

A large, circular inset image on the left side of the slide showing an aerial view of a dense, lush green forest. The trees are tall and closely packed, with some bare branches visible.

# RESULTS: PLANNED REPORTING CHANGES

# OUTLINE

- Intro
- Background
- Spatial Reporting:
  - Forest Cover
  - Silviculture treatments
- Planting:
  - Technique Codes
  - Objectives Codes
  - Stratification



# APPLICATION



- Changes apply to **new** openings and **new** activities only.
  - E.g., New CP or harvest blocks.
  - E.g., Spring 2025 planting activities
- No expectation to fix old blocks/activities.
- **Soft roll-out** in 2023/2024 (BMPs).
- Changes are likely to become **mandatory in 2025 and 2026.**

# BULLETIN

## RESULTS Business and Policy Documentation Policies and procedures

### ▼ RESULTS Application

#### [Business and Policy Documentation](#)

#### [Spatial Views](#)

#### [Technical Documentation](#)

#### [Training and Resources](#)

### RESULTS- Planned Reporting Updates

January 2024

The following reporting changes are being introduced as best management practices in 2023. The changes are likely to become mandatory in 2025 and 2026 through updates to the RESULTS Information Submission Specifications.

These changes will only apply to new activities and new openings. There is no expectation to clean up openings or activities that have been previously reported to RESULTS.

To better understand how to implement these changes and to review examples, please watch | the training video titled "[RESULTS- Planned Reporting Changes](#)".

If you have any questions or comments, please contact [ellery.tetz@gov.bc.ca](mailto:ellery.tetz@gov.bc.ca).

#### **1.1 Spatial Reporting**

##### **1.1.1 Non-Mapped Component Standard**

Change: For forest cover, opening definition, and disturbance reports, report in-block roads, seismic lines, trails, and landings in accordance with the non-mapped component standard (section 5.7.2.4 in RISS-Licensee Submissions). The tabular information associated with the area occupied by these features is required.

For more information, please refer to the [Forest Cover Updates – Submitting In-Block Roads, Trails, and Landings to RESULTS](#) guidance document from July 2022.

Exception: Silviculture activity reports.

Rationale: This will improve the Vegetation Resource Inventory (VRI) update process from RESULTS. It will facilitate forest cover updates and enable the development of unique yield curves for each stratum.

Expected mandatory date: 2026

##### **1.1.2 Activity Spatial**

Change: A spatial submission will be required to RESULTS for all new silviculture treatments with the following base codes: planting, brushing, site preparation, pest control, direct seeding, fertilization, juvenile spacing, and pruning.

Note: Activity spatial submissions can include seismic lines, permanent access structures, and temporary access structures. The area of these features should not be included in the total activity total area.

# RISS

## Submission specifications data requirements

- [RESULTS Information Submission Specifications: Licensee Submissions - Chief Forester Transmittal memo \(PDF, 37KB\)](#)
- [RESULTS Information Submission Specifications: Licensee Submissions 5th Edition \(SEPT 2023\)](#)
- [RESULTS Information Submission Specifications: Government Funded Activities Edition 7c \(June 2022\) \(PDF, 2MB\)](#)
- [RESULTS Information Submission Specifications \*\*FIP\*\* Interim July to Dec 2023 Edition 1 \(July 2023\)](#)

## Woodlot submissions

- [RESULTS Information Submission Specification: Woodlot Licensees 3rd Edition \(2016\) \(PDF, 1.9MB\)](#)
- [Memo - RESULTS Information Submission Specifications Woodlots March 2018 \(PDF, 199KB\)](#)

## Related information and Communications

[New Interim RISS FIP GUIDE communique](#)

[New Licensee RISS Guide 2023 communique](#)



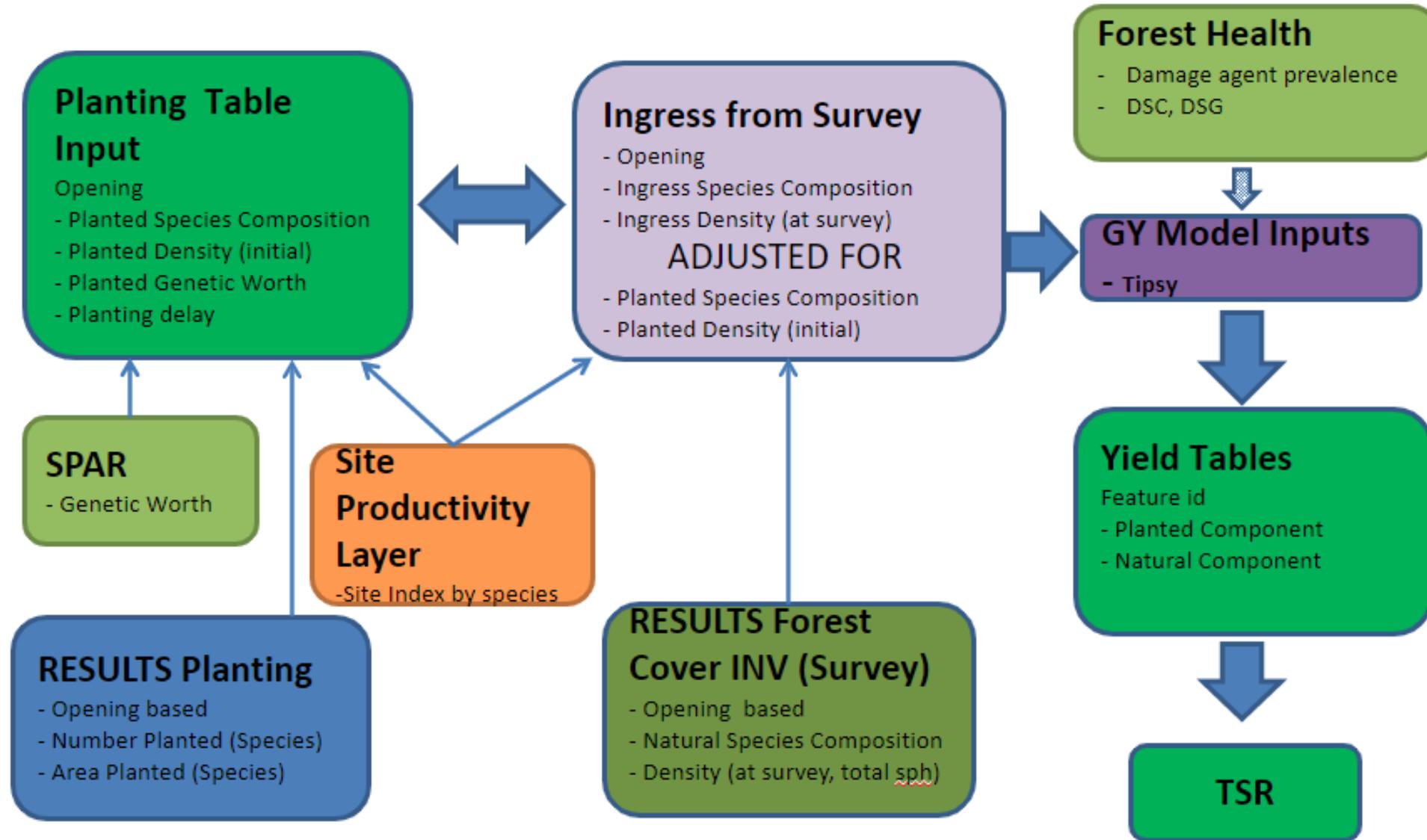
# BACKGROUND

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# FGWG PURPOSE

*Review the current free growing framework in B.C. and provide options and recommendations for potential enhancements that will better support the stand- and forest-level information needs.....*

# G&Y INPUTS



# VRI

## 1. Non-Free Growing

- Generalized to Largest Stratum
- Interior Reserves > 1 ha retained
- Links to RESULTS with Opening\_Id



