

Forest Information Manual 2020

Forest Management Planning Technical Specifications

June 2020

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 implementation requirements of the Forest Management Planning Manual 2020 (FMPM). The FMPM and the FIM 2020 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;
- 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 information 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 the 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. The 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 Natural Resources Information Portal (NRIP). The MNRF and sustainable forest licensee are required to use the technical specifications listed on the NRIP.

For the purposes of information exchange the reference to the establishment surveys and stands being established based on the results of these surveys is the same as the free-to-grow survey and the designation of areas being free to grow.

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 to 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 Operational Planning Inventory;
- Operational Planning Information;
- FMP Documents; and
- Forest Management Planning Maps.

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, public consultation summaries and First Nation and Métis community involvement summary.

3.0 Implementation

These FIM Forest Management Planning Technical Specifications are in effect upon regulation of the FIM 2020. 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 phase in provisions identified in the 2020 FMPM. Specific phase in requirements for information products will be identified in section 4.0 of this technical specification.

3.1 Revision Notes

Revisions to the FIM FMP Technical Specifications include:

2020 revisions

- Wording changes to align with 2020 FMPM revisions
- Inclusion of the FMP tables with instructions and a format
- Addition of Wood Storage yard layer
- Inclusion of Analysis Package appendix
- Removal of requirement for zipped product submission
- General formatting, clarification and typographical corrections
- Clarifications and corrections to validation logic statements

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 inventory products provide

the stand level information required for forest management planning, including forest modelling, habitat modelling, 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 as identified in Section 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 NRIP are:

1. 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_28OPI00

3. ESRI ArcInfo interchange file (E00) is a proprietary ESRI file format intended to support the transfer between ESRI systems of different types of spatial 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 NRIP.

4.1.4 Format

- Spatial 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 NRIP. A single ESRI supported file format will be used within the submission.
- Each spatial 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).
- Spatial information will be submitted in a seamless format or as a map-joined product with or without the tile lines removed (i.e., 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.
- Spatial 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 products for meeting mandatory requirements. The process will assess all the mandatory products 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 of the information product(s).**

Stage 2 validation routines assess FMP products 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. 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.

field name	maximum width	field type	decimal places	attribute description	PCI	BMI	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 modifier	XV	XV	XV
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 origin for the stand	XV	X	
OSPCOMP	120	character	--	overstorey species composition	XV	X	
OLEADSPC	3	character	--	overstorey leading species	XV	X	
OAGE	3	integer	--	overstorey age	XV	X	
OHT	4	double	1	overstorey height	XV	X	
OCCLO	3	integer	--	overstorey crown closure	XV	X	
OSTKG	4	double	2	overstorey stocking	XV	X	
OSC	1	integer	--	overstorey site class	XV	X	
UYRORG	4	integer	--	overstorey year of origin for the stand	XV	X	
USPCOMP	120	character	--	understorey species composition	XV	X	
ULEADSPC	3	character	--	understorey leading species	XV	X	
UAGE	3	integer	--	understorey age	XV	X	

field name	maximum width	field type	decimal places	attribute description	PCI	BMI	OPI
UHT	4	double	1	understorey height	XV	X	
UCCLO	3	integer	--	understorey crown closure	XV	X	
USTKG	4	double	2	understorey stocking	XV	X	
USC	1	integer	--	understorey site class	XV	X	
INCIDSPC	3	character	--	incidental species	XV	X	X
VERT	2	character	--	vertical stand structure	XV	X	X
HORIZ	2	character	--	horizontal stand structure	XV	X	X
PRI_ECO	13	character	--	ELC primary ecosite	XV	X	X
SEC_ECO	13	character	--	ELC secondary ecosite	XV	X	X
ACCESS1	3	character	--	accessibility indicator	XV	X	XV
ACCESS2	3	character	--	accessibility indicator	XV	X	XV
MGMTCON1	4	character	--	management consideration	XV	X	XV
MGMTCON2	4	character	--	management consideration	XV	X	XV
MGMTCON3	4	character	--	management consideration	XV	X	XV
YRORG	4	integer	--	model year of origin for the stand		XV	XV
SPCOMP	120	character	--	model species composition		XV	XV
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 indicator		XV	XV
SMZ	15	character	--	strategic management zone		XV	XV

field name	maximum width	field type	decimal places	attribute description	PCI	BMI	OPI
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 management zone			XV
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	Type
WAT	water	All water areas. Includes lakes, ponds, reservoirs (i.e., inland basin areas containing water) and wide (“two sided”) rivers. These are rivers that can be defined by area. Smaller/narrower rivers and streams are maintained as linear features in a centre-line layer(s).	water
DAL	developed agricultural land	Lands which are cultivated for growing crops, orchards, floral gardens, etc. These areas may include abandoned agricultural lands.	non-forested
GRS	grass and meadow	Farm areas devoted to pasture for domesticated animals. These areas may also include abandoned grass and meadows, but are not part of the productive forest land base and do not include “barren and scattered” areas. These areas are similar to barren and scattered, but are located near developed agriculture land or unclassified areas and are usually fenced.	non-forested
ISL	small island*	Islands less than 8 hectares in size, down to a lower limit of 0.0025 hectares or 25 square meters in size (e.g., 5 meters X 5 meters) are recorded during the inventory production process, but are not interpreted/typed for practicality and cost considerations. Only islands 8 hectares and larger are interpreted and assigned an appropriate POLYTYPE code, such as FOR or BSH.	non-forested

Code	Option	Definition	Type
UCL	unclassified	Non-forested areas which were created for specific uses other than timber production, such as roads, railroads, mines, utility corridors, logging camps, gravel pits, airports, etc.	non-forested
BSH	brush and alder	Areas covered with “non-commercial” tree species or shrubs. These areas are normally associated with wetlands or water features.	non-productive forest
RCK	rock	Areas of barren or exposed rock (e.g., bedrock, cliff face, talus slope) which may support a few scattered trees, but is less than 25% crown closure.	non-productive forest
TMS	treed wetland (muskeg)	Areas of dry or wet muskeg on which stunted trees occur as widely spaced individuals or in small groups.	non-productive forest
OMS	open wetland (muskeg)	Wet areas of mosses, grasses, sedges, and small herbaceous plants, often interspersed with small areas of open water.	non-productive forest
FOR	productive forest	Areas that are capable of producing trees and can support tree growth. These areas may or may not be capable of supporting the harvesting of timber on a sustained yield basis. Some areas may have physical and/or biological characteristics which effect land use. Thus this polygon type includes both production and protection forest areas.	productive forest

*If a delineated polygon is located on an island or is an island, the management consideration attribute is set to island (MGMTCON1 = ISLD).

The polygon type is determined from the classification of area on a 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 management unit are classified into various non-forested or forested lands.

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:

- 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 blank or null

OWNER

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

Format:

Code	Option	Definition
1	Crown land	Crown Managed
2	Patent land - with timber rights reserved to the Crown	Patented – Crown Timber

Code	Option	Definition
3	Patented land – fee simple (private)	Non Crown
4	Patented land– Company Freehold	Non Crown
5	Provincial Park	Crown Other
6	Land identifying Indian Reserve boundaries for the Province of Ontario defined by the Legal Surveys Division of Natural Resources Canada	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 management unit. The ownership information is used to create table FMP-1.

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 four-digit number representing the **calendar year** that corresponds to the **source** of data update used to determine or update the polygon description attributes..

Format:

- YYYY

The year that corresponds to the source 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. This value 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
- 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 cover ” layer	Base feature information that is provided by the MNRF (e.g., water or evaluated wetlands).
DIGITALA	multispectral scanning (digital image) – automated process	Digital analysis, automated processing of imagery (e.g., Ecognition or Feature Analyst) to extract and delineate spatial features. In the FRI used to represent the source of water polygons and islands.

Code	Option	Definition
DIGITALP	multispectral scanning (digital image) – manual process (photo -interpreted)	Photo-interpreted using softcopy systems.
ESTIMATE	expected/ estimated outcome/ result	This source option is only for use in areas that have been recently renewed and have not been revisited since the renewal work was performed i.e., where a follow-up survey has not yet been performed (e.g., establishment/FTG survey, performance survey). Therefore, the description of the newly regenerated stand is a “best estimate” of the expected outcome/result of the renewal treatment that was applied to the area based on past silvicultural successes.
FOC	forest operations compliance inspection	Inspection of a site after silvicultural treatment to determine whether an operator/operation conformed to the approved plan or permit. The evaluation of any harvest, renewal, maintenance, or access forest management activity (e.g., post-harvest site inspection) can be included here.
FORECAST	forecasted description	This indicates a polygon description that was updated based on expected outcomes of planned operations (which have not yet been implemented) for the remainder of the current plan period. This code is only valid in the Base Model Inventory.
FRICNVRT	forest resources inventory converted	The current polygon description is based on data converted from a previous FRI product.
INFRARED	Infrared satellite imagery	Note: This type of imagery is used to assess succession and distinguish hardwood versus conifer regeneration in young plantations.

Code	Option	Definition
MARKING	pre-harvest site inspection/ marking	Assessment of the trees in a stand for purpose of establishing a silvicultural or operational prescription. Selecting and marking the trees to be harvested and/or the trees to be left to grow; to sustain and enhance the stand for timber management, wildlife habitat management, aesthetics, recreation, biodiversity and other environmental and heritage concerns.
OCULARA	ocular aerial survey/ reconnaissance	Visual assessment of a stand/polygon or management area from a helicopter or fixed wing aircraft.
OCULARG	ocular estimate (ground)	Visual assessment of a stand/polygon or 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 a recognized sampling plan or design.
PHOTO	air photo interpretation	Photography at a conventional scale of 1:10,000 to 1:20,000.
PHOTOLS	photography - large scale aerial	Photography at a scale larger than 1:10,000 (e.g., 1:500, 1:1000).
PHOTOSS	photography - small scale aerial	Photography at a scale smaller than 1:20,000 (e.g., 1:100,000).
PLOTFIXD	plot - fixed area	Data collected from a fixed area plot, or series of fixed area plots that represent the polygon (e.g., FRI – permanent inventory plot)
PLOTVAR	plot - variable area (radius)	Data collected from a variable radius plot, or series of variable radius plots that represent the polygon (e.g., FRI calibration plot)
RADAR	radar satellite imagery	Note: Radar imagery may provide for image separation among forest types when pre-existing forest and non-forest land cover classifications are incorporated.

Code	Option	Definition
REGENASS	regeneration assessment	Survey data collected of a regenerated polygon area to determine the species composition, stand height, density, and condition of the regenerating forest. The surveys include seeding, survival, and stocking assessments.
SEMEXTEN	silvicultural effectiveness monitoring survey - extensive	Generalized survey sampling methodologies used to determine if regeneration or management objectives have been met in relation to the Silviculture Ground 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	silvicultural effectiveness monitoring survey - intensive	Rigorous survey sampling methodologies to determine if regeneration or management objectives have been met in relation to the Silviculture Ground 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.
SPECTRAL	spectral satellite imagery	Note: This type of imagery can be used to distinguish and identify different forest and plantation types.
SUPINFO	supplied information	Spatial or tabular information provided by either the 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 (i.e., sub-division) 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	Regular Production Forest	Productive forest areas at various stages of growth and development, including areas that have been recently disturbed (by harvest or natural causes) or renewed (by artificial or natural means), that are capable of producing adequate growth of timber to support harvesting on a sustained yield basis. These areas have no significant physical or biological limitations on the ability to practice forest management, but may include areas which pose an operational challenge in terms of harvest, access, protection, silviculture, or renewal.

Code	Option	Definition
MR	Production Forest – Designated Management Reserve	Productive forest areas which are considered to be production forest, but that are unavailable for timber production as determined through the forest management planning process. That is, these areas have been identified as no-cut areas through area of concern planning for the purpose of protecting values (e.g., reserve buffers applied to protect tourism values). Designated management reserves are areas that were managed as an operational reserve during previous forest management plan 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 Forest	Productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitation such as steep slopes or shallow soils over bedrock.

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

There is a relationship between the site class (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 regular production forest (RP) instead of protection forest but this is 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 stand 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.

