

Date: February 21, 2023

**P.E.I.
Public Forests**



Woodlot Management Plan

Property Number: 36483

Location: Piusville

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Goals and Management Objectives

Forest Management on Prince Edward Island (P.E.I.) means different things to different people. Public Forest Lands are managed for a variety of reasons including timber and non- timber values, wildlife enhancement, soil and water preservation, demonstration techniques, training and recreation and aesthetics.

The primary goal for management of P.E.I. Public Forest Land is to enhance the overall forest quality. To accomplish this, it may be necessary to remove some of the lower quality trees on the property and nurture those of higher quality. This will in turn improve genetic quality, species distribution and diversity through careful tree selection and natural regeneration. Allowing acceptable growing stock the chance to thrive and provide a seed source for the surrounding areas will ensure that quality natural regeneration has an opportunity to establish. Enhancement or enrichment planting may be necessary in areas where there is inadequate or unsuitable natural regeneration. Trees native to P.E.I. that are suitable to the site conditions will be chosen for any required reforestation on the property. Prescribing treatments in some stands while leaving others untreated will provide for a range of forest types. Converting stands from a single species to multiple species is desirable. This can be accomplished by retaining some of the natural regeneration in areas that have been previously planted and by planned tree selection in stand improvement treatments. Planted and natural stands on the property will be assessed for health and growth of desired species on an on-going basis. This information will be used to determine when and where future treatments will be carried out. Through time, a favourable healthy mixture of short-lived and long-lived species will provide for an abundance of quality forest products, biodiversity, wildlife, and recreational opportunities as well as a range of ecological goods and services (such as clean air and water).

Property Overview

Location

Property #36483 is located on the Dock Road, Route #150, in the community of Piusville, P.E.I., (Appendix A). The total area of this property is 27.2 hectares (67.9 acres) and the midpoint of the property is Latitude N 46.792239 decimal degrees, Longitude W -64.219446 decimal degrees.

Past Information

Local records and previous aerial photography show that the northern portion of the property was farmed in the 1930's with the remainder of the property being forested. Since, the farmland has reverted to forested land and the property remains forested today. To better illustrate this 1935 and 1968 photography can be seen in Appendix B and Appendix C respectively.

Property Information

The information in Appendix D has been taken from the 2010 Corporate Land Use Inventory. An explanation of forestry code meanings can be seen in Appendix E. Any stands that have proposed silvicultural treatment prescriptions are to have on-ground stand assessments completed prior to any work being started. This on-ground assessment information is included in this plan as updated stand tally sheets (Appendix F) and supplements the extrapolated data where applicable. A topographic map of the property shows the general terrain profile, the ranges in elevation and the plantations currently on the property (Appendix G).

Wetland and Watercourses

There is one drainage that is considered a stream for forest management purposes and is located on the south end of the property, north of stand 10696 (Appendix A). A 15-metre buffer zone is to be maintained around this drainage/stream.

Property Access

Access to the north part of the property is from an unmaintained portion of Blanchard Road. An older haul road runs partway along the east boundary. The south portion of the property is accessed by Piusville Road and has a culvert installed.

Property Boundaries

This property is bounded on the north by an unmaintained section of Blanchard Road and on the south by the Piusville Road. The east and west properties border private land.

Fire Protection

This property is located within the jurisdiction of the Alberton Fire Department. The amount of personnel and equipment used to fight any forest fires will depend greatly upon the size and severity of the fire. Protection of our woodland from forest fire is the responsibility of the Forestry Division and our local community fire brigades. In the Western District, there are two four-wheel drive forestry fire trucks housed at each of the Wellington and West Point Fire Departments. These heavy-duty trucks are available to assist the local fire department responsible for this area. Additional forestry fire trucks, off road tracked vehicles, portable pumps and specialized forest fire suppression equipment are available if

needed. The drainage/stream on the property may not be a suitable site to setup a portable fire pump system as there is typically not enough water flow.

Planting and Silviculture

There are three (3) plantations on the property. It is recommended that any trees planted on the property be assessed at regular intervals. These assessments will determine if the planted trees require manual maintenance or fill planting as specified in the Forest Management Standards manual (Eco-Manual). A list of all silviculture treatments completed on the property from 1991 to present is shown in Appendix G.

