required component of an electronic FMP submission and therefore does not have a standard naming convention.

4.3.6 Strategic Planning Maps

4.3.6.1 Public Notice Map

4.3.6.1.1 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.

MNRF is responsible for submitting the digital map file to the Advertising Coordinator of

MNRF's Communications Services Branch.

This map accompanies all public notices, including direct written notices and media notices, for

all stages of the FMP process, forest management plan extensions, mid-plan checks, minor and

major amendments, amendments to long-term management directions, 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

Management Unit Boundary

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Product Descriptions Map Specifications

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers

4.3.6.1.2 Packaging and Naming Convention

None

4.3.6.1.3 Format

The Public Notice Map must be designed in high contrast black and white with textual components readable when the map is produced at a size of 2 by 3 inches. The Public notice maps should be simple, largely composed of lines and only the necessary geographic reference points.

The digital image file must be 300 dpi and either a jpeg or an encapsulated postscript (EPS) file format in order for the Advertising Coordinator, MNRF'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 MNRF's mailing list.

4.3.6.1.4 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 (Stage 3 & 4) will normally be issued 30 days prior to the information centre.

If the digital map file is produced by the sustainable forest licensee, it must be provided to MNRF 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).

4.3.6.1.5 Review and Approval

If the production of the digital map file is the responsibility of the sustainable forest licensee, MNRF will review and approve the map prior to submitting it to the Advertising Coordinator.

Product Descriptions

Map Specifications

4.3.6.2 Forest Management Plan Index Map

4.3.6.2.1 Description, Intent and Intended Use

The FMP Index Map provides an overview of planned operations for the ten-year plan period of

the FMP and provides an index/grid for identifying specific FMP operations maps. This map will

aid the public in accessing specific operations maps on the Ontario Government 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 Ontario Government 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 First

Nation and Métis 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

Harvest Areas (Regular) 10-year period

Tree Improvement Areas(10-year plan period)

Primary & Branch Road Corridors (10-year plan period)

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Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.6.2.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_Index_00.PDF (Draft Plan)
- MU123 2028 FMP MAP Index 00.PDF (Final Plan)
- MU123 2028 FMPDPC MAP Index 00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_Index_00.PDF (Final Contingency Plan)

4.3.6.2.3 Format

For the format of 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

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.

Product Descriptions Map Specifications

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 Forest Landscape Pattern Map(s)

4.3.6.3.1 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.

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

Forest landscape pattern classification

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.6.3.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_LandPat_00.PDF (Draft Plan)
- MU123 2028 FMP MAP LandPat 00.PDF (Final Plan)
- MU123 2028 FMPDPC MAP LandPat 00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_LandPat_00.PDF (Final Contingency Plan)

4.3.6.3.3 Format

The format of this map product, when exchanged between the MNRF and the sustainable forest 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.

4.3.6.3.4 Data Transfer and Schedule

This map is to be available at meetings to discuss desired forest and benefits during planning. It is not required to be available at other consultation opportunities prior to the draft and final plan submissions.

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

4.3.6.3.5 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.

4.3.6.4 Projected Distribution of Harvest Map(s)

4.3.6.4.1 Description, Intent and Intended Use

The Projected Distribution of Harvest Map is a map of the projected distribution of harvest areas over the first four ten year FMP plan periods (i.e. 40 years) and the strategic management zones identified in the Base Model Inventory and the Operational Planning Inventory. The information may be presented as four harvest themes, one for each time frame, on the same map or as four separate maps, one map for each of the four harvest time frames.

The map is required to be available at stage 2 and stage 3 of public consultation and with the draft and final FMP submissions.

Map Name: Projected Distribution of Harvest (sub-title required if more than one map is produced)

Scale: composite

Map Surround Components: all

Information Displayed:

Theme Features

- Planned Harvest Areas by Plan Period (for the first four plan periods (i.e. 40 years))
- Strategic Management Zones

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.6.4.2 Packaging and Naming Convention

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

- MU123_2028_FMPDP_MAP_DistHarv_00.PDF (Draft Plan)
- MU123 2028 FMP MAP DistHarv 00.PDF (Final Plan)
- MU123 2028 FMPDPC MAP DistHarv 00.PDF (Draft Contingency Plan)
- MU123_2028_FMPC_MAP_DistHarv_00.PDF (Final Contingency Plan)

4.3.6.4.3 Format

The format of this map product, when exchanged between the sustainable forest licensee and the MNRF 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.

4.3.6.4.4 Data Transfer and Schedule

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

This map 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.

4.3.6.4.5 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.

4.3.6.5 Preferred and Optional Harvest Areas Map

4.3.6.5.1 Description, Intent and Intended Use

The Preferred and Optional Harvest Areas map portrays areas that are eligible for harvest during the ten-year plan period of the FMP. The preferred areas for harvest for the ten-year plan period as defined in FMPM Part A Section 1.2.5.2 will be identified and mapped as closely as practical to the projection of preferred harvest in the strategic model up to the level of the available harvest area for each forest unit All eligible areas that are not preferred areas for harvest are considered to be optional harvest areas for the ten-year plan period and may be ranked in order of preference on the map. The past and approved areas of harvest operations for the current FMP and for the previous ten-years (20 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 FMP, 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

- Preferred Harvest Areas
- Optional Harvest Areas (may be ranked)
- Confirmed Primary Road Corridors (20-years)
- Primary Road Corridors (20-year alternatives)
- Past & Approved Areas of Harvest (2015 years)

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Other non-Crown Land
- Township (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.6.5.2 Packaging and Naming Convention

None

4.3.6.5.3 Format

The format of this map product, when exchanged between the MNRF and the sustainable forest licensee, will be as identified in the planning team terms of reference.

4.3.6.5.4 Data Transfer and Schedule

This map is required to be available for display and review at the appropriate MNRF office and the office of the sustainable forest licensee when the public notice is issued for the review of proposed long-term management direction at Stage 2 of the public consultation process.

