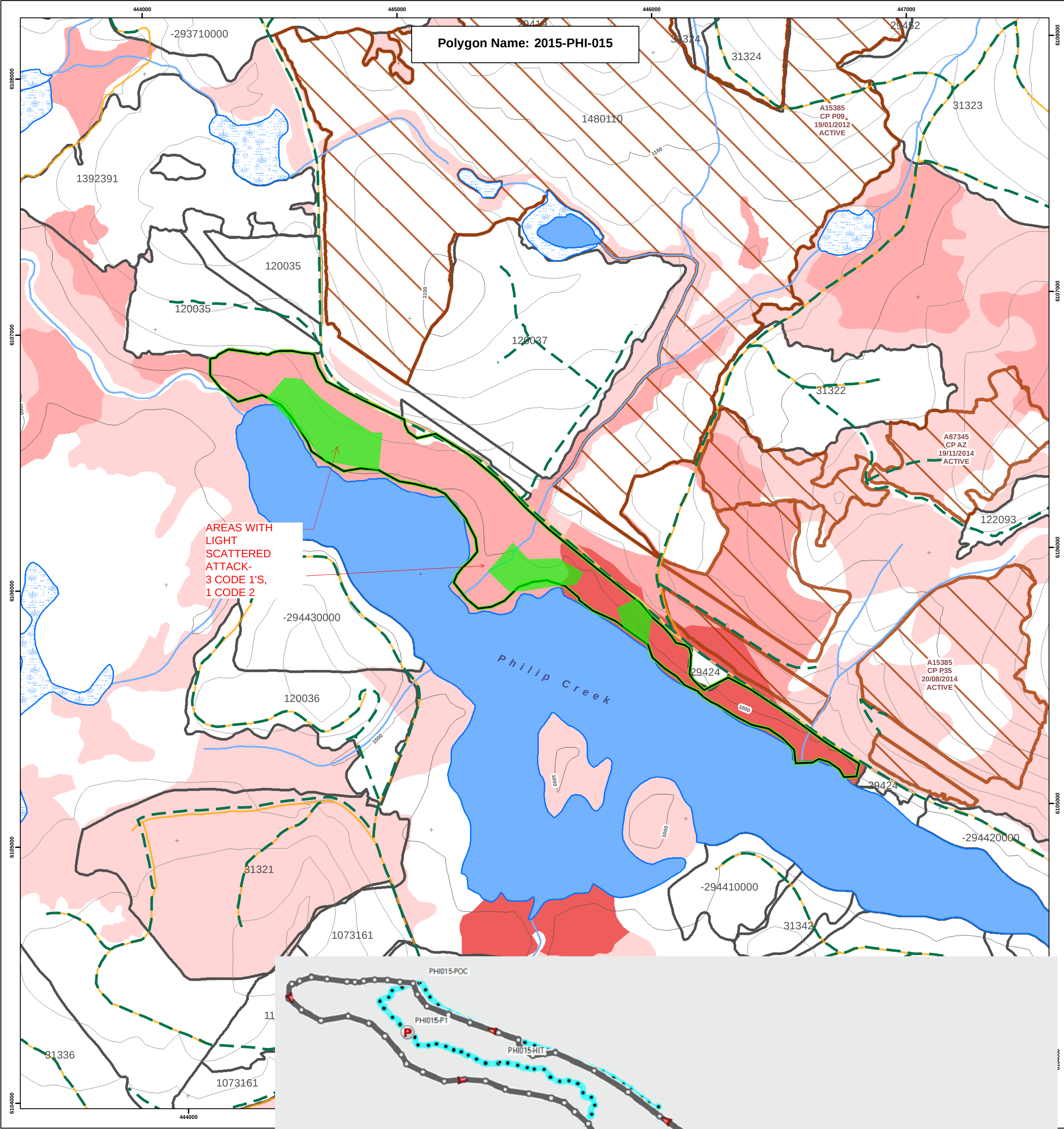
