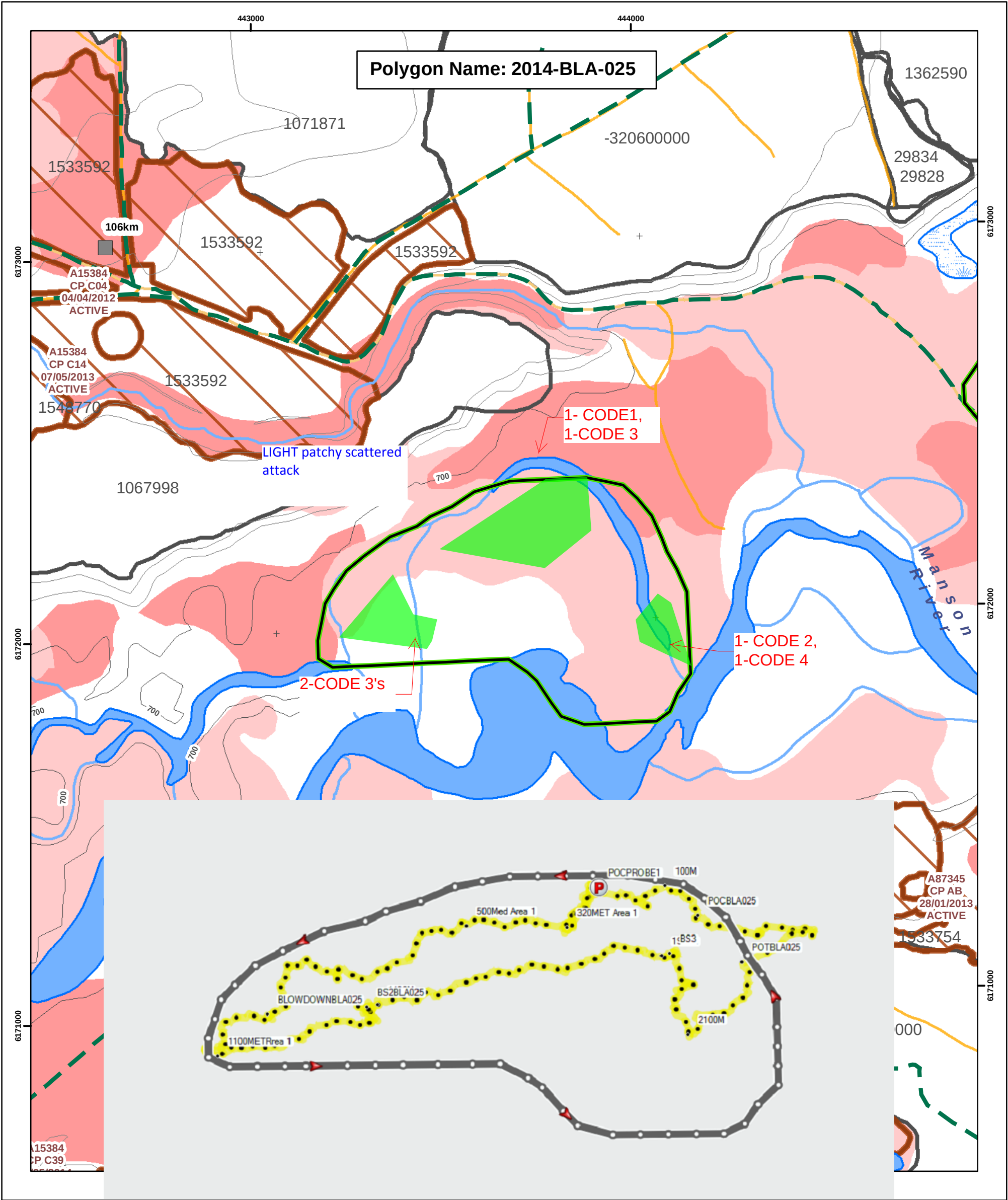




Spruce Bark Beetle Field Map

Polygon Name: 2014-BLA-025

Landscape Unit/BMU: Blackwater

Region: Omineca

District: Mackenzie

Mapsheet: 093O12

Hectares: 43.32

Scale: 1:10,000

When plotted on 11x17

Coordinate System: PCS Albers

Datum: North American 1983

Date Drawn: 03/06/2015

Drawn By: msnively

Map Features

- Susceptible Spruce Bark Beetle Polygon
- 2013 SB Hazard Rating (20% increments)
- Hazard Classes
 - Low/Med (21-40)
 - Med (41-60)
 - High (61-80)
 - Very High (81-100)
- Cutting Permit
- RESULTS Opening
- Landscape Unit
- Road Permit Active
- Road Permit Pending
- Km_Marker_Points
- Communities

Map Features

- First Nations Reserves
- Mackenzie District
- OGMA Legal Current
- Ungulate Winter Range
- Wildlife Habitat Area
- Protected Lands Designation
 - Ecological Reserve
 - Protected Area
 - Provincial Park
- Contour - Index
- Contour - Intermediate
- Streams
- Lakes and Rivers
- Wetlands

Disclaimer

The accuracy and completeness of the information on this map is not guaranteed.