# VRI

## 2. Free Growing

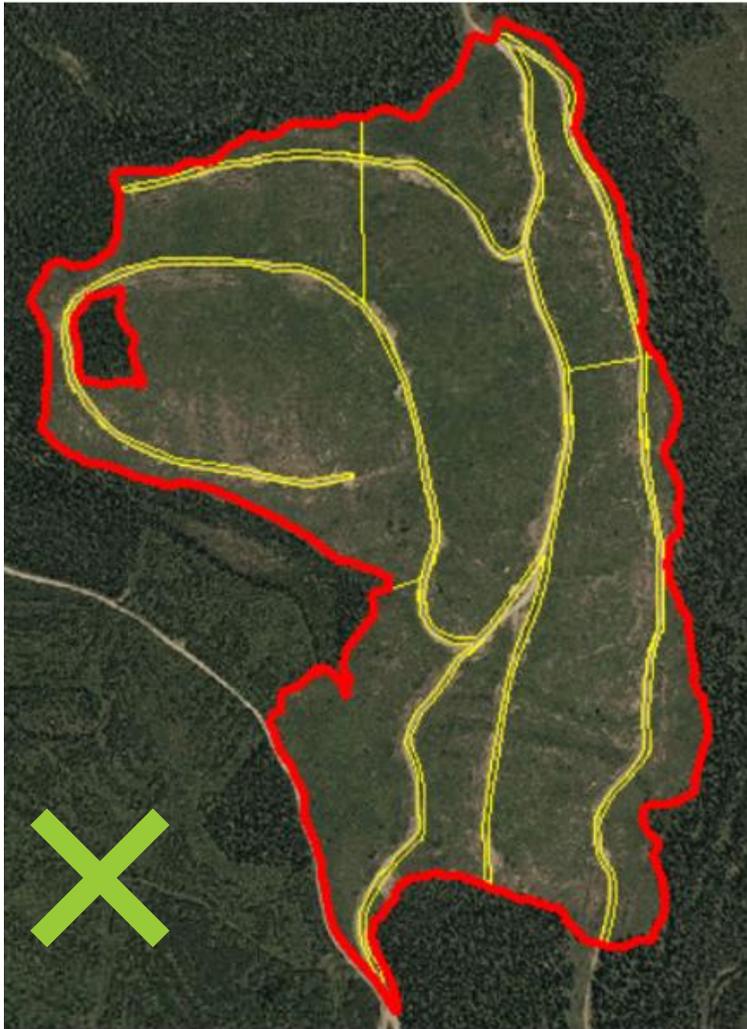
- All stratum polygons > 1ha are retained
- Manual removal of road tubes required
- Links to RESULTS with Opening\_Id

Road Tube

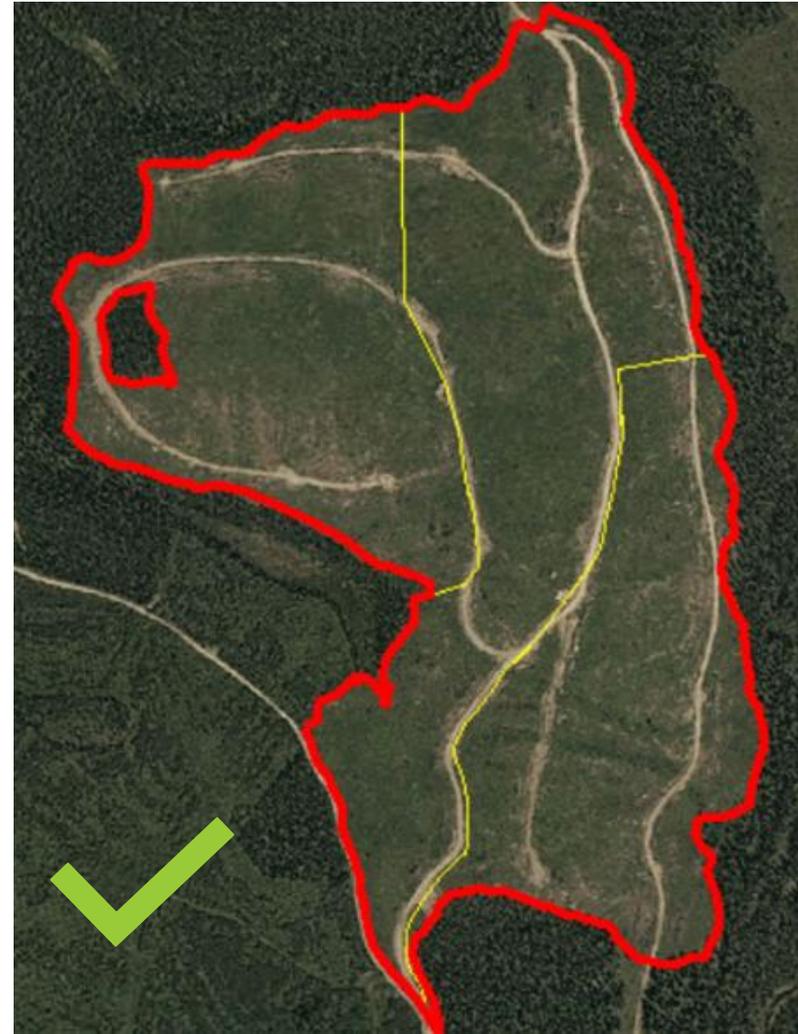


# OPTIONS

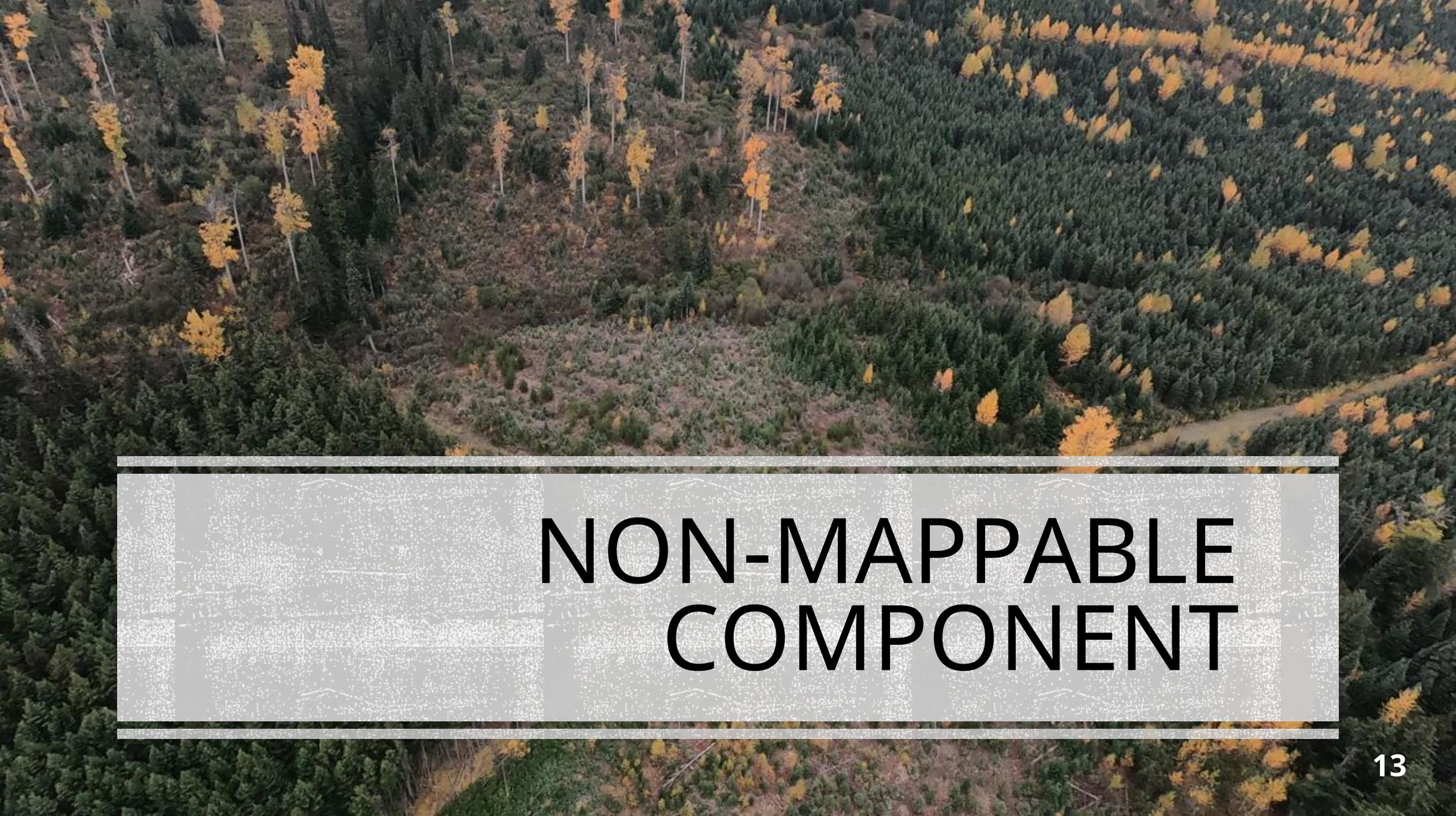
Spatially (With Road Tubes)