Proposed Treatments

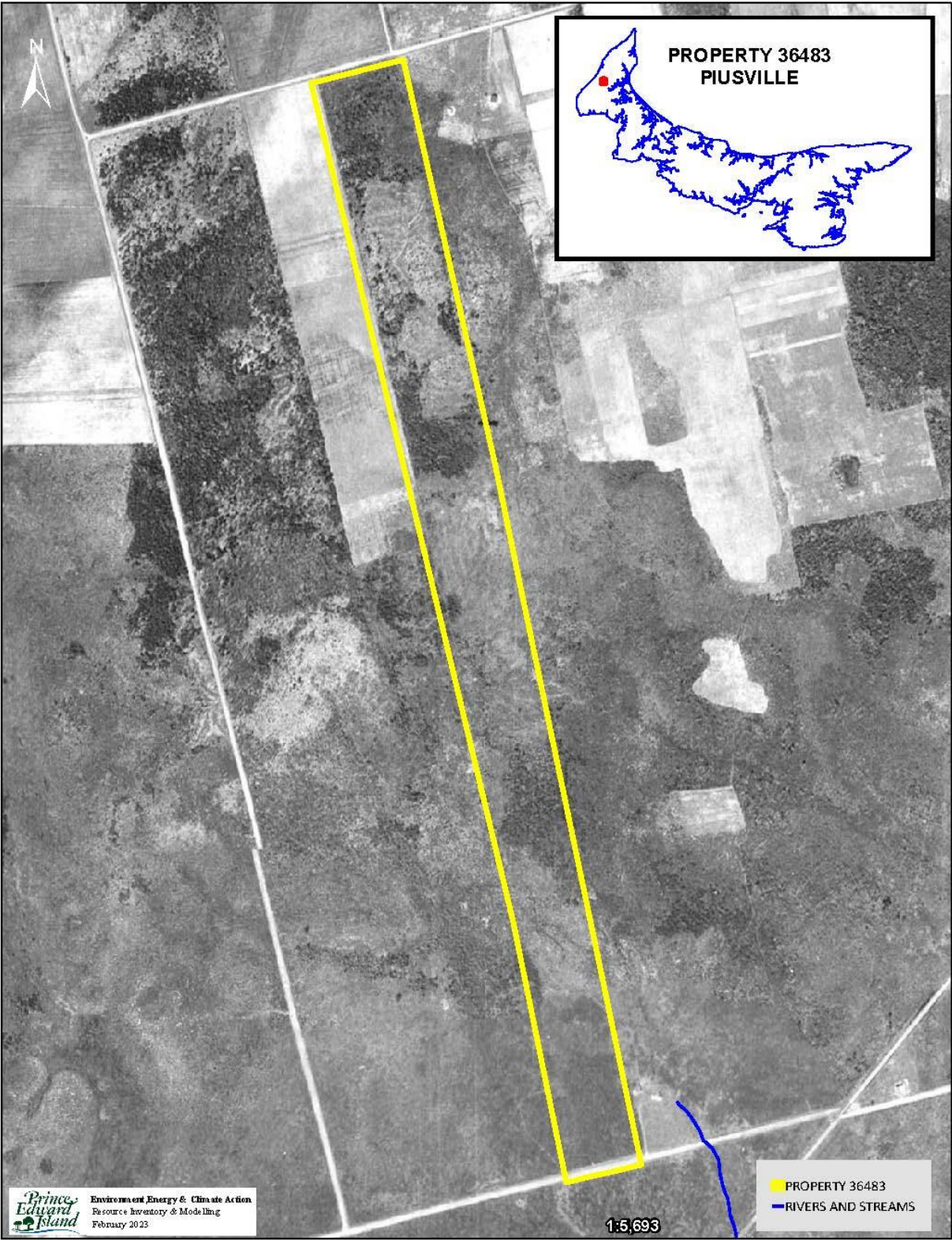
The 2006 Forest Policy “Moving to Restore a Balance in Island Forests” lays out the framework for Public Land Forest management. The Eco-Manual provides details for prescribed treatments. All work completed on this property must comply with that manual. Although all stands were assessed, only specific stands were prescribed treatments to accomplish goal(s) within the next 10 years. Table 1 provides a summary of these proposed treatments. Proposed treatments may be updated in 5 years, when the 10-year period expires, or due to unforeseen events. This table will be updated as required when additional treatments are prescribed. For a better understanding of the treatments prescribed, a more detailed explanation is available in the ECOSYSTEM-BASED FOREST MANAGEMENT STANDARDS MANUAL(“EcoManual”)

www.princeedwardisland.ca/sites/default/files/publications/2018_eco_manual_technical_version_-_final.pdf. Any additional information may be obtained by contacting a Provincial Forest representative at the District Forestry Office in Wellington.