Key Map

**SENECA ENTERPRISES LTD.**

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

**SPRUCE BARK BEETLE REPORT
FH16DMK010**

POLYGON: 2014-BLA-025

HECTARES:

46.32

WALKTHROUGH DISTANCE:

2300

ESTIMATED INFESTED PIXELS FROM

WALKTHROUGH (Code 1-4)

4

17.4%

SUMMARY OF CURRENT INFESTATION

Walkthrough estimate shows 20% of polygon pixels having attack. Various codes, much attack around trees that have been blown over, and is at a fairly low rate of spread. (Pitchouts also noticed) Attack has a moderate attack and mean larval density from 1 probe line and 2 additional bark samples taken on infected treed

LIGHT SCATTERD ATTACK

ACCESS

Access is ATV down down rough trail from Finlay Main. Near 2014-BLA024.

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

Polygon has Manson River to the south and is very wet with drainages throughout. (Flat) Polygon is mixed stand of Spruce, Balsam Cottonwood with about 35% spruce.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Polygon has a mix of code 1's-4's and is lightly scattered throughout. Most of the infected trees around blowdown, swampy areas dispersed throughout. Around 20% infested pixels but single attacks in areas.

INCIDENCE AND SEVERITY OF ATTACK

From 1 probe line and 2 bark samples, infestation has Moderate attack density and Moderate mean larval density and is scattered throughout polygon

RISK OF BEETLE SPREAD

Polygon has pockets of attack that are scattered throughout polygon usually around areas with blowdown and will continue to spread through polygon at a slow rate/

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Access is south of Finlay Main on old trail that can be ATV'ed/ Very flat and swampy Polygon. South boundaries Manson River

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

Light Sanitation rating and schedule another walkthrough in 2016.

OPTION 2**TRAP TREES/ BAITS**

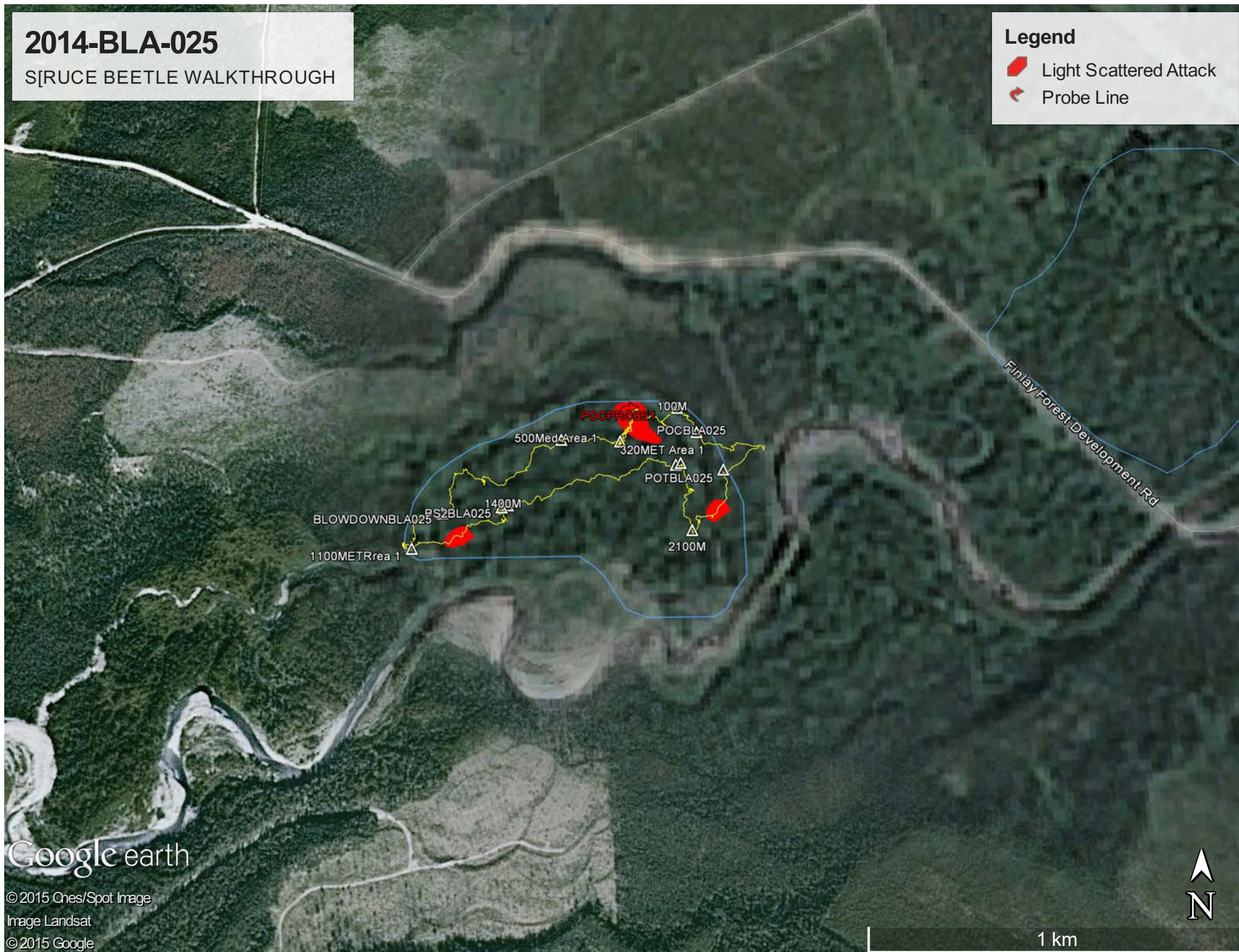
With close access to Finlay, could set up baits or lay down a trap tree trail as beetle in various stages to reduce spread.