Non-Mappable Area

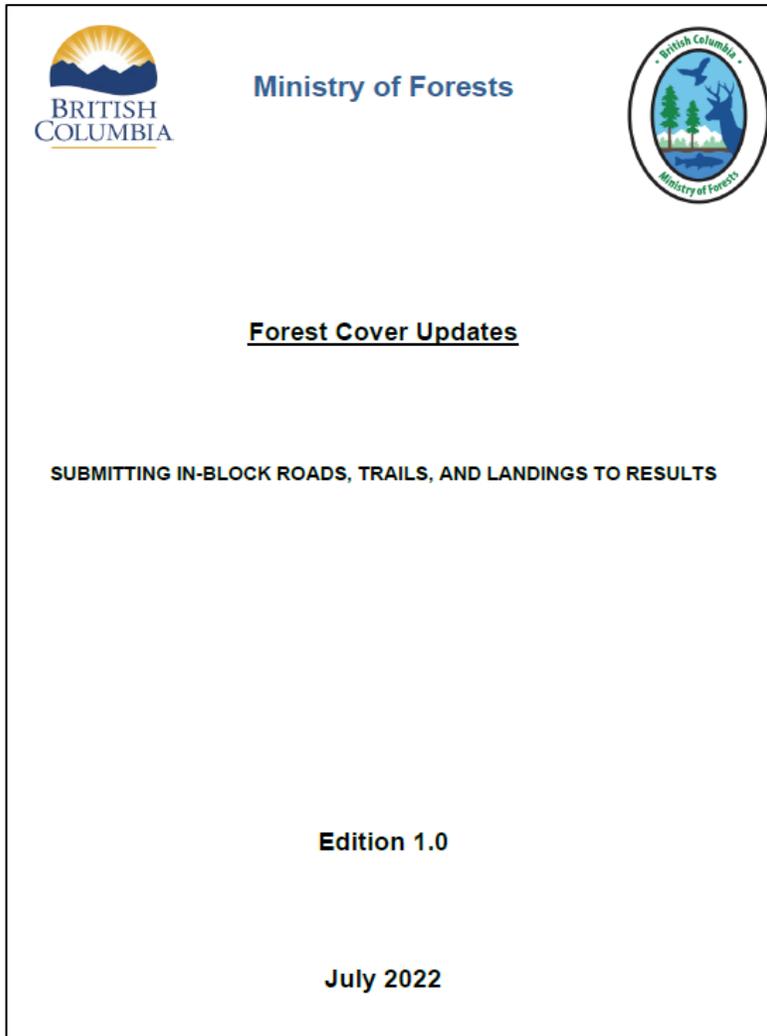


# SPATIAL REPORTING

An aerial photograph of a forest landscape. The terrain is covered with a mix of green coniferous trees and yellow deciduous trees, suggesting an autumn season. The trees are densely packed, and the overall scene is a natural, undisturbed forest environment. A semi-transparent grey banner is overlaid across the middle of the image, containing the text 'NON-MAPPABLE COMPONENT'.

# NON-MAPPABLE COMPONENT

# BEST MANAGEMENT PRACTICE #1



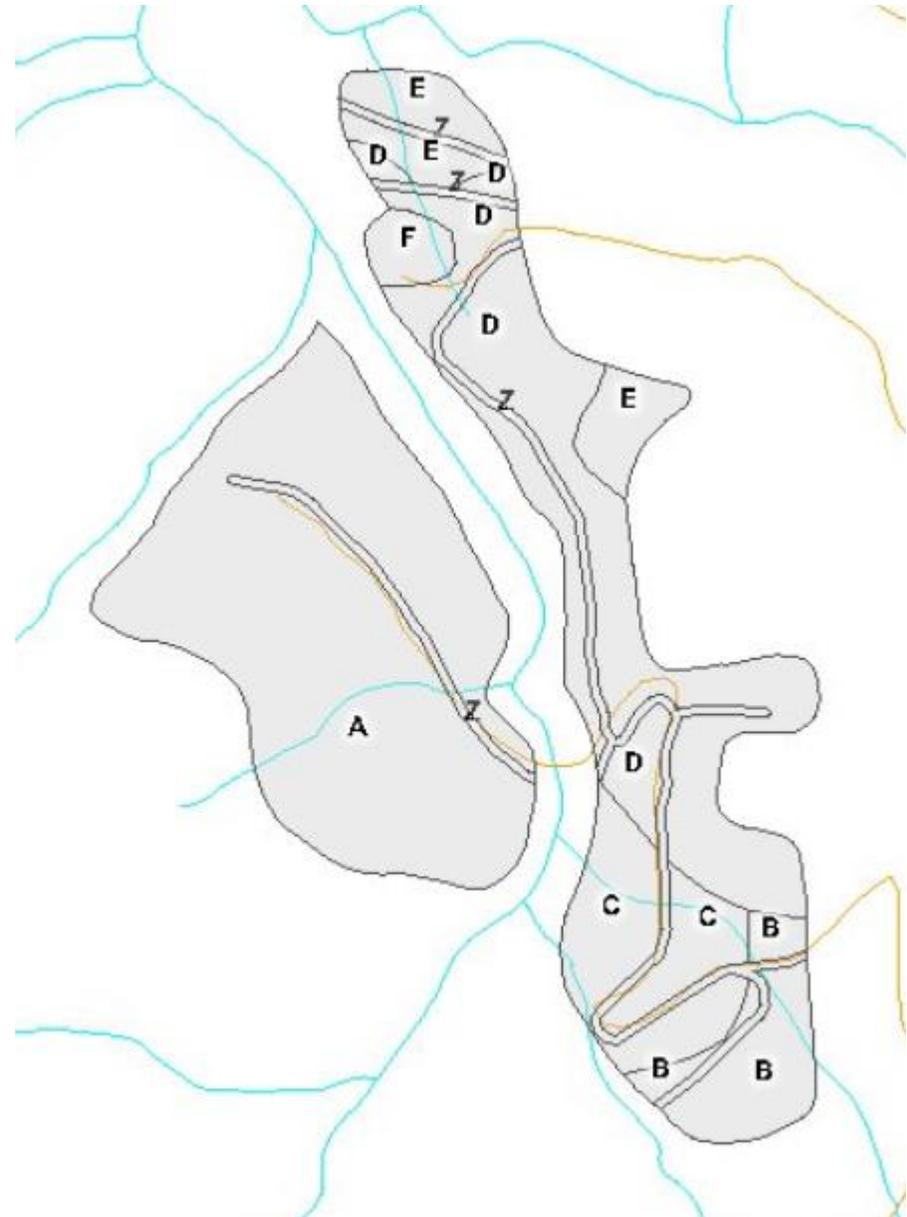
- **Report in-block roads, seismic lines, trails, and landings as non-mapped area.**
  - Aka. No road tubes
- Must provide tabular information associated with these features.
- Applies to opening definition, forest cover, and disturbance reporting.
- Activities can include road tubes.
- Anticipated mandatory date = 2026

# X ROAD TUBES

SU	Polygon ID	Non-Mapped Area	Layer	Polygon Area		Stock
				Gross	Net	
A	A		I	16.8	16.8	IMM
A	A		S	16.8	16.8	IMM
B	B		I	2.5	2.5	IMM
B	B		S	2.5	2.5	IMM
C	C		I	3.9	3.9	IMM
C	C		S	3.9	3.9	IMM
D	D		I	9.7	9.7	IMM
D	D		S	9.7	9.7	IMM
E	E		I	2.6	2.6	IMM
E	E		S	2.6	2.6	IMM
F	F		I	0.7	0.7	IMM
F	F		S	0.7	0.7	IMM
	Z			2.6	2.6	NP

Non Mapped Area

Id Area Status Type



# ✓ NON-MAPPED AREA

Last Action Date: 2013-02-20 06:38:02 AM    Comments: /  
 SU: A    Forest Cover ID: 2  
 Gross Area(ha): 7    Net Area(ha): 6  
 Reference Year: 2012    Reserve Type: /  
 Site Class:    Site Index: -  
 Stocking Status: IMM - Immature    Stocking Type: /  
 Tree Cover Pattern:

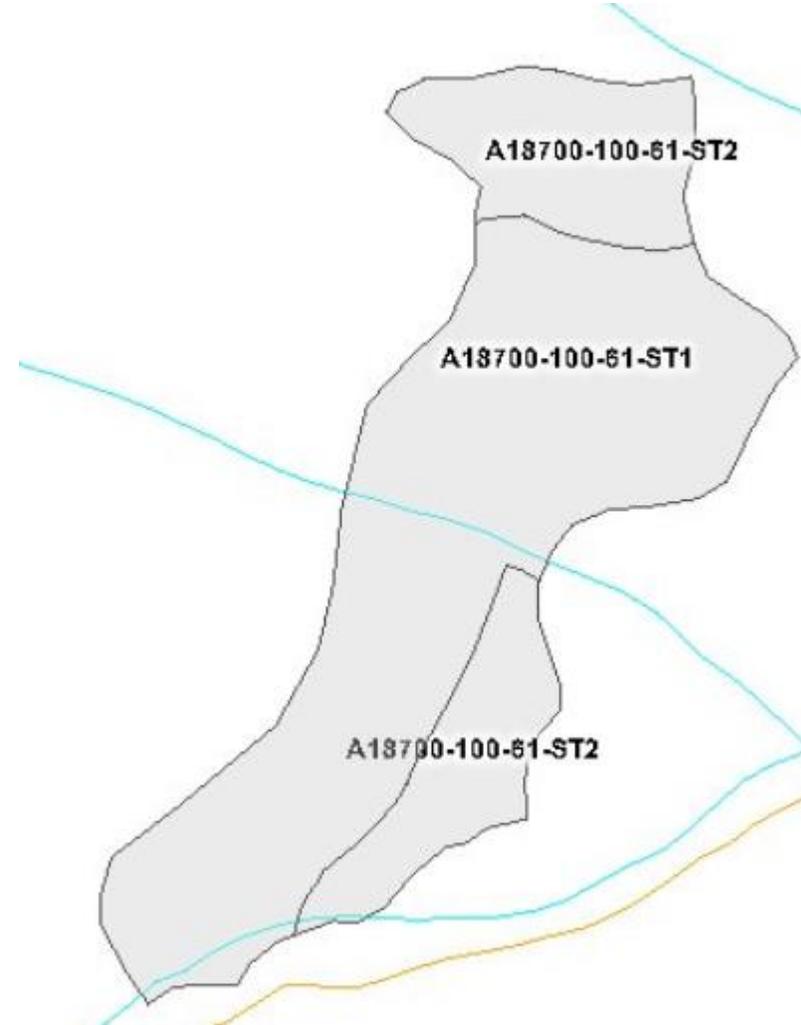
### Non Mapped Area

Id	Area	Status	Type
3A	0.5	NP	UNN

### Layer I Inventory Layer

Species
1 PLI - lodgepole pine
2 BL - subalpine fir
3 PA - whitebark pine

SU	Polygon ID	Non-Mapped Area	Layer	Polygon Area		Stocking	
				Gross	Net	Stat	Type
A	A18700-100-61-ST1		I	7	6.5	IMM	ART
A	A18700-100-61-ST1		S	7	6.5	IMM	ART
	A18700-100-61-ST1	3A		0.5		NP	UNN
B	A18700-100-61-ST2		I	3.1	2.6	IMM	ART
B	A18700-100-61-ST2		S	3.1	2.6	IMM	ART
	A18700-100-61-ST2 4B			0.5		NP	UNN

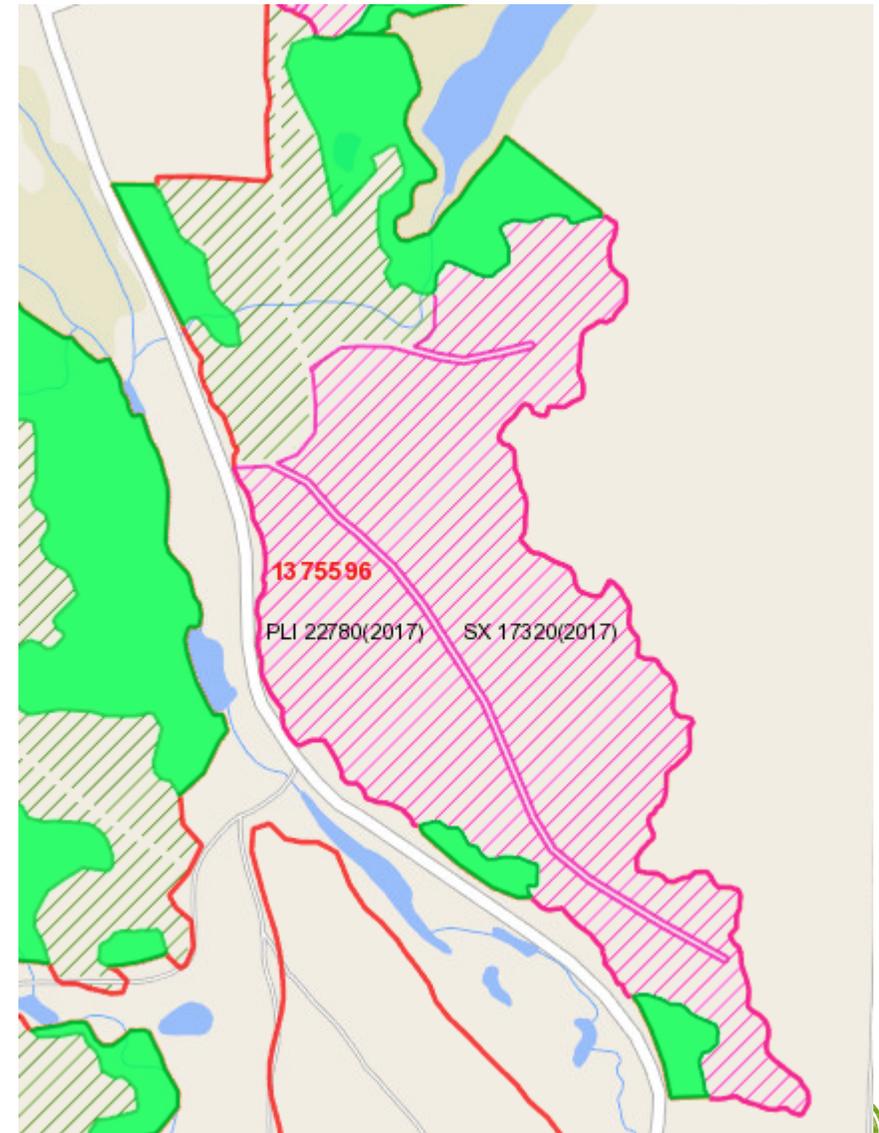


An aerial photograph of a forest landscape. The foreground and middle ground show a silviculture treatment area with rows of young, green coniferous trees planted in a grid pattern. The ground is covered with brown mulch or wood chips. In the background, there is a dense forest of taller, mature trees. A dirt road or path is visible on the left side of the image.

# SILVICULTURE TREATMENTS

# CURRENT

- Required for government funded treatments
- Optional for other funding sources



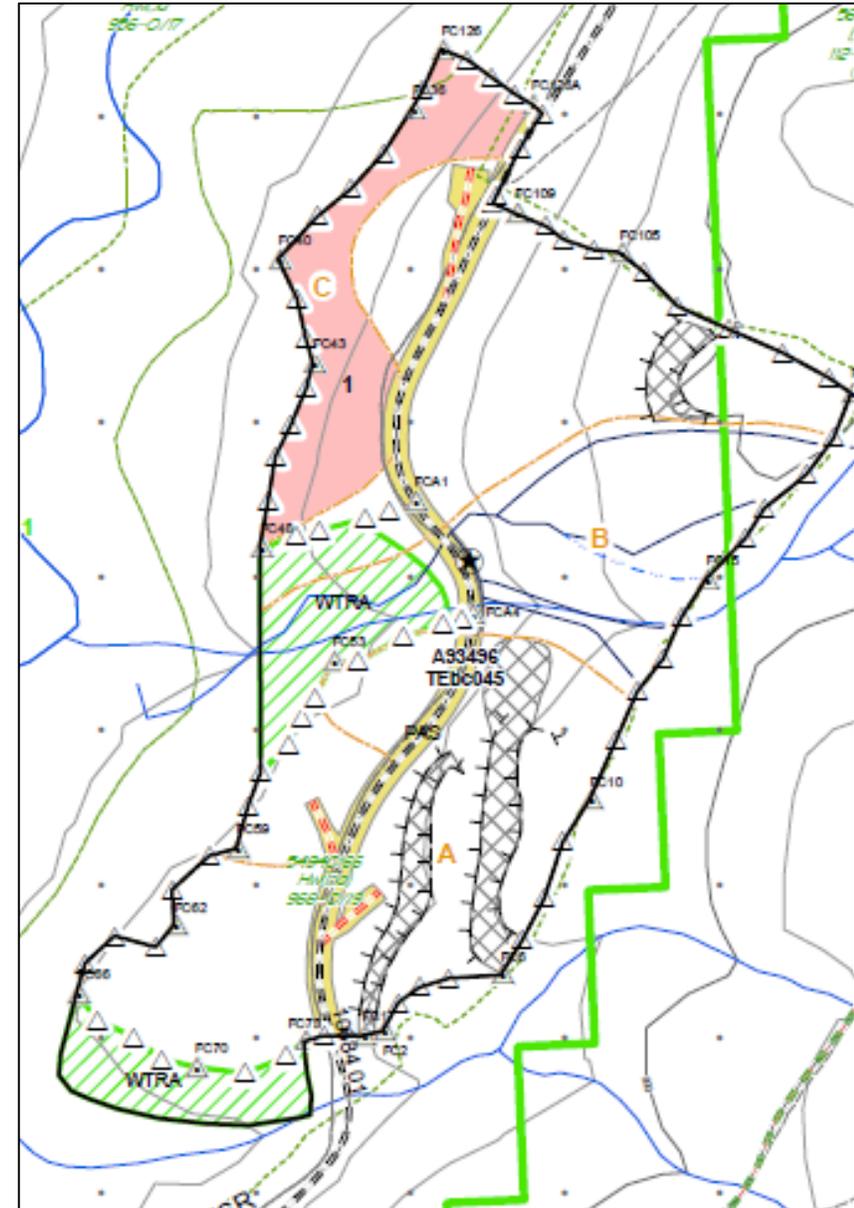
# RATIONALE

- Improve yield curve development process
- Track deployment of improved stock
- Monitor climate-based seed transfer
- Link forest health to seed use
- Monitor impacts of treatment
- Track application of enhanced basic silviculture