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

4.3.6.5.5 Review and Approval

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

4.3.7 Operational Planning Maps

4.3.7.1 Areas Selected for Operations Maps

4.3.7.1.1 Description, Intent and Intended Use

The Areas Selected for Operations maps display the areas of operations for the ten-year plan period. The amount of information to be displayed and differentiated on these operations maps is significant.

Planned harvest areas for the ten-year plan period may include harvest categorized as regular, salvage, bridging, 2nd pass, 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.

The proposed areas of operations for the ten-year plan period 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. Forest stands must be labelled or symbolized by silvicultural ground rule (SGR) or if the stands are labelled with forest units then a cross-reference table to the SGR must be available in the legend.

AOCs will be portrayed on the operations maps for all areas of operations for the ten-year plan period. 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 tree improvement areas. AOCs will be differentiated on the map as reserve or modified operations. AOCs will be labelled and/or symbolized in such a way as to identify their AOC or AOC group as documented in table FMP-11 Operational Prescriptions for Areas of Concern and Conditions on Roads, Landings, and Forestry Aggregate Pits.

AOCs for tree improvement activities are normally only required for modified operations or where a value may be impacted by tree improvement activities (e.g., timing restrictions, herbicide applications, or site disturbance restrictions) or road activities.

For AOCs 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 operational prescription and conditions for the AOC in table FMP-11 called CV1. Alternately, individual AOCs could have unique identifiers (e.g., CV1, CV2, CV3, etc.) and the identifiers will be listed in table FMP-11 with the appropriate prescription. The confidential detailed information about the value will be available at the appropriate MNRF office and will be shared with the sustainable forest 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 appropriate MNRF office and at the office of the sustainable forest 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.

The conditions of the AOC will define the locations where the primary and branch roads may cross the AOC and either be explicitly identified on the operations maps or inferred by identifying unacceptable crossing locations.

Roads, proposed or existing, which will have access controls (under the *Public Lands Act* or any other form of regulation) implemented during the ten-year plan period or where access controls will continue to be in effect will be differentiated on the operations maps. Access

Product Descriptions

Map Specifications

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 ten-year plan period, will be identified on the maps.

Stage 3

Map Name: Areas Selected for Operations

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features

Planned Harvest Areas (block IDs)

Harvest Areas by Harvest Category

AOC reserves (IDs)

AOC modified operations (IDs)

Stand-level Residual Areas

Primary & Branch Corridors (IDs)

Operational Road Boundaries (IDs)

Aggregate Extraction Areas (IDs) (10-year plan)

• Eligible Renewal & Tending Areas (may be transferred to a composite scale map)

Tree Improvement Activities

Base Features

Communities (labels)

Highways/Major Roads (labels)

Other roads

- Railways
- Utility Lines
- Lakes, rivers and streams (labels)
- Forest Stand Boundaries (optional)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Other non-Crown Land
- Township (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

Stage 4 and 5

Map Name: Areas Selected for Operations

Scale: operational

Map Surround Components: all

Information Displayed:

Theme Features

- Silvicultural System (if more than one silvicultural system is being used to manage the forest)
- Harvest Areas by Harvest Category
- AOC reserves (IDs)
- AOC modified operations (IDs)
- Stand-level Residual Areas (optional)
- Eligible Renewal & Tending Areas (may be transferred to a composite scale map)

Product Descriptions

Map Specifications

- Tree Improvement Areas (may be transferred to a composite scale map)
- Primary & Branch Corridors (IDs)
- Planned Harvest Areas (block IDs)
- Operational Road Boundaries (IDs)
- Road Access Control
- Roads Planned to be Decommissioned
- Roads with Use Management Strategy Changes (may be transferred to a composite scale map)
- Aggregate Extraction Areas (IDs)

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Other roads
- Railways
- Utility Lines
- Lakes, rivers and streams (labels)
- Forest Stand Boundaries (optional)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Other non-Crown Land
- Township (optional)
- Operational Map Grid (label or key)
- Management Unit Boundary

4.3.7.1.2 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_2028_FMPDP_MAP_Ops54530_00.PDF (Draft Plan)

MU123 2028 FMP MAP Ops54530 00.PDF (Final Plan)

MU123_2028_FMPDPC_MAP_Ops1234_00.PDF (Draft Contingency Plan)

MU123 2028 FMPC MAP Ops1234 00.PDF (Final Contingency Plan)

4.3.7.1.3 Format

The format of this map product, when exchanged between the sustainable forest licensee and the MNRF 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.

4.3.7.1.4 Data Transfer and Schedule

The Areas Selected for Operations maps are required to be available for display and review at the Stage 3 information centres and at the appropriate MNRF offices and the office of the Sustainable forest licensee for a period of 60 days following the Stage 3 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.

Product Descriptions Map Specifications

4.3.7.1.5 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.

4.3.7.2 FMP Summary Map and LTMD Summary Map and FMP Extension Map

4.3.7.2.1 Description, Intent and Intended Use

The summary maps are intended to be a take-home style maps available to the public at

various stages of public consultation. Updates are to be made to the summary maps to reflect

the decisions made up to that point for each required stage.

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 these maps are 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 maps are required for all areas within the Province, regardless

of whether the forest management unit is located within a French Language Services Act

designated area.

Stage 2

The proposed LTMD 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 the

ten-year plan period, 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 FMP and for the previous ten-years (20 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: Long-Term Management Direction Summary Map

Scale: summary

Map Surround Components: all

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Information Displayed:

Theme Features

- Preferred Harvest Areas
- Optional Harvest Areas
- Confirmed Primary Road Corridors
- Primary Road Corridors (20 year alternatives)
- Past & Approved Areas of Harvest (15 20 years)
- Modified Fire Response Areas

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers (labels)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Township or OBM grid (labels)
- Management Unit Boundary

Stage 3

The FMP summary map at this stage is a summary of the proposed areas for harvest for the ten-year plan period; preferred areas for harvest for the ten-year plan period; tree improvement areas for the ten-year plan period; optional harvest areas; proposed primary road corridors required for the next 20 years; proposed new primary and branch road corridors for the ten-year plan period; and past and approved areas of harvest for the current FMP and for the previous ten-years (20 years of harvest depletions prior to the start of the new plan).