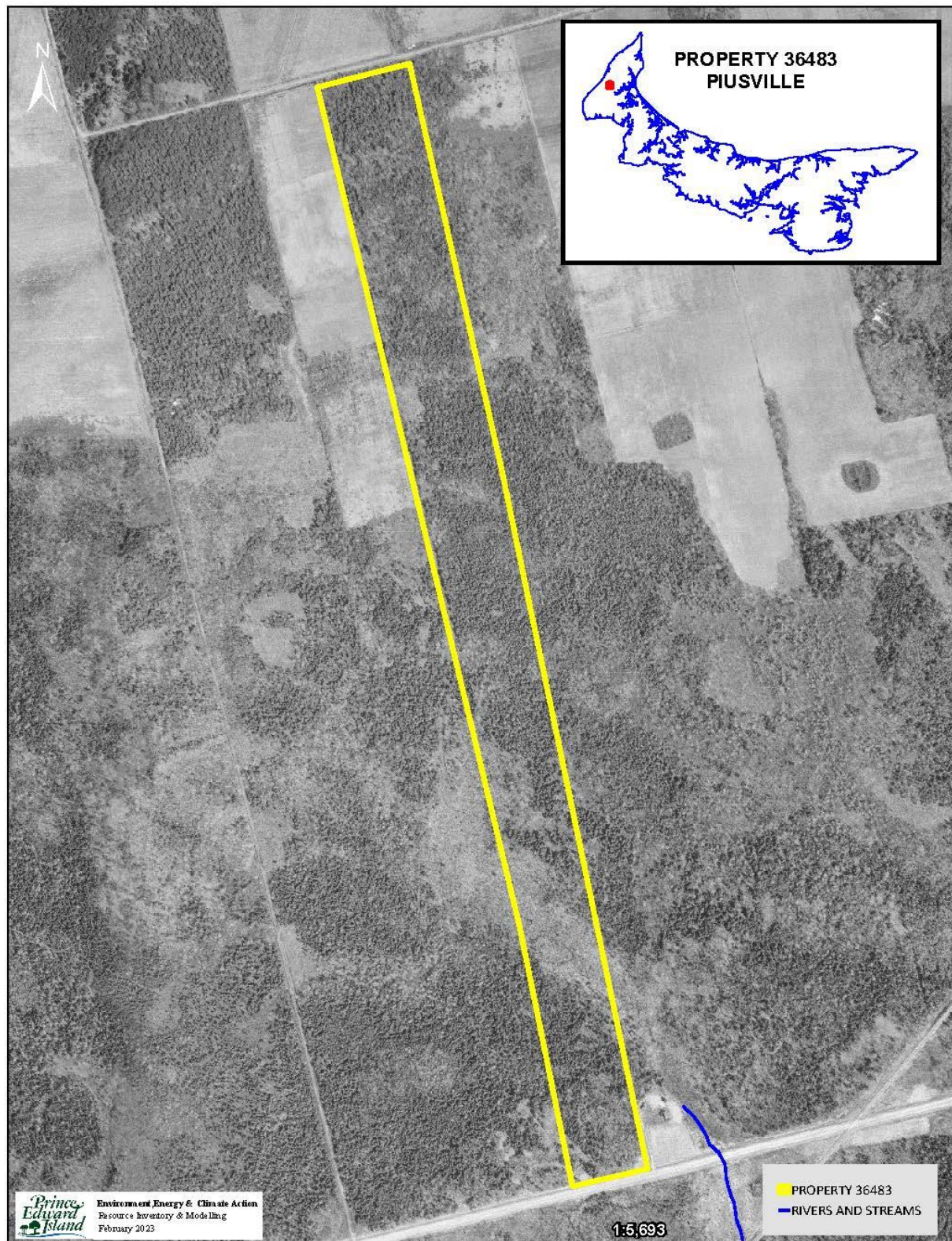
Table 1. Proposed Treatment Summary

Stand Number and Plantation Number	Treatment Type	Treatment Year	Amount Proposed	2018 Eco-Manual Reference	Comments	Goals
PN 3070151 (ST 101691)	Manual Plantation Maintenance	2023	3.5	Pg. 17	The trees are growing well. Conduct a plantation maintenance to eliminate undesirable competing vegetation and provide growing space for crop trees.	Improve growth of crop trees
PN 3925161 (ST 10696)	Block Harvest	2023	2.0	Pg. 30	This stand is heavy to GB and PO. Harvest. Retain RM, WP and windfirm cover patches of BS, BF and LA. There is a wet drainage area within the stand. Control the wood extraction crossing area (e.g. corduroy, brush matt). Establish 15 m buffer along the drainage system outside the north boundary of the stand.	Salvage the GB and SW that would blow over.
PN 3925161 (ST 10696)	Site Prepare and Reforest	2024	2.0	Pg. 14, 16	Create plantable spots and plant BS, WP, WA.	Create planting microsites
PN 3925161 (ST 10696)	Manual Plantation Maintenance	2028	2.0	Pg. 17	Eliminate undesirable competing vegetation	Improve growth of crop trees

Appendix B. 1935 Aerial Photography



Appendix C. 1968 Aerial Photography



Appendix C. 2010 Corporate Land Use Inventory

FIELDID	COV1	PER1	COV2	PER2	COV3	PER3	COV4	PER4	COV5	PER5	HT(M)	HECTARES
0101092	BS	5.0	WP	3.0	WB	2.0		0.0		0.0	7.0	3.09
010696	BS	6.0	WP	3.0	WB	1.0		0.0		0.0	7.0	2.01