Format:

Code	Option	Definition	Type
DEPHARV	recently disturbed (depletion) by harvest and has received no regeneration/renewal treatment	Productive forest area that was recently disturbed by clearcut harvesting and has not received a silvicultural treatment such as natural regeneration, seeding or planting. These areas do not have advanced regeneration, or a distinct or established regeneration layer that would be released and/or protected as part of the depletion operation.	recent disturbances

Code	Option	Definition	Type
DEPNAT	recently disturbed (depletion) by natural causes and has received no regeneration/renewal treatment	Productive forest area that was recently disturbed by natural causes (i.e., fire, blowdown, ice damage, insect, disease) and has not received a silvicultural treatment such as natural regeneration, seeding or planting. These areas do not have advanced regeneration, or a distinct or established regeneration layer.	recent disturbances
LOWMGMT	below regeneration standards due to past management	Productive forest stands which were previously harvested and have not reached the regeneration standards as described in an approved 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%).	not satisfactorily regenerated

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

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

Code	Option	Definition	Type
BLKSTRIP	modified cut: block or strip	<p>The removal of the stand in progressive strips or blocks in more than one operation. Strip and block harvest methods are prescribed to encourage natural regeneration, provide wildlife habitat, protect fragile sites, or for aesthetics.</p> <p>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.</p> <p>Note: Harvesting where the cut strips are greater than 100 meters wide (> 5 chains) should be recorded as clearcut.</p>	forest stands regenerated - clearcut
SEEDTREE	modified cut: seed tree	<p>An even-aged, silvicultural system that retains mature standing trees scattered throughout the cut block to provide seed sources for natural regeneration.</p> <p>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.</p>	forest stands regenerated - clearcut

Code	Option	Definition	Type
FRSTPASS	modified cut: first pass	A partial harvest where the first harvest operation removes target/specific merchantable tree species from a forest stand. The remaining species are merchantable and are intended to be harvested by another logger/contractor/forest resource licence holder in the next pass. A first pass should be recorded if merchantable tree species remain in the forest stand which have been allocated for harvest - but have not yet been harvested.	forest stands regenerated - clearcut
PREPCUT	received a preparatory cut	A shelterwood silvicultural system stage of management designed to remove undesirable species of any species from the stand and to select trees to remain that will provide the best seed source and to improve conditions for seed production and natural regeneration.	forest stands regenerated - shelterwood
SEEDCUT	received a seed cut	A shelterwood silvicultural system stage of management where trees are removed from a mature stand to create openings in the canopy/create spaces and to prepare sites for natural regeneration while maintaining the seed-bearing trees and protecting any existing advance regeneration.	forest stands regenerated - shelterwood
FIRSTCUT	received a first removal harvest (cut)	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.	forest stands regenerated - shelterwood

Code	Option	Definition	Type
LASTCUT	received a last removal harvest (cut)	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.	forest stands regenerated - shelterwood
IRREGULR	received an irregular shelterwood harvest	An irregular shelterwood stage of management where overstorey trees are removed in successive regeneration cuts with a long and indefinite regeneration period typically resulting in a multi-aged stand.	Forest stands regenerated - shelterwood
IMPROVE	received an improvement cut	A selection silvicultural system stage of management where a cut is made in an uneven-aged stand primarily to improve stand composition, distribution and quality by removing less desirable trees of any species.	forest stands regenerated - selection
SELECT	received a selection harvest	A selection silvicultural system stage of management where individual trees or groups of trees are selected for cutting in order to recover the yield and develop a balanced uneven-aged structure, while providing the cultural measures required for tree growth and seedling establishment.	forest stands regenerated - selection

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 or FTG. 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.

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 ($OSTKG \geq 0.40$)
- If crown closure is less than 25% ($UCCL + OCCL < 25$) 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 **fiscal** year that a productive forest area was disturbed, completely or partially, by harvest or by natural causes that was identified in an annual report. 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, for example, any disturbances occurring during the period of April 1, 2029 through March 31, 2030 would be recorded as 2029

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 last disturbance). The disturbance may have affected the entire stand or only a portion of it.

Format:

Code	Option	Definition
BLOWDOWN	wind/ blowdown	25% or greater of the basal area, crown closure or 25% or 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

Code	Option	Definition
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 harvest 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
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 natural or artificial regeneration 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 or FTG, 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	<i>Fraxinus spp.</i>
Ab	ash, black	<i>Fraxinus nigra</i>
Aw	ash, white	<i>Fraxinus americana</i>
Pl	Aspen, largetooth	<i>Populus grandidentata</i>
Pt	Aspen, trembling	<i>Populus tremuloides</i>
Bd	Basswood	<i>Tilia americana</i>
Be	Beech, American	<i>Fagus grandifolia</i>
Bw	birch, white (or paper)	<i>Betula papyrifera</i>
By	birch, yellow	<i>Betula alleghaniensis</i>
Bn	Butternut	<i>Juglans cinerea</i>
CE	cedar, all	<i>Thuja spp.</i>
Cr	cedar, eastern red (redcedar)	<i>Juniperus virginiana</i>
CH	Cherry, any/mix	<i>Prunus spp.</i>
Cb	Cherry, black	<i>Prunus serotina</i>

Code	Common Name	Scientific Name
OC	conifers, other	-----
EX	elm, any/mix.	<i>Ulmus spp.</i>
Ew	elm, white (or American)	<i>Ulmus americana</i>
Bf	fir, balsam	<i>Abies balsamea</i>
OH	hardwoods, other	-----
He	hemlock, eastern	<i>Tsuga canadensis</i>
Hi	hickory, all	<i>Carya spp.</i>
Iw	ironwood (also called Eastern hop-hornbeam)	<i>Ostrya virginiana</i>
La	larch, eastern (also called Tamarack or American Larch)	<i>Larix laricina</i>
Mh	Maple, hard (= sugar maple)	-----
Mr	Maple, red (also called soft maple)	<i>Acer rubrum</i>
Ms	Maple, silver	<i>Acer saccharinum</i>
Mr	Maple, soft (= red maple)	-----
Mh	Maple, sugar (also called hard maple)	<i>Acer saccharum</i>
Ob	oak, bur	<i>Quercus macrocarpa</i>
Or	oak, red (or northern red)	<i>Quercus rubra</i>
Ow	oak, white	<i>Quercus alba</i>
Pn	pine, Austrian or black	<i>Pinus nigra</i>
Pj	pine, jack	<i>Pinus banksiana</i>
Pr	pine, red	<i>Pinus resinosa</i>
Ps	pine, scots	<i>Pinus sylvestris</i>
Pw	pine, white [eastern white]	<i>Pinus strobus</i>
PO	Poplar, any/mix	<i>Populus spp.</i>
Pb	Poplar, balsam	<i>Populus balsamifera</i>
SX	spruce, any/mix	<i>Picea spp.</i>
Sb	spruce, black	<i>Picea mariana</i>
Sr	spruce, red	<i>Picea rubens</i>
Sw	spruce, white	<i>Picea glauca</i>

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 SSSPPSSSPPP, example: PJ 80BW 20 (there are two blanks between the species and the proportion)
- no duplicate species codes allowed in the string
- proportion values in the string must sum to 100
- The tree species in the composition are to be coded using the scheme listed here.

The most common species codes (based on all the inventories as of 2009) are listed 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)

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

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 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, field samples, or growth algorithms.

Format:

- 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 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 $OCCLO \leq 100$)

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

- If DEVSTAGE attribute starts with DEP or NEW, then zero 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 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 (i.e., stems/hectare) has been collected or determined from a regeneration survey, this information must be converted to a stocking value for the purpose of updating the forest stand description information.

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 $STKG \leq 4.00$)

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 ($OSTKG \leq 2.50$)

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.

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 protection forest (PF).

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 regular (RP) instead of PF.

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)

- 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 contains a four digit number representing the average year that the species within the understorey having the greatest relative abundance in terms of basal area, 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 and 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 and 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 SSSPPSSSPPP example: PJ 80BW 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

Definition: The **understorey leading species** attribute indicates the most prevalent species in the forest stand, or in 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

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 valid codes
- 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., $OCCLC + UCCLC \leq 200\%$).

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 UCCLC 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 ($UCCLC > 0$)
- The attribute value must be greater than zero and less than or equal to 100 ($UCCLC > 0$ and $UCCLC \leq 100$), 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:

- 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 \leq 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

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 $USC \leq 4$), 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 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)

- 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 (i.e., storeys) that can be identified within a forested polygon.

Format:

Code	Option	Definition
SI	single storey	Mainly a single storey stand.
SV	single storey with veterans	Mainly a single storey stand with a veteran (super canopy) component representing less than 10% of the total crown closure for the stand.

Code	Option	Definition
TO	two-tiered overstorey used to set DEVSTAGE	The stand canopy is composed of mainly two distinct layers that have at least 3 meters in height difference or 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 - understorey used to set DEVSTAGE	The stand canopy is composed of mainly two distinct layers that have at least 3 meters in height difference or 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	mainly two-tiered with veterans - overstorey used to set DEVSTAGE	Mainly a two-tiered canopy with an additional veteran (super canopy) component of less than 10% of the total stand canopy crown closure. The overstorey is the layer used to assign the DEVSTAGE value during photo interpretation/inventory creation.
MU	mainly two-tiered with veterans- understorey used to set DEVSTAGE	Mainly a two-tiered canopy with an additional veteran (super canopy) component of less than 10% of the total stand canopy crown closure. The understorey is the layer used to assign the DEVSTAGE value during photo interpretation/inventory creation.
CX	complex or continuous	A stand with a wide range of heights and ages to the 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 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 minus the UHT must be greater than or equal to 3 or the OAGE minus the 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:

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 - 1 or 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 Depth modifier	2*
substrate Moisture modifier	1
substrate Chemistry modifier	1
vegetative cover class 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 below. 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 of Ontario for Ecosite Coding

Code	Option
A	Sub-arctic
B	Boreal
G	Great Lakes St. Lawrence
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 224, plus 997 to 999 for unclassified areas. Refer to the list of codes following the geographic range map. Numbers less than 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
X	Not Vegetated (X)	<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 Deep	Depth of unconsolidated mineral material > 60 cm 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
x	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
a	acidic
b	basic
k	calcareous (k)
n	non calcareous
z	saline (z)

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

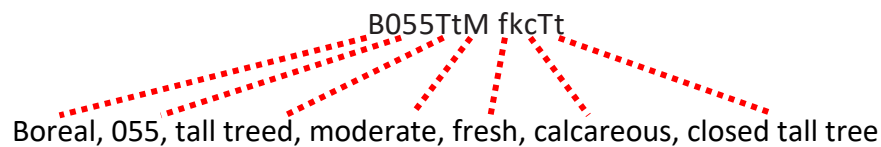
All ecosites in Key 10, Permanently Flooded or Hydric ecosites (i.e., codes 126 -156 and 222 - 224), are assigned the chemistry modifier “n” (for non-calcareous) unless ground data supports a calcareous call for mineral soils within the hydric ecosites.

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
oTt	open tall treed
sTt	sparse tall treed
Tt	greater than 25% tall treed
TI	greater than 25% low treed
sTI	sparse low treed
St	tall shrub
sSt	sparse tall shrub
SI	low shrub
sSI	sparse low shrub
H	herbaceous
sH	sparse herbaceous
Nv	non vascular
X	not vegetated (X)

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

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

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 (none)	The are no physical or ecological “restrictions” in the site that need to be considered when determining management of the stand.
ISLD	Island	The area is or is located on an island (i.e., an area of land that is totally surrounded by water).
COLD	Permafrost (cold)	Poor growing conditions due to the trees in the polygon area being subject to permafrost conditions.
DAMG	physical/natural disturbance/ damage	A stand which contains trees that are damaged, dead and/or dying due to natural causes (e.g., ice damage, blowdown, insect/disease damage).
NATB	natural barrier	A productive stand that is unreachable due to the physical features of the surrounding area (e.g., the area is a mesa or is productive forest surrounded by non-forested wetland).
PENA	Peninsula	An area of land that is nearly surrounded by water and is connected to the mainland.
POOR	stagnated, poor tree growth – no indicator	The trees within a polygon that are exhibiting stagnated growth where there is no discernible cause for the poor growing condition.
ROCK	exposed bedrock/rocky outcrops	A forested polygon where the rocky conditions may limit accessibility for forestry equipment and/or present a potential for soil erosion due to operations.
SAND	blow sand /exposed fine sand , shallow or no humus	A forested polygon where forest regeneration 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.

Code	Option	Definition
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 condition with the appropriate ecosite code.
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 production forest reserve (PFR) area	Productive forest land containing obvious physical features which may limit, but does not prevent, the ability to practice forest management. The feature(s) must be considered during forest management planning, but does not make the stand unmanageable. The specific reason/limitation is not known.
U_PF	unknown concern – historic protection forest (PF) area	Productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects. The specific reason/limitation is not known.
WATR	vertical or horizontally fluctuating ground water	A forested polygon where the entire or partial area of the polygon may be influenced by 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.

Code	Option	Definition
WETT	poorly drained – high water table and the potential to reduce water table depth (wet[t])	A forested polygon where the entire or partial area of the polygon may be influenced by 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, 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 must 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

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 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), 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 SSSPPSSSPPP example: PJ 80BW 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 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 populated in SPCOMP.

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

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)

AGE

Definition: The **model age** attribute indicates the average age of the dominant and co-dominant 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 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
- 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 <= 40.0 and HT >= 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
- 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 (OCCLCLO > 0 and OCCLCLO <= 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

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 $STKG \leq 4.00$)

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 ($STKG \leq 2.50$)

SC

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)

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 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 (e.g., eco-regions, ecodistricts), watershed zones, large landscape patches (LLP), wilderness zones, and industrial operating units.

Strategic management zone information may influence forest modelling and landscape diversity analysis. Strategic management zones may also be used to assess the spatial distribution of harvest over the first four FMP periods as described in the FMPPM.

Note: If applicable, 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 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

Sustainable forest licensees must identify a forest unit for all productive forest areas on Crown lands within a 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 modelling, 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
A	available	Crown production forest that can be managed for timber production.
U	unavailable	Managed Crown production forest that is not available for timber production.

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 - regular (RF), production forest – designated management reserve (MR), or protection forest (PF). Normally, productive forest areas which are designated as RF are considered as forest stands which are available for timber production. Productive forest areas that are designated as PF are usually considered as forest stands which are not available for timber production. Productive forest areas which are designated as MR are also normally considered as forest stands which are not available for timber production.