# BMP #2

- Submit spatial for new silviculture treatments to RESULTS with the following base codes:
  - PL- planting
  - BR- brushing
  - SP-site preparation
  - PC-pest control
  - DS- direct seeding
  - FE-fertilization
  - JS- juvenile spacing
  - PR-pruning
- Anticipated mandatory date: 2025





A photograph of a field of young pine trees. A semi-transparent grey rectangular box is overlaid across the middle of the image. Inside this box, the word "PLANTING" is written in large, bold, black capital letters. On the left side of the box, there is a small yellow tag with handwritten text. In the bottom right corner of the box, there is a green circular icon containing the number "22".

# PLANTING

1824  
63809  
150000  
VIC 31  
KLAN  
10/14

A photograph of a forest floor covered in moss, small green plants, and fallen sticks. A large, semi-transparent grey rectangle is overlaid in the center, containing the text 'TECHNIQUE CODES' in bold black letters.

# TECHNIQUE CODES

# PLANTING TECHNIQUES

- Base Code= PL
- Planting technique codes:
  - Plant
  - Replant
  - Fill
  - Roadside
  - Road Rehab
  - Slide
  - ~~Chemical Ground~~
  - ~~Seedling Protection~~

Base	Technique	Method	Unit	Description
PL			HA	Planting
PL	CG	BAGS	HA	Planting/Chemical Ground/Gro-max Bags
PL	FP		HA	Planting/Fill Planting
PL	FP	BROOT	HA	Planting/Fill Planting/Bareroot
PL	FP	COPPR	HA	Planting/Fill Planting/Copper Treated Plugs
PL	FP	CTAIN	HA	Planting/Fill Planting/Container
PL	FP	LAYOT	HA	Planting/Fill Planting/Layout
PL	FP	MXPLT	HA	Planting/Fill Planting/Mixed Stock
PL	FP	RBROO	HA	Planting/Fill Planting/Resistant Bareroot
PL	FP	RCOOP	HA	Planting/Fill Planting/Resistant Copper treated
PL	FP	RCTAI	HA	Planting/Fill Planting/Resistant Container
PL	FP	TRANS	HA	Planting/Fill Planting/Transplanted stock
PL	FP	UNDER	HA	Planting/Fill Planting/Understory Burn
PL	FP	WHIPS	HA	Planting/Fill Planting/Whips
PL	PL		HA	Planting/Planting
PL	PL	AUGER	HA	Planting/Planting/Auger
PL	PL	BROOT	HA	Planting/Planting/Bareroot
PL	PL	COPPR	HA	Planting/Planting/Copper Treated Plugs
PL	PL	CTAIN	HA	Planting/Planting/Container
PL	PL	FENCE	HA	Planting/Planting/Fence Style Protectors
PL	PL	LAYOT	HA	Planting/Planting/Layout
PL	PL	MACH	HA	Planting/Planting/Machine
PL	PL	MXPLT	HA	Planting/Planting/Mixed Stock
PL	PL	RBROO	HA	Planting/Planting/Resistant Bareroot
PL	PL	RCOOP	HA	Planting/Planting/Resistant Copper treated
PL	PL	RCTAI	HA	Planting/Planting/Resistant Container
PL	PL	TRANS	HA	Planting/Planting/Transplanted stock
PL	PL	UNDER	HA	Planting/Planting/Understory Burn
PL	PL	WHIPS	HA	Planting/Planting/Whips
PL	RO		HA	Planting/Roadside
PL	RO	BROOT	HA	Planting/Roadside/Bareroot
PL	RO	COPPR	HA	Planting/Roadside/Copper Treated Plugs
PL	RO	CTAIN	HA	Planting/Roadside/Container
PL	RO	MXPLT	HA	Planting/Roadside/Mixed Stock
PL	RO	RBROO	HA	Planting/Roadside/Resistant Bareroot
PL	RO	RCOOP	HA	Planting/Roadside/Resistant Copper treated
PL	RO	RCTAI	HA	Planting/Roadside/Resistant Container
PL	RO	TRANS	HA	Planting/Roadside/Transplanted stock
PL	RO	WHIPS	HA	Planting/Roadside/Whips
PL	RP		HA	Planting/Re-Planting
PL	RP	BROOT	HA	Planting/Re-Planting/Bareroot
PL	RP	COPPR	HA	Planting/Re-Planting/Copper Treated Plugs
PL	RP	CTAIN	HA	Planting/Re-Planting/Container
PL	RP	LAYOT	HA	Planting/Re-Planting/Layout
PL	RP	MXPLT	HA	Planting/Re-Planting/Mixed Stock
PL	RP	RBROO	HA	Planting/Re-Planting/Resistant Bareroot
PL	RP	RCOOP	HA	Planting/Re-Planting/Resistant Copper treated
PL	RP	RCTAI	HA	Planting/Re-Planting/Resistant Container
PL	RP	TRANS	HA	Planting/Re-Planting/Transplanted stock
PL	RP	WHIPS	HA	Planting/Re-Planting/Whips

# RATIONALE

- **Need consistency**
- Better able to understand current practices/regimes
- Standardized reporting for appraisal
- Consistent G&Y modelling
- Not all planting techniques will require spatial
- Not all techniques require the objective to be provided



**Mandatory date= 2025**

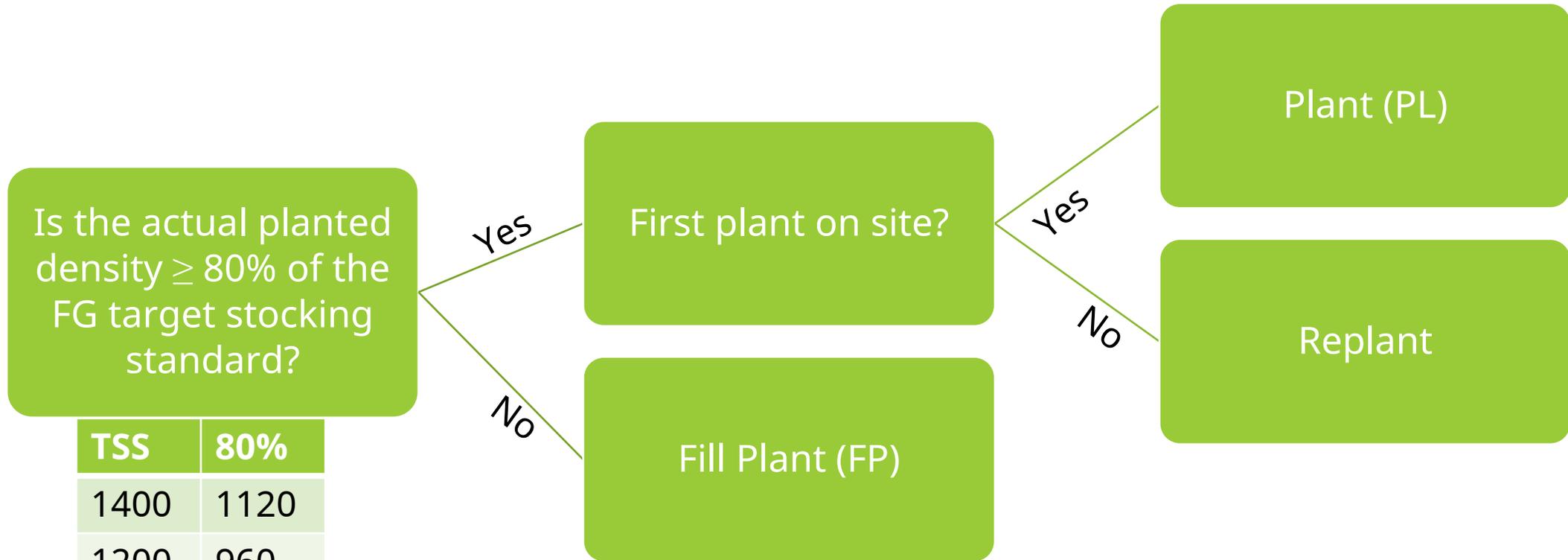
# BMP #3

Type	Common Characteristics
Plant	Completed planting density $\geq$ 80% of Target Stocking Standard (TSS). First plant on site.
Replant	Completed planting density $\geq$ 80% of TSS. Previously planted.
Fill	Completed planting density $<$ 80% of TSS. First plant on site OR previously planted.
Roadside	Only planting burn holes or roadside areas. Surrounding area is regenerated (previously planted or natural).
Slide	Slide areas. Surrounding area is regenerated (previously planted or natural).
Road Rehab	Rehabilitated road surfaces. Surrounding area is regenerated (previously planted or natural).

