

Date: Feb 23rd, 2023

P.E.I. Public Forests



Woodlot Management Plan

Property Number: 615625

Location: Wellington Centre

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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 # 615625 is located on the Camp Tamawaby Road, in the community of Wellington Centre, P.E.I., (Appendix A). The total area of this property is 10.1 hectares (25 acres) and the midpoint of the property is Latitude N 46.51508 decimal degrees, Longitude W -64.04905 decimal degrees.

Past Information

Local records and previous aerial photography show approximately 65% of the property was in agriculture lands in 1935. Over time, the fields slowly reverted to forested land which were supported by two plantations as well. Currently, the entire property is forested. To better illustrate this 1935 and 1968 photography can be seen in Appendix B and Appendix C.

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 a small stream that starts in the southeast corner of the property and flows into the inlet to the east. The eastern boundary of the property borders Little Trout River which is a main tributary that flows southward into New London Bay. This observation can be viewed in Appendix A.

Watershed Group

This property falls in the Little Trout River watershed. Richmond Bay Watershed Inc. is the watershed group for this area.

Property Access

This property straddles the Camp Tamawaby Road with a portion falling to the east and a portion falling to the west. This road provides great access to the woodland. Any wood extraction on the property can occur by overland hauling. The existing road through the property can be seen on Appendix A

Property Boundaries

This property is bounded on the south, west and a portion of the north by private land. Public Land parcel 53280 also borders a portion of the north boundary. The east property line falls along the shore of the Little Trout River which is a main tributary to New London Bay.

Fire Protection

This property is located within the jurisdiction of the Wellington 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 Forests, Fish and

Wildlife Division and our local community fire brigades. In the Western District, there are four-wheel drive forestry fire trucks housed at 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. A stream that flows through the middle of the property would be a suitable site to setup a portable fire pump system.

Planting and Silviculture

There are two 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 ECOSYSTEM-BASED FOREST MANAGEMENT STANDARDS MANUAL ("Eco Manual"). A list of all silviculture treatments completed on the property from 1991 to present is shown in Appendix H.

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 ("Eco Manual")

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.

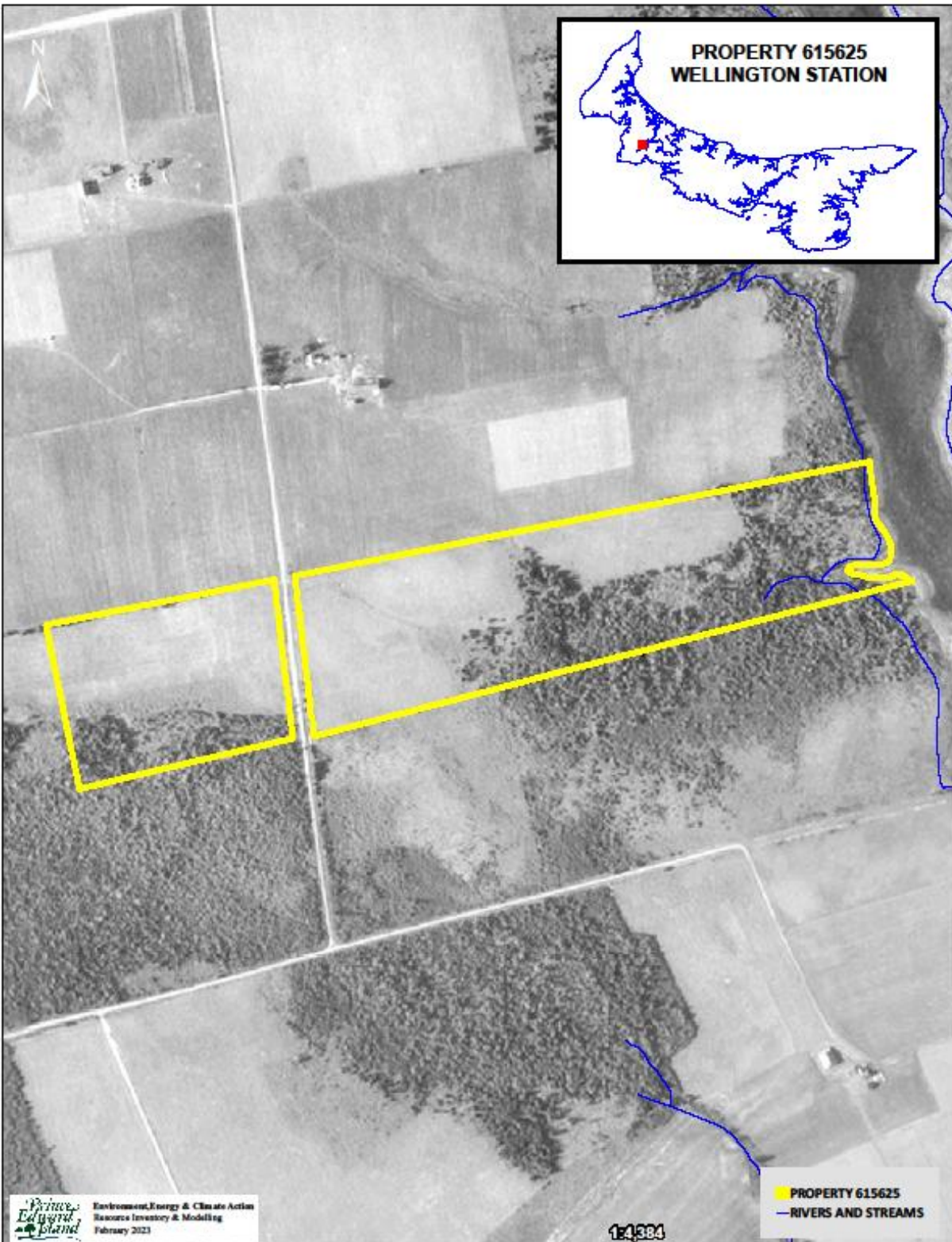
Table 1. Proposed Treatment Summary.