The decision regarding the availability of a forest stand area for 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 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.

Code	Option	Definition
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.

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

Code	Option	Definition
BLKSTRIP	will receive a modified cut: block or strip	<p>The removal of a portion of the existing trees in a stand in progressive strips in more than one operation so that the non-disturbed portion of the stand is left primarily to provide a natural seed source for regeneration of the disturbed area. Several cutting patterns are available to achieve the same goal.</p> <p>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.</p> <p>Note: Harvesting where the cut strips are greater than 100 meters wide (> 5 chains) should be recorded as conventional clearcut.</p>
SEEDTREE	will receive a modified cut: seed tree	<p>An even-aged, silvicultural system that retains mature standing trees scattered throughout the cut block to provide seed sources for natural regeneration.</p> <p>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.</p>
SCNDPASS	will receive a modified cut: next/ second-pass	<p>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.</p>

Code	Option	Definition
PREPCUT	will receive a preparatory cut	A shelterwood silvicultural system stage of management designed to remove undesirable trees 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 (cut)	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 (cut)	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.
IRREGULR	will receive an irregular shelterwood harvest	An irregular shelterwood stage of management where overstorey trees are removed in successive regeneration cuts with a long and indefinite regeneration period typically resulting in a multi-aged stand.
IMPROVE	will receive an improvement cut	A selection silvicultural system stage of management where a cut is made in an uneven-aged stand primarily to improve stand composition, distribution and quality by removing less desirable trees of any species.
SELECT	will receive a selection harvest	A selection silvicultural system stage of management where individual trees or groups of trees are selected for cutting in order to recover the yield and develop a balanced uneven-aged structure, while providing the cultural measures required for tree growth and seedling 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 (DEVSTAGE) 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 (i.e., 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.

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 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 FMPPM 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 or blank

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 Section 5, Submission 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 Section 5, Submission for more information.

4.1.7 Planning Composite Inventory

4.1.7.1 Description Intent and Intended Use

The planning composite inventory (PCI) 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 PCI product. The PCI contains updates to the forest resources inventory (FRI) as a result of actual forest management activities and natural disturbances that occurred between the delivery of the FRI and the start of the planning process. The source of forest management activities information and natural disturbance information is found in the approved annual reports.

The PCI is a single spatial data layer created by combining the updated FRI 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 PCI:

- 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 PCI 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
PCI	Letters "PCI" representing Planning Composite Inventory .
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
<file extension>	Include a file extension if required as described in Section 4.1.2

4.1.7.3 Format

Spatial Requirements

The PCI 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 PCI 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 modelling 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:

Part	Description
MU	Letters “MU” representing Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
FDP	Letters "FDP" representing Forecast Depletions .
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
<file extension>	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.

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 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

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.

The BMI provides the necessary information to generate the inputs for spatial and non-spatial models required for strategic modelling. 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 BMI are required and if a resubmission of the BMI is required.

The forest management decision of selecting a managed forest stand canopy from the PCI 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 OMZs.

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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
BMI	Letters "BMI" representing Base Model Inventory .
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
<file extension>	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 BMI 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 (OPI) 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 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 PCI 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
–	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
OPI	Letters "OPI" representing O perational P lanning I nventory.
<part number>	This value is used where the inventory exceeds software limitations and is required to be submitted in pieces. The default value is 00 where the product is submitted as a single entity.
<file extension>	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;
- tree improvement; and
- wood storage yards.

These products will be used to facilitate the MNRF review of the FMP and used to inform the stakeholders, First Nation and Métis communities and the public as part of 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 as identified in Section 5.

Naming conventions for the individual operational planning information products is discussed in the individual product sections (Sections 4.2.7 – 4.2.16).

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 NRIP 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 (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_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 spatial 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 NRIP.

4.2.4 Format

The format of the individual operational planning information products is discussed in the individual product sections (Sections 4.2.7 – 4.2.16).

Validation

Stage 1 validation routines assess FMP products for meeting mandatory requirements. The process will assess the required products 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 products 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. 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 Section 5 Submission 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 Section 5, Submission for more information.

4.2.7 Planned Harvest

4.2.7.1 Description, Intent and Intended Use

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 the different silviculture systems and harvest categories 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
PHR	Letters "PHR" representing Planned Harvest .
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

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 ten-year plan period associated with polygons planned for harvest that are in proximity of each other for practical implementation of operations.

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

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 silvicultural system where mature trees are harvested in a series of two or more cuts (i.e. preparatory, seed, first removal, final removal or successive regeneration cuts) for the purpose of establishing regeneration under shelter of the residual trees, either by cutting uniformly over the entire stand area or, in narrow strips or irregularly. Regeneration is natural or artificial. The regeneration interval determines the degree of even-aged uniformity.

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

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 operation	Areas which were scheduled for harvest in the current forest management plan, but were not harvested.

Code	Option	Definition
CONTNGNT	contingency (nt) harvest area	The area set aside to accommodate unforeseeable circumstances (e.g., wildfire). Contingency area will serve as replacement for harvest area, and only be used if needed. The area must be sufficient to provide for a minimum of one year and a maximum of two years of harvest operations
REGULAR	regular planned harvest	This is the "planned harvest area" for the 10 year plan 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 harvest area	The salvage harvest is the areas where the recovery or harvesting of timber that has been killed or damaged by natural causes (i.e., wind, flood, insects, disease) are planned. The salvage area, as described in the FMPM, does not contribute to the available harvest area.
REDIRECT	redirected harvest	Areas to be harvested under a pest management plan and count against the available harvest area of the FMP.
ACCELER	accelerated harvest	Areas to be harvested under a pest management plan and are areas in addition to the available harvest area of the FMP.
SCNDPASS	second-pass harvest	For areas managed using the clearcut silvicultural system, harvest may be planned in two passes. This is normally when species within the stand are harvested and utilized by different logger/contractor/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.

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
- 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 spatial 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, wood storage yards 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, 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
AOC	Letters "AOC" representing Area of Concern .
<layer number>	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>	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.

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 AOC prescription which must correspond with a prescription identified on Areas Selected for Operations maps and the AOC prescriptions contained in table FMP-11 and the supplementary documentation of the FMP. The prescription can represent either a group of AOCs with a common prescription or an individual AOC 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-11 and the supplementary documentation

AOCTYPE

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

Format:

Code	Option	Definition
M	modified	Areas which are planned for operations but have specific conditions or restrictions on operations as required by an AOC prescription.

Code	Option	Definition
R	reserved	Areas which are reserved (prohibited) from operations as required by an AOC prescription.

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

4.2.9 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 combined 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
PRP	Letters "PRP" representing Planned Residual Patches .
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

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

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

4.2.10 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
PRC	Letters "PRC" representing Planned Road Corridor .
<part number>	This value will always be 00 (default).
<file extension>	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.

field name	maximum width	field type	decimal places	attribute description
ROADID	30	character	--	road identification
ROADCLAS	1	character	--	road class
TRANS	4	integer	--	transfer year
ACYEAR	4	integer	--	access control year
ACCESS	8	character	--	access control
DECOM	4	character	--	decommissioning type
INTENT	30	character	--	MNRF intent
CONTROL1	4	character	--	access control type
CONTROL2	4	character	--	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.
B	branch	A branch road is a road, other than a primary road, that branches off an existing or new primary or branch road, providing access to, through or between areas of operations on a management unit

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 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 ($TRANS \neq 0$), then INTENT must be populated
- If the value is not equal to zero ($TRANS \neq 0$), then it 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 that the access control is anticipated to take effect.

Format:

- YYYY
- based on fiscal year, for example, any disturbances occurring during the period of April 1, 2029 through March 31, 2030 would be recorded as 2029

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 access control year does not equal zero ($ACYEAR \neq 0$) then 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 ($ACYEAR \neq 0$) 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.
BOTH	both activities; 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.

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

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	slash pile
WATX	water crossing (x) removal

Stage 1 Validation:

- 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

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 ten-year 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	slash pile
WATX	water crossing (x) 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).

Stage 1 Validation:

- 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 may include the planned area of operations, and the area from an existing road or planned road corridor to the planned area of operations within which an operational road is planned to be constructed. ORBs are intended to identify where operational roads may be constructed and should provide flexibility in operational road location where necessary (e.g., terrain limitations). The delineation of ORBs will establish the limits within which operational roads and forestry aggregate pits can be constructed for the plan period of the FMP. Operational roads within an ORB will have the same use management strategy. The extent of the ORBs defines the area in which a single use management strategy will apply.

This layer may also include area between planned operations or between planned/existing roads and planned 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 identifier (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 Management Unit .

Part	Description
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
–	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
ORB	Letters "ORB" representing O perational R oad B oundaries.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

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

ORBID

Definition: The **operational road boundary identifier** attribute indicates the user defined unique number, label or name assigned to the operational road boundary.

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.

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

4.2.12 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 and other existing roads that will be the used for forest management purposes as described in the FMPM Part A , Section 1.1.8.10. 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
ERU	Letters "ERU" representing Existing Road Use Management Strategy

Part	Description
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

field name	maximum width	field type	decimal places	attribute description
ROADID	30	character	--	road identifier
ROADCLAS	1	character	--	road class
TRANS	4	integer	--	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	--	maintenance
MONITOR	1	character	--	monitoring
RESPONS	3	character	--	responsibility
CONTROL1	4	character	--	access control type
CONTROL2	4	character	--	access control type

ROADID

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

Format:

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

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 ($TRANS \neq 0$) then the value must be greater than or equal to the plan period start year
- If TRANS value does not equal zero ($TRANS \neq 0$) then INTENT must be populated

Stage 2 Validation:

- 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 that the establishment of an access control is anticipated to take effect.

Format:

- YYYY
- based on fiscal year, for example, any disturbances occurring during the period of April 1, 2029 through March 31, 2030 would be recorded as 2029

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 \neq 0) and access control is not EXISTING or REMOVE (ACCESS \neq EXISTING or ACCESS \neq 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 \neq 0) then access control must not be null (ACCESS is not 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.
BOTH	both activities; apply new and remove	This indicates that a new access control is being applied and removed from the road segment in the plan period.
ADDREMOVE	additional and remove	This indicates that an access control exists on the 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 and remove (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 Type, 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.

Format:

Code	Option
BERM	ber m and/or ditch
SCAR	sca rify and/or plant and/or seed road
SLSH	sla sh pile
WATX	wa ter crossing (x) 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 Type, 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 Type, 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 Type, 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	slash pile
WATX	water crossing (x)

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).

Stage 1 Validation:

- 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 ≠ REMOVE or ACCESS is not null

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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
WXI	Letters "WXI" representing Existing Water Crossing Inventory
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

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

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

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
BOX	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)

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

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

4.2.14 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
PAG	Letters "PAG" representing Planned Aggregate Extraction Area .
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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 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.

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 FMP 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 Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
IMP	Letters "IMP" representing Tree Im provement.
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	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.

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

4.2.16 Wood Storage Yard

4.2.16.1 Description, Intent and Intended Use

The wood storage yard layer identifies areas where logs may be slashed sorted and stored for a period of time prior to being shipped to their destination facility. A wood storage yard is defined as a site that is geographically separated from the harvest location that may be used for slashing, sorting, storage and other wood measurement activities of forest resources prior to the movement to final processing destination(s). The wood storage yard layer will identify the wood storage yard locations for the FMP period.

4.2.16.2 Naming Convention

A standard naming convention will be used for the wood storage yard 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>WSY<part number>.<file extension>

where:

Part	Description
MU	Letters "MU" representing Management Unit .
<management unit>	The three digit FMU number, pad left with zeros as required (e.g., 001).
_	Underscore character as a separator.
<year>	Two digit numeric start year of the FMP period (e.g., 2028 is 28).
IMP	Letters "WSY" representing Wood Storage Yard .
<part number>	This value will always be 00 (default). Overlapping areas are not permissible and therefore multiple layers will not exist.
<file extension>	Include a file extension if required as described in Section 4.2.2

4.2.16.3 Format

Spatial Requirements

The wood storage yard 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 wood storage yard 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.

field name	maximum width	field type	decimal places	attribute description
WSYID	15	character	--	wood storage yard identifier
TYPE	3	character	-	wood storage yard type

WSYID

Definition: The **wood storage yard identifier** attribute indicates the unique identifier for the area where a wood storage yard may be located.

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

TYPE

Definition: The **wood storage yard type** attribute indicates the type of use intended for the wood storage yard identified.

Format:

Code	Option	Definition
THY	temporary holding yard	Temporary holding yards for forest resources are storage sites which are removed from the harvesting location, i.e. outside of the harvest approval area. These yards are generally used annually for the short-term storage of forest resources prior to movement to the final processing destination. Wood from more than one license and/or Harvest Approval area may be stored at these sites
TMY	temporary merchandizing yard	Merchandizing yards are sites which are also removed from the harvesting location. These yards may temporary and are used for slashing, sorting, log improvement and wood measurement activities, as applicable, that occur prior to delivery to the final processing destinations. Forest resources from more than one license and/or Harvest Approval area may be processed at these sites.
LMY	long-term merchandizing yard	Merchandizing yards are sites which are also removed from the harvesting location. These yards may be long-term and are used for slashing, sorting, log improvement and wood measurement activities, as applicable, that occur prior to delivery to the final processing destinations. Forest resources from more than one license and/or Harvest Approval area may be processed at these sites.