0101691	BS	10.0		0.0		0.0		0.0		0.0	1.0	3.47
0101107	CC	10.0		0.0		0.0		0.0		0.0	0.0	2.49
0101091	CC	10.0		0.0		0.0		0.0		0.0	0.0	0.08
0101103	RM	4.0	LA	2.0	PO	2.0	RS	1.0	WB	1.0	15.0	0.31
010281	CC	10.0		0.0		0.0		0.0		0.0	0.0	0.32
010634	BS	3.0	RM	2.0	PO	2.0	WB	2.0	LA	1.0	12.0	1.19
010441	CC	10.0		0.0		0.0		0.0		0.0	0.0	0.43
010412	PO	4.0	RM	3.0	BS	2.0	BF	1.0		0.0	17.0	1.33
010499	RM	4.0	PO	3.0	BS	2.0	WB	1.0		0.0	16.0	0.00
0101627	CC	10.0		0.0		0.0		0.0		0.0	0.0	0.13

Appendix D: Forest Inventory Codes

EXPLANATION OF FOREST CODES; SPECIES

WS	White Spruce	JL	Japanese Larch	WB	White Birch
BF	Balsam Fir	EL	European Larch	PO	Poplar
HE	Hemlock	NS	Norway Spruce	RM	Red Maple
WP	White Pine	PC	Pin Cherry	RO	Red Oak
RP	Red Pine	MA	Apple	WA	White Ash
JP	Jack Pine	SP	Scots Pine	EM	Elm
CE	Cedar	AP	Austrian Pine	GB	Gray Birch
LA	Larch	YB	Yellow Birch	AL	Alders
BS	Black Spruce	SM	Sugar Maple	LI	Linden
RS	Red Spruce	BE	Beech		

PERCENT

0	1 - 9%
1	10 - 19%
2	20 - 29%
3	30 - 39%
4	40 - 49%
5	50 - 59%
6	60 - 69%
7	70 - 79%
8	80 - 89%
9	90 - 100%

CROWN CLOSURE

A	91 % - 100%
B	81 % - 90 %
C	71 % - 80 %
D	61 % - 70 %
E	51 % - 60 %
F	41 % - 50 %
G	31 % - 40 %
H	21 % - 30 %
I	11 % - 20 %
J	0 % - 10 %

ORIGIN AND HISTORY

BR	Burn	DI	Disease-Insect
WF	Wind Fall	OF	Old Field
PC	Partial Cut	PN	Plantation
CC	Clear Cut	HR	Hedgerow
TH	Thinning	EP	Excavation Pit

SAMPLE DESCRIPTIONS

FOREST STAND DESCRIPTIONS

75401 – Stand No.