Stand Number and Plantation Number	Treatment Type	Treatment Year	Amount Proposed	2018 Eco-Manual Reference	Comments	Goals
48201 PN# 3130011	Manual Plantation Maintenance	2023	1.2	Pg 17	Eliminate undesirable competing vegetation	Improve growth of crop trees

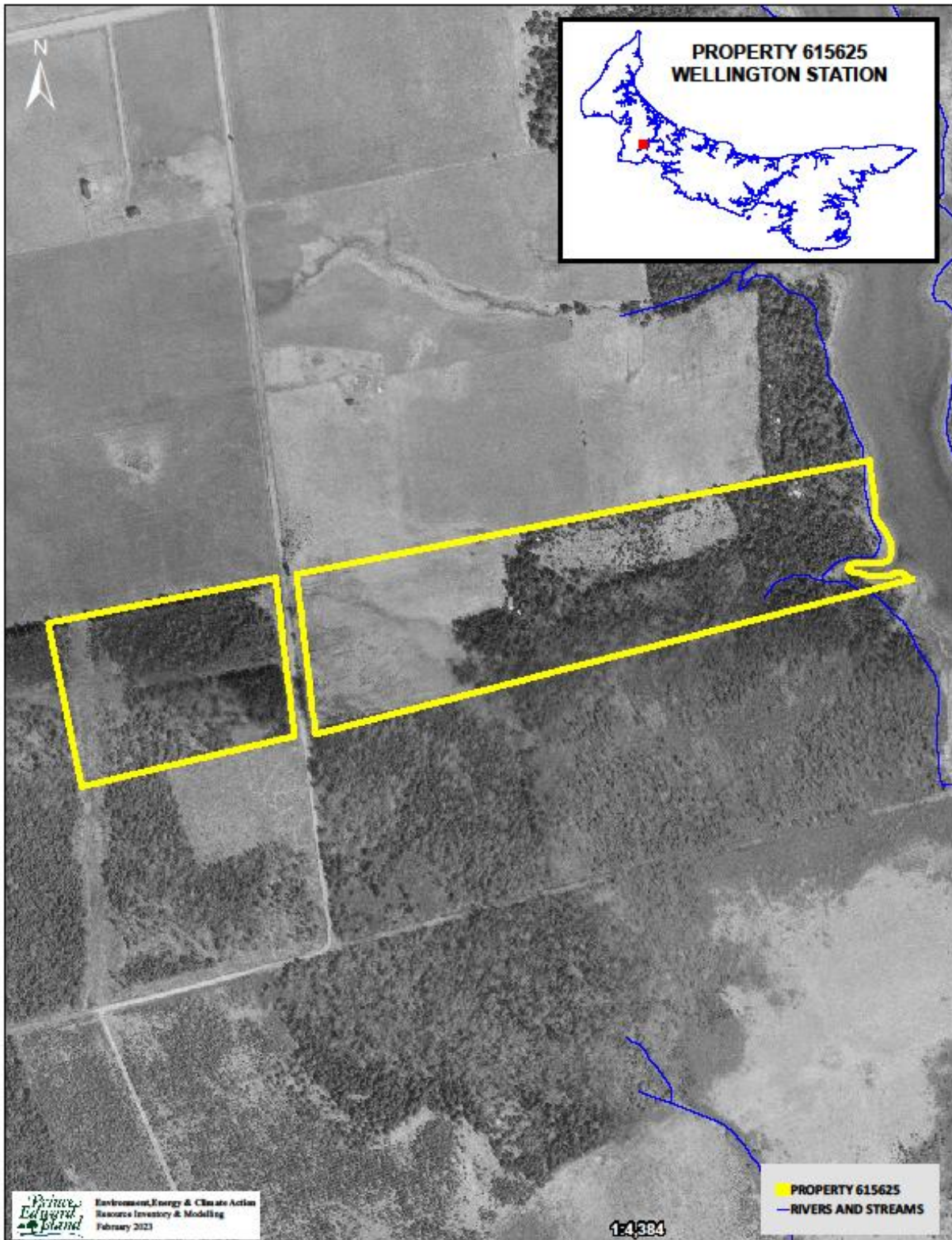
Appendices

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Appendix B. 1935 Aerial Photography



Appendix C. 1968 Aerial Photography



Appendix D. 2010 Corporate Land Use Inventory

FIELDID	COVER1	PER1	COVER2	PER2	COVER3	PER3	COVER4	PER4	COVER5	PER5	HEIGHT	HECTARES
048212	LA	3.0	WS	2.0	BF	2.0	RM	2.0	PO	1.0	18.0	0.1
048201	LA	5.0	BF	2.0	WB	1.0	WS	1.0	PO	1.0	19.0	1.2
048202	WS	3.0	RM	3.0	BF	2.0	PO	2.0		0.0	16.0	0.2
048248	RM	4.0	BF	2.0	WB	2.0	PO	1.0	WS	1.0	18.0	2.3
048689	BS	4.0	RM	2.0	WB	2.0	AL	2.0		0.0	3.0	3.1
048136	RM	4.0	WB	3.0	PO	2.0	BF	1.0		0.0	8.0	2.4
048230	RM	4.0	PO	2.0	BF	2.0	WA	1.0	YB	1.0	14.0	0.7
048061	RM	5.0	BF	2.0	WS	1.0	WA	1.0	WB	1.0	16.0	0.0
0481306	PO	3.0	BF	2.0	WB	2.0	RM	2.0	WS	1.0	8.0	0.2

Appendix E. 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 overlaid 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 F. Stand Tally Sheets from on the Ground Assessment