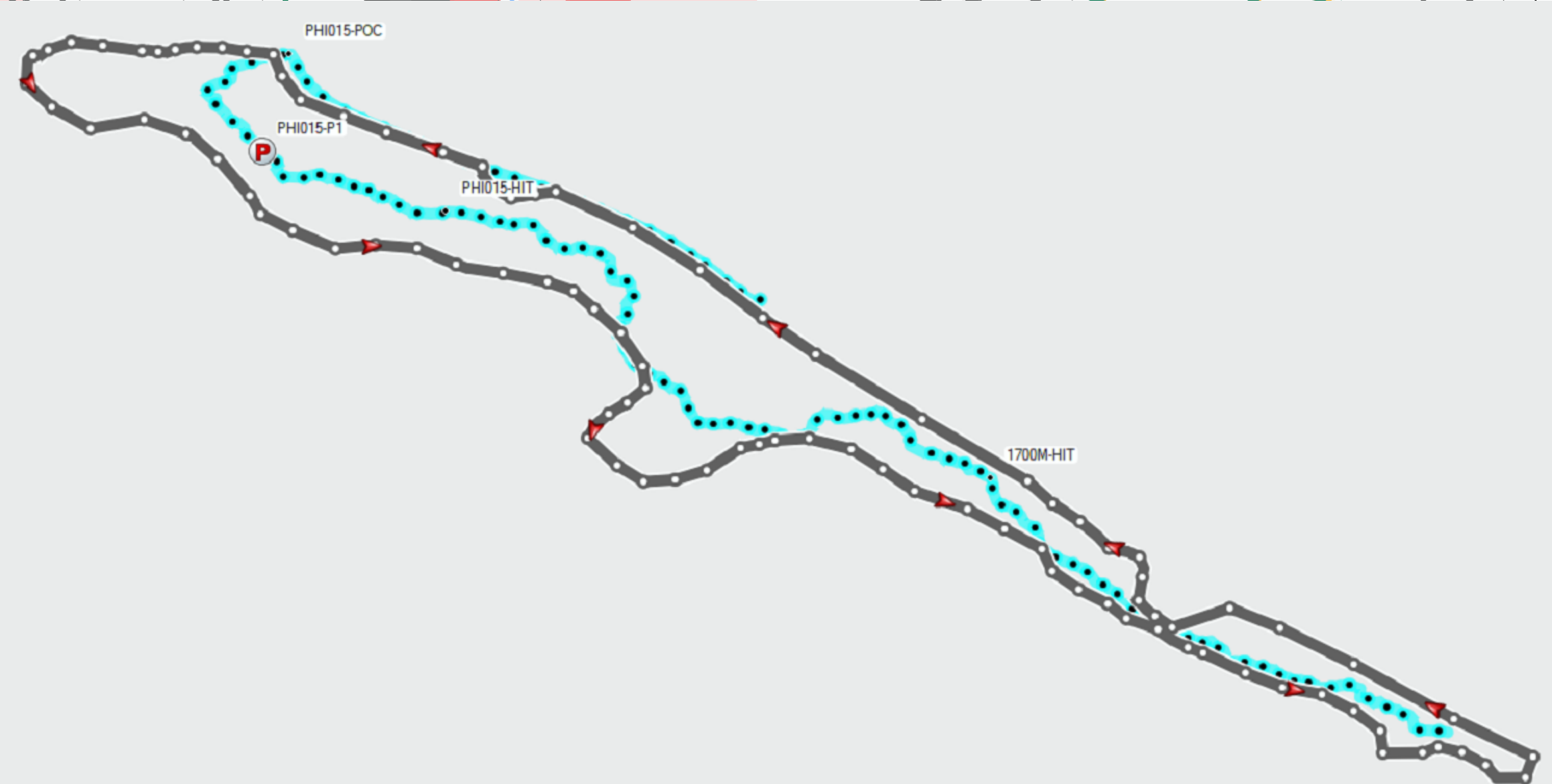




