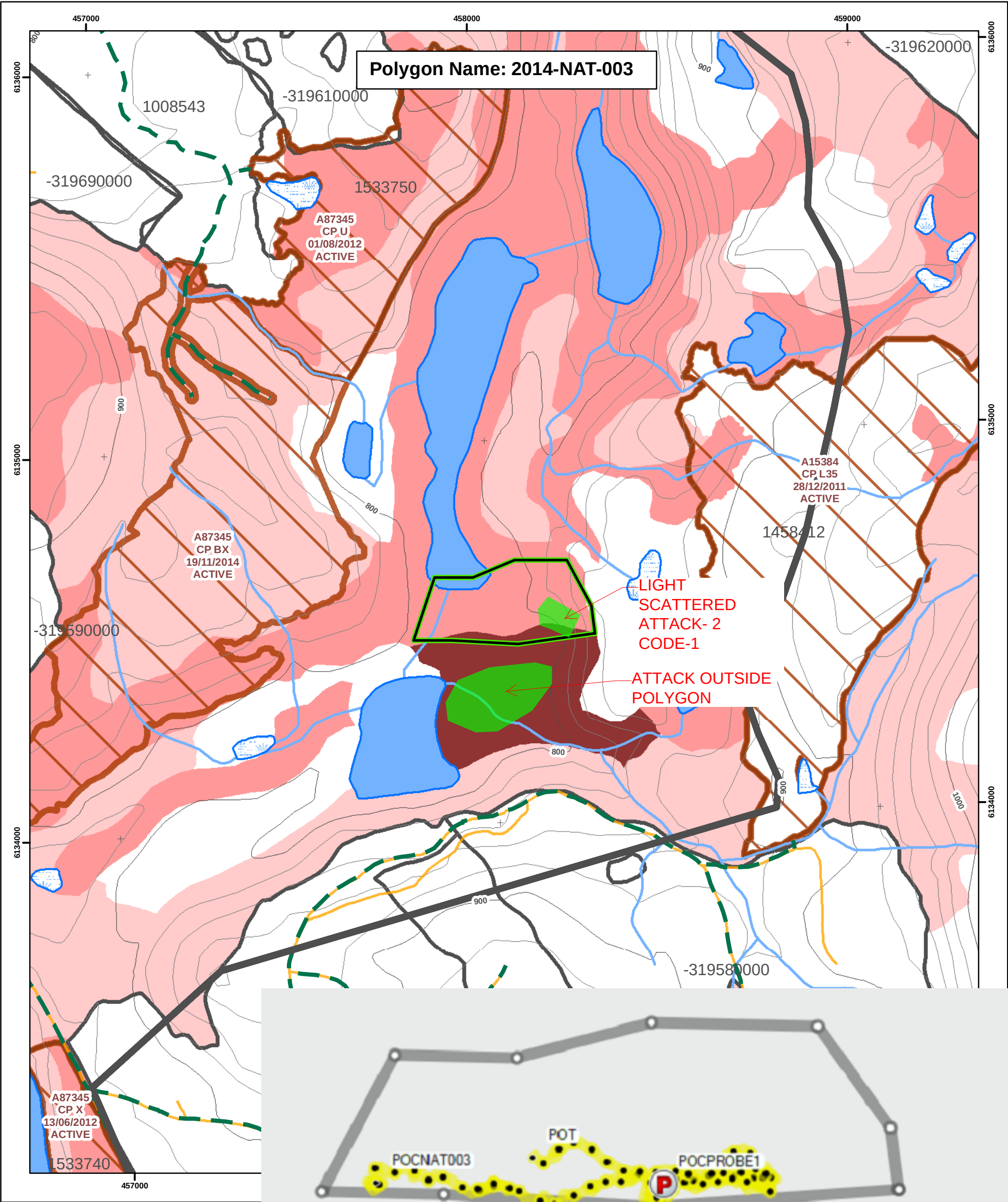




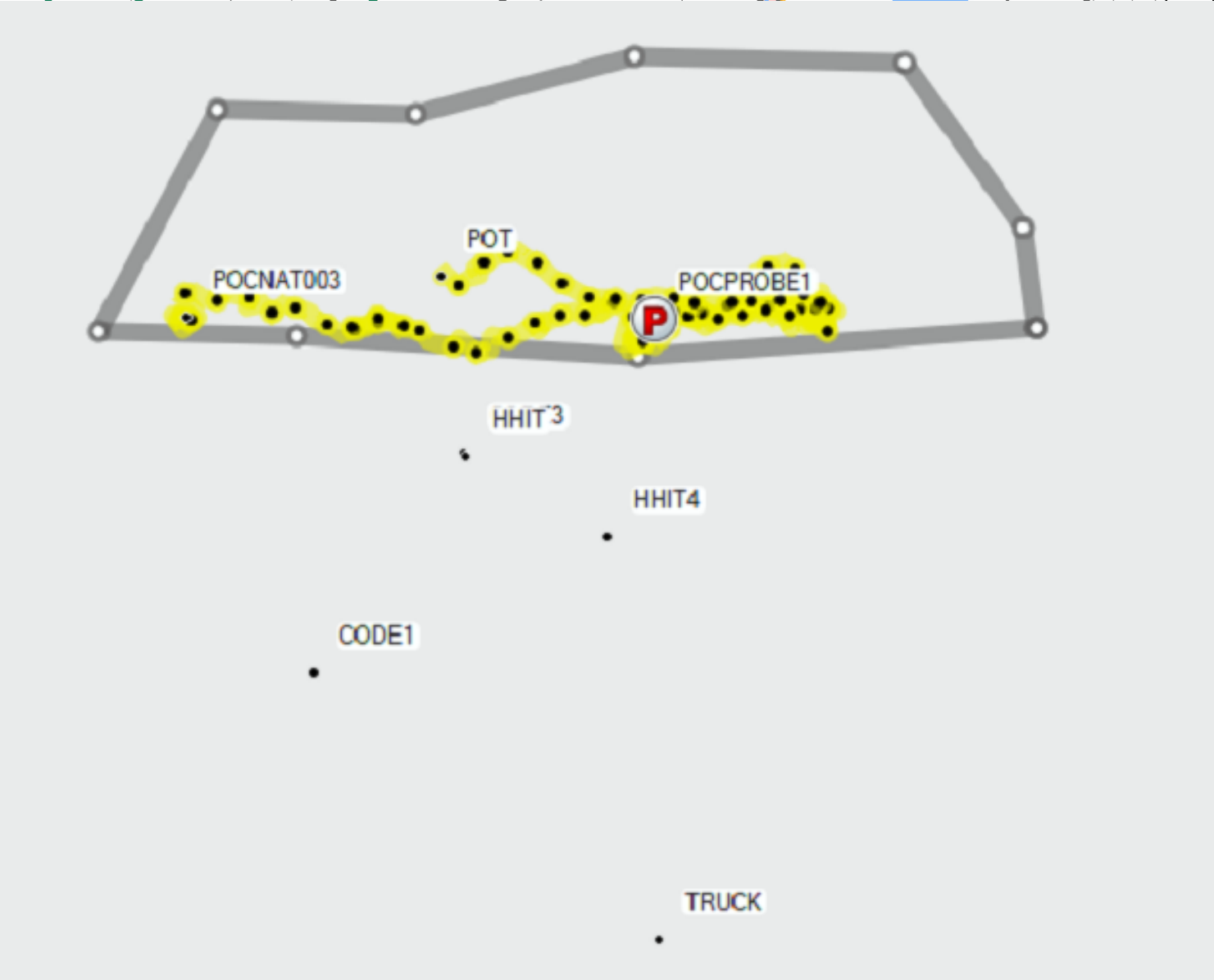


Ministry of
Forests, Lands and
Natural Resource Operations

Spruce Bark Beetle Field Map

Polygon Name: 2014-NAT-003

Landscape Unit/BMU:	Nation
Region:	Omineca
District:	Mackenzie
Mapsheet:	093O05
Hectares:	8.04
Scale:	1:10,000
When plotted on 11x17	
Coordinate System:	PCS Albers
Datum:	North American 1983
Date Drawn:	03/06/2015
Drawn By:	msnively



**SENECA ENTERPRISES LTD.**

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Phone: (250) 561-0890, Fax: (250) 564-3275

**SPRUCE BARK BEETLE REPORT
FH16DMK010**

POLYGON: NAT-003

HECTARES:

8.04

WALKTHROUGH DISTANCE:

450

ESTIMATED INFESTED PIXELS FROM
WALKTHROUGH (Code 1-4)

1 22.2%

SUMMARY OF CURRENT INFESTATION

On walkthrough, noticed moderate to heavy attack more to the south of the Polygon. Within Polygon, noticed one area with 2 Code 1-trees, on a 1 and two year cycle within the same tree. High Sanitation rating based on one probe line and not reflective of entire polygon.