2014-BLA-025

S[RUCE BEETLE WALKTHROUGH

Legend

-  Light Scattered Attack
-  Probe Line



Google earth

© 2015 Qnes/Spot Image

Image Landsat

© 2015 Google

Summary						
2014-BLA-025	HEC	46.32	METERS WALKED	2300	% TRAVERSED	5.0%
PIXELS COVERED BY WALKTHROUGH	23	INFESTED PIXELS	4	ESTIMATED % OF BLOCK INFESTED (From Walk through)		17.4%

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	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0
25.1-30.0	5.3	21.2	0.0	0.0	0.0	0.0	5.3	0.0	0
30.1-35.0	7.1	28.4	7.1	0.0	0.0	0.0	0.0	0.0	0
35.1-40.0	9.4	28.2	0.0	0.0	9.4	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	13.8	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	16.2	0.0	0
55.1-60.0	18.7	0	0.0	0.0	0.0	0.0	0.0	0.0	18.7
60.1 +	25.3	25.3	0.0	0.0	0.0	0.0	0.0	0.0	253
TOTALS	176.4	138.4	7.1	0	9.4	0.0	21.5	0	271.7

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
1.50	< 3.9 SEVERE Attack Density	10.00	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	4.0%	4.0	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	5.3%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	418.2
% 2013 ATTACK	12.2%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	39.4%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

SUMMARY OF ALL CARDS FS1111							NUMBER OF CARDS		3	
ACCESS -		Access is ATV down down rough trail from Finlay Main. Near 2014-BLA024.								
POLYGON FEATURES -		Polygon has Manson River to the south and is very wet with drainages throughout. (Flat) Polygon is mixed stand of Spruce, Balsam Cottonwood with about 35% spruce.								
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	3	0	0	0	0	0	0	0	0
25.1-30.0	5.3	4	0	0	0	0	1	0	0	0
30.1-35.0	7.1	4	1	0	0	0	0	0	0	0
35.1-40.0	9.4	3	0	0	1	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	1	0	0	0	0	0	0	0	0
50.1-55.0	16.2	0	0	0	0	0	1	0	0	0
55.1-60.0	18.7	0	0	0	0	0	0	0	1	0
60.1 +	25.3	1	0	0	0	0	0	0	10	0
TOTALS		17	1	0	1	0	2	0	11	0
BARK SAMPLES 15 cm x 15 cm	NO. ENTRANC E HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN				
						Attacked Y r	Y r	Unattacked		
6	9	3	60	0	9	0		0	0	0
SIZE, BOUNDARY AND PATTERN OF THE INFESTATION										
Polygon has a mix of code 1's-4's and is lightly scattered throughout. Most of the infected trees around blowdown, swampy areas dispersed throughout. Around 20% infested pixels but single attacks in areas.										
INCIDENCE AND SEVERITY OF THE INFESTATION										
From 1 probe line and 2 bark samples, infestation has Moderate attack density and Moderate mean larval density and is scattered throughout polygon										
RISK OF BEETLE SPREAD										
Polygon has pockets of attack that are scattered throughout polygon usually around areas with blowdown and will continue to spread through polygon at a slow rate/										
ACCESS, OPERABILITY AND INTEGRATED RESOURCE MANAGEMENT ISSUES										
Access is south of Finlay Main on old trail that can be ATV'ed/ Very flat and swampy Polygon. South boundaries Manson River										

