Date: January 26, 2022

P.E.I.

Public Forests

Woodlot Management Plan

Property Number: 28261

Location: McNeills Mills

Table of Contents

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 #28261 is located on the McNeills Mills Road, Route #134, in the community of McNeills Mills, P.E.I., (Appendix A). The total area of this property is 11.52 hectares (28.8 acres) and the midpoint of the property is Latitude N 46.63162 decimal degrees, Longitude W -63.98727 decimal degrees.

Past Information

Local records and previous aerial photography show that the property was predominately agriculture fields and was subsequently used as a car track. Since being abandoned, the site has partially been reclaimed to forests with the remainder reverting to heavy alder. 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).

There is evidence of habitation (old camper trailer) near the south west corner of the property. It appears that this straddles the private land right-of-way that borders the west boundary and this

public land parcel. This is to be investigated further during the summer when it would most likely be occupied.

Wetland and Watercourses

There is one wetland located in the northeast portion of the property. A 15 m riparian buffer is to be applied to the wetland should any activity occur in this vicinity. This observation can be viewed in Appendix A.

Property Access

The property can be accessed from the McNeills Mills Road. An old abandoned road is still present which can be used with some minor vegetation (alder) removal. The south part of the old track is also useable as access for harvest operations and stockpiling and hauling wood.

Property Boundaries

This property is bounded on the south by the McNeills Mills Road. and east, west and north by private land.

Fire Protection

This property is located within the jurisdiction of the Tyne Valley 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 is a 900 gallon (gal) four-wheel drive forestry fire truck 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.

Planting and Silviculture

There are no 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

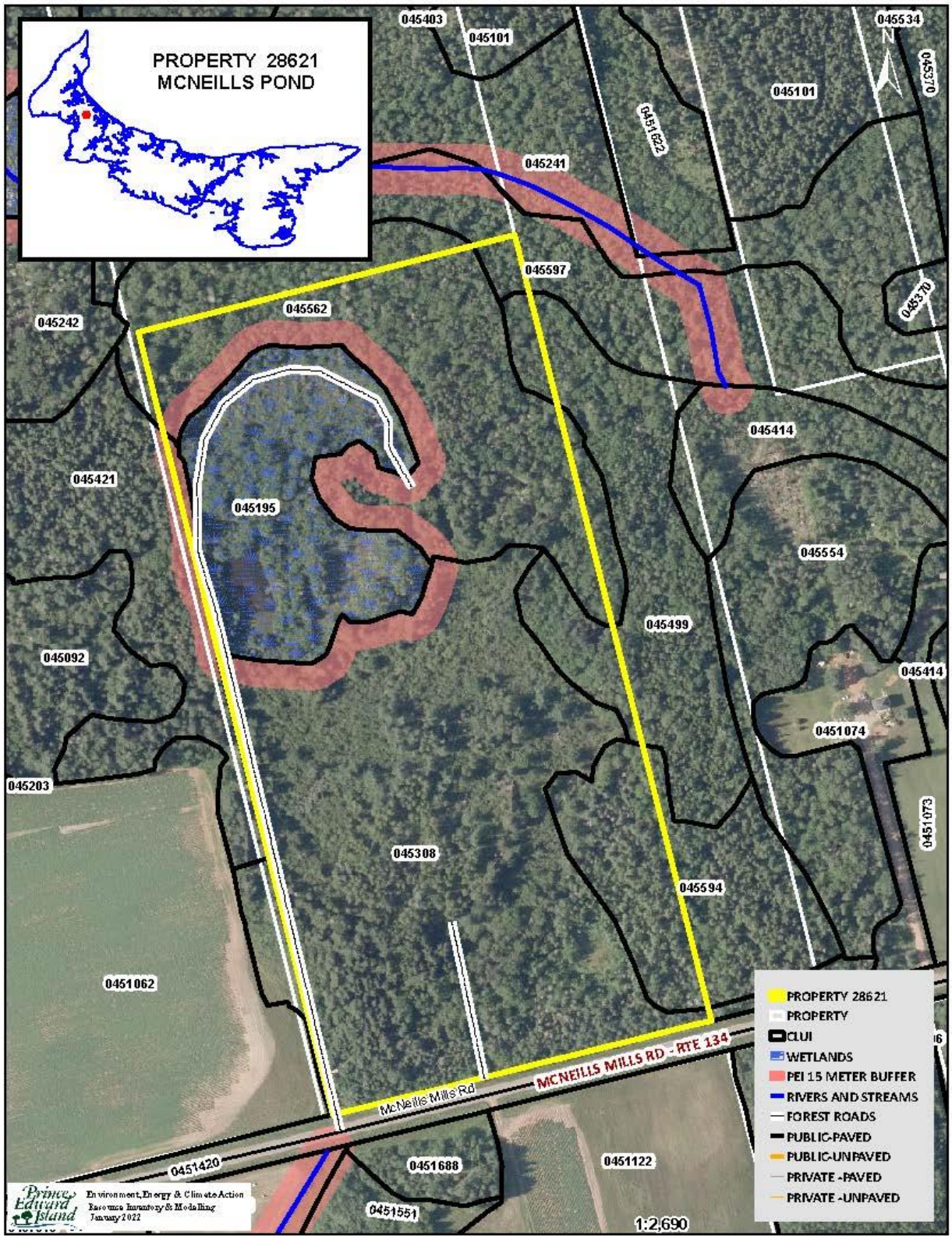
The 2006 Forest Policy "Moving to Restore a Balance in Island Forests" lays out the framework for Public Land Forest management. The Eco-Manual provides details for prescribed treatments. All work completed on this property must comply with that manual. Although all stands were assessed, only specific 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.