SM5RM4 – Sugar Maple 50%, Red Maple 40%

WS1 12A – White Spruce 10%, Height, Crown Closure

OF – Origin History Old Field

Stand Numbering relates to the position of the stand within a 100 X 100 grid cell overlay with the minimum values in the southwest corner and the maximum values in the northeast corner.

A stand labeled 75 40 1 would be positioned within easting grid 75 and northing grid 40 and would be the first stand within that grid cell.

NON-FOREST LAND TYPES

BO	Bog	AL	Alders
CL	Clear Land	FL	Flowerage
SO	Swamps – Open	AG	Agricultural Land
EP	Excavation Pit	SD	Sand Dune
PL	Power Line	UR	Urban
C	Cemetery	WW	Water

FOREST GROUND CONDITION

SW	Wet – Swampy
ST	Steep
SY	Sandy

Appendix E. Stand Tally Sheets from on the Ground Assessment

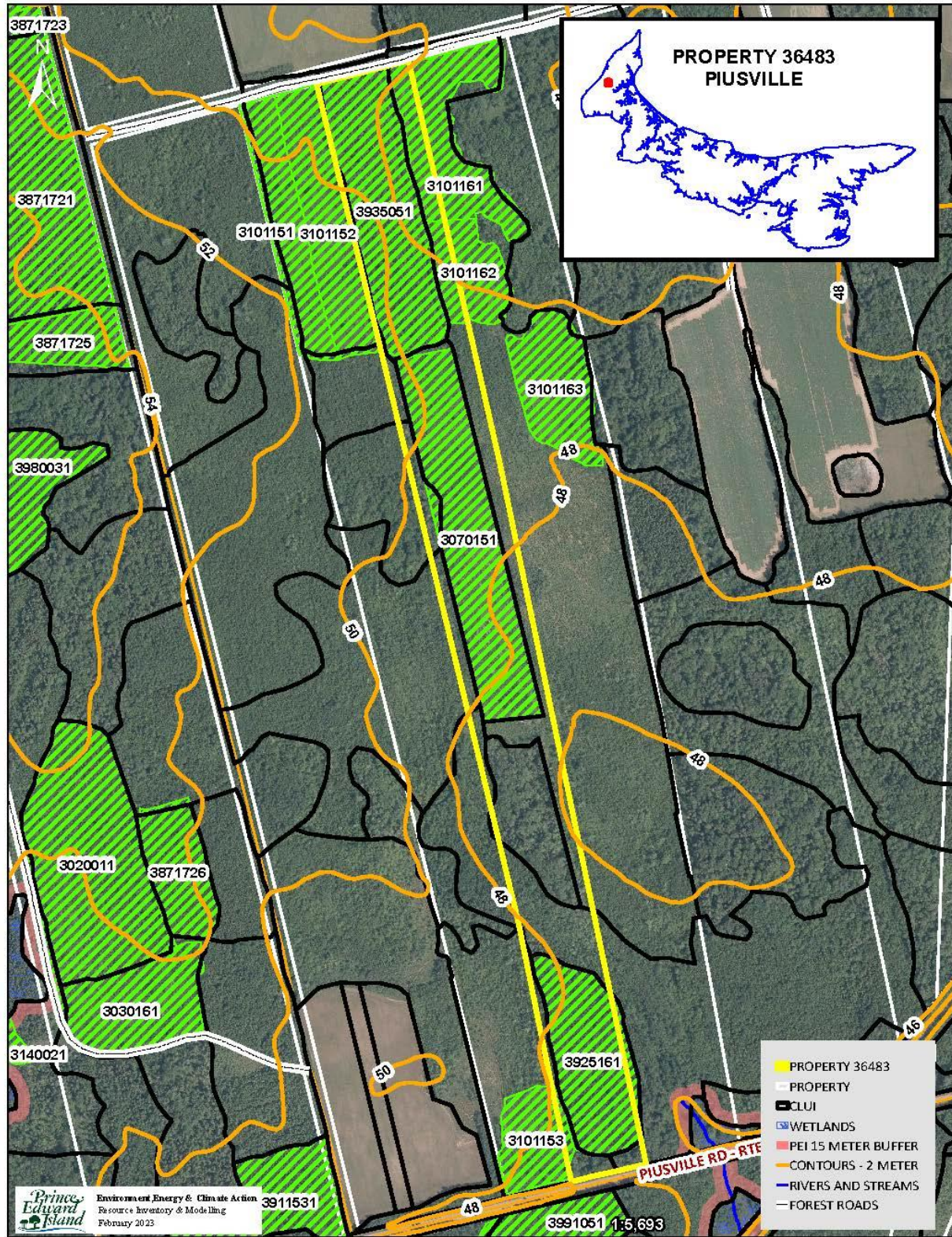
STAND TALLY SHEET															
CRUISER		S.Rankin			STAND #		101092		PLANTATION #		3935051				
PROPERTY #		36483			AREA		3.4 ha		Date		4 / 10 / 2023				
											D M Y				
SAMPLE TREE INFORMATION															
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT					
1	BS	30	20	15		4									
2						5									
3						6									
STAND INFORMATION															
Stand Basal Area		SW	22	M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha		
Species and (%)		BS9	%	WP1	%		%								
Even-aged		X		Uneven-aged											
Slope		level	%	Aspect											
Stand Origin:		Old Field			Partial Cut			Burn			Unploughed				
		Windfall			Non Forest						Ploughed				
		Clear Cut			Unknown		X								
Stand Maturity Class:		Regeneration			Immature		X	Mature			Over-mature				
Stand Stocking:		Understocked			Fully Stocked		X	Overstocked			Patchy				
Density:		SW	2200	HW	-										
Advanced Regeneration:		Understocked		X	Fully Stocked			Overstocked			Patchy		X		
Regeneration:		1. Spp. BS			Height 0.3 m			2. Spp.			Height				
		3. Spp.			Height			4. Spp.			Height				
GROUND OBSERVATIONS															
Ground Vegetation Species Present:		bracken fern, bunch berry													
Ground Hemlock		Y / N	X												
Invasive Species Present		Y / N	X		If yes then what species:										
Site Indicators		Y / N	X		If yes then what species:										
ENVIRONMENTAL OBSERVATIONS															
Water Course		X		Bog	X	Pond	X	Stream	X	Seeps	X	Beaver Present			N Y / N
Drainage:		Poor	X	Moderate		Good		Excellent		Erosion Control Required					N Y / N
Snag Trees:		Adequate			Inadequate		X								
Coarse Woody Material:		Adequate		X	Inadequate										
Dens		N		Nests (Raptors, songbirds, etc.)		N									
Wildlife Observed		None observed													
Comments															
STAND PRESCRIPTION															
No Treatment				X	Regeneration Cut			Crop Tree Release			Block Cut				
Shelterwood Cut					Selection Cut			Patch Cut			Strip Cut				
Commercial Thinning					Afforestation			Site Preparation							
Pre-commercial Thinning					Reforestation			Riparian Zone Mgmt							
Pln. Maint.		Y / N		Stems/Ha											
Comments:		This is an immature stand of BS. It is doing well. Block harvest when mature.													