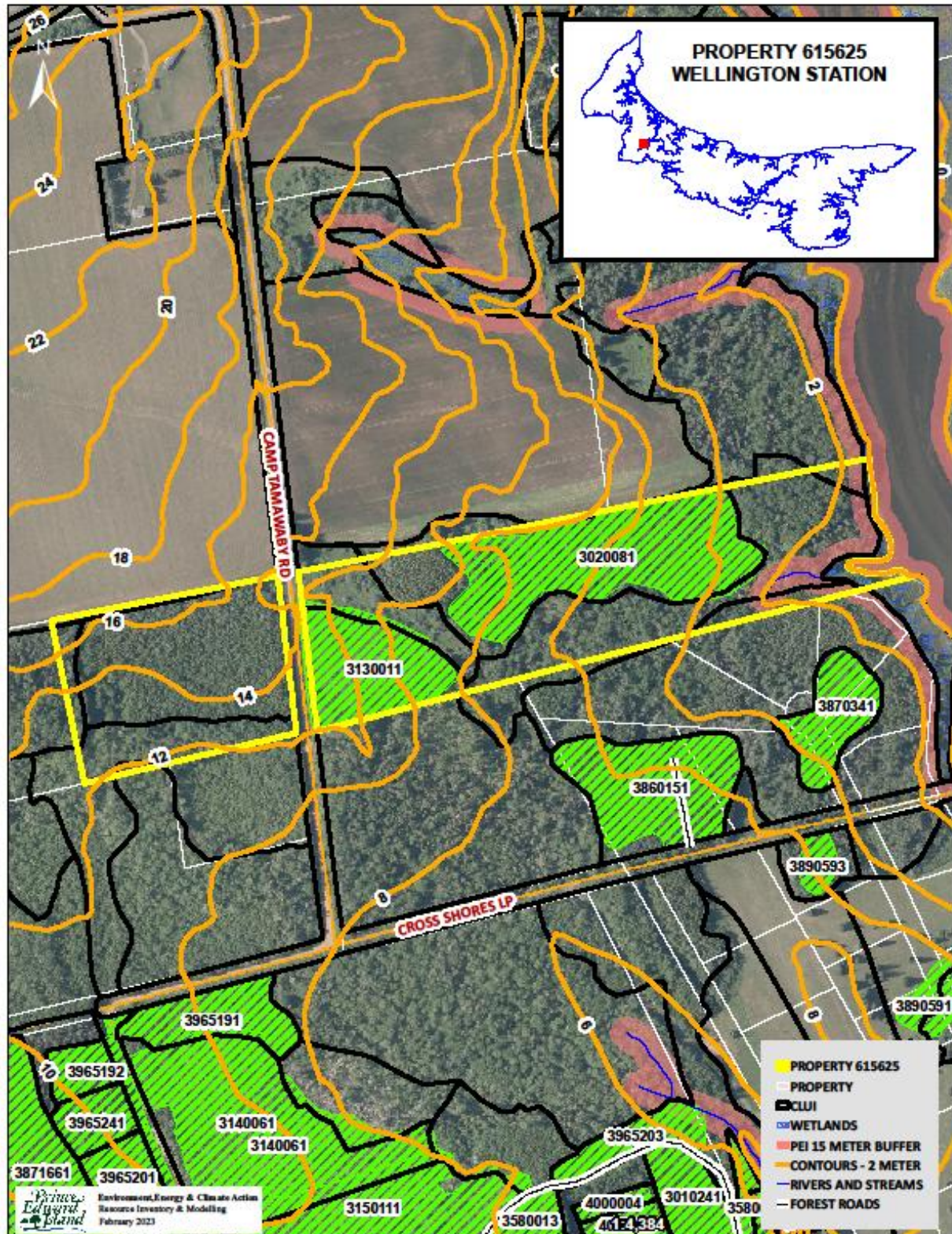
STAND TALLY SHEET														
CRUISER		J.LeClair			STAND #		48201			PLANTATION #		3130011		
PROPERTY #		615625			AREA		1.2 ha		Date		13 / 2 / 2023			
											D M Y			
SAMPLE TREE INFORMATION														
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT				
1	WS		2	2.3		4								
2	BF		2	2		5								
3	RM		1	3.5		6								
STAND INFORMATION														
Stand Basal Area		SW	M ² /Ha		SWSL	M ² /Ha		HW	M ² /Ha		HWSL	M ² /Ha		
Species and (%)		WS 6 %	BF 1 %	PO 1 %	RM 1 %	*WA 1 %								
Even-aged X		Uneven-aged												Biomass
Slope L		%	Aspect											
Stand Origin:		Old Field X		Partial Cut		Burn		Unploughed						
		Windfall		Non Forest				Ploughed X						
		Clear Cut X		Unknown										
Stand Maturity Class:		Regeneration X		Immature		Mature		Over-mature						
Stand Stocking:		Understocked		Fully Stocked		Overstocked X		Patchy						
Density:		SW	4,500	HW	16,700									
Advanced Regeneration:		Understocked		Fully Stocked		Overstocked X		Patchy						
Regeneration:		1. Spp. WS		Height 2 m		2. Spp. BF		Height 0.5 - 2 m						
		3. Spp. RM		Height 2-4 m		4. Spp.		Height						
GROUND OBSERVATIONS														
Ground Vegetation Species Present:		wild raisin, red-osier dogwood, golden rod, mountain ash, common elder (heavy shrub cover)												
Ground Hemlock		Y / N	X											
Invasive Species Present		Y / N	X	If yes then what species:										
Site Indicators		X	Y / N	If yes then what species: red-osier - wet site										
ENVIRONMENTAL OBSERVATIONS														
Water Course		Bog	Pond	Stream		Seeps	Beaver Present		Y / N					
Drainage:		Poor X	Moderate	Good	Excellent		Erosion Control Required		Y / N					
Snag Trees:		Adequate X	Inadequate											
Coarse Woody Material:		Adequate X	Inadequate											
Dens		Nests (Raptors, songbirds, etc.)												
Wildlife Observed		Snow shoe hare tracks.												
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. Maint.		X	Y / N	Stems/Ha										
Comments:		Spruce growing well in patches but some sections height growth is suppressed by hardwood species. Old snags from past harvest still onsite providing value to wildlife. Competition from shrubs looks aggressive. Save WA during maintenance operation in 2023 (could flag quality hardwoods).												