If done concurrently, PL/RP/FP activities in the NAR can include burn holes, slide areas, or roads

TSS= Target Stocking Standard  
 \* For enhanced basic silviculture, use FG TSS (e.g., 1200).

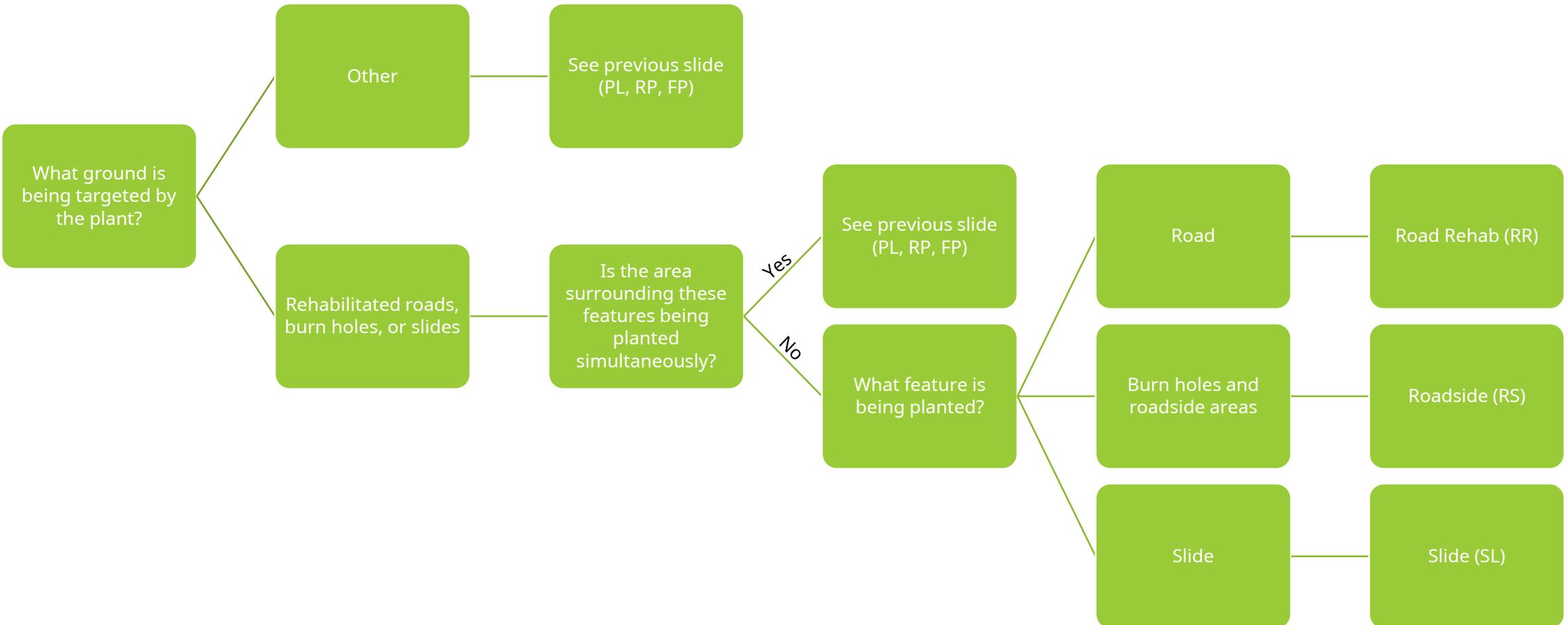
# TECHNIQUE CODES



TSS	80%
1400	1120
1200	960
900	720
800	6640

PL/RP/FP activities can include road rehab areas, slides, or burn holes.

# TECHNIQUE CODES



# EXAMPLE 1

For all examples, the FG Target Stocking Standard is 1200sph.

- Block ABC was **planted** at 1200sph in Spring 2021.
  - You complete a survival survey in 2022. You find only 100 WS sph.
  - You **plant again** at 1100sph to achieve the target density in 2023.
- **What do you call this 2023 plant?**

## CURRENT:

 Plant (PL)	2
 Fill Plant (FP)	4
 Replant (RP)	19
 Other	1



## NEW:

### Replant:

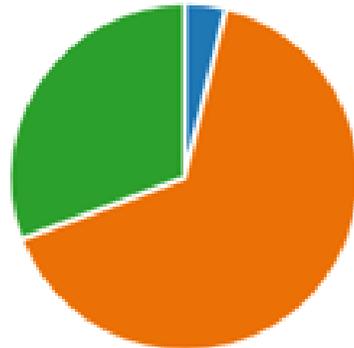
- Previously planted.
- 2023 planting density  $\geq 80\%$  of FG TSS

# EXAMPLE 2

- Block DEF was **planted** at 1200sph in 2021.
- You complete a survival survey in 2022. You find 850 WS sph. There are non-stratifiable NSR holes from frost.
- You decide to **plant** 350sph in 2023 to bring WS density back up to target.
- **What do you call this 2023 plant?**

## CURRENT:

 Plant (PL)	1
 Fill Plant (FP)	17
 Replant (RP)	8



## NEW:

### Fill plant:

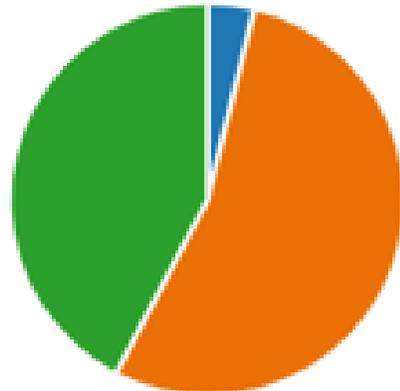
- 2023 planting density < 80% of TSS

# EXAMPLE 3

- Block GHI was **planted** at 1200sph in 2021.
- You complete a survival survey in 2022. You find 600 WS sph.
- You decide to **plant** 600sph in 2023 to bring the WS density above the MSS and up to the TSS.
- **What do you call this 2023 plant?**

## CURRENT:

 Plant (PL)	1
 Fill plant (FP)	14
 Replant (RP)	11



## NEW:

### Fill plant:

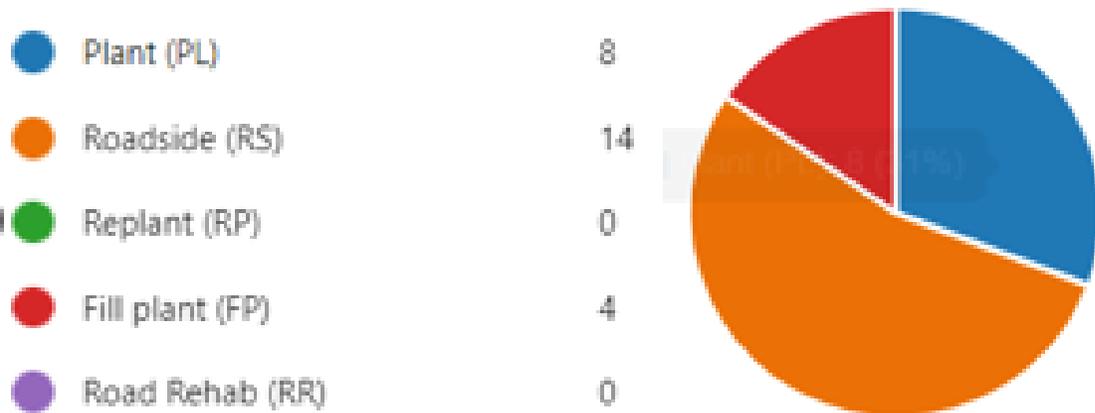
- 2023 planting density < 80% of TSS

# EXAMPLE 4



- Block JKL was **planted** at 1200sph in Spring 2021.
  - Block JKL was **pile burned** in Fall 2021.
  - In Spring 2022, the **burn holes** were planted at 1200sph.
- **What do you call this 2022 plant?**