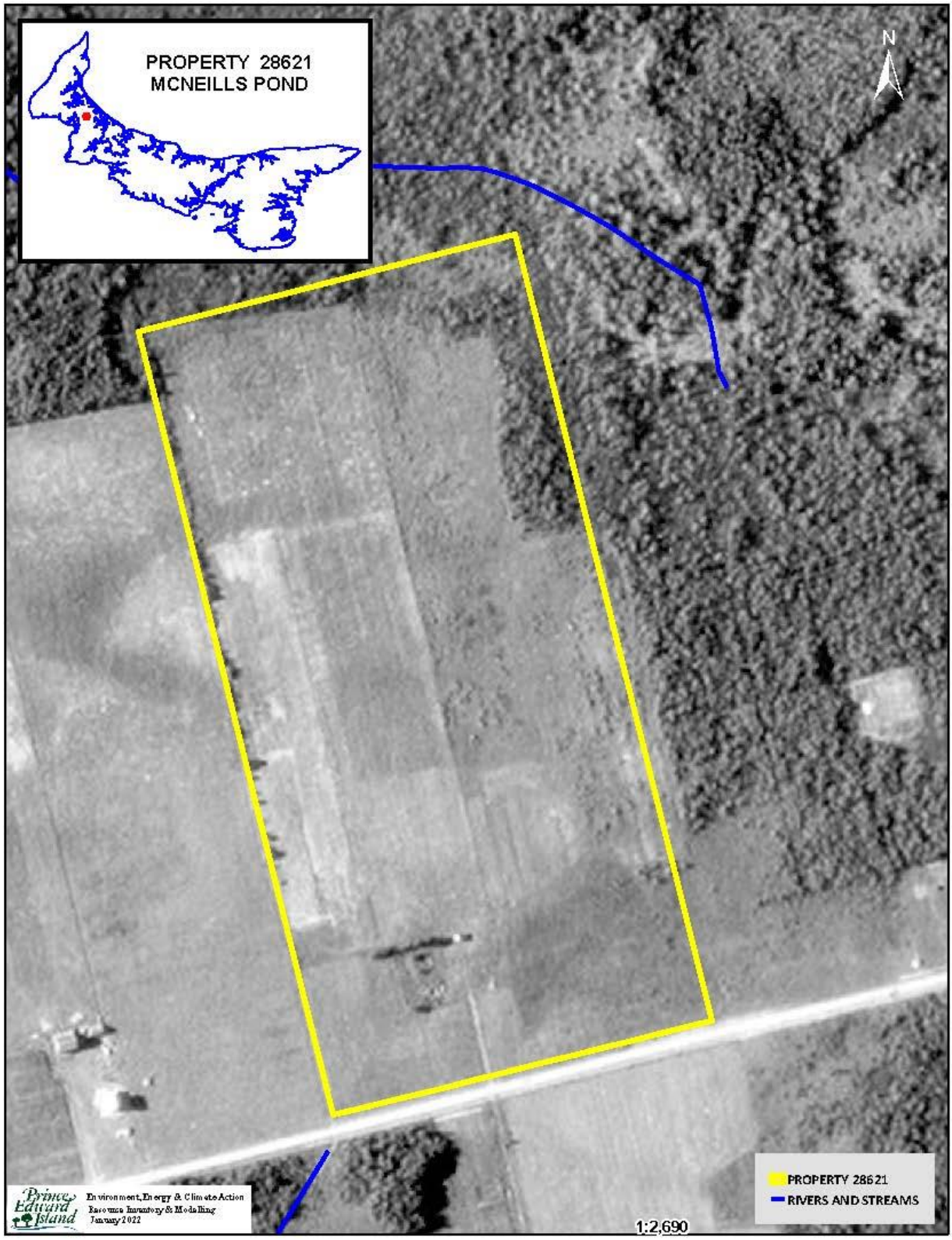
Stand Number and Plantation Number	Treatment Type	Treatment Year	Amount Proposed	2018 Eco-Manual Reference	Comments	Goals
Road	Road Maintenance	2022	200 m	Pg 12	Brush cutting on road and part of old racetrack. This access can be used as a landing area as well by cutting a few adjacent trees.	Provide useable access
45308 45594	Patch Harvest	2022	0.7 ha	Pg 29	Salvage SW and some PO. Retain any RM.	Salvage mature softwood
45562 45499	Selective Harvest	2022	0.3 ha	Pg 31	Salvage SW and some PO. Retain all other HW. Low volume of SW wood present.	Salvage mature softwood and some poplar. Diversify tree species.
45308 45594	Manual Site Preparation and Reforestation	2023	0.7 ha	Pg 14, 16	Create plantable spots and plant species suited to the site.	Reforest the harvest area and diversify tree species
45562 45499	Manual Site Preparation and Reforestation	2023	0.3 ha	Pg 14, 16	Create plantable spots and plant species suited to the site.	Reforest the harvest area and diversify tree species
45308 45499	Manual Plantation Maintenance	2026	0.7 ha	Pg 17	Eliminate undesirable competing vegetation	Improve growth of crop trees