Ministry of
Forests, Lands and
Natural Resource Operations

Spruce Bark Beetle Field Map

Polygon Name: 2015-PHI-015

Landscape Unit/BMU: Philip
Region: Omineca
District: Mackenzie
Mapsheet: 093004
Hectares: 52.3
Scale: 1:10,000
When plotted on ANSIC
Coordinate System: PCS Albers
Datum: North American 1983
Date Drawn: 03/06/2015
Drawn By: msively

Map Features

- Susceptible Spruce Bar
- 2013 SB Hazard Rating (20% 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



0 0.1 Kilometers

**SENECA ENTERPRISES LTD.**

PO BOX 1902, PRINCE GEORGE, BC, V2L 5E3

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

**SPRUCE BARK BEETLE REPORT
FH16DMK010**

POLYGON: 2015-PHI-015

HECTARES:

52.30

WALKTHROUGH DISTANCE:

2750

ESTIMATED INFESTED PIXELS FROM
WALKTHROUGH (Code 1-4)

4 14.5%

SUMMARY OF CURRENT INFESTATION

Walkthrough has 4 infested ppxels or 15% of area, with only one attacked tree per peoxel from walkthrough. Stand is 60% spruce and has excellent mainline access which runs the entire length of polygon. Attack densities are low from one probe line and are surrounded by patchy Older Code 5 attacked trees.

LIGHT SCATTERED ATTACK

ACCESS

Access is the mainline for the entire length of the polygon.

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

Long and thin runs along mainline. Slope runs 0-15% down from the highway. Stand is on average 60% Spruce, 40% Balsam. Polygon boundaried on entire south length by Philip Creek

SIZE, BOUNDARY and PATTERN OF INFESTATION

Attack is scattered as 4 pixels infested with 1 attacked tree in each. (3 Code 1;s, 1 Code 2) All attack on a two year cycle and mixed amongst older attack code 5 trees.

INCIDENCE AND SEVERITY OF ATTACK

Severity is low to moderate as very patchy and minimal larvae and entrance holes from one sample.

RISK OF BEETLE SPREAD

Polygon has room to move within polygon but surrounded by old cutblocks and wide river and has a lower attack density at a slow rate of spread.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Excellent access as entre length of polygon is off of mainline and quite flat with slopes 0-15%

RECOMMENDATIONS**OPTION 1****MONITOR TRAP TREES**

The attack found was 3-Code 1;s and 1-Code 2 that are on a 2 year life cycle and won't fly until 2017. It is scattered amongst some 2013 older attacked trees but the salvage rating is Light. Schedule Trap Trees or Bait for spring 2017.