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, First Nation and Métis communities, and the public 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.

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

MU<management unit>_<year>_<info product>_MAP_<description>_<file number>.PDF

where:

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

Parts	Description
–	Underscore character as a separator.
<year>	Four digit numeric start year of the FMP planning period (e.g., 2028).
–	Underscore character as a separator.
<info product>	Letters representing the information products being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan "FMPDPC" for FMP Draft Plan Contingency "FMPC" for FMP Final Plan Contingency "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>	Text representing the required standard component being submitted. For non-standard additional maps, the description is user defined.
–	Underscore character as a separator.
<file number>	A two-digit numeric place holder for identifying situations where maps have been split into more than one file, based on map extent or theme. If only one map file exists, the file number will remain at "00". If more than one map file exists, the first map will contain "01" in the file number, the second map "02", and so on. If operational scale maps have been produced with a consistent theme split, all of the maps showing the same theme should have the same file number. For example, if harvest operations are displayed on one set of maps and 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, 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 submissions are submitted via the NRIP.

4.3.4 Format

Maps that are a required component of an FMP submission 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 NRIP. 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 4.3.6.1 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 11x17" 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, sustainable forest licensee logo or a 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 (i.e., <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.

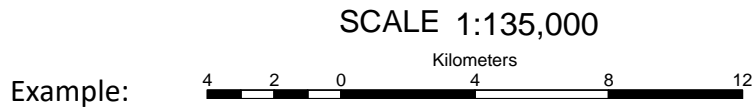
Legend - provides a list of map symbols used for theme and base features.

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.

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

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 a 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 1 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 4.3.7, 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. Natural resource features, land uses and values will not be portrayed on the values maps when publication of the location may be detrimental to their conservation.

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 management unit plus an additional 2000 metres beyond the management unit boundary. This will ensure that values outside of the management unit, which may be adversely affected by forest operations within the 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 First Nation and Métis community or as agreed to by the planning team and the First Nation and Métis 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 forum may be at a different map scale than the ones required for updating of values.

4.3.5.2.3 Values Map Symbolology

The standards for symbols used on values maps are described in Appendix 1. The MNRF must use the standard values symbology described in Appendix 1 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 forums.

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 forum for the review of the Proposed Insect Pest Management Program.

The values maps are to be included in the digital draft and final FMP submissions. 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:

❖ 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 Heritage, Sport, Tourism and Culture Industries.

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)
- Examples of possible types of RBT values:

- Camping Sites
- Hunting Station
- Swimming Beach
- 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)

4.3.5.12 Cultural Heritage Values Map

4.3.5.12.1 Description, Intent and Intended Use

The Ontario Ministry of Heritage, Sport, Tourism and Culture Industries 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/deposition 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/deposition 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 as described in the FMPM.

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

- 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 a digital 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

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 in relevant 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 media being used and the desired mail out date of direct written notices. Public notices for information forums (Stage 3 & 4) will normally be issued 30 days prior to the information forum.

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.

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 NRIP. 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 NRIP, 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 as described in 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)

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, 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 if operational planning maps are included in the contingency plan submissions.

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, 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. The contingency plan proposal will identify if this is a required component of the contingency plan submission.

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, if applicable, 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, 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.

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 described in the FMPM 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 (i.e., 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 road 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 (20 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

There is no packaging and naming convention since this map is not included in a submission that is exchanged through the NRIP.

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.

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 rules (SGR). For candidate areas of bridging operations and second-pass harvest areas, the applicable SGR from the current approved forest management plan will be used. Forest stands must be labelled or symbolized by 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, wood storage yards, 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.

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, site disturbance restrictions) or road activities.

For AOCs for values classified as sensitive, the AOC identifier and the corresponding prescription will 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) 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.

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 implemented under the *Public Lands Act* or any other form of regulation during the ten-year plan period or where access controls will continue to be in effect will be differentiated on the operations maps. Access control is the closure of a road to public travel or the restricted access to a road for certain specified uses for given periods of time.

Roads planned to be decommissioned that will be rendered impassable by 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
- Wood Storage Yard (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

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)
- 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)
- Wood Storage Yard (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 (i.e., 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_Ops54530_00.PDF (Draft Contingency Plan)
- ❖ MU123_2028_FMPC_MAP_Ops54530_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, 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 forums and at the appropriate MNRF offices and the office of the sustainable forest licensee for a period of 30 days following the Stage 3 information forum.

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

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 map 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 and pattern 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 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 found in Section 4.3.6.5 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 (i.e., 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

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 (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 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

- 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 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
- Township or OBM grid (labels)
- Management Unit Boundary

FMP Extension

The FMP extension map is a summary planned operations (e.g., primary road corridors, branch road corridors, wood storage yard 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 term and Long Term)

Scale: summary

Map Surround Components: all

Information Displayed:

Theme Features

- Harvest Areas
- Primary & Branch Corridors
- Wood storage yards

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, 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 as described 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.

The FMP Summary Map is a mandatory component of all draft and final FMP submissions. 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.

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

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

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. The planning team or the appropriate task team, and/or the sustainable forest licensee may create and use 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 the FMP submission, 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, 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 Forest Management Plan Text and Supplementary Documentation

4.4.1 Description, Intent and Intended Use

The mandatory text components of the FMP submission has been structured to facilitate efficient organization, retention, access and use of the information on the NRIP. The following rules apply to text components of the FMP submission:

- FMP text;
- Analysis package;
- FMP Summary text;
- Proposed Long-Term Management Direction Summary Text;
- LCC statement;
- MNRF's list of required alterations;
- Supplementary documentation (remaining components*); and
- Forest Management Plan Extension Text (short and long term).

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 described in Part B 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 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 will be included in the FMP submission according to the standards described in Section 5.0.

FMP text 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>_TXT_<description>.PDF

where:

Parts	Description
MU	Letters “MU” representing Management Unit .
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
–	Underscore character as a separator.
<year>	Four digit numeric start year of the FMP planning period (e.g., 2028).
–	Underscore character as a separator.
<info product>	Letters representing the information product being submitted: “FMPDP” for FMP Draft Plan “FMP” for FMP Final Plan “FMPDPC” for FMP Draft Plan Contingency “FMPC” for FMP Final Plan Contingency “LTMD” for Proposed LTMD summary “FMPEX” for FMP Extensions
–	Underscore character as a separator.
TXT	Letters representing the type of product being submitted: “TXT” for text
–	Underscore character as a separator.
<description>	Letters representing the required standard component being submitted.

	For non-standard additional files that are being submitted, the description is user defined.
.PDF	File format extension of .PDF.

Sample naming conventions for the individual file components are provided in the detailed file descriptions below (Section 4.4.7 to 4.4.12).

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 submission via the NRIP and will apply to all components contained within the submission.

4.4.4 Format

All FMP text files, as components of the submission to the NRIP, 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 Digital Document Accessibility Guide. 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 in Sections 4.4.7 to 4.4.12.

4.4.5 Data Transfer and Schedule

The FMP text and supplementary documentation are included in the FMP product submission and are subject to those timelines. Refer to Section 5.0 for more information.

4.4.6 Review and Approval

Review and approval of the FMP text and supplementary documentation is performed as part of the FMP review. Refer to Section 5.0, Submission 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 submissions. The contingency plan request or proposal will identify if this is a required component of a contingency plan submission.

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:

- ❖ MU123_2028_FMPDP_TXT_PlanText.PDF (Draft Plan)
- ❖ MU123_2028_FMP_TXT_PlanText.PDF (Final Plan)
- ❖ MU123_2028_FMPDPC_TXT_PlanText.PDF (Draft Contingency Plan)
- ❖ MU123_2028_FMPC_TXT_PlanText.PDF (Final Contingency Plan)

4.4.7.3 Title and Certification Pages

4.4.7.3.1 Description, Intent and Intended Use

The Forest Management Plan – Title, Certification and Approval Page will be located at the front of each draft and approved FMP. The plan author will complete, sign and seal the title, certification and approval page of the draft and final FMP. For FMPs prepared by an organization other than MNRF, the senior company official of the sustainable forest licensee will also sign the title, certification and approval page. The final FMP approval page will also be

signed by the MNRF district manager, MNRF regional resources manager, and the MNRF regional director. The Forest Information Manual provides direction for signing and submitting approval pages associated with digitally submitted FMPs.

If the MNRF district manager and MNRF regional resources manager direct other people with expertise beyond the standard expertise of a registered professional forester to develop parts of a FMP, those people will certify the parts of the FMP that they prepared and indicate they have prepared those parts of the FMP in accordance with the FMPM. Their certification will be documented in the format provided below, Forest Management Plan - Title and Certification Page for Sections of the Forest Management Plan not Prepared by the Plan Author.

A list of exceptions will follow the title and certification page. The list of forest management plan contributors will follow the list of exceptions. Both templates are provided below.

4.4.7.3.2 Naming Convention

As part of the single text file, the standardized naming convention will be as described in 4.4.7.2.

4.4.7.3.3 Template Format

Forest Management Plan – Title, Certification and Approval Page

FOREST MANAGEMENT PLAN
for the
[NAME OF MANAGEMENT UNIT]

[MNRF Administrative District and Region]
[Name of plan author's organization]
for the 10-year period from April 1, [year] to March 31, [year]

I hereby certify that I have prepared this forest management plan, including the silvicultural ground rules, to the best of my professional skill and judgement with the assistance of an interdisciplinary planning team in accordance with the requirements of the Forest Management Planning Manual and Forest Information Manual.

[R.P.F. seal]	[Plan Author]	[date]
Submitted by: (where applicable)	[name] [Senior official of plan author's organization, if other than MNRF]	[date]

I recommend that this forest management plan be approved for implementation and certify that it has been prepared in accordance with the requirements of the Forest Management Planning Manual, the Forest Information Manual, and relevant policies and obligations (including any relevant MNRF agreements with Indigenous peoples). I also certify that the forest management plan has been prepared using the applicable forest management guides. In this forest management plan, prescriptions and conditions that differ from specific direction or recommendations in the applicable forest management guides are identified in the attached List of Exceptions.

Certified and Recommended for Approval by:

[MNRF District Manager]	[date]
[MNRF Regional Resources Manager]	[date]

Approved by:

[MNRF Regional Director]	[date]
--------------------------	--------

Natural Resources Information Portal Submission Identifier: [ID]

Forest Management Plan - Title and Certification Page for Sections of the Forest Management Plan not Prepared by the Plan Author

FOREST MANAGEMENT PLAN
for the
[NAME OF MANAGEMENT UNIT]

[MNRF Administrative District and Region]
[Name of plan author's organization]
for the 10-year period from April 1, [year] to March 31, [year]

I hereby certify that I have prepared the sections of the forest management plan as indicated, to the best of my professional skill and judgement, in accordance with the requirements of the Forest Management Planning Manual.

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

<u>[name]</u>	<u>[position]</u>	<u>[section]</u>	<u>[name]</u>	<u>[date]</u>
Name	Job Title	Sections prepared	Signature	Date

Forest Management Plan - List of Exceptions

FOREST MANAGEMENT PLAN
for the
[NAME OF MANAGEMENT UNIT]

[MNR Administrative District and Region]
[Name of plan author's organization]
for the 10-year period from April 1, [year] to March 31, [year]

All silvicultural treatments in the silvicultural ground rules that are exceptions to the recommendations in the silvicultural guides, and all operational prescriptions and conditions for areas of concern that are exceptions to the specific direction or recommendations (standards and guidelines) in the applicable forest management guides, are provided in this list of exceptions. The specific section of the forest management plan that provides documentation of the exception is also referenced in this list.

Description of Exception	Specific Section of Forest Management Plan

Forest Management Plan Contributors

FOREST MANAGEMENT PLAN for the [NAME OF MANAGEMENT UNIT]

[MNR Administrative District and Region]
[Name of plan author's organization]
for the 10-year period from April 1, [year] to March 31, [year]

PLANNING TEAM MEMBERS

[name]
Plan Author

[list]

PLANNING TEAM ADVISORS

[list]

LOCAL CITIZENS' COMMITTEE MEMBERS

[list]

A brief statement which reports on the local citizens' committee's agreement or disagreement with the forest management plan (final plan only):

[statement]

PLAN REVIEWERS

[list]

4.4.8 Analysis Package

4.4.8.1 Description, Intent and Intended Use

The analysis package, as described in Appendix 2 of this tech spec, 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 the public.

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

4.4.8.2 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) |

4.4.9 Proposed Long-Term Management Direction Summary Text

4.4.9.1 Description, Intent and Intended Use

The Proposed LTMD Summary as described in Part A 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.

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 to the MNRF 30 days before stage two. The text will be provided as a Microsoft Word document. The MNRF will prepare a French language version and will provide it to the sustainable forest licensee for inclusion in the Proposed LTMD Summary submission.