Map Name: FMP Summary – Proposed Operations

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features

- Harvest Areas
- Tree Improvement Areas (10-year plan)
- Optional Harvest Areas
- Primary Corridors (20 years)
- Primary & Branch Corridors (10-year plan)
- Past & Approved Areas of Harvest (20 years)*
- Renewal and Tending Areas**

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

**Renewal and tending areas portrayed on the FMP Summary Map are areas that are eligible.

The refinement and approval of these areas occurs in the AWS.

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers (labels)

Administrative Boundary Features

- Parks and Reserves
- Federal Land

Product Descriptions

Map Specifications

Township or OBM grid (labels)

Management Unit Boundary

Stage 4 and Stage 5

The FMP summary map at these stages is a summary of the planned areas for harvest for the

ten-year plan period; preferred areas of harvest for the ten-year plan period; tree improvement

areas for the ten-year plan period; and planned new primary and branch road corridors for the

ten-year plan period.

These maps are a required component of the draft and final FMP summary. The draft FMP

summary is a required component of the final Report on Protection of Identified First Nation

and Métis Values.

Map Name: FMP Summary – Draft and Final FMP

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features

Harvest Areas

Tree Improvement Areas (10-year plan)

Primary & Branch Corridors (10-year plan)

Primary Corridors (20 years)

Renewal and Tending areas*

*Renewal and tending areas portrayed on the FMP Summary Map are areas that are eligible.

The refinement and approval of these areas occurs in the AWS.

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Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers (labels)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Township or OBM grid (labels)
- Management Unit Boundary

FMP Extension

The FMP extension map is a summary of the primary road corridors, branch road corridors, and the harvest area that will be carried forward in the plan extension. This map is a required component of the final FMP extension submission.

Map Name: FMP Extension (Short or Long Term)

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features

- Harvest Areas
- Primary & Branch Corridors

Base Features

- Communities (labels)
- Highways/Major Roads (labels)
- Large lakes and rivers (labels)

Administrative Boundary Features

- Parks and Reserves
- Federal Land
- Township or OBM grid (labels)
- Management Unit Boundary

4.3.7.2.2 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_2028_LTMD_MAP_Sum_00.PDF	(Proposed LTMD Summary)
*	MU123_2028_FMPDP_MAP_Sum_00.PDF	(Draft Plan)
*	MU123_2028_FMP_MAP_Sum_00.PDF	(Final Plan)
*	MU123_2028_FMPDPC_MAP_Sum_00.PDF	(Draft Contingency Plan)
*	MU123_2028_FMPC_MAP_Sum_00.PDF	(Final Contingency Plan)
*	MU123_2028_FMPEX_MAP_Sum_00.PDF	(FMP extension)
*	MU123_2028_LTMD_MAP_SumFR_00.PDF	(Proposed LTMD Summary, French)
*	MU123_2028_FMPDP_MAP_SumFR_00.PDF	(Draft Plan, French)
*	MU123_2028_FMP_MAP_SumFR_00.PDF	(Final Plan, French)
*	MU123_2028_FMPDPC_MAP_SumFR_00.PDF	(Draft Contingency Plan, French)
*	MU123_2028_FMPC_MAP_SumFR_00.PDF	(Final Contingency Plan, French)
*	MU123_2028_FMPEX_MAP_SumFR_00.PDF	(FMP extension, French)

4.3.7.2.3 Format

The format of this map product, when exchanged between the sustainable forest licensee and the MNRF 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.

4.3.7.2.4 Data Transfer and Schedule

The map products are required to be available for distribution at public consultation opportunities identified in the FMPM.

The sustainable forest licensee will submit to the MNRF the summary maps 30 days before the applicable submission. The maps will be provided in Adobe's portable document format (PDF). MNRF will prepare a French language version and will provide it to the sustainable forest licensee for inclusion in the submission file.

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

The LTMD Summary Map is a mandatory component of Proposed Long Term Management Direction Summary submission file. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

The FMP Extension Map is a mandatory component of the Forest Management Plan Extension submission file.

Product Descriptions Map Specifications

4.3.7.2.5 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.

4.3.7.3 Other Maps Used for Forest Management Planning Purposes

4.3.7.3.1 Description, Intent and Intended Use

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

Additional themes as required

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

4.3.7.3.2 Packaging and Naming Convention

There are no packaging and naming requirements if the maps are exchanged between the sustainable forest licensee and the MNRF 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 according to Section 4.3.2.

4.3.7.3.3 Format

The format of this map product, when exchanged between the sustainable forest licensee and the MNRF 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.

4.3.7.3.4 Data Transfer and Schedule

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

4.3.7.3.5 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 Ontario Government website. The following rules apply to text and table components of FMP submission files:

- FMP text;
- FMP tables;
- Analysis package;
- FMP Summary text;
- Proposed Long-Term Management Direction Summary Text;
- LCC statement;
- Preliminary list of required alterations;
- Supplementary documentation (remaining components*);
- Forest management Plan Extension Text (short and long Term); and
- Mid-Plan Check.

The public correspondence related to the development of the plan will be retained on file at the appropriate MNRF office. The Report on the Protection of Identified First Nation and Métis Values will be retained at a location as agreed to in consultation with the First Nation or Métis 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 3.4 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>_<product type>_<description>.PDF

where:

Parts	Description
MU	Letters "MU" representing Forest Management Unit.
<management< td=""><td>The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,
	2028) or the start year of the Contingency Plan.
_	Underscore character as a separator.
<info product=""></info>	Letters representing the information product being submitted:
	"FMPDP" for FMP Draft Plan
	"FMP" for FMP Final Plan
	"FMPDPC" for Draft Contingency Plan
	"FMPC" for Final Contingency Plan
	"LTMD" for Proposed LTMD summary
	"FMPEX" for FMP Extensions
	"MIDPCHKD" for Draft Mid Plan Check
	"MIDPCHK" for Mid Plan Check
_	Underscore character as a separator.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Letters representing the type of product being submitted, either:
	"TXT" for text or
	"TBL" for table.
_	Underscore character as a separator.

