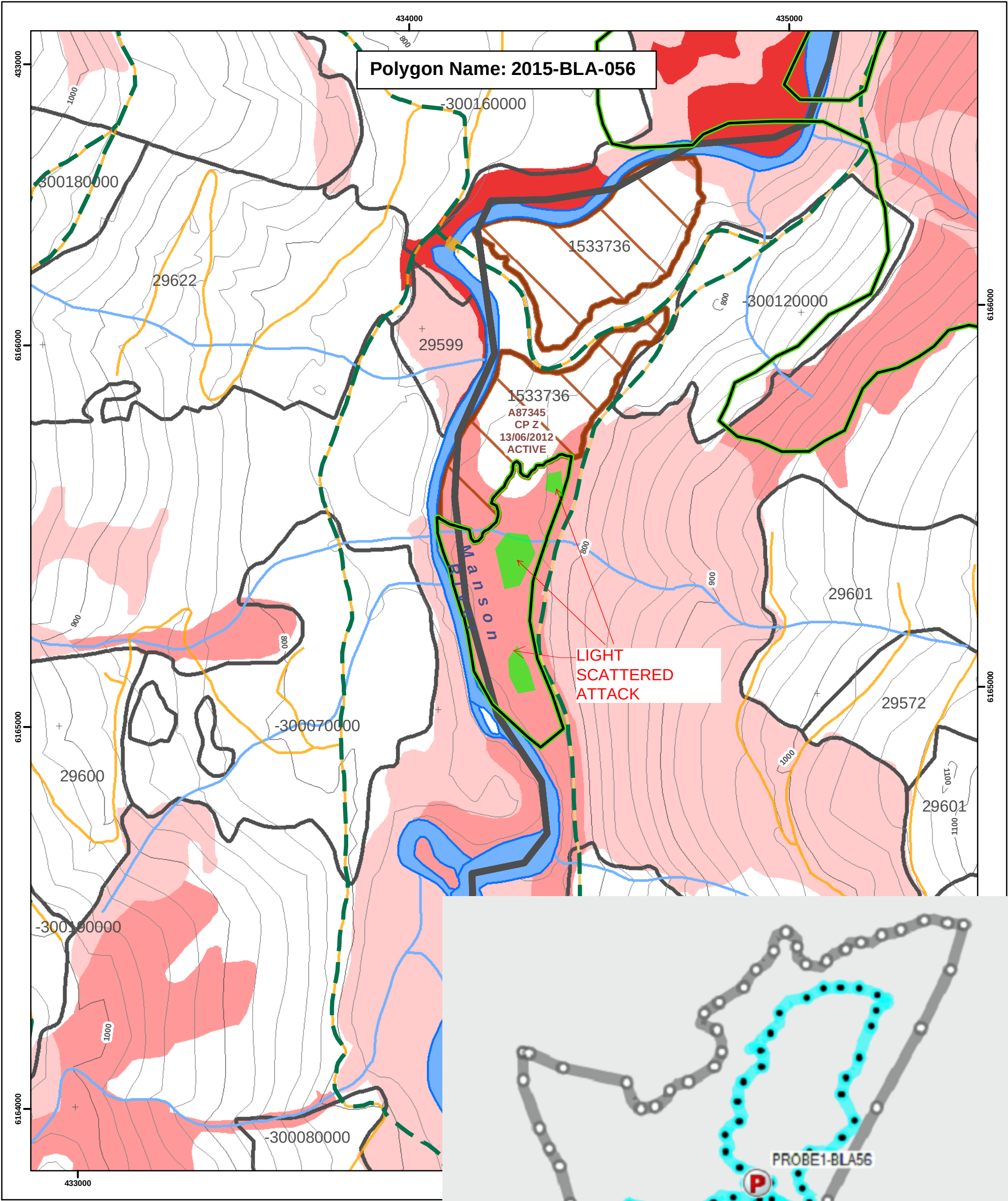
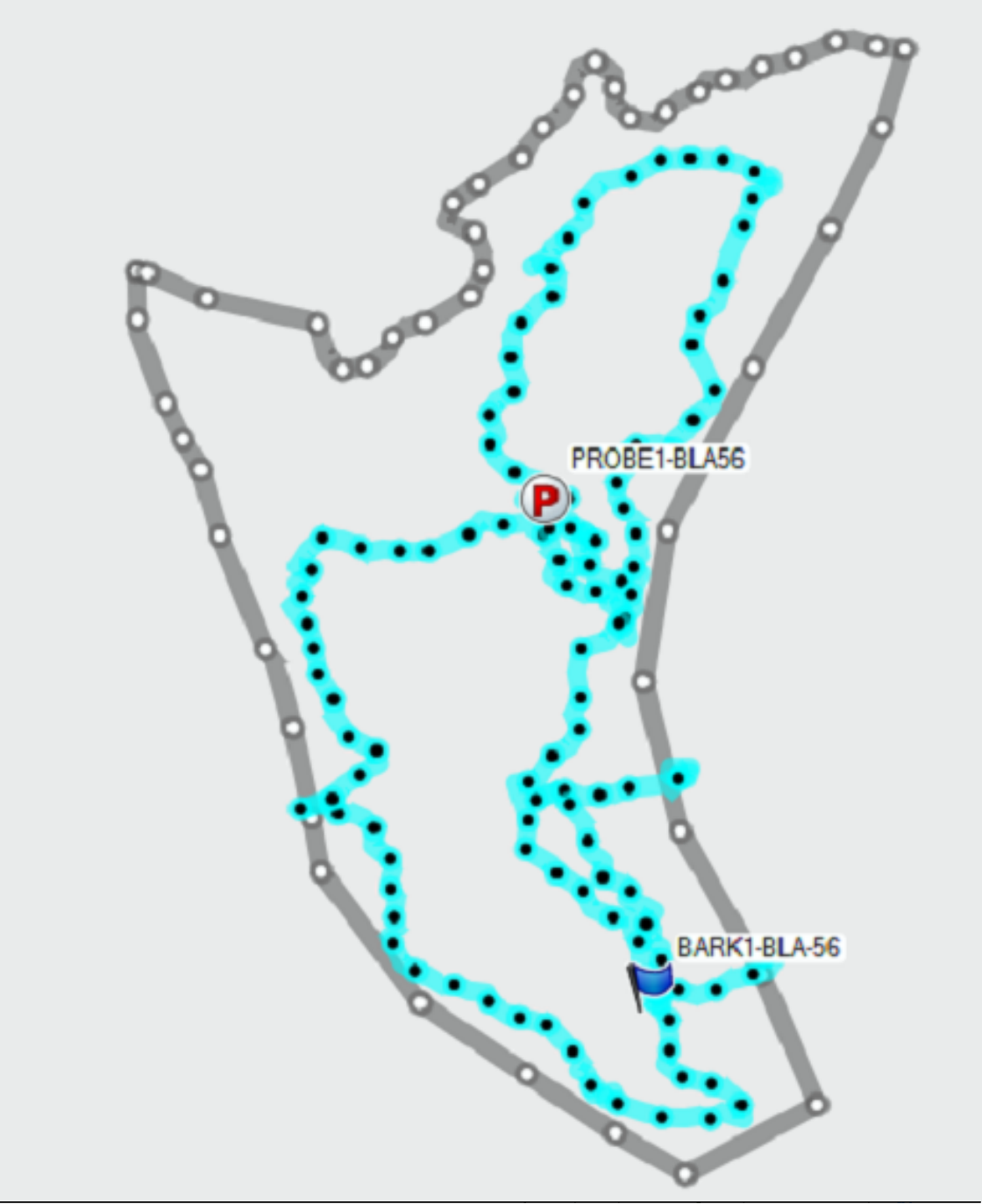