STAND TALLY SHEET															
CRUISER		J. LeClair			STAND #		48230		PLANTATION #						
PROPERTY #		615625			AREA		ha		Date		13 / 2 / 2023				
											D M Y				
SAMPLE TREE INFORMATION															
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT					
1	WA	80+	24	18		4									
2	WS	80+	45	20		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 (%)		WA3		%		RM3		%		WB2		%		BF/WS 2%	
Even-aged X		Uneven-aged										Biomass			
Slope		%		Aspect		L									
Stand Origin:		Old Field X		Partial Cut		Burn		Unploughed X							
		Windfall		Non Forest				Ploughed							
		Clear Cut X		Unknown											
Stand Maturity Class:		Regeneration		Immature		Mature X		Over-mature							
Stand Stocking:		Understocked X		Fully Stocked		Overstocked		Patchy							
Density:		SW 200		HW 1,000											
Advanced Regeneration:		Understocked X		Fully Stocked		Overstocked		Patchy		X					
Regeneration:		1. Spp. BF		Height 1m		2. Spp. WS		Height 0.3 m							
		3. Spp. PO		Height 5 m		4. Spp. RM		Height 4 m							
GROUND OBSERVATIONS															
Ground Vegetation Species Present:		beaked hazelnut, red-osier dogwood, sensitive fern													
Ground Hemlock		Y / N		X											
Invasive Species Present		Y / N		X		If yes then what species:									
Site Indicators		X		Y / N		If yes then what species: red-osier, sensitive fern - wet site									
ENVIRONMENTAL OBSERVATIONS															
Water Course		Bog		Pond		Stream		Seeps		Beaver Present		Y / N			
Drainage:		Poor X		Moderate		Good		Excellent		Erosion Control Required		Y / N			
Snag Trees:		Adequate X		Inadequate											
Coarse Woody Material:		Adequate X		Inadequate											
Dens		Nests (Raptors, songbirds, etc.)													
Wildlife Observed		wood pecker holes in old snags													
Comments		soft wet soils													
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:		Old hardwoods with patchy advanced regeneration of younger hardwoods, spruce and fir in the understory. No treatment at this time.													