STAND TALLY SHEET													
CRUISER		S.Rankin		STAND #		101691		PLANTATION #		3070151			
PROPERTY #		36483		AREA		3.5 ha		Date		4 / 10 / 2022			
										D M Y			
SAMPLE TREE INFORMATION													
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT			
1	BS	26	3	2.5		4							
2						5							
3						6							
STAND INFORMATION													
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha	
Species and (%)	BS4	%	BFLA2	%	P01	%	GB2	%	RM1				
Even-aged	X		Uneven-aged										
Slope	level	%	Aspect										
Stand Origin:	Old Field		Partial Cut		Burn		Unploughed						
	Windfall		Non Forest				Ploughed						
	Clear Cut	X	Unknown										
Stand Maturity Class:	Regeneration	X	Immature		Mature		Over-mature						
Stand Stocking:	Understocked		Fully Stocked	X	Overstocked		Patchy	X					
Density:	SW	3500	HW	15,000									
Advanced Regeneration:	Understocked	X	Fully Stocked		Overstocked		Patchy						
Regeneration:	1. Spp.	BF	Height	1.0 m	2. Spp.	BS	Height	1.0 m					
	3. Spp.	RM	Height	1.5 m	4. Spp.		Height						
GROUND OBSERVATIONS													
Ground Vegetation Species Present:				golden rod, aster, bog grasses, sheep laurel, bracken fern, cattails, woody shrubs									
Ground Hemlock				Y / N	X								
Invasive Species Present				Y / N	X	If yes then what species:							
Site Indicators				Y / N	X	If yes then what species:							
ENVIRONMENTAL OBSERVATIONS													
Water Course	X	Bog	X	Pond	N	Stream	N	Seeps	N	Beaver Present	N	Y / N	
Drainage:	Poor	X	Moderate		Good		Excellent		Erosion Control Required	N	Y / N		
Snag Trees:	Adequate	X	Inadequate										
Coarse Woody Material:	Adequate	X	Inadequate										
Dens	N	Nests (Raptors, songbirds, etc.)	N										
Wildlife Observed	None observed.												
Comments													
STAND PRESCRIPTION													
No Treatment				Regeneration Cut		Crop Tree Release		Block Cut					
Shelterwood Cut				Selection Cut		Patch Cut		Strip Cut					
Commercial Thinning				Afforestation		Site Preparation							
Pre-commercial Thinning				Reforestation		Riparian Zone Mgmt							
Pln. Main.	X	Y / N		Stems/Ha									
Comments:	This plantation is doing well for being on a wet site and requires a second plantation maintenance.												
	There are some wet spots that SW trees did not grow; however hardwood grew. They can be left as cover patches during a maintenance operation. Conduct the work as soon a possible.												