4.4.9.2 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) |

4.4.10 Forest Management Plan Summary Text

4.4.10.1 Description, Intent and Intended Use

The FMP Summary as described in Part B of the FMPM is to be prepared as a single text file. 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 forum. The text will be provided as a Microsoft Word document (.docx). The MNRF will prepare a French language version and will provide it to the sustainable forest licensee for inclusion in the Draft Summary submission. 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 and final FMP submission as well as a component of the final Report on Protection of Identified First Nation or Métis Values. The contingency plan request or proposal will identify if this is a required component of the contingency plan submission.

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_FMPDP_TXT_Sum.PDF (Draft Plan)
- ❖ MU123_2028_FMP_TXT_Sum.PDF (Final Plan)
- ❖ 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)

4.4.11 Local Citizens' Committee Report

4.4.11.1 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. 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. The contingency plan proposal will identify if this is a required component of the draft contingency plan summary submission.

4.4.11.2 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_FMPDP_TXT_LCCReport.PDF (Draft Plan)
- ❖ MU123_2028_FMPDPC_TXT_LCCReport.PDF (Draft Contingency Plan)

4.4.12 MNRF's List of Required Alterations

4.4.12.1 Description, Intent and Intended Use

The MNRF's list of required alterations will be prepared as a single text file as a component of the draft FMP Summary submission. 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. The contingency plan proposal will identify if this is a required component of the draft contingency plan summary submission.

4.4.12.2 Packaging and Naming Convention

The <description> component of the file name for this file is **AltList**. 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_AltList.PDF (Draft Plan)
- ❖ MU123_2028_FMPDPC_TXT_AltList.PDF (Draft Contingency Plan)

4.4.13 Supplementary Documentation

4.4.13.1 Description, Intent and Intended Use

All supplementary documentation, as described in Part B 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 MNRF list of required alterations are submitted separately with the plan summary files. Refer to Section 5.0 for more information.

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

4.4.13.2 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)

4.4.14 Forest Management Plan Extension

4.4.14.1 Description, Intent and Intended Use

All plan extension text files as described in Part C of the FMPM, will be incorporated into a single file. The file will include a version of the title, certification and approval page, as described in Section 4.4.7.3 above, 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.

4.4.14.2 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)

4.5 Forest Management Plan Tables

4.5.1 Description, Intent and Intended Use

All FMP tables will be incorporated into a single file. This is a mandatory component of all draft and final FMP submissions. The mandatory tables of the FMP submission has been structured to facilitate efficient organization, retention, access and use of the information on the NRIP.

The contingency plan proposal will identify if this is a required component of the contingency plan submission.

The Proposed LTMD summary requires tables FMP-8, FMP-9 and FMP-10. These tables are a mandatory component of the summary of the proposed LTMD submission. The sustainable forest licensee will submit the Proposed LTMD summary tables to the MNRF 30 days before stage two. 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.

4.5.2 Packaging and Naming Convention

The FMP tables will be included in the FMP submissions according to the standards described in Section 5.0.

The FMP tables 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>_TBL_<description>.PDF

where:

Parts	Description
MU	Letters “MU” representing Management Unit .
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
–	Underscore character as a separator.
<year>	Four digit numeric start year of the FMP planning period (e.g., 2028).
–	Underscore character as a separator.
<info product>	Letters representing the information product being submitted: “FMPDP” for FMP Draft Plan “FMP” for FMP Final Plan “FMPDPC” for FMP Draft Plan Contingency “FMPC” for FMP Final Plan Contingency “LTMD” for Proposed LTMD summary
–	Underscore character as a separator.
TBL	Letters representing the type of product being submitted: “TBL” for table .
–	Underscore character as a separator.
<description>	Letters representing the required standard component being submitted, either: Tables for the English language version, or TablesFR for the French language version
.PDF	File format extension of .PDF.

The following are samples of the mandatory file naming convention:

- ❖ MU123_2028_FMPDP_TBL_Tables.PDF (Draft Plan)
- ❖ MU123_2028_FMP_TBL_Tables.PDF (Final Plan)
- ❖ MU123_2028_LTMD_TBL_Tables.PDF (Proposed LTMD Summary)
- ❖ MU123_2028_LTMD_TBL_TablesFR.PDF (Proposed LTMD Summary, French)
- ❖ MU123_2028_FMPDPC_TBL_Tables.PDF (Draft Contingency Plan)
- ❖ MU123_2028_FMPC_TBL_Tables.PDF (Final contingency Plan)

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 FMP product submission via the NRIP and will apply to all components contained within the submission.

4.5.4 Format

All FMP tables, as components of the submission to the NRIP, 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 Digital Document Accessibility Guide . 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.

4.5.5 Data Transfer and Schedule

The FMP tables are included in the FMP product submission and are subject to those timelines. Refer to Section 5.0 for more information.

4.5.6 Review and Approval

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

4.5.7 Management Unit Crown Land Summary

4.5.7.1 Description, Intent and Intended Use

This table summarizes the area of different Crown land types for the management unit at the start of the plan period. The source of information for this table is the updated planning inventory for the management unit. Planning inventory updates for lands other than Crown managed land should be reflected in this inventory, where information is available, and particularly where large areas of these lands within the management unit have implications on the development of the FMP.

4.5.7.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.7.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares by land type for each land ownership type and enter all subtotals and totals.

Crown Land:

Managed: All Crown land available for forest management purposes including, where appropriate, lands patented to Ontario government agencies. Crown Land – Managed may include area of some or all inventory land types (e.g., treed muskeg, protection forest, production forest). Area affected by forest management planning decisions (e.g., areas of concern reserves) is included.

Other: All Crown land that is not available for forest management purposes through legal designation, including areas established by policy direction where forest

management activity is not permitted, provincial parks and conservation reserves regulated under the *Provincial Parks and Conservation Reserves Act*, and higher order land use decisions (e.g., Ontario Living Legacy).

Patented Land:

Crown Timber: Patented land where the Crown has reserved rights to some or all of the trees.

Notes for selected land types:

Production Forest: Includes production forest reserve and regular production forest stands.

Recent Disturbance: Areas of stand replacing natural disturbance (e.g., fire, insect, blow down) or artificial disturbance (e.g., harvest) that have not received a silvicultural treatment for regeneration such as natural regeneration, seeding or planting.

Below Regeneration Standards: Area of productive forest stands that have received regeneration treatments such as natural regeneration, seeding or planting but do not yet meet the regeneration standards in an approved FMP. Includes natural disturbances and artificial disturbances.

Forest Stands: All existing forest stands and areas that have been successfully regenerated.

4.5.7.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-1: Management Unit Crown Land Summary

Land Ownership and Type	Land Ownership (Hectares)			Total
	Crown Land		Patent	
	Managed	Other	Crown Timber	
Unsurveyed				
Non-forested				
Water				
Other Land				
Agricultural Land				
Grass & Meadow				
Unclassified				
Other				
Subtotal Non-Forested				
Forested				
Non-Productive Forest				
Treed Muskeg				
Open Muskeg				
Brush & Alder				
Rock				
Subtotal Non-Productive				
Productive Forest				
Protection Forest				
Site				
Islands				
Subtotal Protection				
Production Forest				
Recent Disturbance				
Below Regeneration Standards				
Forest Stands				
Subtotal Production				
Subtotal Productive				
Subtotal Forested				
Total				
	Total Crown Land:			

4.5.8 Description of Forest Units

4.5.8.1 Description, Intent and Intended Use

This table describes the forest units used to classify all forest stands of the management unit, including the stands that are not available for forest management activities. Forest units are used as the basis for summarizing data for many FMP, annual work schedule and management unit annual report tables.

4.5.8.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.8.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Forest Unit:

List each forest unit including an appropriate **Code** and a descriptive **Name**. The list should include all forest units currently represented and forest units that will occur in the future as a result of management actions.

Eco-sites:

Indicate the eco-site(s) that fall within the forest unit, based on the provincial Ecological Land Classification.

Landscape Guide Forest Unit:

Indicate the landscape guide forest unit classification that aligns with each forest unit.

Silvicultural System:

Indicate the silvicultural system (i.e., clearcut, shelterwood, selection) to be used for the forest unit.

FRI Parameters and Criteria:

For the purpose of assigning a forest unit to each stand, identify the appropriate FRI parameters (e.g., species composition, site class, stocking) or other criteria by which the stands are classified (e.g., plantations).

Additional Information:

Indicate any other information that is useful in describing each forest unit.

4.5.8.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-2: Description of Forest Units

Forest Unit		Ecosite(s)	Landscape Guide Forest Unit	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name					

4.5.9 Summary of Managed Crown Productive Forest by Forest Unit

4.5.9.1 Description, Intent and Intended Use

This table summarizes the area of managed productive Crown forest (as shown in Table FMP-1) by forest unit and age class. The source of information for this table is the planning inventory with forest units as defined in FMP-2.

4.5.9.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.9.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals and subtotals as required.

Forest Unit:

Enter the forest unit as identified in Table FMP-2.

Age Class:

Enter 20-year age classes for clearcut and shelterwood management. This column is not completed for the forest units managed under the selection silvicultural system.

Protection Forest:

Enter the area by forest unit and age class.

Production Forest:

Unavailable:

Enter the area of the Crown managed production forest that is not available for timber production as a result of forest management planning decisions, current forest management guides and other known factors (e.g., actual or anticipated reserves, inaccessible area).

Stage of Management:

Where stage of management is applicable (e.g., shelterwood, commercial thinning), enter stage of management. Where the forest unit is managed under the selection system, leave this column blank.

Available:

Enter the area of the managed Crown production forest area minus the Unavailable area.

Ensure that the total areas in the Protection Forest and Production Forest (Unavailable and Available) columns correspond with the productive forest subtotals in Table FMP-1.

FMP-3: Summary of Managed Crown Productive Forest by Forest Unit

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4.5.10 Silvicultural Ground Rules

4.5.10.1 Description, Intent and Intended Use

This table describes the silvicultural systems and types of treatments that may be used to manage a specific current forest condition to achieve a desired future forest condition. The sources of information for the table are the applicable silvicultural guide(s) and the knowledge and experience of the plan author and planning team.

4.5.10.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.10.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

SGR Code:

Enter a label (maximum 25 characters) that identifies the SGR.

Silvicultural System:

Enter the silvicultural system (i.e., clearcut, shelterwood and selection) under which each forest unit will be managed. Only one silvicultural system will be identified.

Current Condition:

Enter the forest units as identified in Table FMP-2 and eco-site(s). In describing eco-site, use the provincial Ecological Land Classification (ELC) or the best available site information. Provide any additional information as required (e.g., broad soil group). Forest units and ecosites can be grouped when the future condition, the regeneration standard, and the silvicultural treatments are identical.

Future Condition:

Future conditions that result from the implementation of the SGR will be described in terms of the desired forest unit, stand characteristics and development information. Enter the desired forest unit. Enter the desired stand characteristics, (e.g., average species composition, stocking, stand density) for the mature stand condition. The development information will identify the silvicultural stratum used for the performance assessment and forest level modelling.

Regeneration Standards:

The regeneration standard is the required level of observable measures of a regenerating area to provide confidence that the target mature stand condition can be achieved. Regeneration standards will include establishment and performance parameters. The standards will be consistent with the definition of future forest condition used in the development of the LTMD (e.g., development of the yield curves).

For the establishment assessment, the observable measures will include age, height, species composition, the maximum time to establishment, and parameters representing the number and distribution of trees.

For the performance assessment, the observable measures will be parameters required to project yield. Observable measures will normally include age, height, species composition, measure of site quality (e.g., site class, site index), and parameters representing the number and distribution of trees. The yield identified in the table will be consistent with the definition of an applicable future forest condition used in the development of the LTMD (e.g., development of the yield curves).

Silvicultural Treatments:

For each SGR, identify the most common series of silvicultural and acceptable alternative treatments. Where a silvicultural treatment differs from the

recommendations in the appropriate silvicultural guide(s), that treatment will be identified as an exception.

Harvest Method:

Enter the harvest method (e.g., strip clearcut, uniform shelterwood) and any reference to commercial thinning.

Logging Method:

Enter the logging method (e.g., full tree, tree length, shortwood) to be used. Where there are options, indicate under what conditions the different methods will be used. Special restrictions on the type of logging equipment, the prescription for logging or the timing of logging to ensure site compatibility will be noted.

Site Preparation:

Enter the site preparation treatment (e.g., mechanical, chemical, prescribed burn). Combinations of site preparation treatments (e.g., chemical site preparation followed by prescribed burning) are acceptable.

Regeneration:

Enter the regeneration treatments (e.g., natural, plant, seed). Regeneration treatments that are necessary to achieve the future stand condition will be identified (e.g., species, planting density, anticipated ingress).

Tending:

Enter the tending treatments. Where achievement of a future stand condition requires a specific tending treatment (e.g., spacing), the details will be identified.

4.5.10.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-4: Silvicultural Ground Rules

SGR Code		Silvicultural System	
Current Condition		Future Condition	
Forest Units	Ecosite(s)	Forest Unit	Stand Characteristics
Additional Information		Development Information	

	Silvicultural Treatments				
	Harvest Method	Logging Method	Site Preparation	Regeneration	Tending
Most Common Treatment Package					
Acceptable Alternative Treatments					

4.5.11 Post-harvest Renewal Transition Rules

4.5.11.1 Description, Intent and Intended Use

This table describes the post-harvest renewal rules used in the development of the LTMD. The source of information for this table is the analysis of past silvicultural performance.