<description></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 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 FMP 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). To meet the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) and more specifically the Integrated Accessibility Standards Regulation, the MNRF will provide sustainable forest licensees with guidance to enhance the accessibility of PDFs. This guidance can be found in the Electronic Document Accessibility Guide For FI Portal Users. As technology advances and offers practical improvements for the production of AODA compliant FIM information products this technical specification will be updated to reflect these advancements.

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 FMP product 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 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.

Note: 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**. 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:

	M11122	2028	EMDDD	TYT	PlanText.PDF	(Draft Plan)
**	INIOTZO	ZUZO	FIVIPUP	1 / 1	PIdITIEXL.PDF	(Didit Pidit)

4.4.8 Tables

4.4.8.1 Description, Intent and Intended Use

All FMP tables, as described in Part B, Section 8.0 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.

The LTMD summary as described in FMPM Part A Section 1.2.7 requires tables FMP-8, FMP 9 and FMP 10. These tables are a mandatory component of the summary of the proposed LTMD submission file.

4.4.8.2 Packaging and Naming Convention

The <description> component of the file name for this file is **Tables** for the English language version and **TablesFR** for the French language version. 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_2028_FMP_TBL_Tables.PDF	(Final Plan)
*	MU123 2028 ITMD TRI Tables PDF	(Proposed LTMD Summary)

(Draft Plan)

MU123 2028 FMPDP TBL Tables.PDF

4.4.9 Analysis Package

4.4.9.1 Description, Intent and Intended Use

The analysis package, as described in Part A and Appendix I 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 MNRF staff and public.

This file is a mandatory component of all draft and final FMP submission files 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**. 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_2028_FMPDP_TXT_AnPack.PDF	(Draft Plan)
*	MU123_2028_FMP_TXT_AnPack.PDF	(Final Plan)
*	MU123_2028_FMPDPC_TXT_AnPack.PDF	(Draft Contingency Plan)
*	MU123_2028_FMPC_TXT_AnPack.PDF	(Final Contingency Plan)

4.4.10 Proposed Long-Term Management Direction Summary Text

4.4.10.1 Description, Intent and Intended Use

The Proposed LTMD Summary as described in Part A, Section 1.2.7 of the FMPM, is to be prepared as a single text file. The summary text file is a mandatory component of the Proposed LTMD Summary submission file.

A French language version of the Proposed LTMD summary text is required for all areas within the Province. The sustainable forest licensee will submit the Proposed LTMD summary text and tables to the MNRF 30 days before the environmental registry posting for Stage two. The text will be provided as a Microsoft Word document and the tables will be provided as a Microsoft Excel document. MNRF will prepare a French language version and will provide it to the sustainable forest licensee for inclusion in the Proposed LTMD Summary submission file.

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 2028 LTMD TXT Sum.PDF (Proposed LTMD Summary)
- MU123_2028_LTMD_TXT_SumFR.PDF (Proposed LTMD Summary, French)

4.4.11 Forest Management Plan Summary Text

4.4.11.1 Description, Intent and Intended Use

The FMP Summary as described in Part B, Section 7.0 of the FMPM is to be prepared as a single text file. The summary text available with the draft FMP 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 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 sustainable forest licensee will submit the draft plan summary text to the MNRF 30 days before the information centre. The text will be provided as a Microsoft Word document (.docx). MNRF will prepare a French language version and will provide it to the sustainable forest 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 MNRF for French language translation. The amount of time required by MNRF 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 First Nation or Métis Values. The contingency plan proposal will identify if this is a required component of the contingency plan submission files.

4.4.11.2 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:

Product Descriptions

Plan Text, Tables and Supplementary Documentation

*	MU123_2028_FMPDPC_TXT_Sum.PDF	(Draft Contingency Plan)
*	MU123_2028_FMPC_TXT_Sum.PDF	(Final Contingency Plan)
*	MU123_2028_FMPDP_TXT_SumFR.PDF	(Draft Plan, French)
*	MU123_2028_FMP_TXT_SumFR.PDF	(Final Plan, French)
*	MU123_2028_FMPDPC_TXT_SumFR.PDF	(Draft Contingency Plan, French)
*	MU123_2028_FMPC_TXT_SumFR.PDF	(Final Contingency Plan, French)

4.4.12 Local Citizens' Committee Report

4.4.12.1 Description, Intent and Intended Use

The Local Citizens' 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.

4.4.12.2 Packaging and Naming Convention

The <description> component of the file name for this file is **LCCReport**. 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_2028_FMPDPC_TXT_LCCReport.PDF (Draft Plan)
- MU123_2028_FMPDPC_TXT_LCCReport.PDF (Draft Contingency Plan)

4.4.13 Preliminary List of Required Alterations

4.4.13.1 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.

4.4.13.2 Packaging and Naming Convention

The <description> component of the file name for this file is **PrelimAlt**. 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_2028_FMPDP_TXT_PrelimAlt.PDF (Draft Plan)
- MU123_2028_FMPDPC_TXT_PrelimAlt.PDF (Draft Contingency Plan)

4.4.14 Supplementary Documentation

4.4.14.1 Description, Intent and Intended Use

All supplementary documentation, as described in Part B, Section 6.1 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.

4.4.14.2 Packaging and Naming Convention

The <description> component of the file name for this file is **SuppDoc**. 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 2028 FMPDP TXT SuppDoc.PDF (Draft Plan)
- MU123 2028 FMP TXT SuppDoc.PDF (Final Plan)
- MU123 2028 FMPDPC TXT SuppDoc.PDF (Draft Contingency Plan)
- MU123 2028 FMPC TXT SuppDoc.PDF (Final Contingency Plan)

4.4.15 Forest Management Plan Extension

4.4.15.1 Description, Intent and Intended Use

All plan extension text files as described in Part C, Section 5.0 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.

Note: This is not meant to be a scanned version of the original page with signatures.