STAND TALLY SHEET													
CRUISER		S.Rankin		STAND #		10696		PLANTATION #		3925161			
PROPERTY #		36483		AREA		2.2 ha		Date		4 / 10 / 2022			
										D M Y			
SAMPLE TREE INFORMATION													
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT			
1	BS	10	14	10		4							
2						5							
3						6							
STAND INFORMATION													
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha	
Species and (%)	PO2	%	BS3	%	GB3	%	WP1	%	LA1BF				
Even-aged	X		Uneven-aged										
Slope	level	%	Aspect										
Stand Origin:	Old Field		Partial Cut		Burn		Unploughed						
	Windfall		Non Forest				Ploughed						
	Clear Cut		Unknown	X									
Stand Maturity Class:	Regeneration		Immature	X	Mature		Over-mature						
Stand Stocking:	Understocked	X	Fully Stocked		Overstocked		Patchy						
Density:	SW	1000	HW	1,800									
Advanced Regeneration:	Understocked	X	Fully Stocked		Overstocked		Patchy						
Regeneration:	1. Spp.	BF	Height	0.3 - 1.5m	2. Spp.		Height						
	3. Spp.	BF	Height	0.3 - 1.5m	4. Spp.		Height						
GROUND OBSERVATIONS													
Ground Vegetation Species Present:		wild raisin, bunch berry, sheep laurel, blueberry											
Ground Hemlock		Y / N	Y										
Invasive Species Present		Y / N	X		If yes then what species:								
Site Indicators		Y / N	X		If yes then what species:								
ENVIRONMENTAL OBSERVATIONS													
Water Course	X	Bog	N	Pond	N	Stream	N	Seeps	N	Beaver Present	N	Y / N	
Drainage:	Poor	X	Moderate		Good		Excellent		Erosion Control Required	N	Y / N		
Snag Trees:	Adequate	X	Inadequate										
Coarse Woody Material:	Adequate	X	Inadequate										
Dens	N	Nests (Raptors, songbirds, etc.)	N										
Wildlife Observed	None observed.												
Comments	There is a drainage outside the north stand boundary. Retain a 15 m buffer.												
STAND PRESCRIPTION													
No Treatment				Regeneration Cut		Crop Tree Release		Block Cut	X				
Shelterwood Cut				Selection Cut		Patch Cut		Strip Cut					
Commercial Thinning				Afforestation		Site Preparation	X						
Pre-commercial Thinning				Reforestation	X	Riparian Zone Mgmt							
Pln. Maint.	X	Y / N		Stems/Ha									
Comments:	This BS plantation has areas that are unsuccessful (competition from GB, RM, PO) and portions that are moderately successful. Block harvest the site while retaining healthy windfirm pockets of BS, LA and WP. Prepare microsites and plant BS and WP. Conduct a maintenance when required. There is a drainage area that runs through the stand. Pick a crossing spot for control of wood extraction.												