4.5.11.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.11.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Planned Forest Unit:

Enter the forest unit as identified in Table FMP-2.

Regeneration Type:

Enter the regeneration type (e.g., natural, plant, seed).

Target Silvicultural Stratum:

FU:

Enter the target forest unit as identified in the model used to develop the LTMD.

Percent FU:

Enter the proportion of the planned forest unit transitioning to the target silvicultural stratum as identified in the model used to develop the LTMD.

Yield Curve:

Enter the identifier for the yield curve that the target silvicultural stratum is projected to achieve.

4.5.11.4 Format

MANAGEMENT UNIT NAME: _____
PLAN PERIOD: _____ TO _____

FMP-5: Post-harvest Renewal Transition Rules

Forest Unit	Regeneration Type	Target Silvicultural Stratum					
		FU		FU		FU	
		%	Yield Curve	%	Yield Curve	%	Yield Curve

4.5.12 Projected Forest Condition for the Crown Productive Forest

4.5.12.1 Description, Intent and Intended Use

This table summarizes the area of Crown productive forest by forest type (e.g., forest unit, provincial forest type) and age (e.g., age class, seral stage) by 20-year projections for the LTMD. The purpose of the table is to provide a tabular comparison of the future forest conditions over time resulting from the LTMD.

The source of information for this table is the output of forest modelling for the LTMD.

4.5.12.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.12.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals and subtotals as required.

Forest Type:

Enter the user defined forest type. The defined forest type may be forest units as identified in Table FMP-2 or forest unit groupings.

Age:

Enter the user defined age. The defined age may be a twenty year age class or a seral stage age. This column is left blank for forest types managed under the selection silviculture system.

Area (ha):

Enter the actual year (e.g., 2030) as column titles where <Year 0> represents the FMP start year and <Year 20> represents FMP start year plus 20. Complete the remaining column titles in a similar manner.

Enter the area for each forest type/age at each indicated year from forest modelling for the LTMD. The information shown for <Year 0> will be consistent with the Crown productive forest total summarized in Table FMP-1 (Crown – Total).

FMP-6: Projected Forest Condition for the Crown Productive Forest

Forest Type	Age	Area (ha)					
		<Year 0>	<Year 20>	<Year 40>	<Year 60>	<Year 80>	<Year 100>
Forest Type Subtotal							
Total							

4.5.13 Projected Habitat for Wildlife Species

4.5.13.1 Description, Intent and Intended Use

This table summarizes the area of habitat for selected wildlife species by 20-year projections for the LTMD. The purpose of the table is to provide a tabular comparison of the habitat availability over time resulting from the LTMD.

4.5.13.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.13.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares.

Species:

Enter the common names of the selected wildlife species.

Area (ha):

Enter the actual year (e.g., 2030) as column titles where <Year 0> represents the FMP start year and <Year 20> represents FMP start year plus 20. Complete the remaining column titles in a similar manner.

Enter the area of habitat for each selected wildlife species at each indicated year from forest modelling for the LTMD.

4.5.13.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-7: Projected Habitat for Wildlife Species

Species	Area (ha)					
	<Year 0>	<Year 20>	<Year 40>	<Year 60>	<Year 80>	<Year 100>

4.5.14 Projected Available Harvest Area by Forest Unit

4.5.14.1 Description, Intent and Intended Use

This table summarizes the available harvest area for the 10-year plan period by 20-year projections for the LTMD. The purpose of the table is to provide a tabular comparison of the projected harvest area over time resulting from the LTMD.

4.5.14.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.14.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals as required:

Forest Unit:

Enter the forest unit as identified in Table FMP-2.

Available Harvest Area (ha):

Enter the actual year (e.g., 2030) as column titles where <Year 0> represents the FMP start year and <Year 20> represents FMP start year plus 20. Complete the remaining column titles in a similar manner.

Enter the available harvest area for the 10-year period at each indicated year from forest modelling for the LTMD.

FMP-8: Projected Available Harvest Area by Forest Unit

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4.5.15 Projected Available Harvest Volume by Species Group and Broad Size or Product Group

4.5.15.1 Description, Intent and Intended Use

This table summarizes the estimated available harvest volume for the 10-year plan period by 20-year projections for the LTMD. The purpose of the table is to provide a tabular comparison of the available harvest volume by broad size or product group over time resulting from the LTMD.

4.5.15.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.15.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the volume in cubic meters and all totals and subtotals as required:

Species Group:

Enter the species group (e.g., spruce/pine/fir, white/red pine). The species groups are normally the same as the species groups used in forest modelling.

Size or Product Group:

Enter the broad size or product group by species group.

Available Harvest Volume (m³):

Enter the actual year (e.g., 2030) as column titles where <Year 0> represents the FMP start year and <Year 20> represents FMP start year plus 20. Complete the remaining column titles in a similar manner.

Enter the available harvest volume for the 10-year period by species group and broad size or product group at each indicated year from forest modelling for the LTMD.

FMP-9: Projected Available Harvest Volume by Species Group and Broad Size or Product Group

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4.5.16 Assessment of Objective Achievement

4.5.16.1 Description, Intent and Intended Use

This table summarizes management objectives, indicators and target information and includes an assessment of achievement for each objective.

4.5.16.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.16.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Management Objective:

Enter each management objective in the appropriate section of the table (i.e., quantitative or qualitative objectives) in text form. If the text of the objective is long, it may be paraphrased.

For each Quantitative Objective:

Indicator:

Enter the indicator used as a measure (e.g., preferred habitat in hectares, volume of wood by species group in cubic metres) for levels, targets and projections.

Plan Start Level:

Enter the FMP start level for the indicator. This may represent a level for a point in time (e.g., selected species habitat) or a level for a 10-year FMP period (e.g., available harvest volume).

Desirable Level:

Enter the desirable level for the indicator. The desirable level may be a specific quantity, a range or a trend (i.e., increase, maintain, decrease).

Timing of Assessment:

Enter the timing of assessment for the indicator (e.g., FMP preparation, FMP implementation).

Target:

Enter the target level for the indicator. The target level may be a specific quantity, a range or a trend (i.e., increase, maintain, decrease).

LTMD – Projections:

Enter the level of objective achievement, from forest modelling for the LTMD, for the target year and for the medium and long term.

Assessment:

Enter a brief text description of the assessment of the level of achievement of each management objective. The assessment will consider the FMP start, desirable and target levels, and the trend of the indicator over time.

For each Qualitative Objective:

Enter each management objective with a qualitative measure. Provide a text assessment of achievement of each management objective.

4.5.16.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-10: Assessment of Objective Achievement

Management Objective	Indicator	Plan Start Level	Desirable Level	Timing of Assessment	Target	LTMD - Projections		Assessment
						Medium	Long	
Quantitative Objectives								
Qualitative Objectives	Assessment:							

4.5.17 Operational Prescriptions for Areas of Concern and Conditions on Roads, Landings, and Forestry Aggregate Pits

4.5.17.1 Description, Intent and Intended Use

This table outlines the prescriptions and conditions for areas identified as areas of concern (AOC). Each table entry represents either a group of areas of concern with a common prescription, or an individual area of concern with a unique prescription.

4.5.17.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.17.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

AOC Identifier:

Enter the code by which an area of concern prescription and/or conditions can be identified on the operations maps and in the area of concern supplementary documentation for individual or groups of AOCs.

Group AOC:

Note in the table “Yes” or “No” to indicate whether the prescription is a group AOC.

Description of Value:

Briefly describe the value for which an AOC prescription has been prepared.

Part A: Operational Prescription

Enter the operational prescription for the area of concern including any constraints on harvest, renewal and tending operations.

Source:

Enter source of the prescription, if applicable, including the title of the forest management guide and page number from which the prescription specific direction or recommendation is located.

Exception:

Where an area of concern prescription differs from specific direction or from a recommendation in the appropriate forest management guide, the prescription will be considered an exception and indicated by placing “Yes” in the column.

Parts B, C, and D: Conditions on Location, Construction or Use

Enter conditions on location, construction or use (e.g., construction methods, mitigative measures, timing, marking or flagging requirements, notification requirements, crossing structure).

Public Comment:

Enter “Yes” or “No” if public comments have been received on the crossing. Public comments are recorded in the public consultation summary supplementary documentation for individual or groups of AOCs

Exception:

Where a condition on a road, landing, or forestry aggregate pit differs from specific direction in the appropriate forest management guide, the condition will be considered an exception and indicated by placing “Yes” in the column.

4.5.17.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-11: Operational Prescriptions for Areas of Concern and Conditions on Roads, Landings, and Forestry Aggregate Pits

AOC ID	Group AOC	Description of Value		
	A. Operational Prescriptions for Areas of Concern			
		Operational Prescription	Source	Exception
	B. Primary Roads, Branch Roads, and Landings			
		Planned or Existing	Public	Exception
		Conditions on Location, Construction or Use	Comment	
	C. Operational Roads and Landings			
		Planned or Existing	Public	Exception
		Conditions on Location, Construction or Use	Comment	
	D. Forestry Aggregate Pits			
		Planned or Existing	Exception	
		Conditions on Location, Construction or Use		

4.5.18 Planned Harvest Area

4.5.18.1 Description, Intent and Intended Use

This table summarizes the available harvest area, and the planned harvest area, by forest unit for comparison. The source of information for this table is the LTMD and the results of the harvest selection process.

4.5.18.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.18.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals and subtotals as required.

Forest Unit:

Enter the forest unit as identified in Table FMP-2.

Available Harvest Area (ha):

Enter the 10-year available harvest area by forest unit.

Age Class or Stage of Management and Age Class:

Enter the 20-year age class. Where stage of management is applicable (e.g., shelterwood, commercial thinning), enter stage of management and 20-year age class. Where the forest unit is managed under the selection system, leave this column blank.

Planned 10-Year Harvest Area (ha):

Enter the 10-year planned harvest area by forest unit and age class. If applicable, enter the planned area by stage of management and age class. The planned area will agree with the available harvest area by forest unit.

4.5.18.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-12: Planned Harvest Areas

Forest Unit	Available Harvest Area (ha)	Age Class or Stage of Management and Age Class	Planned Harvest Area 10 Year (ha)
Stage of Management Subtotal			
Forest Unit Subtotal			
Total			

4.5.19 Planned Harvest Volume by Species

4.5.19.1 Description, Intent and Intended Use

This table summarizes the available harvest volume and compares the available harvest volume to the planned harvest volume by conifer and hardwood. The source of information for this table is the LTMD and the result of the harvest selection process.

4.5.19.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.19.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the volume in cubic metres and all totals and subtotals as required.

Forest Unit:

Enter the forest units as identified in Table FMP-2.

Volume Type:

Enter the 10-year available harvest volume and planned harvest volume for net merchantable volume and undersize and defect volume.

10-Year Available Harvest Volume (m³):

Enter the 10-year available harvest volume for conifer and hardwood by forest unit.
Ensure the available harvest volume matches the harvest volume in the LTMD.

10-Year Planned Harvest Volume (m³):

Conifer:

Enter the 10-year planned conifer volume by forest unit and by species.

Hardwood:

Enter the 10-year planned hardwood volume by forest unit and by species.

4.5.19.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-13: Planned Harvest Volume by Species

Forest Unit	Volume Type	10-Year Available Harvest Volume (m³)		10-Year Planned Harvest Volume (m³)												
				Conifer						Subtotal	Hardwood				Subtotal	Total
		Conifer	Hardwood													
	Net Merchantable															
	Sub-Total															
	Undersize & Defect															
	Sub-Total															
	Total															

4.5.20 Planned Harvest Volume and Wood Utilization

4.5.20.1 Description, Intent and Intended Use

This table summarizes projected utilization of the planned harvest volumes that are available for harvest from the planned harvest areas by species, product and volume type. Planning teams have the option of summarizing the planned harvest area by licensee or grouping. The table will summarize volume that is projected to be utilized and the volume that is currently anticipated to be unutilized but remains available for industrial uses.

4.5.20.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.20.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares, the volume in cubic meters and all totals and subtotals as required.

Licensee or Grouping (Optional):

List the licensees or groupings that are expected to conduct harvesting. Where licensees are not known, groupings (e.g., tendered sale areas) shall be indicated. In the case of overlapping licences, all licensees or groupings should be shown. Where the SFL holder is the only licensee, identify the SFL name.

Planned Harvest Area (ha):

Enter the amount of planned harvest area that is expected to be harvested by the licensees or groupings. Where overlapping licensees exist, the area may exceed the planned harvest area shown in Table FMP-12. Where only one licensee is identified, the area will be consistent with the planned harvest area shown in Table FMP-12.

Volume Type:

For the 10-year planned harvest area, identify the net merchantable and undersize or defect volumes.

Utilization:

For the 10-year planned harvest area, identify the volumes that are projected to be utilized to meet industrial wood requirements and the volumes above industrial wood requirements that are currently anticipated to be unutilized and available for industrial proposals. Unutilized volume also includes available volumes expected to be left standing in the cutover or harvested trees brought to roadside. Although this table identifies volumes not expected to be utilized, approval of the FMP does not condone wasteful practices.

Product:

Enter the anticipated product (e.g., pulp, sawlogs, poles, veneer, bioproduct) where possible.