Appendices

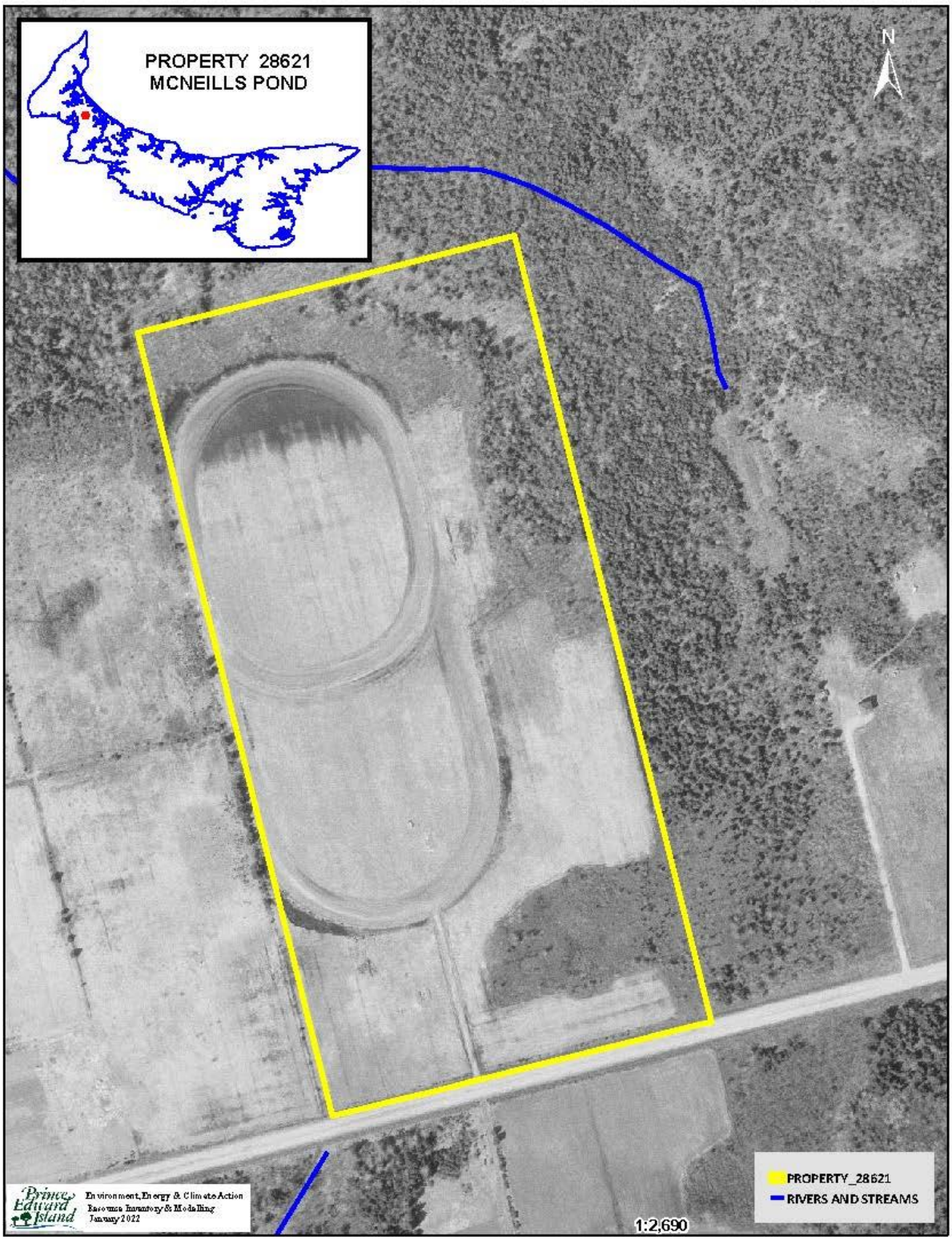
Appendix A. Map of Property with Locator Map