STAND TALLY SHEET															
CRUISER		J. LeClair			STAND #		48136		PLANTATION #						
PROPERTY #		615625			AREA		2.4 ha		Date		13 / 2 / 2023				
									D		M		Y		
SAMPLE TREE INFORMATION															
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT					
1	RM	34	13	11		4									
2	WB	34	16	11		5									
3						6									
STAND INFORMATION															
Stand Basal Area		SW		M ² /Ha		SWSL		M ² /Ha		HW		M ² /Ha		HWSL	
Species and (%)		RM2		%		PO2		%		WB2		%		BF1	
Even-aged X		Uneven-aged										Biomass			
Slope L		%		Aspect W											
Stand Origin:		Old Field X		Partial Cut		Burn		Unploughed							
		Windfall		Non Forest				Ploughed X							
		Clear Cut X		Unknown											
Stand Maturity Class:		Regeneration		Immature X		Mature		Over-mature							
Stand Stocking:		Understocked		Fully Stocked X		Overstocked		Patchy							
Density:		SW 800		HW 2,400											
Advanced Regeneration:		Understocked		Fully Stocked		Overstocked		Patchy		X					
Regeneration:		1. Spp. BF		Height 2-5 m		2. Spp. BS		Height 1 m							
		3. Spp. RM		Height 4 m		4. Spp.		Height							
GROUND OBSERVATIONS															
Ground Vegetation Species Present:		beaked hazelnut, sensitive fern, snowberry													
Ground Hemlock		Y / N		X											
Invasive Species Present		Y / N		X		If yes then what species:									
Site Indicators		X		Y / N		If yes then what species: sensitive fern wet									
ENVIRONMENTAL OBSERVATIONS															
Water Course		Bog		Pond		Stream		Seeps		Beaver Present		Y / N			
Drainage:		Poor		Moderate		X		Good		Excellent		Erosion Control Required		Y / N	
Snag Trees:		Adequate		X		Inadequate									
Coarse Woody Material:		Adequate		Inadequate		X									
Dens		Nests (Raptors, songbirds, etc.)													
Wildlife Observed		Snow shoe hare tracks.													
Comments		Dead standing poplar in stand.													
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 hardwood stand with some BF in the second story and understory in some patches. No treatment recommended at this time.													

STAND TALLY SHEET														
CRUISER	D. Gavin (L. Stevenson)				STAND #	48689		PLANTATION #	3020081					
PROPERTY #	615625				AREA	ha		Date	15 /	6 /	2022			
									D	M	Y			
SAMPLE TREE INFORMATION														
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT				
1	BS	20	14	7		4								
2	GB	20	10	6		5								
3	PO	20	24	14		6								
STAND INFORMATION														
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha		
Species and (%)	BS40	%	GB50	%		%	RM,EM,Willow							
Even-aged	X	Uneven-aged								Biomass				
Slope	%	Aspect		L										
Stand Origin:	Old Field		X	Partial Cut			Burn			Unploughed		strip S		
	Windfall			Non Forest						Ploughed		X		
	Clear Cut		X	Unknown										
Stand Maturity Class:	Regeneration			Immature		X	Mature			Over-mature				
Stand Stocking:	Understocked			Fully Stocked		X	Overstocked			Patchy				
Density:	SW	1,750	HW	1,750										
Advanced Regeneration:	Understocked			Fully Stocked			Overstocked			Patchy				
Regeneration:	1. Spp. GB		Height		0.3-3		2. Spp. RM		Height		0.52			
	3. Spp. YB		Height		2		4. Spp.		Height					
GROUND OBSERVATIONS														
Ground Vegetation Species Present:	laurel, wild rose, blueberry, fern, pincherry, red-osier dogwood													
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	Bog		Pond		Stream		Seeps		Beaver Present	Y / N				
Drainage:	Poor	X	Moderate		Good		Excellent		Erosion Control Required	Y / N				
Snag Trees:	Adequate	X	Inadequate											
Coarse Woody Material:	Adequate	X	Inadequate											
Dens	Nests (Raptors, songbirds, etc.)													
Wildlife Observed	raccoon track, bald eagle overhead, songbirds													
Comments	good wildlife habitat values													
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:	Access to this stand is difficult. Stand can be left to develop naturally so it can contribute to wildlife habitat as it is adjacent to a wildlife management area on the adjacent property.													

Appendix G. Plantation Map with Contour Lines



Appendix H. Work Completed

Activity Number	Treatment Code	Amount Completed	Treatment Date	Treatment Description
3020081	29	2.39	1/10/2002	Raking Crawler Tractor-Root Rake:per Ha
3130011	30B	2912	6/19/2013	Manual Site Preparation per Site (Hawk)
3020081	51W	678	6/3/2002	BLACK SPRUCE - WESTERN
3020081	51W	6678	6/3/2002	BLACK SPRUCE - WESTERN
3130011	55W	2912	6/19/2013	WHITE SPRUCE - WESTERN
3020081	83C	1.22	5/17/2012	Class 3Manual Pn Cleaning:10001-15000/Ha >6 meters
3130011	88E	1.2	12/17/2019	Class 5 : Manual : 20001- 25000/Ha <6 Metres
3120564	92	1.08	10/1/2012	Clearcut Block
3020081	92	2.39	1/7/2002	Clearcut Block
	95	200	11/15/2017	Special Projects