Volume by Species (m³):

Enter the volume by species, product, volume type and utilization. If licensee or grouping is used, enter this information by licensee or grouping. If licensee or grouping is used, the column totals in licensee or grouping will equal the column totals in the utilized and unutilized part.

Total of utilized and unutilized volumes should equal total of planned harvest volume identified in Table FMP-13.

4.5.20.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-14: Planned Harvest Volume and Wood Utilization

Licensee or Grouping	Planned Harvest Area (ha)	Utilization	Volume Type	Product	Volume by Species (m³)											Total
					Conifer						Hardwood					
											Subtotal					
			Net Merchantable													
			Undersize & Defect													
Total																
		Utilized	Net Merchantable													
			Undersize & Defect													
			Subtotal													
		Unutilized	Net Merchantable													
			Undersize & Defect													
			Subtotal													
		Total														

4.5.21 Projected Wood Utilization by Mill

4.5.21.1 Description, Intent and Intended Use

This table lists the mills and the anticipated volumes each will utilize from the planned harvest area for the 10-year period. Volumes are summarized by volume type, product type and species. This table also summarizes the wood supply mechanisms through which the volumes were made available to each mill. The source of information for this table is Table FMP-13 and Table FMP-14 and information regarding industrial wood requirements for mills supplied from the management unit.

4.5.21.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.21.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the volume in cubic metres and all totals and subtotals as required.

Mill:

List all mills projected to be supplied from the management unit.

Wood Supply Mechanism:

Enter the type(s) of mechanism under which volumes are to be made available to a mill.

Mechanisms will be described under the following categories:

- a) Supply Agreement (i.e., wood supply agreement entered into under section 25 of the CFSA between the Minister and a mill);

- b) Other Crown commitment (e.g., Crown wood supply commitment other than a supply agreement, a Minister's commitment letter);
- c) SFL holder (i.e., wood supply made available to a mill owned/operated by the holder of a single entity SFL);
- d) SFL shareholder (i.e., wood supply made available to a mill through the shareholder agreement for a shareholder SFL for the management unit);
- e) Business arrangement (i.e., wood supply made available to a mill through business arrangements); and
- f) Other (e.g., wood supply made available through a Forest Resource Licence, a conditional offer of a wood supply from the Crown, etc.)

Volume:

For each Crown wood supply commitment (i.e., Supply Agreement, other Crown commitment) enter the total volume committed. For all other wood supply mechanisms, enter the total volume that is intended to flow to each facility under that mechanism.

Volume Type:

Volumes projected to be utilized by each mill will be identified by net merchantable, and undersize and defect.

Product:

Enter the anticipated product (e.g., pulp, sawlogs, veneer, bioproduct) for each mill.

Volume by Species:

Enter the projected mill utilization volume by mill, wood supply mechanism, product, and species. Ensure the total volume projected by species is consistent with utilized harvest volume in Table FMP-14 (with appropriate modification).

4.5.21.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-15: Projected Wood Utilization by Mill

Mill	Wood Supply Mechanism	Volume (m³)	Volume Type	Product	Volume by Species (m³)											
					Conifer						Hardwood					Total
											Subtotal					
			Net Merchantable													
				Subtotal												
			Undersize & Defect													
Total																

4.5.22 Contingency Harvest Area and Volume

4.5.22.1 Description, Intent and Intended Use

This table summarizes the contingency harvest area and associated volume. The sources of information for this table are the LTMD and the results of the harvest selection process.

4.5.22.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.22.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares, the volume in cubic meters and all totals and subtotals as required.

Forest Unit:

Enter the forest unit as identified in Table FMP-2.

Age Class or Stage of Management and Age Class:

Enter the 20-year age class. Where stage of management is applicable (e.g., shelterwood, commercial thinning), enter stage of management and 20-year age class. Where the forest unit is managed under the selection system, leave this column blank.

Contingency Harvest Area:

Enter the contingency harvest area, not including reserves, by forest unit and age class. If applicable, enter the contingency harvest area by forest unit, stage of management and age class.

Contingency Harvest Volume:

Conifer:

Enter the conifer volume associated with the contingency harvest area by forest unit.

Hardwood:

Enter the hardwood volume associated with the contingency harvest area by forest unit.

Total:

Enter the total volume associated with the contingency harvest area by forest unit.

4.5.22.4 Format

MANAGEMENT UNIT NAME: _____
PLAN PERIOD: _____ TO _____

FMP-16: Contingency Harvest Area and Volume

Forest Unit	Age Class or Stage of Management and Age Class	Contingency Harvest Area (ha)	Contingency Harvest Volume (m ³)		
			Conifer	Hardwood	Total
Forest Unit Subtotal					
Total					

4.5.23 Planned Renewal and Tending Operations

4.5.23.1 Description, Intent and Intended Use

This table summarizes the regeneration and site preparation renewal areas and the tending operations areas that are planned by harvest or natural disturbance, by treatment method. The source of information for this table is the LTMD, the selection of silviculture operations and the current FMP.

Note: There is no requirement to plan natural regeneration for natural disturbances.

4.5.23.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.23.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals and subtotals as required.

Harvest/Natural Disturbance

Planned silvicultural treatments by original disturbance (i.e., harvest, natural) and enter the area by treatment method. The treatment of natural disturbances where salvage harvest is completed is included under the natural disturbance columns.

Renewal

Regeneration:

Natural: Enter the area of natural regeneration by silvicultural system and harvest method. Selection harvest includes those areas where stand improvement has been the primary objective.

Artificial: Enter the area of artificial regeneration by planting and seeding treatments.

Artificial - Retreatment: Enter the area of artificial regeneration associated with retreatment of unsuccessfully regenerated areas by planting and seeding treatments.

Artificial - Supplemental: Enter the area of supplemental artificial regeneration associated with areas where natural regeneration is the primary goal, by planting and seeding treatments.

Site Preparation:

Enter the area of site preparation by treatment. Site preparation is the preparation of a seedbed for follow up artificial or natural regeneration and includes scarification. For slash pile burn, enter the net area only.

Tending

Enter the area of tending by treatment.

4.5.23.4 Format

MANAGEMENT UNIT NAME: _____
PLAN PERIOD: _____ TO _____

FMP-17: Planned Renewal and Tending Operations

		Area (ha)	
		Planned (10-Year)	
Renewal		Harvest	Natural Disturbance
Regeneration			
Natural			
	Clearcut Silvicultural System (even-aged)		
	Block Cut		
	Strip Cut		
	Seed Tree Cut		
	HARP/HARO/CLAAG		
	Shelterwood Silvicultural System (even-aged)		
	Uniform Shelterwood - Seed Cut		
	Strip Shelterwood - Strip Cut		
	Selection Silvicultural System - Selection Harvest (uneven-aged)		
Subtotal Natural			
Artificial			
	Planting		
	Seeding		
Subtotal Artificial			
Total Regeneration			
Artificial - Retreatment			
	Planting		
	Seeding		
Total Retreatment			
Artificial - Supplemental			
	Planting		
	Seeding		
Total Supplemental			
Site Preparation			
	Mechanical		
	Chemical	Aerial	
		Ground	
	Prescribed Burn	High Complexity	
		Slash Pile Burn	
Total Site Preparation			
Tending			
Cleaning			
	Manual		
	Mechanical		
	Chemical	Aerial	
		Ground	
	Prescribed Burn	High Complexity	
Spacing, pre-commercial thinning, improvement cutting			
	Clearcut and Shelterwood Silvicultural Systems (even-aged)		
	Selection Silvicultural System (uneven-aged)		
Other			
	Cultivation		
	Pruning		
Total Tending			

4.5.24 Road Construction and Use Management

4.5.24.1 Description, Intent and Intended Use

This table summarizes planned road construction, use management, and responsibility for all primary, branch, and operational roads or operational road networks, for the 10-year period of the FMP. Existing roads that are the responsibility of the licensee, and other existing roads that will be used for forest management purposes, are also identified.

4.5.24.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.24.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the length in kilometres and all totals and subtotals as required.

Road or Road Network Identifier:

For each primary, branch and operational road, or network of operational roads, enter the unique name or code by which a road or road network can be identified on the maps, in text, and in the supplementary documentation.

Responsibility:

For each road, enter the party responsible for the road (e.g., SFL, MNRF, Other).

Plan Start Length:

For each road, enter the length of existing road at the beginning of the FMP period. For new roads, enter "0".

Construction:

Planned 10 Year:

For each primary and branch road, enter the length of planned construction (10 Year) where applicable.

Use Management:

For each primary, branch and operational road or network of operational roads, complete the following columns.

Maintenance:

Provide a brief summary of the maintenance including emergency repairs to road water crossings that is likely to occur during the 10-year period.

Monitoring:

Provide a schedule of monitoring activities, including monitoring of water crossings, that is likely to occur during the 10-year period.

Access Control:

Type: If applicable, enter the type of existing access control (i.e., under the *Public Lands Act*, any other form of regulation, or forest management planning decision) or access provision that is to be established during the 10-year period.

Year: Indicate the expected operating fiscal year in which access control is to be established during the 10-year period.

Future Use Management:

Transfer Year: Indicate the expected operating fiscal year in which responsibility for the road or road network is anticipated to be transferred to MNRF.

Management Intent: Indicate MNRF's management intent (e.g., MNRF maintain, MNRF transfer of responsibility to a third party, decommission, or no longer maintain).

4.5.24.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-18: Road Construction and Use Management

Road or Road Network Identifier	Responsibility	Plan Start Length (km)	Planned Construction 10 Year	Use Management					
				Maintenance	Monitoring	Access Control		Future Use Management	
						Type	Year	Transfer Year	Management Intent
A. Primary									
Subtotal									
B. Branch									
Subtotal									
Total									
C. Operational									
Subtotal									
Total									

4.5.25 Planned Expenditures

4.5.25.1 Description, Intent and Intended Use

This table summarizes the planned expenditures to be made by activity and funding source for the 10-year period. The source of information for this table is the forecast of operations summarized in Table FMP-17.

4.5.25.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.25.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the costs in thousands of dollars and all totals and subtotals as required.

Expenditures:

Expenditures are estimated by activity and funding source.

Activity:

Estimate expenditures by the broad activities listed.

Forest Renewal Trust or Special Purpose Account (000s \$):

Enter the estimates of expenditures.

Forestry Futures Trust (000s \$):

Enter the estimate of expenditures for approved projects only.

Do not include HST in the amounts entered.

Notes for Expenditures:

Natural Regeneration -Activities include harvest and regeneration option, modified cutting, and scarification.

Tree Marking – Activities include tree marking for harvest using the selection and shelterwood silvicultural system. Boundary marking is ineligible.

Artificial Regeneration – Activities include tree planting (e.g., bareroot, container, cuttings) and seeding (e.g., aerial, with site preparation).

Site Preparation – Activities include mechanical, chemical, including cost of chemicals, chipper and debris piling, and prescribed burn.

Tending – Activities include spacing, thinning (i.e., pre-commercial), improvement cut (i.e., even-aged and uneven-aged).

Renewal Support – Activities include cone collection and transport; seed extraction, storage, testing, and transport; tree improvement; stock purchase and delivery (e.g., bareroot, container, cuttings).

Silvicultural Surveys – Activities include silvicultural surveys (e.g., establishment, performance).

Other Eligible Silvicultural Work (ESW) – Includes associated administrative overhead.

Protection – Activities include insect pest control.

4.5.25.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-19: Planned Expenditures

Expenditures (\$)		
Activity	Forest Renewal Trust or Special Purpose Account (000s \$)	Forestry Futures Trust (000s \$)
Natural Regeneration		
Tree Marking		
Artificial Regeneration		
Site Preparation		
Tending		
Renewal Support		
Silvicultural Surveys		
Other Eligible Silviculture Work		
Protection		
Total		

4.5.26 Planned Assessment of Establishment

4.5.26.1 Description, Intent and Intended Use

This table summarizes the area to be assessed for establishment during the 10-year period of the FMP by forest unit and SGR. The source of information for this table is a record of the applicable SGRs, from the current and past FMPs, and the harvest and silvicultural treatments. The amount of area planned to be assessed for establishment should be consistent with the level of regeneration success required to meet FMP objectives and the LTMD as well as levels of past disturbance (i.e., harvest and natural).

4.5.26.2 Naming Convention

As part of a single file, the standardized naming convention will be as described in 4.5.2.

4.5.26.3 Instructions

Complete the table as follows:

Enter the management unit name and plan period.

Enter the area in hectares and all totals and subtotals as required.

Past Plan Period:

Enter the FMP period when the harvest occurred.

Confirmed Depleted Forest Unit:

Enter the forest unit identified in Table FMP-2 or the appropriate table from a previous FMP applied to the stands at the time of harvest.

Silvicultural Ground Rule by plan period:

Enter the SGR from Table FMP-4 or the appropriate table from a previous FMP applied to the stands at the time of harvest. In the case where an original SGR was changed, enter only the final SGR implemented.

Assigned to SGR (all years):

Enter the total area assigned to the relevant SGR for areas that have been harvested.

Planned Assessment of Establishment

Enter the area to be assessed.