## CURRENT:



## NEW:

### Roadside:

- Only targeting burn holes
- Surrounding area is not being planted

# EXAMPLE 5A

- Block MNO was harvested in Summer 2017.
- It was left for **natural regeneration** with a FG target of 1200 sph.
- You survey it for the first time in August 2021, **4 years later**.
- You create 2 strata:
  - A- NSR, ~300 WS sph, 900 plantable spots per hectare
  - B- SR, ~780 WS sph, 500 plantable spots per hectare.
- **What do you call Stratum A's planting activity?**

## CURRENT:



## NEW:

### Fill Plant:

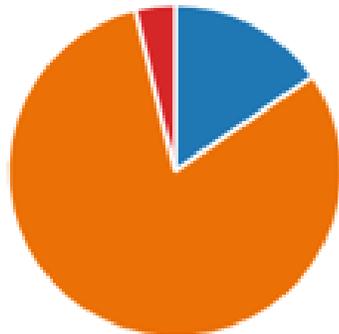
- Planting density < 80% of TSS

# EXAMPLE 5B

- Block MNO was harvested in Summer 2017.
- It was left for **natural regeneration**.
- You survey it for the first time in August 2021, **4 years later**.
- You create 2 strata:
  - A- NSR, ~300 WS sph, 900 plantable spots per hectare
  - B- SR, ~780 WS sph, 500 plantable spots per hectare.
- **What do you call Stratum B's planting activity?**

## CURRENT:

 Plant (PL)	4
 Fill plant (FP)	21
 Replant (RP)	0
 Other	1



## NEW:

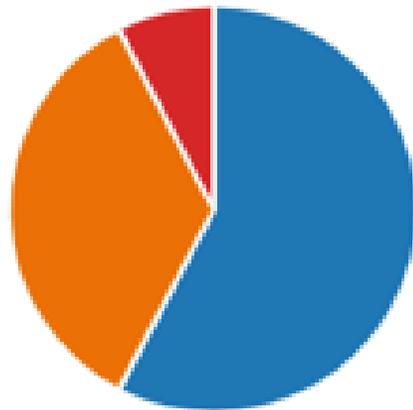
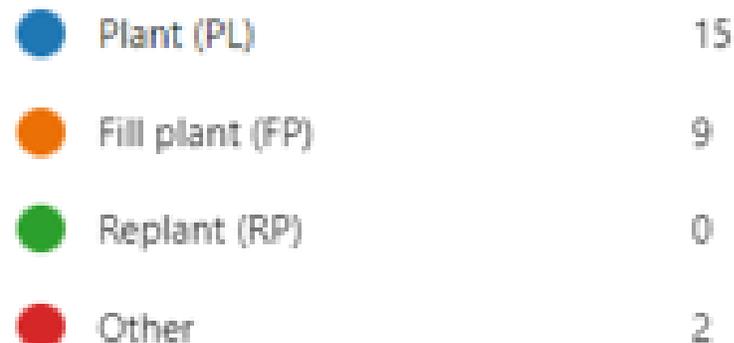
### Fill Plant:

- Planting density < 80% of TSS

# EXAMPLE 6

- Block PQR was harvested in Spring 2021.
- You prescribe a Spring 2022 initial plant with 1200sph.
- Planters find dense naturals and only plant 500sph.
- **What planting technique code(s) do you use?**

## CURRENT:



## NEW:

### Fill Plant:

- Planting density < 80% of TSS

Target planting density= 1800sph  
FG Target Stocking Standard (TSS)= 1200sph

# EXAMPLE 7

- Block STU was planted at **1800sph** in Spring 2021.
  - **Enhanced basic standards apply.**
- You complete a survival survey in 2022. You find 100 WS sph.
- You prescribe **1100sph** for Spring 2023.
- **What planting technique code(s) do you use?**

## **NEW:**

### **Replant:**

- Previously planted.
- 2023 planting density  $\geq$  80% of FG TSS
  - Always based on FG TSS

# OBJECTIVE CODES

# BMP #4

- **Include the objective code for fill plant or replant activities if the leading cause is drought or frost**
- Objective code= forest health code
  - ND= caused by drought
  - NG= caused by frost
- Optional: Report objective codes for FP/RP activities caused by other forest health agents (e.g., A, IW)
- Mandatory: 2024

Base	Objective	Description
PL	ND	Planting / Drought
PL	NG	Planting / Frost



# WHY?

- Requested by:
  - ISSC and Drought Working Group
- *Where are we having issues?*
- *What is the impact?*
- *What regimes/silvicultural systems work best?*
- Monitor climate-based seed transfer (CBST)





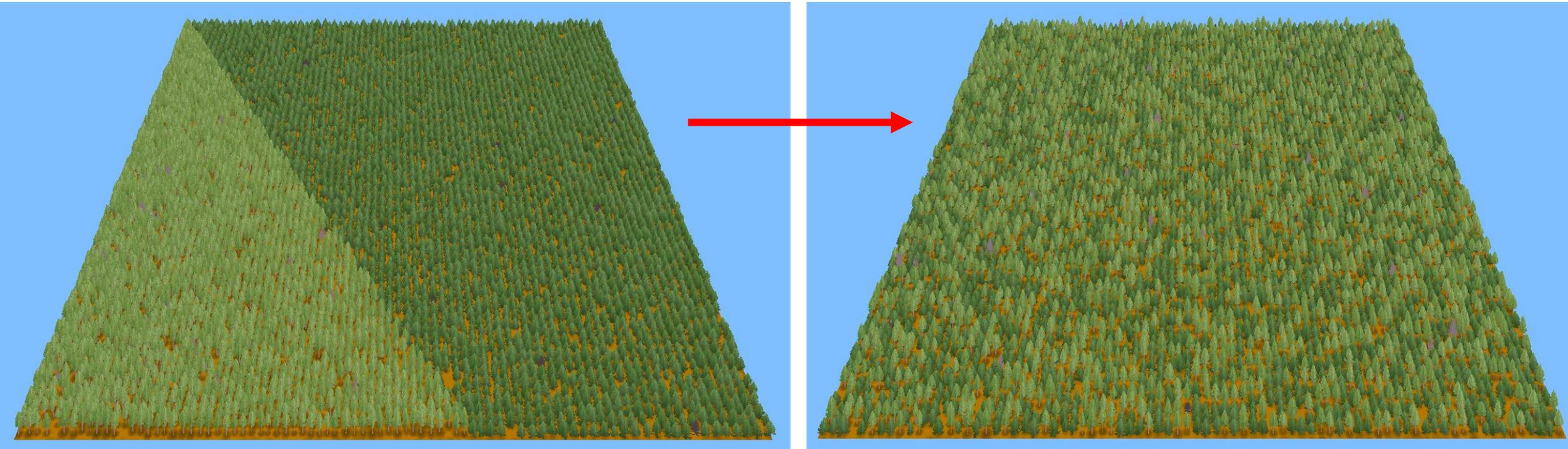
# PLANTING STRATIFICATION

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# PLANTING STRATIFICATION

- Treatments are reported by silviculture activity treatment units (ATUs)
- Silviculture activity reports include:
  - Species
  - Seedlot-vegplot
  - Number planted
  - Etc.
- Planting Units (PUs) are typically combined and reported at the opening-level
  - Depends on database
- No planting stratification reporting requirements

# EXAMPLE



# EXAMPLE

- 4 species
- 8 seedlots
- 2 standards units:
  - SU1 (63ha)= single layer
  - SU2 (18.5ha)= multi-layer

- 1 ATU
- No spatial

## RESULTS317 - Maintain Activity Detail - Complete

Back

ATU ID: 526987 Licensee Activity ID:

Activity Base:  Technique:  Method:

Objectives:

Completion Date (YYYY-MM-DD):  Treated Amount:  HA Funding Source:

Inter-agency No:  Project Id:

Comments: [No](#)

Map: N

Planting Specifications

Total Planted 103055

8 rows returned

Index	Species	Number Planted	Number Beyond Transfer Limit	Request ID	Lot	Stock			Remove
						Type	Cntr	Age	
1	FDI - interior Douglas-fir	1430			04907				Remove
2	LW - western larch	16695			04914				Remove
3	FDI - interior Douglas-fir	2850			04908				Remove
4	FDI - interior Douglas-fir	25115			05079				Remove
5	PLI - lodgepole pine	24160			10526				Remove
6	SX - spruce hybrid	14050			06012				Remove
7	PLI - lodgepole pine	15095			05089				Remove
8	PLI - lodgepole pine	3660			43261				Remove