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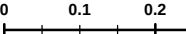
Spruce Bark Beetle Field Map

Polygon Name: 2015-BLA-056

Landscape Unit/BMU:	Blackwater
Region:	Omineca
District:	Mackenzie
Mapsheet:	093N09
Hectares:	13.2
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
- 2013 SB Hazard Rating (20% in)
- 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



**SENECA ENTERPRISES LTD.**

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**SPRUCE BARK BEETLE REPORT
FH16DMK010**

POLYGON: BLA-056

HECTARES: 13.2

WALKTHROUGH DISTANCE: 2700

ESTIMATED INFESTED PIXELS FROM
WALKTHROUGH (Code 1-4)

5 18.5%

SUMMARY OF CURRENT INFESTATION

Walkthrough shows Moderate Scattered attack infestation with around 20% infested Pixels with most of the trees found on a 1 and 2 year life cycle (Code1's). There is a mix and attack is quite patchy. In areas that are attacked, Sanitation Rating Heavy.

MODERATE SCATTERED ATTACK- 20% PIXELS

ACCESS

Access is 2WD down mainline to the East boundary.

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

Minimal slopes within Polygon 0-10%. From walkthrough estimate 60-70% spruce, DBH 35cm. One creek to the north of Polygon leads to Manson River which is West Boundary of Polygon.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Very light scattered attack with 5- Code 1's (Hit 2014 and 2015), 1 code 2 and 1 code 3.