OPTION 2**MONITOR**

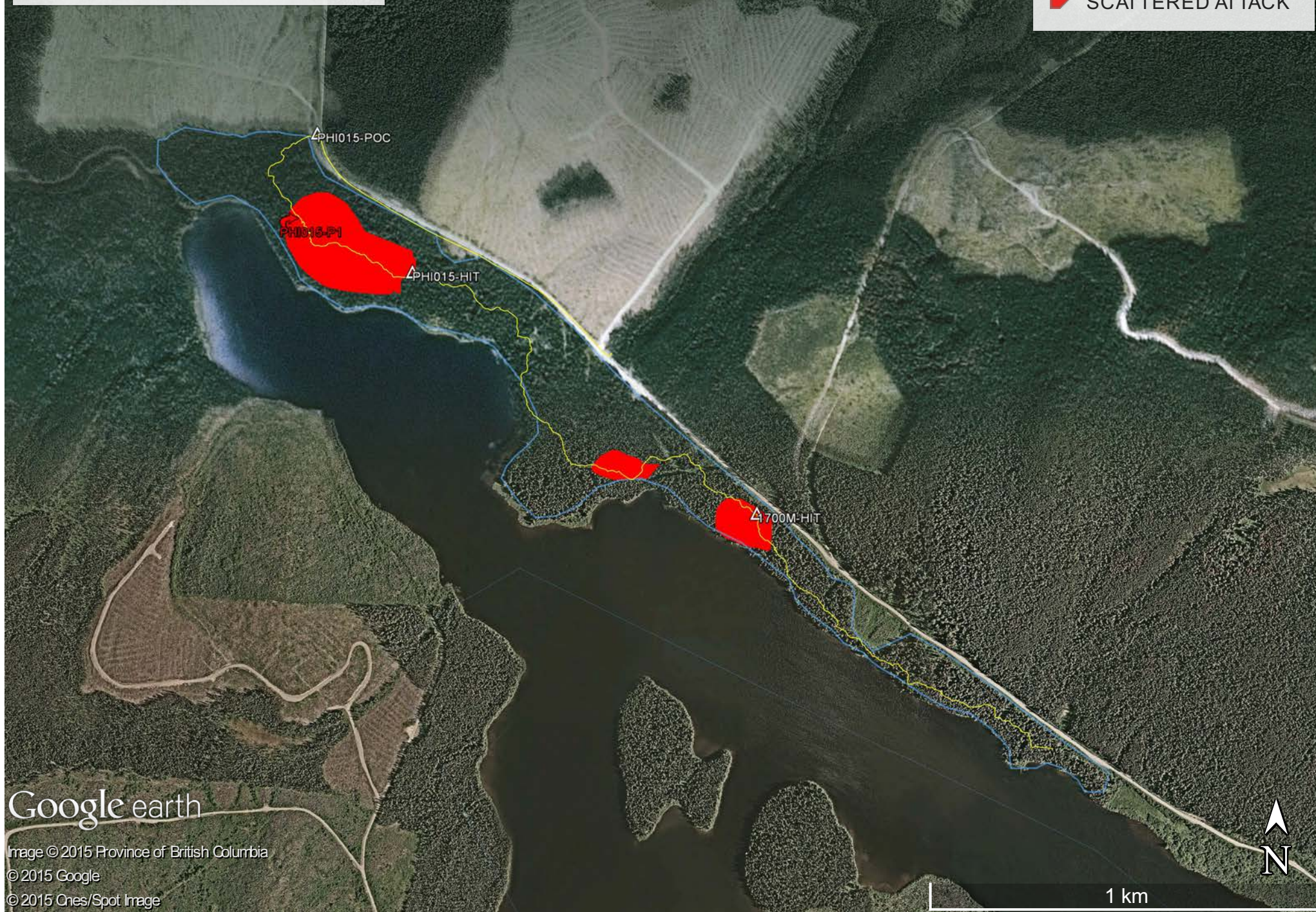
Monito and reevaluate with another Walkthrough FallWinter 2016. Good Access, little risk of beetle spread, flat ground.

2015-PHI-015

SPRUCE BEETLE WALKTHROUGH

Legend

- PHI015-P1
- SCATTERED ATTACK



Google earth

Image © 2015 Province of British Columbia
© 2015 Google
© 2015 Ones/Spot Image

Summary						
2015-PHI-015	HEC	52.30	METERS WALKED	2750	% TRAVERSED	5.3%
PIXELS COVERED BY WALKTHROUGH		27.5	INFESTED PIXELS		4	ESTIMATED % OF BLOCK INFESTED (From Walk through)
						14.5%

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	39.6	0.0	0.0	0.0	0.0	0.0	0.0	0
25.1-30.0	5.3	68.9	0.0	0.0	0.0	0.0	0.0	0.0	15.9
30.1-35.0	7.1	35.5	0.0	3.6	0.0	0.0	0.0	0.0	7.1
35.1-40.0	9.4	75.2	0.0	0.0	0.0	0.0	28.2	0.0	0
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	0.0	0.0	0.0	0.0	0.0	0
50.1-55.0	16.2	16.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	366.6	323.2	0.0	3.55	0.0	0.0	39.8	0	23

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
1.00	< 3.9 SEVERE Attack Density	2.50	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	1.0%	1.0	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	346.6
% 2013 ATTACK	10.9%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	94.1%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