STAND TALLY SHEET														
CRUISER		S.Rankin			STAND #		10412, 10634			PLANTATION #				
PROPERTY #		36483			AREA		1.4 ha			Date		4 / 10 / 2022		
										D		M Y		
SAMPLE TREE INFORMATION														
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT				
1	PO	-	24	20		4								
2						5								
3						6								
STAND INFORMATION														
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha		
Species and (%)	PO3	%	RM2	%	BS2	%	BFLA1	%	ALWI2					
Even-aged	X		Uneven-aged											
Slope	level	%	Aspect											
Stand Origin:	Old Field		Partial Cut		Burn		Unploughed							
	Windfall		Non Forest				Ploughed							
	Clear Cut		Unknown	X										
Stand Maturity Class:	Regeneration		Immature		Mature	X	Over-mature							
Stand Stocking:	Understocked		Fully Stocked	X	Overstocked		Patchy							
Density:	SW	200	HW	1,000										
Advanced Regeneration:	Understocked	X	Fully Stocked		Overstocked		Patchy							
Regeneration:	1. Spp. BF		Height	0.3-4.0		2. Spp.		Height						
	3. Spp. RM3		Height	1.5		4. Spp.		Height						
GROUND OBSERVATIONS														
Ground Vegetation Species Present:														
Ground Hemlock Y / N X														
Invasive Species Present Y / N If yes then what species:														
Site Indicators Y / N If yes then what species:														
ENVIRONMENTAL OBSERVATIONS														
Water Course	X	Bog	X	Pond	X	Stream	Y	Seeps	N	Beaver Present	N	Y / N		
Drainage:	Poor	X	Moderate		Good		Excellent		Erosion Control Required	N	Y / N			
Snag Trees:	Adequate	X	Inadequate											
Coarse Woody Material:	Adequate	X	Inadequate											
Dens	N	Nests (Raptors, songbirds, etc.)	N											
Wildlife Observed	None observed													
Comments	Leave 15 m buffer along drainage/watercourse along the south boundary.													
STAND PRESCRIPTION														
No Treatment		X	Regeneration Cut		Crop Tree Release		Block Cut							
Shelterwood Cut			Selection Cut		Patch Cut		Strip Cut							
Commercial Thinning			Afforestation		Site Preparation									
Pre-commercial Thinning			Reforestation		Riparian Zone Mgmt									
Pln. Maint.	Y / N		Stems/Ha											
Comments:	This is HW dominant and a wet drainage area. This stand is not economical to harvest as it would be a long haul (900 m) to the north through wet lands and the drainage/stream and adjacent wet areas to the south prevent access. Leave as is.													

Appendix F. Plantation Map with Contour Lines



Appendix G. Work Completed

Activity Number	Treatment Code	Amount Completed	Treatment Date	Treatment Description
0	14	1.07	2/25/1991	Boundary Line Establishment
0	14	1.4	8/14/1991	Boundary Line Establishment
0	156	2.04	10/8/1991	Site Reclamation class 6-with product
0	156	3	1/17/1992	Site Reclamation class 6-with product
0	158	2.04	10/8/1991	Site Reclamation extraction 41-80m3/ha
0	158	3	1/17/1992	Site Reclamation extraction 41-80m3/ha
3925161	25B	2.04	9/16/1991	Chemical Broadcast
0	25B	3	9/14/1992	Chemical Broadcast
3925161	29	2.04	11/25/1991	Raking Crawler Tractor-Root Rake:per Ha
0	29	3	9/1/1992	Raking Crawler Tractor-Root Rake:per Ha
306002	29	3.5	7/25/2006	Raking Crawler Tractor-Root Rake:per Ha
	3W	1	1/4/2021	Water Diversion Structure
3925161	51W	2993	6/15/1992	BLACK SPRUCE - WESTERN
3935051	51W	4883	6/4/1993	BLACK SPRUCE - WESTERN
3070151	51W	8640	11/16/2007	BLACK SPRUCE - WESTERN
3925161	56W	1120	6/15/1992	WHITE PINE - WESTERN
3935051	56W	1712	6/4/1993	WHITE PINE - WESTERN
3925161	82B	2.04	10/4/1993	Herbicide:Broadcast : 1st Treatment
3935051	82B	3	10/7/1996	Herbicide:Broadcast : 1st Treatment
393505	88C	3.01	12/14/2010	Class 3: Manual: 10001-15000/Ha <6 Metres
	88C	1.6	4/15/2016	Class 3: Manual: 10001-15000/Ha <6 Metres