This is a mandatory component of all FMP extension submissions. The FMP extension provision does not apply to a contingency plan.

4.4.15.2 Packaging and Naming Convention

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

- MU123 2028 FMPEX TXT Short.PDF (FMP short-term Extension)
- MU123_2028_FMPEX_TXT_Long.PDF (FMP long-term Extension)

4.4.16 Mid-Plan Check

4.4.16.1 Description, Intent and Intended Use

A Mid-Plan Check text file as described in Part C, Section 6.4 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.

Note: This is not meant to be a scanned version of the original page with signatures.

This is a mandatory component of all Mid Plan Check submissions.

4.4.16.2 Packaging and Naming Convention

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

MU123_2028_MIDPCHKD_TXT_Text.PDF (Draft Mid Plan Check)

MU123_2028_MIDPCHK_TXT_Text.PDF (Final Mid Plan Check)

4.5 Modeling Files

4.5.1 Description, Intent and Intended Use

All files required to support the use of the decision support system as described in the terms of reference (FMPM Part A 1.1.2.1) will be included in the FMP submission files in order to have a complete copy of the plan on the FI Portal, the official repository. The modelling files will be in the format required to execute the decision support system software. These files will include input files and the output files required to confirm model assumptions and results. The modeling files will not be available on the Ontario Government 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>_MDL_<description>.<extension>

where:

Parts	Description
MU	Letters "MU" representing Forest Management Unit.
<management< td=""><td>The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,
unit>	001).
_	Underscore character as a separator.
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,
	2028) or the start year of the Contingency Plan.
_	Underscore character as a separator.

Parts	Description	
<info product=""></info>	t> Letters representing the information product being submitted:	
	"FMPDP" for FMP Draft Plan	
	"FMP" for FMP Final Plan	
	"FMPDPC" for Draft Contingency Plan	
	"FMPC" for Final 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></description>	The description is user defined.	
<file extension=""></file>	file extension	

Example:

MU123_2011_FMPDP_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 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 or appropriate task team. The modelling files will be in the format required to execute the decision support system software. These files will include input files and the output files required to confirm model assumptions and results.

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 text file (containing a copy of the approval page) and the amendment request decision file are the only mandatory amendment files. 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 Ontario Government website.

For deemed amendments the amendment request file is not mandatory.

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:

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td>The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	

Product Descriptions Amendment Files

Parts	Description
_	Underscore character as a separator.
FMPAM	Letters "FMPAM" representing FMP Amendment.
_	Underscore character as a separator.
<sequence< td=""><td>A three digit consecutive numbering system for organizing and</td></sequence<>	A three digit consecutive numbering system for organizing and
number>	tracking amendments (amendment number), padded left with zeros
	(e.g., 001) and numbered consecutively for the ten-year plan period
	of the plan.
_	Underscore character as a separator.
<pre><pre><pre><pre></pre></pre></pre></pre>	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></description>	Letters representing the required component being submitted: a user
	defined description for non-standard components or the following
	"Decision" for Amendment Request Decision
	"Req" for Amendment Request
	"Text" for Amendment Text
	"Tables" for Amendment FMP Tables
	"Ops <extent>_<file number=""> for operational scale operations maps</file></extent>
	"SEV" for statement of environmental values (for major amendments
	only)
	For 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</file></extent>
	component will link to the FMP Index Map grid label.
	The <file number=""> is a two-digit place holder which identifies if the</file>
	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></extension>	portable document format (pdf)

Example:

- MU123_2028_FMPAM_019_TXT_Decision.PDF
- MU123_2028_FMPAM_019_TXT_Req.PDF
- MU123_2028_FMPAM_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 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 separate 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 (e.g., FI Portal information posting, email). Only the final amendment files, which will be approved and posted to the Ontario Government 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 Files

5.1 Description, Intent and Intended Use

All FMP documentation will be submitted in an electronic format, through the FI Portal, to improve the efficiency of production, distribution, and storage of the information that include the following:

- planning inventories;
- base model inventories;
- draft, final and contingency forest management plans;
- forest management plan extensions;
- mid-plan checks; and
- amendments.

The official copy of all FMP documentation is the electronic version submitted through the FI Portal. Amendments will be maintained individually (Section 5.13); there will be no replacement or substitution of original sections of the FMP documentation.

The electronic submission of products meets the MNRF's strategic direction of 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 Ontario Government website. Some data/information components included in the submission files will not be available to the public on the Ontario Government website. These include the modeling files and geospatial data layer files. All files available on the Ontario Government 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 MNRF office(s) and the office of the sustainable forest 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 MNRF office. The Report on the Protection of Identified First Nation and Métis Values will be retained at a location as agreed to in consultation with the First Nation or Métis 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 - 5.13).

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 Ontario Government website if they are provided in PDF. 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 FMP 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. The exception for duplicate file names will be when a shapefile is the chosen format for the geospatial data layers.

Geospatial files are to be organized into a single directory located at the root of the zip file. Likewise, modeling information is organized into a directory 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 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 Ontario Government website. Some examples include, but are not limited to, the following:

- FMP text submitted as a single PDF file;
- FMP tables submitted as a single PDF file;
- FMP maps submitted as individual PDF files 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; and

Geospatial data layer files.

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 MNRF 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 Planning Inventory

5.7.1 Description, Intent and Intended Use

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. 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 the inventory product needs to be re-submitted more than once as part of the planning inventory checkpoint during the FMP development process due to changes/updates to the product, then the entire information product as described in this document must be resubmitted.

5.7.2 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> INV.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest M anagement U nit.	
<management unit=""></management>	The three digit FMU number, pad left with zeros as required (e.g.,	
	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028).	

Parts	Description
_	Underscore character as a separator.
INV	Letters representing the information product being submitted:
	"INV" for Planning Inv entory
.ZIP	File format extension for a compressed file.

The following is a sample of the mandatory file naming convention:

MU123_2028_INV.ZIP (Planning Inventory)

5.8 Base Model Inventory

5.8.1 Description, Intent and Intended Use

The submission (.ZIP) file for the BMI must contain its spatial and tabular files. 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 the inventory product needs to be submitted more than once as part of the base model inventory and base model checkpoint during the FMP development process due to changes/updates to the product, then the entire information product as described in this document must be re-submitted.