INCIDENCE AND SEVERITY OF ATTACK

1 probe line established, 3 bark samples. Of the 3 samples, showing moderate attack density and all showing beetle on a 1 and 2 year life cycle. Attacked areas alongside creek draw.

RISK OF BEETLE SPREAD

With patchy scattered attack, and could spread fairly quickly within polygon and between

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Polygon has good access to the east with mainline Road. Minimal slopes/

RECOMMENDATIONS**OPTION 1****/PROBE/CRUISING/ HARVEST**

If there are logging operations in area, easiest to schedule a cruise and Harvest in the spring of 2016. A probe may better stratify areas of attack and polygon has good access with minimal slope or issues.

OPTION 2**TRAP TREES/**

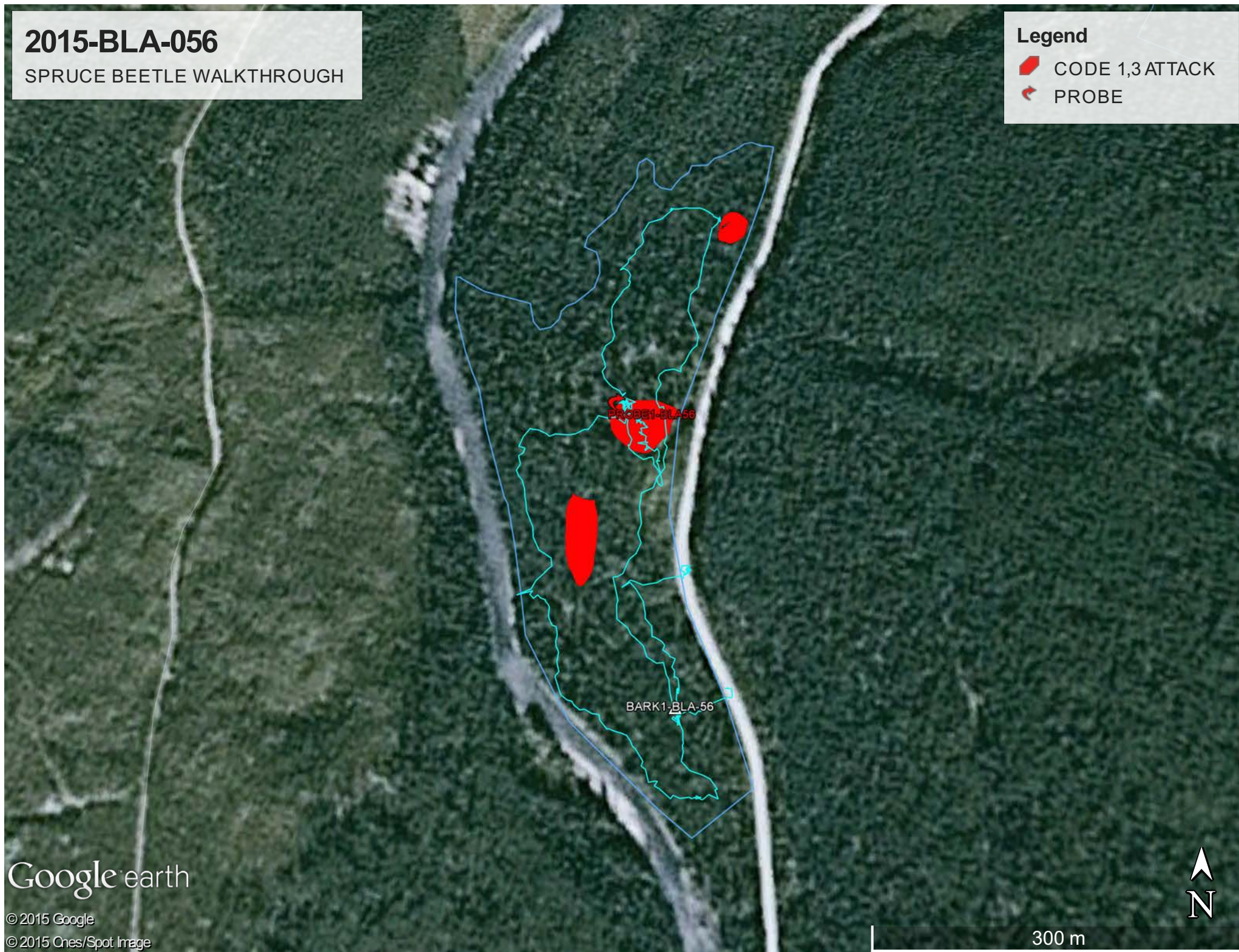
May schedule option for Trap Trees to hold attack until Logging becomes an option. Polygon along Main Line.