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BEETLE PROBE CARD

LOCATION **BLA-025**
10 u 6172344

ELEVATION

LATITUDE

PAGE

OF

BEARING **200°** STRIP LINE NO **Probe 1** STRIP WIDTH **10m** DISTANCE **100m** BEETLE SPECIES ☒ SB ☐ MPB ☐ DFB

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	MAIN	OTHER
12.5 - 17.4	2.0	N/A							N/A	N/A
17.5 - 25.0	3.3	••								
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			18	1	1	2	10			

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN	
						Attacked	Unattacked
N	•		••••	•	••		
S	•		••••	•	••		

COMMENTS

⑤ sample

CREW NAMES **Aaron Colebank**
Brandon Sparks

DATE

Y M D
2015 10 18

FS 1111A RPQ 00/02 7530881049 (100/bd)

BRITISH
COLUMBIA

BEETLE PROBE CARD

LOCATION **BLA-025**
10 u 6172344

ELEVATION

LATITUDE

PAGE

OF

BEARING **200°** STRIP LINE NO **Probe 1** STRIP WIDTH **10m** DISTANCE **100m** BEETLE SPECIES ☒ SB ☐ MPB ☐ DFB

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	MAIN	OTHER
12.5 - 17.4	2.0									
17.5 - 25.0	3.3									
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										

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

NO

CREW NAMES **Aaron Colebank**
Brandon Sparks

DATE

Y M D
2015 10 18

FS 1111A RPQ 00/02 7530881049 (100/bd)



BRITISH
COLUMBIA



BEETLE PROBE CARD

LOCATION BLA-025 104 9443904 617 2177		ELEVATION		LATITUDE		PAGE OF				
BEARING	STRIP LINE NO B53	STRIP WIDTH	DISTANCE	BEETLE SPECIES ☐ SB ☐ MPB ☐ DFB						
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	MAIN	OTHER
12.5 - 17.4	2.0									
17.5 - 25.0	3.3									
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										
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN				
						Attacked	Unattacked			
North	1	1	1	1	1					
South	1	1	1	1	1					
COMMENTS Bark Sample 3										
CREW NAMES Paron Colebank Brandon Sparks						DATE Y M D 2015 10 18				

TOPOGRAPHY

STRIP No.

BLA-025

TIMBER TYPE

70/30 Sw/Ac	500
Scale change	400
flat	
70/30 Sw/Ac	350
flat	
Probe 1 ends @ 320m	
262° bearing @ 320m	300
bearing change @ 20m - 202°	250
Probe 1 start @ 220m - 202°	
Scale change	200
60/40 Sw/Ac	
Swamp @ 100-150m	
236° bearing	100
60/40 Sw/Ac	

Probe 1 ends

Probe 1 - BSI

TOPOGRAPHY

STRIP No.

BLA-025

TIMBER TYPE

70/30 Sw/Ep	1200
046° bearing @ 1100m	1100m
flat	
Infested blundown @ 1000m	1000
70/30 Sw/Ac	
flat	900
190° bearing @ 850m	
flat	800
270° bearing @ 750m	
80/20 Sw/Ep	700
flat	
80/20 Sw/bl	600
80/20 Sw/bl	
222° bearing	500

(BLV) - Blaw down

STRIP NO.:

DIRECTION:

START STRIP:

JOB NO.:

DATE:

CREW:

REMARKS:



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TOPOGRAPHY

STRIP No.

BLA-025

TIMBER TYPE

	1800	
70/30 Ac/Sw	1700	⑤
60/40 Ac/Sw	1600	
50/50 Sw/Ac	1500	
56° bearing @ 1400		
* Scale change	1400	
Bark Sample 2 @ 1380m		③ (BS3) ③
Small DBH @ 1350m	1350	
* Scale change	1300m	⑥
flat		
70/30 Sw/Ep	1200	

TOPOGRAPHY

STRIP No.

TIMBER TYPE

done	2300	
50/50 Sw/Ac-Ep	2200	
50/50 Sw/Ac-Ep		
3° bearing	2100	②
70/30 Ac/Sw	2000	
flat		
60/40 Ac/Sw	1900	* (BS3) also ②
50/50 Sw/Ac	1800	④ - forked top is broken

STRIP NO.:

DIRECTION:

START STRIP:

JOB NO.:

DATE:

CREW:

REMARKS:

BS3 outside of 10m


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