5.8.2 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:

where:

Parts	Description	
MU	Letters "MU" representing Forest M anagement U nit.	
<management unit=""></management>	The three digit FMU number, pad left with zeros as required (e.g.,	
	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028).	
_	Underscore character as a separator.	

Parts	Description
BMI	Letters representing the information product being submitted:
	"BMI" for B ase M odel I nventory
.ZIP	File format extension for a compressed file.

The following is a sample of the mandatory file naming convention:

MU123_2028_BMI.ZIP (Base Model Inventory)

5.9 Draft and Final Forest Management Plans

5.9.1 Description, Intent and Intended Use

The components of the draft and final FMP submission files will be available for public review on the Ontario Government website. 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 description and requirements are identified in the FMPM Part A Sections 2.3.3.4 and 2.3.3.5.

The main difference between the two submissions is the requirement for a separate Draft Plan Summary submission file (Section 5.10) 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 Ontario Government website until a Draft Summary has been successfully submitted. Before preparing a draft FMP submission file, refer to Section 5.10, Draft Forest Management Plan Summary, to become familiar with the FMP product components that are to be submitted separately from the draft FMP submission.

5.9.2 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>.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	

Parts	Description	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	
_	Underscore character as a separator.	
<info product=""></info>	Letters representing the information product being submitted:	
	"FMPDP" for FMP Draft Plan	
	"FMP" for FMP Final Plan	
	"FMPDPC" for Draft Contingency Plan	
	"FMPC" for Final Contingency Plan	
.ZIP	File format extension.	

The following are samples of the mandatory file naming convention:

*	MU123_2028_FMPDP.ZIP	(Draft Plan)
*	MU123_2028_FMP.ZIP	(Final Plan)
*	MU123_2028_FMPDPC.ZIP	(Draft Contingency Plan)
*	MU123_2028_FMPC.ZIP	(Final Contingency Plan)

5.9.3 Directory Requirements

FMP submission files will contain only two mandatory directories. One directory will contain the analysis model runs and the other directory will contain a single compressed (zip) file with the inventories and operational planning geospatial data layers. These directories 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.

Additional geospatial information may be included in the compressed (zip) file in the LAYERS directory and this will not result in a submission failure. Any additional sub directories included within the LAYERS directory or at the root directory level will result in a failure of the submission.

When a single ESRI File Geodatabase contains all of the required geospatial data layers a standardized naming convention is to be used to name the file geodatabase. All feature data

Draft and Final Forest Management Plans

classes will be in the root of the file geodatabase as the use of feature datasets will result in a rejection of the submission. The file geodatabase name is composed of the following parts:

MU<management unit>_<year >_<info product>.GDB

A standardized naming convention is to be used to name the compressed (zip) file containing the inventories and operational planning geospatial data layers in the Layers directory. The compressed (zip) file name is composed of the following parts:

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

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>_<directory name>

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	
_	Underscore character as a separator.	
<info product=""></info>	Letters representing the information products being submitted:	
	"FMPDP" for FMP Draft Plan	
	"FMP" for FMP Final Plan	
	"FMPDPC" for Draft Contingency Plan	
	"FMPC" for Final Contingency Plan	
_	Underscore character as a separator.	
<directory name=""></directory>	Letters representing the name of directory, either:	
	"LAYERS" for planning layers	
	"MODEL" for analysis modelling runs	

The following are samples of the mandatory ESRI File Geodatabase naming convention:

MU123_2028_FMPDP.GDB (Draft Plan geodatabase)
 MU123_2028 FMP.GDB (Final Plan geodatabase)

The following are samples of the mandatory compressed (zip) file naming convention:

MU123_2028_FMPDP.ZIP (Draft Plan geospatial data layers)
 MU123_2028_FMP.ZIP (Final Plan geospatial data layers)

The following are samples of the mandatory folder naming convention:

MU123_2028_FMPDP_LAYERS (Draft Plan planning layer directory)

MU123 2028 FMPDP MODEL (Draft Plan model directory)

MU123 2028 FMP LAYERS (Final Plan planning layer directory)

MU123 2028 FMP MODEL (Final Plan model directory)

MU123 2028 FMPDPC LAYERS (Draft Contingency Plan – planning layer directory)

MU123 2028 FMPDPC MODEL (Draft Contingency Plan – model directory)

MU123 2028 FMPC LAYERS (Final Contingency Plan – planning layer directory)

MU123 2028 FMPC MODEL (Final Contingency Plan – model directory)

5.9.4 Product Components

The following is a list of mandatory file components for a draft and final plan submission with sample file names. All listed files are expected to be included in submissions with the following exception, the planned aggregate extraction areas layer [PAG] may be excluded from a submission if no extraction areas have been identified in the plan (i.e., do not submit an empty layer). If the Strategic Forest Management Model (SFMM) is not the tool used for modeling during plan development, then comparable information from the tool used (e.g., Patchworks, Woodstock) is to be submitted instead.

Draft Plan

- MU123_2028_FMPDP_TXT_PlanText.PDF
- MU123 2028 FMPDP TXT SuppDoc.PDF
- MU123_2028_FMPDP_TXT_AnPack.PDF
- MU123_2028_FMPDP_MAP_ValCult_00.PDF
- MU123_2028_FMPDP_MAP_ValDistHarv_00.PDF
- MU123_2028_FMPDP_MAP_ValWild_00.PDF
- MU123_2028_FMPDP_MAP_ValFish_00.PDF
- MU123_2028_FMPDP_MAP_ValRec_00.PDF
- MU123 2028 FMPDP MAP Valland 00.PDF
- MU123_2028_FMPDP_MAP_ValBMA_00.PDF
- MU123_2028_FMPDP_MAP_ValTrap_00.PDF
- MU123 2028 FMPDP MAP ValRBT 00.PDF
- MU123_2028_FMPDP_MAP_LandPat_00.PDF
- MU123_2028_FMPDP_MAP_Index_00.PDF
- MU123_2028_FMPDP_MAP_Ops54530_00.PDF
- MU123_2028_FMPDP_TBL_Tables.PDF
- MU123_2028_FMPDP_LAYERS
 - MU123_2028_FMPDP.ZIP
 - ❖ MU123 2028 FMPDP.GDB
 - MU123 28PCI00
 - MU123_280PI00
 - MU123_28FDP00
 - MU123 28BMI00
 - MU123_28PHR00
 - MU123_28AOC000
 - MU123 28PRP00
 - MU123_28PRC00
 - MU123_28ORB00