Appendix B. 1935 Aerial Photography



Appendix C. 1968 Aerial Photography



Appendix D. 2010 Corporate Land Use Inventory

ID	COV1	PER1	COV2	PER2	COV	PER3	COV4	PER4	COV5	PER5	HT(m)	HA
045421	LA	5.00	WS	2.00	PO	1.00	BF	1.00	DT	1.00	15.00	0.06
045594	WS	4.00	LA	2.00	BF	2.00	PO	1.00	DT	1.00	14.00	0.76
045195	AL	8.00	RM	2.00		0.00		0.00		0.00	4.00	1.91
045597	RM	4.00	WS	2.00	BF	2.00	WB	1.00	PO	1.00	11.00	0.08
045562	PO	3.00	WS	3.00	RM	2.00	LA	1.00	WB	1.00	16.00	2.47
045499	RM	3.00	PO	3.00	WS	2.00	WB	1.00	BF	1.00	12.00	0.45
045308	AL	6.00	PO	2.00	LA	1.00	RM	1.00		0.00	4.00	5.49

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		**CROWN CLOSURE**	
0	1 - 9%	**A**	91 % - 100%
1	10 – 19%	**B**	81 % - 90 %
2	20 – 29 %	**C**	71 % - 80 %
3	30 – 39 %	**D**	61 % - 70 %
4	40 – 49 %	**E**	51 % - 60 %
5	50 – 59 %	**F**	41 % - 50 %
6	60 – 69 %	**G**	31 % - 40 %
7	70 – 79 %	**H**	21 % - 30 %
8	80 – 89 %	**I**	11 % - 20 %
9	90 – 100 %	**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 Maple40%
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 over lay 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: S. Rankin | STAND #: 45308 | PLANTATION #:

PROPERTY #: 28621 | AREA: 5.8 ha | Date: 20 / 1 / 2022 (D / M / Y)

SAMPLE TREE INFORMATION

TREE #	SPP.	AGE	D.B.H.	HEIGHT	TREE #	SPP.	AGE	D.B.H.	HEIGHT
1	WS	53	18	13	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 (%): AL6 % PO2 % RM1 % WS/BF1 % LA

Even-aged: X | Uneven-aged: ____ | Biomass: ____

Slope: level % | Aspect: ____

Stand Origin: Old Field: X | Partial Cut: ____ | Burn: ____ | Unploughed: ____
Windfall: ____ | Non Forest: ____ | Ploughed: ____
Clear Cut: ____ | Unknown: ____

Stand Maturity Class: Regeneration: ____ | Immature: X | Mature: X | Over-mature: ____

Stand Stocking: Understocked: X | Fully Stocked: ____ | Overstocked: ____ | Patchy: ____

Density: SW 100 | HW 600

Advanced Regeneration: Understocked: X | Fully Stocked: ____ | Overstocked: ____ | Patchy: ____

Regeneration: 1. Spp. BF | Height 0.1-1.5m | 2. Spp. ____ | Height ____
3. Spp. ____ | Height ____ | 4. Spp. ____ | Height ____

GROUND OBSERVATIONS

Ground Vegetation Species Present: under snow

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: N | Bog: N | Pond: Y | Stream: N | Seeps: N | 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: ____ | Inadequate: X

Dens: N | Nests (Raptors, songbirds, etc.): N

Wildlife Observed: none observed

Comments: Apply a 15m riparian area to the wetland

STAND PRESCRIPTION

No Treatment		Regeneration Cut		Crop Tree Release		Block Cut	
Shelterwood Cut		Selection Cut		Patch Cut	X	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 is an old field site with altered drainage patterns from construction of an old track in the 1960's. There is some WS/BF that is maturing in south part of stand that could be harvested. Retain the HW. Plant WS. Water pools in the alder area in the north part of the stand. No work is recommended to convert the alder area to forest due to drainage patterns and economics.