FROM 1 PROBE LINE TAKEN. Sample tree was code 2 Attacked tree

SUMMARY OF ALL CARDS FS1111							NUMBER OF CARDS		1	
ACCESS -		Access is the mainline for the entire length of the polygon.								
POLYGON FEATURES -		Long and thin runs along mainline. Slope runs 0-15% down from the highway. Stand is on average 60% Spruce, 40% Balsam. Polygon boundaried on entire south length by Philip Creek								
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	12	0	0	0	0	0	0	0	0
25.1-30.0	5.3	13	0	0	0	0	0	0	3	0
30.1-35.0	7.1	5	0	1	0	0	0	0	1	0
35.1-40.0	9.4	8	0	0	0	0	3	0	0	0
40.1-45.0	11.6	4	0	0	0	0	1	0	0	0
45.1-50.0	13.8	3	0	0	0	0	0	0	0	0
50.1-55.0	16.2	1	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	0	0	0	0	0	0	0	0
TOTALS		46	0	1	0	0	4	0	4	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 Yr _____	Yr _____	Unattacked		
2	2	0	5	0	0	0	0	0	0	
SIZE, BOUNDARY AND PATTERN OF THE INFESTATION										
Attack is scattered as 4 pixels infested with 1 attacked tree in each. (3 Code 1;s, 1 Code 2) All attack on a two year cycle and mixed amongst older attack code 5 trees.										
INCIDENCE AND SEVERITY OF THE INFESTATION										
Severity is low to moderate as very patchy and minimal larvae and entrance holes from one sample.										
RISK OF BEETLE SPREAD										
Polygon has room to move within polygon but surrounded by old cutblocks and wide river and has a lower attack density at a slow rate of spread.										
ACCESS, OPERABILITY AND INTEGRATED RESOURCE MANAGEMENT ISSUES										
Excellent access as entre length of polygon is off of mainline and quite flat with slopes 0-15%										

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P 1

SPRUCE BEETLE PROBE CARD

LOCATION PHI 015		0444598 6106647		PAGE 7 OF					
BEARING 140°		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	☐							01.
25.1 - 30.0	5.3	☐							??
30.1 - 35.0	7.1	☐	0						?
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		46	1			4		4	
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN			
						Attacked	Unattacked		
2	2	1	5	1	1				
5	1	1	1	1	1				
COMMENTS ①-BS - CODE 2									
CREW NAMES JAMES L.						DATE Y M D 15 11 12			

STRIP NO.: 1 DIRECTION: 170°-120°
START STRIP: 0-700
JOB NO.: PHE-5015 DATE: NOV 12, 15
CREW: JK / PAT
REMARKS:

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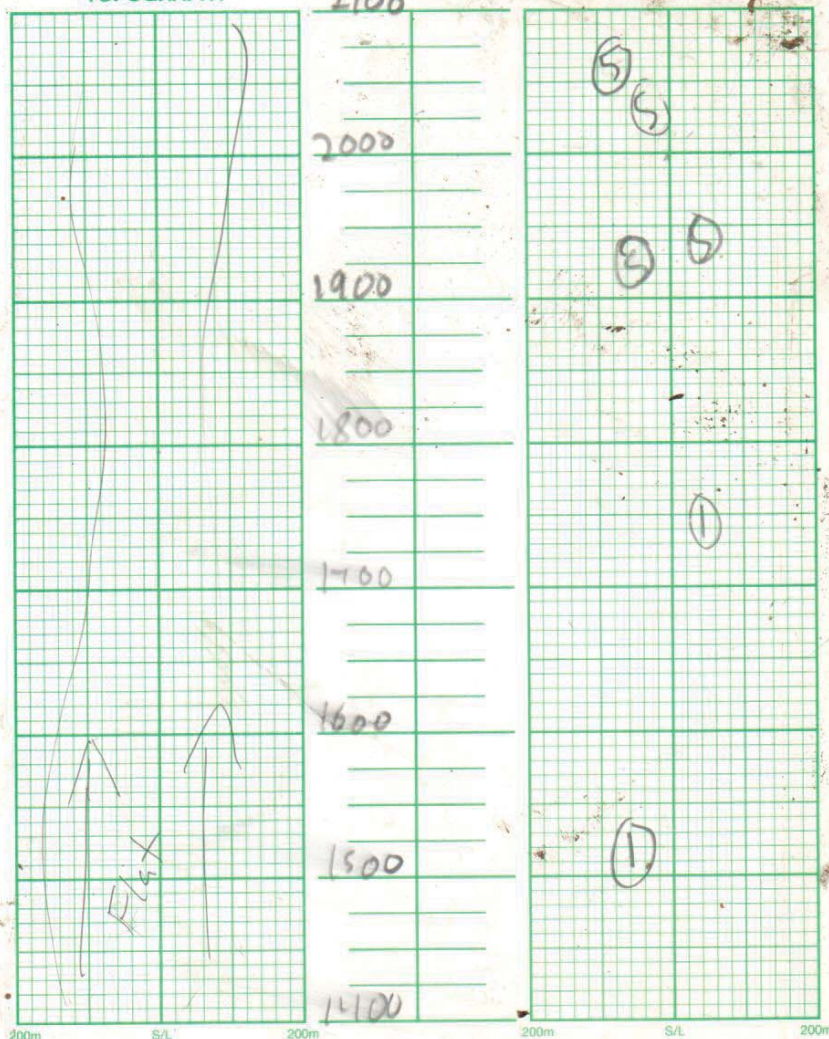
STRIP NO.: 1 DIRECTION: 120°
START STRIP: 200-1400
JOB NO.: PH1-8155 DATE: NOV 12, 15
CREW: JK PAT
REMARKS: _____