- MU123 28ERU00
- MU123 28WXI00
- MU123 28PAG00
- MU123 28IMP00

MU123_2028_FMPDP_MODEL

- ➤ MU123 2028 FMPDP MDL SFMMbase.ACCDB
- MU123_2028_FMPDP_MDL_SFMMscope.ACCDB

Final Plan

- MU123 2028 FMP TXT PlanText.PDF
- MU123 2028 FMP TXT SuppDoc.PDF
- MU123_2028_FMP_TXT_AnPack.PDF
- MU123 2028 FMPDP MAP ValCult 00.PDF
- MU123 2028 FMPDP MAP ValDistHarv 00.PDF
- MU123_2028_FMP_MAP_ValWild_00.PDF
- MU123 2028 FMP MAP ValFish 00.PDF
- MU123 2028 FMP MAP ValRec 00.PDF
- MU123_2028_FMP_MAP_Valland_00.PDF
- MU123_2028_FMP_MAP_ValBMA_00.PDF
- MU123 2028 FMP MAP ValTrap 00.PDF
- MU123 2028 FMP MAP ValRBT 00.PDF
- MU123_2028_FMP_MAP_LandPat_00.PDF
- MU123 2028 FMP MAP Index 00.PDF
- MU123_2028_FMP_MAP_Ops54530_00.PDF
- MU123_2028_FMP_TXT_Sum.PDF
- MU123 2028 FMP MAP Sum 00.PDF
- MU123 2028 FMP TXT SumFR.PDF
- MU123_2028_FMP_MAP_SumFR_00.PDF
- MU123_2028_FMP_TBL_Tables.PDF

Submission File

Draft and Final Forest Management Plans

MU123_2028_FMP_LAYERS

- MU123_2028_FMP.ZIP
 - ❖ MU123_2028_FMP.GDB
 - MU123_28PCI00
 - MU123_280PI00
 - MU123_28FDP00
 - MU123_28BMI00
 - MU123_28PHR00
 - MU123_28AOC000
 - MU123_28PRP00
 - MU123_28PRC00
 - > MU123_28ORB00
 - MU123_28ERU00
 - MU123_28WXI00
 - MU123_28PAG00
 - MU123_28IMP00

- MU123_2028_FMP_MDL_SFMMbase.ACCDB
- MU123_2028_FMP_MDL_SFMMscope.ACCDB

5.10 Proposed Long Term Management Direction Summary and Draft Forest Management Plan Summary

5.10.1 Description, Intent and Intended Use

Proposed Long Term Management Direction Summary

The components of the proposed LTMD summary submission file will be available for public review on the Ontario Government website. The sustainable forest licensee will submit the proposed LTMD summary product in time for it to be available for the start of Stage Two public review. The description and requirements for the proposed LTMD summary are identified in the FMPM Part A Section 2.3.3.2.

Draft Forest Management Plan Summary

The draft FMP Summary submission file contains components of the draft FMP that are not available when the draft FMP is submitted for MNRF 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 Ontario Government website at the same time as the draft FMP.

The sustainable forest 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. The description and requirements for the Draft FMP Summary are identified in the FMPM Part A Section 2.3.3.4.

5.10.2 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>.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	
_	Underscore character as a separator.	
<info product=""></info>	Letters representing the information product being submitted:	
	"FMPDPSUM" for FMP Draft Plan Summary	
	"FMPDPCSUM" for Draft Contingency Plan Summary	
	"LTMDSUM" for Proposed LTMD Summary	
.ZIP	File format extension.	

The following are samples of the mandatory file naming convention:

- MU123_2028_FMPDPSUM.ZIP (Draft Plan Summary)
- MU123_2028_FMPDPCSUM.ZIP (Draft Contingency Plan Summary)
- MU123_2028_LTMDSUM.ZIP (Proposed LTMD Summary)

5.10.3 Product Components

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

Draft Forest Management Plan Summary

- MU123_2028_FMPDP_TXT_Sum.PDF
- MU123_2028_FMPDP_MAP_Sum_00.PDF
- MU123_2028_FMPDP_TXT_SumFR.PDF
- MU123_2028_FMPDP_MAP_SumFR_00.PDF
- MU123_2028_FMPDP_TXT_LCCReport.PDF
- MU123_2028_FMPDP_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 - 4.4.13.

Proposed Long Term Management Direction Summary

- MU123_2028_LTMD_TXT_Sum.PDF
- MU123_2028_LTMD_TXT_SumFR.PDF
- MU123_2028_LTMD_TBL_Tables.PDF
- MU123_2028_LTMD_TBL_TablesFR.PDF
- MU123_2028_LTMD_MAP_Sum.PDF
- MU123 2028 LTMD MAP SumFR.PDF

5.11 Forest Management Plan Extension

5.11.1 Description, Intent and Intended Use

The components of the FMP extension submission file will be available for public review on the Ontario Government website. The FMP extension submission file contains the extension text and map. The description and requirements are identified in the FMPM Part C Section 5.0.

5.11.2 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>.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	
_	Underscore character as a separator.	
<info product=""></info>	Letters representing the information product being submitted:	
	"FMPEX" for FMP extension	
.ZIP	File format extension.	