VERY LIGHT ATTACK- MONITOR

ACCESS

From Truck, walk north 350m through standing timber,

POLYGON FEATURES (Topography, Terrain, Timber Types, Age)

Gentle slope from west to east, with steeper portions in the east. Drainage on west side of polygon.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Small polygon 8 hectares, light scattered attack found in one area in the eastern part of Polygon (1-Code1) On walkthrough to Polygon, noticed moderate attack to the south of polygon.

INCIDENCE AND SEVERITY OF ATTACK

One probe line established with 2 Code 1-s, Sample tree was on a 1 and 2 year cycle. The hit sample tree has a high attack density however very patchy light scattered attack within Polygon,. Moderate attack to the south of polygon

RISK OF BEETLE SPREAD

Polygon surrounded by water and could move north and within polygon.. Already moderate attack south of Polygon.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Creek to be crossed to enter polygon from the south, are some slopes in the attacked areas of polygon and a drainage to the west

RECOMMENDATIONS**OPTION 1****MONITOR**

Sanitation and Salvage Rating is heavy in one area where found 2 attacked trees to the East. Attack is light and concentrated within Polygon to the west

OPTION 2**PROBE SOUTH OF POLYGON,**

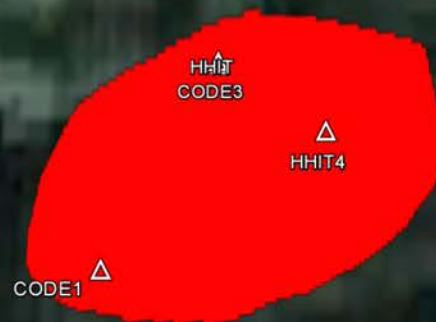
Schedule Probe/ detailed Walkthrough south of Polygon and incorporate the attacked area to the west with the Polygon. Has access issues with Drainages, slopes etc.

2014-NAT-003

SPRUCE BEETLE WALKTHROUGH

Legend

-  MODERATE ATTACK
-  POLYGON OUTLINE
-  PROBE1



TRUCK 

Summary						
NAT-003	HEC	8.04	METERS WALKED	450	% TRAVERSED	5.6%
PIXELS COVERED BY WALKTHROUGH	4.5	INFESTED PIXELS	1	ESTIMATED % OF BLOCK INFESTED (From Walk through)		22.2%

TABLE 5- Spruce Beetle Infestation Summary Sheet

OF NOTE- Results taken from a 100m Probe Line established at 1 per 50 hectares to represent

DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES
			2015		2014		2013		
			1	2	3	4	5	6	
17.5-25.0	3.3	19.8	0.0	0.0	0.0	0.0	0.0	0.0	16.5
25.1-30.0	5.3	10.6	0.0	0.0	0.0	0.0	0.0	0.0	10.6
30.1-35.0	7.1	14.2	7.1	0.0	0.0	0.0	0.0	0.0	0
35.1-40.0	9.4	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0
40.1-45.0	11.6	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0
45.1-50.0	13.8	69	0.0	0.0	0.0	0.0	0.0	0.0	0
50.1-55.0	16.2	0	0.0	0.0	0.0	0.0	0.0	0.0	0
55.1-60.0	18.7	0	0.0	0.0	0.0	0.0	0.0	0.0	0
60.1 +	25.3	0	25.3	0.0	0.0	0.0	0.0	0.0	0
TOTALS	195.2	162.8	32.4	0	0.0	0.0	0.0	0	27.1

TABLE 4- Spruce Beetle Attack Density and Larval Density Rating

MEAN NO. OF ENTRANCE HOLES PER 225 cm2 PHLOEM SAMPLE	< 1 LOW Attack Density	MEAN NO. OF LIVING LARVAE PER 225 cm2 PHLOEM SAMPLE	< 4.9 LOW Mean Larval Density
	1.0- 1.9 MOD Attack Density		5.0 - 14.9 MOD Mean Larval Density
	2.0 - 3.9 HIGH Attack Density		15-24.9 HIGH Mean Larval Density
3.00	< 3.9 SEVERE Attack Density	2.50	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	16.6%	##	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	1457.5
% 2013 ATTACK	0.0%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	87.8%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

While Sanitation rating high, not a represenattive sample as only 1 pocket of attack noticed.