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TOPOGRAPHY

STRIP No. 1

TIMBER TYPE



STRIP NO.: 1

DIRECTION: 170°

START STRIP: 1400-2100

JOB NO.: PH1-5015

DATE: NOV 12, 15

CREW:

REMARKS:

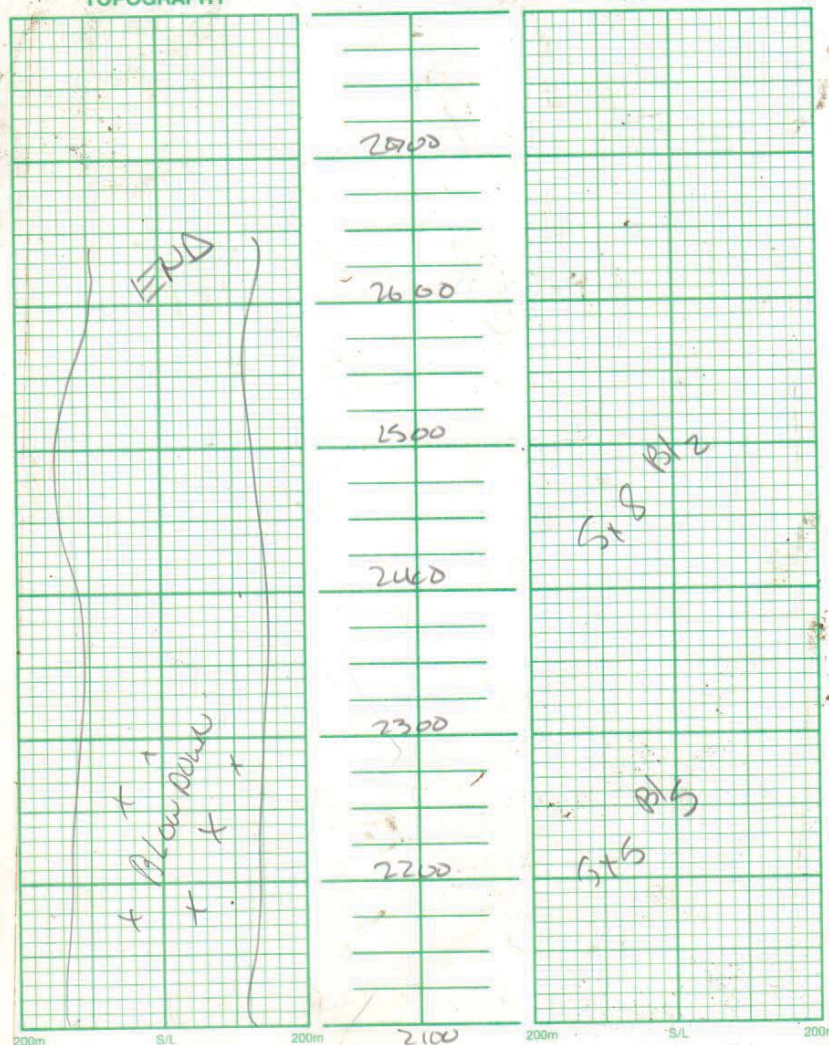


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TOPOGRAPHY

STRIP No. 1

TIMBER TYPE



STRIP NO.: 1

DIRECTION: 170°

START STRIP: 2100-2800

JOB NO.: PH1-015

DATE: NOV 12, 15

CREW: SK / PAT. P

REMARKS:



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