Add Planting Stock Row

# BMP # 5

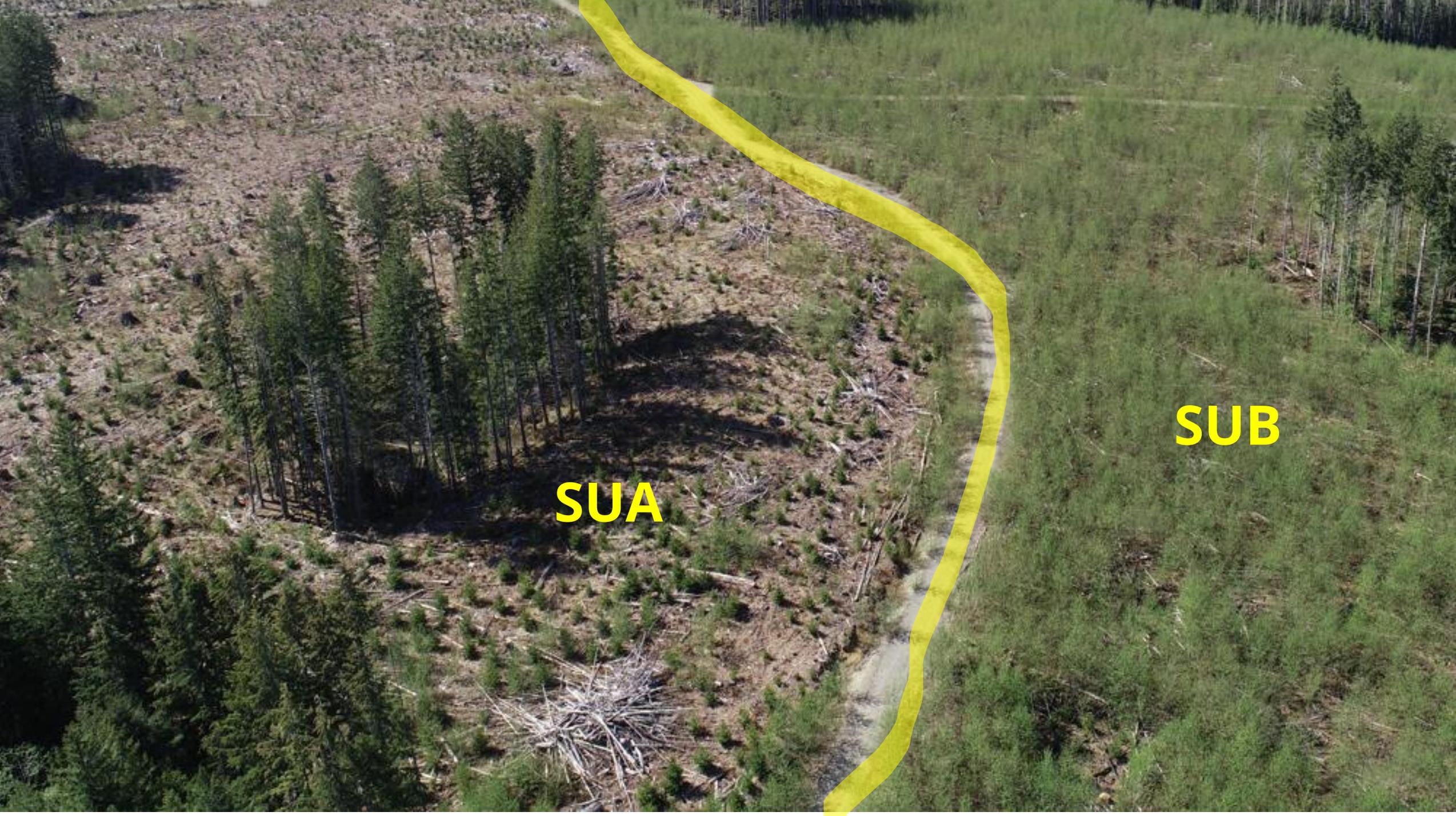
**If the planting attributes vary between Standards Units, then report the planting activity by Standards Unit**

Examples of planting attributes are:

- Density
- Spacing/distribution
- Species composition
- Seed class
- Seed-lots
- Fertilization at time of planting (ATOP)
- Funding Source

# DETAILS

- Stratification is not required for:
  - Woodlots
  - Technique codes: Slide (SL), Roadside (RO), Road Rehab (RR)
  - If a planting treatment is uniform across SUs
- Applies to new planting activities only
- If SU boundaries change due to amendments, planting information/spatial does not need to be re-submitted.

An aerial photograph showing a landscape with a yellow boundary line. The area to the left of the line is labeled 'SUA' and contains a cluster of tall, thin evergreen trees. The area to the right is labeled 'SUB' and is covered in dense, low-lying green vegetation. The background shows a cleared area with brown ground and scattered trees.

**SUA**

**SUB**



TU 1= Fdc70Pw30

TU 2= Fdc100

TU 3= Dr100

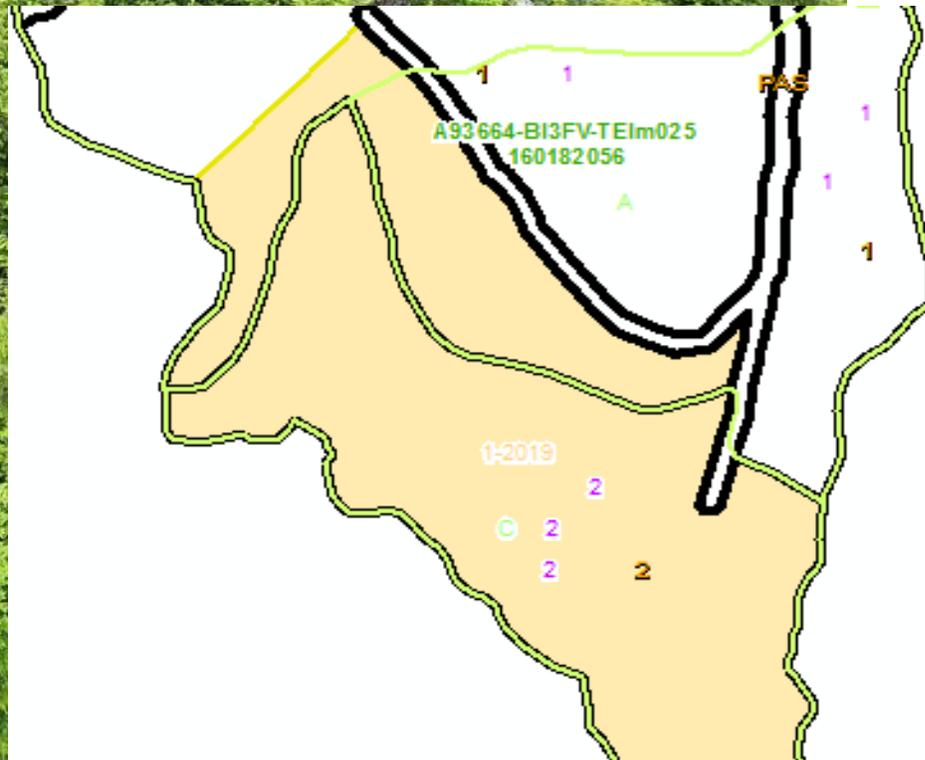
If there are more treatment units (TU) than SUs, report each TU. There is no need/benefit to merging the TUs.

1 ATU = 2 SUs

Prescription:

Hw 60Cw40 @ 1000 sph

Seedlots 47415 and 47458



PLANTING	PL-PL-CTAIN	11.7	Done	2022-06-13	2022-06-19	[Redacted]	[Redacted]	\$0.00	
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### Planting Units

Show  entries [+ Add](#) Search:

PU	Area	Elevation Low	Elevation High	Planting Target	Predicted	Actual	Quality %	Excess %	
<input type="text"/>									
A	7.0			1200		799			
B	4.7			1200		800			

Showing 1 to 2 of 2 entries

# SHORT-TERM

Y	3931404	PL	PL	CTAIN		2022-06-19	7 IA	<a href="#">N</a>	<a href="#">N</a>	<a href="#">Details</a>	<a href="#">Delete</a>
Y	3931405	PL	PL	CTAIN		2022-06-19	4.7 IA	<a href="#">N</a>	<a href="#">N</a>	<a href="#">Details</a>	<a href="#">Delete</a>

```

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```

# FUTURE

- Requirements to stratify planting by SU (at minimum)
- RESULTS to facilitate reporting multiple planting units under a single ATU
- Anticipated expected date: 2025

# SUMMARY

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- Changes needed:
  - Improve provincial inventory
  - Increase accuracy of TSR
  - Support monitoring
- Soft roll-out
  - Releasing as BMPs
  - Nothing mandatory yet
  - Timelines informed by licensee feedback



# QUESTIONS

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