SUMMARY OF ALL CARDS FS1111							NUMBER OF CARDS		1	
ACCESS -		From Truck, walk north 350m through standing timber,								
POLYGON FEATURES -		Gentle slope from west to east, with steeper portions in the east. Drainage on west side of polygon.								
DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES	
			2015		2014		2013			
			1	2	3	4	5	6	BL	AT
17.5-25.0	3.3	6	0	0	0	0	0	0	5	0
25.1-30.0	5.3	2	0	0	0	0	0	0	2	0
30.1-35.0	7.1	2	1	0	0	0	0	0	0	0
35.1-40.0	9.4	4	0	0	0	0	0	0	0	0
40.1-45.0	11.6	1	0	0	0	0	0	0	0	0
45.1-50.0	13.8	5	0	0	0	0	0	0	0	0
50.1-55.0	16.2	0	0	0	0	0	0	0	0	0
55.1-60.0	18.7	0	0	0	0	0	0	0	0	0
60.1 +	25.3	0	1	0	0	0	0	0	0	0
TOTALS		20	2	0	0	0	0	0	7	0
BARK SAMPLES 15 cm x 15 cm		NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN			
							Attacked		Unattacked	
							Yr	Yr		
2		6	1	5	0	3	0	0	0	0
SIZE, BOUNDARY AND PATTERN OF THE INFESTATION										
Small polygon 8 hectares, light scattered attack found in one area in the eastern part of Polgon (1-Code1) On walkthrough to Polygon, noticed moderate attack to the south of polygon.										
INCIDENCE AND SEVERITY OF THE INFESTATION										
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RISK OF BEETLE SPREAD										
Polygon surrounded by water and could move north and within polygon.. Already moderate attack south of Polygon.										
ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES										
Creek to be crossed to enter polygon from the south, are some slopes in the attacked areas of polygon and a drainage to the west										

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SPRUCE BEETLE PROBE CARD

LOCATION 10 u 0452025 6134493		NAT-003 Probe 1		PAGE OF 1						
BEARING 72°		DISTANCE 100m		STRIP WIDTH 10m						
DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES	
			1	2	3	4	5	6		
17.5 - 25.0	3.3	•••••							A	B
25.1 - 30.0	5.3	•••••								
30.1 - 35.0	7.1	•••••								
35.1 - 40.0	9.4	•••••								
40.1 - 45.0	11.6	•••••								
45.1 - 50.0	13.8	•••••								
50.1 - 55.0	16.2	•••••								
55.1 - 60.0	18.7	•••••								
60.1 +	25.3	•••••								
TOTALS		20	2						9	7
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN				
						Attacked	Unattacked			
North	•••••	•••••	•••••	•••••	•••••					
South	•••••	•••••	•••••	•••••	•••••					
COMMENTS • Bark Sample										
CREW NAMES Aaron Cdebank						DATE Y M D 2005 10 28				

TOPOGRAPHY STRIP No. NAT-003 **TIMBER TYPE**

257° bearing @ 350m
335m

50% Slope 300m

40% Slope 250m

50/50 Sw/At

30% Slope 200m

50/50 At/Sw 150m

50/50 At/Sw 100m

30% Slope 50m

60/40 At/Sw

60/40 At/Sw 0

72° bearing

200m S/L 200m

①

Probe @ 235m (5)

72

STRIP NO.: NAT-003 DIRECTION: 72°

START STRIP: 10 U 0457838 6134495

JOB NO.: NAT-003 DATE: Oct 28th, 2015

CREW: Aaron Colebank

REMARKS:

 www.irlsupplies.com

TOPOGRAPHY STRIP No. **TIMBER TYPE**

Heavy hit @ 10 U 0457979 / 10 U 0458050
6134393 6134334

10 U 0457900 6134235

70/30 Sw/b 450

70/30 Sw/b 400

70/30 Sw/b 350

200m S/L 200m

⑤

STRIP NO.: DIRECTION:

START STRIP:

JOB NO.: DATE:

CREW:

REMARKS:

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