STAND TALLY SHEET

CRUISER	S. Rankin	STAND #	45562 & 45499	PLANTATION #			
PROPERTY #	28621	AREA	2.9 ha	Date	20 / D	1 / M	2022 / Y

SAMPLE TREE INFORMATION

TREE #	SPP.	AGE	D.B.H.	HEIGHT	TREE #	SPP.	AGE	D.B.H.	HEIGHT
1	BF	50	20	15	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	%	WS2	%	RM3	%	BF1	%	AL1						
Even-aged	X	Uneven-aged								Biomass					
Slope	level	%	Aspect												
Stand Origin:	Old Field	X	Partial Cut		Burn		Unploughed								
	Windfall		Non Forest				Ploughed								
	Clear Cut		Unknown												
Stand Maturity Class:	Regeneration		Immature	X	Mature	X	Over-mature								
Stand Stocking:	Understocked		Fully Stocked	X	Overstocked		Patchy								
Density:	SW	600	HW	800											
Advanced Regeneration:	Understocked	X	Fully Stocked		Overstocked		Patchy								
Regeneration:	1. Spp.	BF	Height	0.2-2.0m	2. Spp.		Height								
	3. Spp.		Height		4. Spp.		Height								

GROUND OBSERVATIONS

Ground Vegetation Species Present: under snow

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	Y	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	Apply a 15m buffer to the wetland														

STAND PRESCRIPTION

No Treatment		Regeneration Cut		Crop Tree Release		Block Cut	
Shelterwood Cut		Selection Cut	X	Patch Cut		Strip Cut	
Commercial Thinning		Afforestation		Site Preparation			
Pre-commercial Thinning		Reforestation	X	Riparian Zone Mgmt			

Pln. Maint. ___ Y / N ___ Stems/Ha ___

Comments: This site is wetter in the north central part of stand and drier along the south east and north west. There is a low volume of SW here which makes operations not economical. However, the softwood can be salvaged if economics warrant. Salvage some of the PO as well. Wood can be hauled under frozen ground conditions. Interplant with BS and WA to diversify tree species.

STAND TALLY SHEET

CRUISER	S. Rankin		STAND #	45594		PLANTATION #			
PROPERTY #	28621		AREA	0.7	ha	Date	20 / D	1 / M	2022 / Y

SAMPLE TREE INFORMATION

TREE #	SPP.	AGE	D.B.H.	HEIGHT	TREE #	SPP.	AGE	D.B.H.	HEIGHT
1	WS	50	22	15	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 (%)	WSBS 7	%	BF1	%	LA1	%	PO1	%	RM						
Even-aged	X	Uneven-aged								Biomass					
Slope	level	%	Aspect												
Stand Origin:	Old Field	X	Partial Cut		Burn		Unploughed								
	Windfall		Non Forest				Ploughed								
	Clear Cut		Unknown												
Stand Maturity Class:	Regeneration		Immature	X	Mature	X	Over-mature								
Stand Stocking:	Understocked		Fully Stocked	X	Overstocked		Patchy								
Density:	SW	1,600	HW	100											
Advanced Regeneration:	Understocked	X	Fully Stocked		Overstocked		Patchy								
Regeneration:	1. Spp.	BF1	Height	0.2-1.0m	2. Spp.		Height								
	3. Spp.		Height		4. Spp.		Height								