4.5.26.4 Format

MANAGEMENT UNIT NAME: _____

PLAN PERIOD: _____ TO _____

FMP-20: Planned Assessment of Establishment

Current plan period:

Confirmed Depleted Forest Unit	Silvicultural Ground Rule (by Plan Period)	Assigned to SGR (ha) (all years)	Planned Assessment of Establishment (ha)
<u>Harvest</u>			
<u>Salvage Harvest</u>			
Forest Unit Subtotal			
Total			

Past Plan Period:

Confirmed Depleted Forest Unit	Silvicultural Ground Rule (by Plan Period)	Assigned to SGR (ha) (all years)	Planned Assessment of Establishment (ha)
<u>Harvest</u>			
<u>Salvage Harvest</u>			
Forest Unit Subtotal			
Total			

4.6 Modelling Files

4.6.1 Description, Intent and Intended Use

All files required to support the use of the decision support system identified in the terms of reference, as described in the FMPM, will be included in the FMP submission in order to have a complete copy of the plan on the NRIP. 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 modelling files will not be available on the NRIP.

4.6.2 Packaging and Naming Convention

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

Modelling 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 Management Unit .
<management unit>	The three digit MU number, padded left with zeros as required (e.g., 001).
–	Underscore character as a separator.
<year>	Four digit numeric start year of the FMP planning period (e.g., 2028).
–	Underscore character as a separator.

Parts	Description
<info product>	Letters representing the information product being submitted: "FMPDP" for FMP Draft Plan "FMP" for FMP Final Plan "FMPDPC" for FMP Draft Plan Contingency "FMPC" for FMP Final Plan Contingency
_	Underscore character as a separator.
MDL	Letters representing the type of product being submitted; "MDL" for model .
_	Underscore character as a separator.
<description>	The description is user defined.
<file extension>	file extension

Example:

❖ MU123_2011_FMPDP_MDL_ModelRuns.ZIP

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 draft plan and final plan product submissions via the NRIP and will apply to all components contained in the submission.

4.6.4 Format

All modelling files, as components of a submission to the NRIP, 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.

4.6.5 Data Transfer and Schedule

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

4.6.6 Review and Approval

Review and approval of new modelling files is performed as part of draft and final FMP review. The remaining modelling 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.

4.7 Amendment Files

4.7.1 Description, Intent and Intended Use

The amendment text file that contains 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. The approved amendments will be available on the NRIP.

For deemed amendments the amendment request file is not mandatory.

4.7.2 Packaging and Naming Convention

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

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

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

where:

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

Parts	Description
–	Underscore character as a separator.
<sequence number>	A three digit consecutive numbering system for organizing and tracking amendments (i.e., amendment number), padded left with zeros (e.g., 001) and numbered consecutively for the ten-year plan period.
–	Underscore character as a separator.
<product type>	Letters representing the type of product being submitted, either: “TXT” for text , “TBL” for table , or “MAP” for map .
–	Underscore character as a separator.
<description>	Letters representing the required component being submitted: a user defined description for non-standard components or the following; “Decision” for Amendment Request Decision , “Req” for Amendment Request , “Text” for Amendment Text , “Tables” for Amendment FMP Tables , “OPS<extent>_<file number>” for operational scale operations maps, or “SEV” for statement of environmental values (for major amendments only). For operational scale operations maps, the description is the letters “OPS” followed by a user-defined extent component, an underscore character, and a file number. The user-defined extent component will link to the FMP Index Map grid label. The <file number> is a two-digit place holder which identifies if the map has been split into more than one file or not. If only one map file exists, the file number is “00”. If the map is split into more than one file, the maps will be numbered sequentially with the first map file containing “01” in the file name, the second map “02”, etc.
<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

4.7.3 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 NRIP and will apply to all components contained in the submission.

4.7.4 Format

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

4.7.5 Data Transfer and Schedule

Amendment files are included in their own submission. Only the final amendment files will be approved and posted to the NRIP. Refer to Section 5.0 for more information.

4.7.6 Review and Approval

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

5.0 Submission

5.1 Description, Intent and Intended Use

All FMP information products will be submitted in digital format, through the NRIP, 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; and
- amendments.

The official copy of all FMP information products are the digital versions submitted through the NRIP. Amendments will be maintained individually; there will be no replacement or substitution of original sections of the FMP documentation.

The submission of digital information products meets the MNRF's strategic direction of digital 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 NRIP. Some data/information components included in the submissions will not be available to the public on the NRIP. These include the modelling files and spatial data layer files. All files available on the NRIP 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.

For all documents requiring a title, certification and approval page, an original hard copy with all required signatures and the NRIP Submission Identifier will be kept on file at the appropriate MNRF office(s) and the office of the sustainable forest licensee. The submission of all documents requiring a title, certification and approval page will contain a digital 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 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 NRIP. 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 NRIP.

5.3 Submission Components

A standard naming convention must be used to permit an automated validation of the information products. Mandatory file components of the submission files have been structured to facilitate efficient organization, retention, access and use of the information on the NRIP. 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, 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;
- Modelling input files in the format agreed to; and
- Spatial data layer files.

5.4 Data Transfer and Schedule

All FMP documentation will be submitted via the NRIP.

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

5.5 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 FMPPM.

5.6 Planning Inventory

5.6.1 Description, Intent and Intended Use

The submission for the planning inventory must contain the spatial and tabular files associated with the planning composite and the forecast depletions for the management unit.

5.6.2 Submission Components

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

- ❖ MU123_2028_FMP.gdb (multiple feature classes in FGDB)
 - MU123_28PCI00
 - MU123_28FDP00

5.7 Base Model Inventory

5.7.1 Description, Intent and Intended Use

The submission for the BMI must contain its spatial and tabular files.

5.7.2 Submission Components

The following is a sample of the **mandatory** components with sample file names.

- ❖ MU123_2028_FMP.gdb (multiple feature classes in FGDB)
 - MU123_28BMI00

5.8 Draft and Final Forest Management Plans

5.8.1 Description, Intent and Intended Use

The components of the draft and final FMP submission files will be available for public review on the NRIP. 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 as described 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 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 NRIP until a Draft Summary has been successfully submitted. Before preparing a draft FMP submission, refer to Section 5.9, Draft Forest Management Plan Summary, to become familiar with the FMP product components that are to be submitted separately from the draft FMP submission.

5.8.2 Submission Components

The following is a list of **mandatory** 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) and wood storage yard layer (WSY) may be excluded from a submission if no 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 modelling 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_DistHarv_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.GDB

- MU123_28PCI00
- MU123_28OPI00
- MU123_28FDP00
- MU123_28BMI00
- MU123_28PHR00
- MU123_28AOC000
- MU123_28PRP00
- MU123_28PRC00
- MU123_28ORB00
- MU123_28ERU00
- MU123_28WXI00
- MU123_28PAG00
- MU123_28IMP00
- MU123_28WSY00
- MU123_2028_FMPDP_MDL_Base.ACCDB

- MU123_2028_FMPDP_MDL_Scope.ACCDB

Final Plan

- ❖ MU123_2028_FMP_TXT_PlanText.PDF
- ❖ MU123_2028_FMP_TXT_SuppDoc.PDF
- ❖ MU123_2028_FMP_TXT_AnPack.PDF
- ❖ MU123_2028_FMP_MAP_ValCult_00.PDF
- ❖ MU123_2028_FMP_MAP_DistHarv_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

- ❖ MU123_2028_FMP.GDB
 - MU123_28PCI00
 - MU123_28OPI00
 - MU123_28FDP00
 - MU123_28BMI00
 - MU123_28PHR00

- MU123_28AOC000
- MU123_28PRP00
- MU123_28PRC00
- MU123_28ORB00
- MU123_28ERU00
- MU123_28WXI00
- MU123_28PAG00
- MU123_28IMP00
- MU123_28WSY00
- MU123_2028_FMP_MDL_SFMMbase.ACCDB
- MU123_2028_FMP_MDL_SFMMscope.ACCDB

5.9 Proposed Long Term Management Direction Summary and Draft Forest Management Plan Summary

5.9.1 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 NRIP. 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 as described in the FMPM.

Draft Forest Management Plan Summary

The draft FMP Summary will be submitted when the draft FMP is submitted for MNRF review. The components of the draft FMP Summary submission will be available for public review on the NRIP 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 as described in the FMPM.

5.9.2 Submission Components

The following is a list of **mandatory** submission 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_AltList.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

5.10 Forest Management Plan Extension

5.10.1 Description, Intent and Intended Use

The components of the FMP extension submission will be available for public review on the NRIP. The FMP extension submission contains the extension text and map. The description and requirements are as described in the FMPM.

5.10.2 Submission Components

The following is a list of **mandatory** 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

5.11 Forest Management Plan Amendments

5.11.1 Description, Intent and Intended Use

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

5.11.2 Packaging and Naming Convention

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

- ❖ 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.

Mandatory product components of an FMP amendment **except for deemed amendments.

Appendix 1 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 3.0.

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, that are 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 multi-use 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:

Technical Support

Email: NRIP@ontario.ca or FIPortal-FOIPSupport@ontario.ca

Technical assistance and support for the use of the standard values symbols, for MNRF and licensees, is available.

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.

Values Data	Mapping Direction	Custodian/Contact
Species at Risk	Different rules may exist for different status categories for different locations. Contact the Natural Heritage Information Centre (NHIC) for specific guidance in your area.	NHIC 705 755 2159
Registered Archaeological Sites	This data set is not to be shown on any maps that will be available to the public. The availability of maps showing this data must comply with any agreement signed with the Ministry of Heritage, Sport, Tourism and Culture Industries.	MNRF Regional Operations Division Cultural Heritage Specialist Or Ministry of Heritage, Sport, Tourism and Culture Industries
First Nation and Métis Values	First Nation and Métis values are only portrayed on the First Nation and Métis Values Maps as agreed to by the Aboriginal communities.	MNRF District Resource Liaison Officer
Low Sensitivity Values (Locally designated)	Planning team decision.	MNRF Regional Operations Division

Appendix 2 Analysis Package Contents

The analysis package will be used to document the information, assumptions, and decisions made during the strategic analysis conducted to support the development of the long-term management direction, and will consist of text, tables, maps and other information. The analysis package will be included in the supplementary documentation of the forest management plan (FMP).

The satisfactory completion of each progress checkpoint will be documented in the analysis package and will include the following documentation:

Planning Inventory (FMPM Part A, Section 1.1.8.5);

- (a) development of the planning inventory products and the manner in which forest description information is updated, projected, or forecasted; and
- (b) documentation of planning inventory checkpoint

Forest Classification and Current Forest Condition (FMPM Part A, Section 1.2.2);

- (a) results of the planning team's review of forest classifications from the current FMP including rationale for decisions to confirm, update or revise existing classifications;
- (b) development of the base model inventory and forest classifications:
 - (i) the manner in which the planning inventory products are combined, classified and updated in the base model inventory;
 - (ii) the assumptions used to update and forecast forest classification information (e.g., management decision attributes);

- (iii) the assumptions, methodologies and rationale for the classification of forest units, analysis units, landscape biodiversity indicators and other classifications; and
- (c) documentation of forest classification and current forest condition checkpoint.

Base Model Inventory and Base Model (FMPM Part A, Section 1.2.4);

- (a) results of the planning team's review of base model assumptions from the current FMP including rationale for decisions to confirm, update or revise existing model assumptions;
- (b) how background information, specifically recommendations from the year-five management unit annual report, was considered and incorporated into the model assumptions;
- (c) if applicable, the manner in which management zones have been classified in the base model inventory and represented in the base model;
- (d) the manner in which reserves, anticipated reserves and modified harvest areas are represented in the base model inventory and base model;
- (e) methods and results for any sensitivity analysis conducted in the development of the base model assumptions;
- (f) growth projections and yield curves, and the source(s) of information used in their development;
- (g) forest dynamics (e.g., growth and yield, succession assumptions, disturbance assumptions);
- (h) silvicultural options;
- (i) management assumptions (e.g., including harvest flow rules, operability);

- (j) a digital copy of the model run for the base model; and
- (k) documentation of base model inventory and base model checkpoint.

Management Objectives (FMPM Part A, Section 1.2.5.1):

- (a) results of the planning team's review of management objectives from the current FMP including rationale for decisions to confirm, update or revise existing management objectives;
- (b) how background information, specifically recommendations from the year five management unit annual report and forest management guides, was considered in the development of management objectives;
- (c) summary of scoping investigations and significant conclusions or results including:
 - (i) changes and/or additions that are made to base model inputs and assumptions;
 - (ii) results and conclusions that provide rationale for specific management objectives, indicators and desired levels and;
 - (iii) a digital copy of a selected model run(s) that best represents each investigation;
- (d) documentation of management objectives checkpoint

Support for the Proposed Long-term Management Direction, Determination of Sustainability and Primary Road Corridors (FMPM Part A, Section 1.2.7):

- (a) how management objectives were represented in the analysis;
- (b) how the achievement of objectives was interpreted from the model results;

- (c) a summary of changes to the base model and rationale for those changes;
- (d) a summary of modelling results including:
 - (i) key results and conclusions that provide rationale for adjustment to targets, if applicable;
 - (ii) results of the risk assessment investigation(s);
 - (iii) the conclusions of the analysis, with a digital copy of the model run for the proposed long-term management direction; and
- (e) documentation of support for the proposed long-term management direction, determination of sustainability and primary road corridors checkpoint.