The following are samples of the mandatory file naming convention:

5.11.3 Product Components

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

FMP Short-term extension

- MU123_2028_FMPEX_TXT_Short.PDF
- MU123_2028_FMPEX_MAP_Sum_00.PDF
- MU123_2028_FMPEX_MAP_SumFR_00.PDF

FMP Long Term extension

- MU123_2028_FMPEX_TXT_Long.PDF
- MU123_2028_FMPEX_MAP_Sum_00.PDF
- MU123_2028_FMPEX_MAP_SumFR_00.PD

5.12 Mid-Plan Check

5.12.1 Description, Intent and Intended Use

The components of the mid-plan check submission file will be available for public review on the Ontario Government website. The mid-plan check submission file contains a single text file. The description and requirements are identified in the FMPM Part C Section 6.0.

5.12.2 Packaging and Naming Convention

The Mid Plan Check file must be named according to the convention in Section 4.4.2. The following are samples of the mandatory file naming convention:

MU<management unit> <year> MIDPCHK.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) or the start year of the Contingency Plan.	
_	Underscore character as a separator.	
MIDPCHK	Letters representing the information product being submitted:	
	"MIDPCHK" for Mid Plan Check	
.ZIP	File format extension.	

The following are samples of the mandatory file naming convention:

5.12.3 Product Components

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

MU123_2028_MIDPCHK_TXT_Text.PDF

5.13 FMP Amendments

5.13.1 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 ten-year plan period of the plan. Amendments will be available for public viewing on the Ontario Government website.

5.13.2 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 <sequence number>.ZIP

where:

Parts	Description	
MU	Letters "MU" representing Forest Management Unit.	
<management< td=""><td colspan="2">The three digit MU number, padded left with zeros as required (e.g.,</td></management<>	The three digit MU number, padded left with zeros as required (e.g.,	
unit>	001).	
_	Underscore character as a separator.	
<year></year>	Four digit numeric start year of the ten-year planning period (e.g.,	
	2028) 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.	

Parts	Description	
<sequence< td=""><td colspan="2">A three digit consecutive numbering system for organizing and</td></sequence<>	A three digit consecutive numbering system for organizing and	
number>	tracking amendments (amendment number), padded left with zeros	
	(e.g., 001) and numbered consecutively for the ten-year plan period	
	of the plan.	
.ZIP	File format extension.	

The following are samples of the mandatory file naming convention:

- ❖ MU123 2028 FMPAM 018.ZIP
- MU123_2028_FMPAM_019.ZIP

5.13.3 Product Components

The following are samples of the mandatory file naming convention:

- MU123_2028_FMPAM_019_TXT_Req.PDF**
- MU123 2028 FMPAM 019 TXT Decision.PDF*
- MU123_2028_FMPAM_019_TXT_Text.PDF*
- MU123_2028_FMPAM_019_TBL_Tables.PDF
- MU123 2028 FMPAM 019 MAP Ops54530 00.PDF
- MU123_2028_FMPAM_019_TXT_SEV.PDF (for major amendments only)

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

^{**}Mandatory product components of an FMP amendment submission zip file **except** for deemed amendments.

Appendix 1 Symbology

Standard Symbology

The following files are available for use in the production of FMP values maps and for all maps that portray values features and are used for forest management planning. These symbols are provided in accordance with the Forest Information Manual, Part B Section 7.1.4

All MNRF programs that have a requirement to portray values features on maps (e.g. Fire Mapping; District Control Maps) are encouraged to use these standard symbols. To have the standards symbols installed, a radia package for MNRF staff is requested from IT through a SODO request or by calling the helpdesk and asking for CAC_TBS_GISFONTS_10_00 and the name of the application GIS Fonts V.1.0. The MTO and FMP fonts will be installed locally on the C:\ windows\fonts folder and IT will create a folder on the C:\ Symbols for the symbols sets. If a user brings in the current existing layer files (hosted within the district/region servers) the correct symbology will be displayed.

The symbol sizes were designed for a map scale of 1:150,000, approximately mid-range of the requirement for composite scale maps outlined in the Forest Information Manual. Symbol sizes may need to be adjusted for maps produced at a different scale or to accommodate local situations.

Many of the polygon feature data sets have a polygon symbol and a point symbol. The original intention was for the polygon symbol to be used for larger areas and the point symbol to be used for very small areas. Cottage/Residential Areas are a good example of this. There are no standards for when the polygon symbol should be used rather than the point symbol. One or the other or both can be used at any time.

There is no recommended draw order for symbols except for the recreation trails symbolized by use. There was an attempt to design the line symbols in such a way as to accommodate multiuse trails. For example, the Cross Country Ski Trail symbol was designed to be drawn on top of

the Hiking Trail symbol, and the Snowmobile Trail symbol was designed to be drawn on top of ATV Trail symbol.

Recommendations

All recommendations or concerns with symbols should be sent to:

FI Portal Support

Email: FIPortal-FOIPSupport@ontario.ca

Phone: (705) 755-2144

Support

Technical assistance and support for the use of the standard values symbols, for MNRF and licensees, is available from FI Portal Support.

Sensitive Values Information Symbology

Different data sets will have different rules governing their portrayal on maps. It is the responsibility of the planning team to ensure that representation of sensitive data on FMP maps is not detrimental to the conservation of the value.

Appendix 1 Symbology

Values Data	Mapping Direction	Custodian/Contact
Species at Risk	Different rules may exist for	NHIC
	different status categories for	705 755 2159
	different locations. Contact the	
	Natural Heritage Information	
	Centre (NHIC) for specific	
	guidance in your area.	
Registered Archaeological	This data set is not to be shown	Ministry of Natural Resources
Sites	on any maps that will be	Forest Management Branch
	available to the public. The	705 541 5114
	availability of maps showing this	or the
	data must comply with any	Ministry of Tourism, Culture
	agreement signed with the	and Sport
	Ministry of Tourism, Culture and	
	Sport.	
Aboriginal Values	Aboriginal values are only	MNRF District Resource
	portrayed on the Aboriginal	Liaison Officer
	Values Maps as agreed to by the	
	Aboriginal communities.	
Low Sensitivity Values	Planning team decision.	MNRF Regional Operations
(Locally designated)		Division