GROUND OBSERVATIONS

Ground Vegetation Species Present: under snow

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

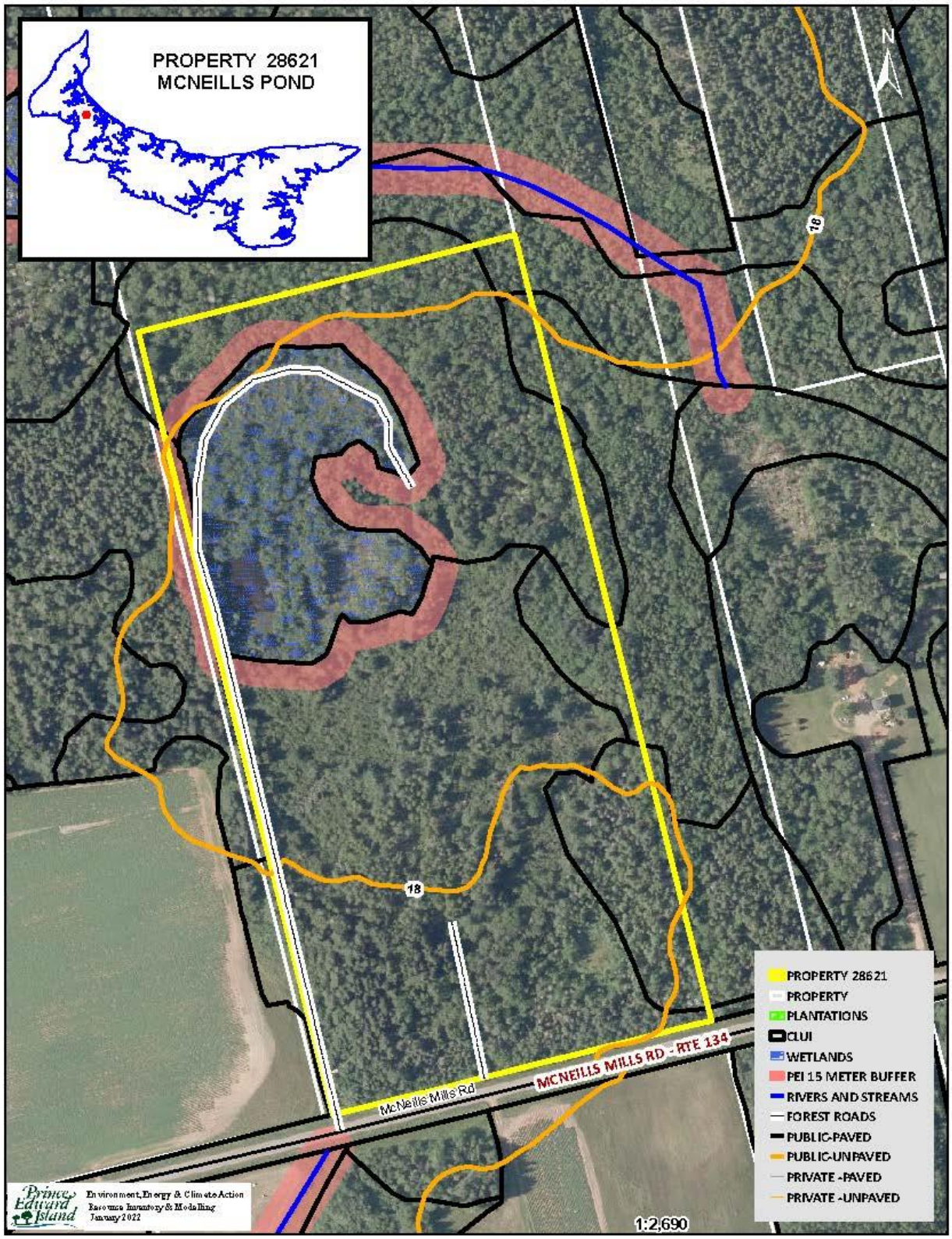
Water Course	N	Bog	N	Pond	N	Stream	N	Seeps	N	Beaver Present	N	Y / N			
Drainage:	Poor	X	Moderate		Good		Excellent		Erosion Control Required	N	Y / N				
Snag Trees:	Adequate	X	Inadequate												
Coarse Woody Material:	Adequate	X	Inadequate												
Dens	N	Nests (Raptors, songbirds, etc.)	N												
Wildlife Observed	none observed														
Comments															

STAND PRESCRIPTION

No Treatment		Regeneration Cut		Crop Tree Release		Block Cut	
Shelterwood Cut		Selection Cut		Patch Cut	X	Strip Cut	
Commercial Thinning		Afforestation	X	Site Preparation			
Pre-commercial Thinning		Reforestation	X	Riparian Zone Mgmt			
Pln. Maint.	X	Y / N		Stems/Ha			

Comments: This site is wet to the south and drier to the north. Younger SW are present in the north of the stand (6-8m ht) which does not warrant any work at this time. A small patch can be salvaged in the central part of the stand. It is beginning to decline. Plant BS and WA to diversify the site's tree species.

Appendix G: Plantation Map with Contours



Appendix H. Work Completed

There has not been any work completed on this property.