2015-BLA-056

SPRUCE BEETLE WALKTHROUGH

Legend

-  CODE 1,3 ATTACK
-  PROBE



Google earth

© 2015 Google
© 2015 Cnes/Spot Image

300 m

N

Summary						
BLA-056	HEC	13.2	METERS WALKED	2700	% TRAVERSED	20.5%
PIXELS COVERED BY WALKTHROUGH	27	INFESTED PIXELS	5	ESTIMATED % OF BLOCK INFESTED (From Walk through)		18.5%

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	3.3	0.0	0.0	0.0	0.0	0.0	0.0	6.6
25.1-30.0	5.3	0	0.0	0.0	0.0	0.0	0.0	0.0	15.9
30.1-35.0	7.1	21.3	0.0	0.0	0.0	0.0	0.0	0.0	71
35.1-40.0	9.4	28.2	0.0	0.0	0.0	0.0	0.0	0.0	28.2
40.1-45.0	11.6	46.4	0.0	0.0	0.0	0.0	11.6	0.0	0
45.1-50.0	13.8	41.4	0.0	6.9	0.0	0.0	0.0	0.0	27.6
50.1-55.0	16.2	16.2	0.0	0.0	16.2	0.0	16.2	0.0	0
55.1-60.0	18.7	37.4	0.0	0.0	0.0	0.0	0.0	0.0	0
60.1 +	25.3	25.3	25.3	0.0	0.0	0.0	0.0	0.0	0
TOTALS	295.7	219.5	25.3	6.9	16.2	0.0	27.8	0	149.3

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
1.67	< 3.9 SEVERE Attack Density	2.50	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	10.9%	##	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	5.5%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	1122.5
% 2013 ATTACK	9.4%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	66.4%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

1 probe line not relfective of entire stand but attacked areas carry a heavy rating.

SUMMARY OF ALL CARDS							NUMBER OF CARDS		1	
ACCESS -		Access is 2WD down mainline to the East boundary.								
POLYGON FEATURES -		Minimal slopes within Polygon 0-10%. From walkthrough estimate 60-70% spruce, DBH 35cm. One creek to the north of Polygon lead to Manson River which is West Boundary 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	1	0	0	0	0	0	0	2	0
25.1-30.0	5.3	0	0	0	0	0	0	0	3	0
30.1-35.0	7.1	3	0	0	0	0	0	0	10	0
35.1-40.0	9.4	3	0	0	0	0	0	0	3	0
40.1-45.0	11.6	4	0	0	0	0	1	0	0	0
45.1-50.0	13.8	3	0	1	0	0	0	0	2	0
50.1-55.0	16.2	1	0	0	1	0	1	0	0	0
55.1-60.0	18.7	2	0	0	0	0	0	0	0	0
60.1 +	25.3	1	1	0	0	0	0	0	0	0
TOTALS		18	1	1	1	0	2	0	20	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		
6		10	0	15	0	31	0	0	0	

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

Very light scattered attack with 5- Code 1's (Hit 2014 and 2015), 1 code 2 and 1 code 3.

INCIDENCE AND SEVERITY OF THE INFESTATION

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SPRUCE BEETLE PROBE CARD

LOCATION BLA-56		U0434205 UTM-6165347		PAGE 1 OF 1					
BEARING 150°		DISTANCE 100 m		STRIP WIDTH 10 m					
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								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		18	1	1	1	2	15		
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN			
						Attacked	Unattacked		
1A	2	/	3	/	/				
1B	/	/	/	/	/				
COMMENTS AREA good. REP for whats in ploygon.									
CREW NAMES Patrick Poinier						DATE Y M D 15 10 15			

SPRUCE BEETLE PROBE CARD

LOCATION BLA-56		U0434251 UTM-6165016		PAGE 1 OF 1					
BEARING Bark Sample		DISTANCE		STRIP WIDTH					
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								
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		
1A	2	/	1	/	1				
1B	/	/	1	/	/				
COMMENTS									
CREW NAMES PAT Poinier						DATE Y M D 15 10 15			

STRIP NO.: BLA-56 DIRECTION: 276°, 158°, 336°, 296°
 START STRIP: 0-700
 JOB NO.: Seneca/walk DATE: Oct, 15, 15
 CREW: Pat Poirier
 REMARKS:

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 Ph: 1-800-863-6845



STRIP NO.: BLA-S6 DIRECTION: 630, 198
START STRIP: 700-800
JOB NO.: Seneca/walk DATE: Oct 16, 15
CREW: _____
REMARKS: _____

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Ph: 1-800-663-6843

