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SPRUCE BARK BEETLE REPORT
FH17DPG218

STAR PROBE# **2016-MIS-0059** 320

NUMBER OF CODE 1-4 ATTACK 6

PROBE LINE YES

SUMMARY OF CURRENT INFESTATION **MODERATE ATTACK**

Three grouped sites all with similar results. (MIS0058- 10 C1, 2 C5, MIS-0059- 6 C1, 5 C-5, MIS-060- 13 C1, 7 C5) All combined, from 3 probe lines sites have a moderate Sanitation priority rating with site MIS-0058 carrying a heavy rating. Site MIS0058 also had fresh silviculture flagging in site. All site have good access and are surrounded by plantations.

ACCESS

From truck, walk 200-300m into sites. All flat ground, heavy blowdown

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

Large DBH Spruce, Heavy blowdown , Flat ground, some areas wet. Plantations surround the sites. Overall 60% Spruce, 40% Balsam

SIZE, BOUNDARY and PATTERN OF INFESTATION

Moderate attack found with MIS0058- 10 C1, 2 C5, MIS-0059- 6 C1, 5 C-5, MIS-060- 13 C1, 7 C5 attacked trees. The sites have large DBH spruce trees and are fairly concentrated within sites on edges of plantations.

INCIDENCE AND SEVERITY OF ATTACK

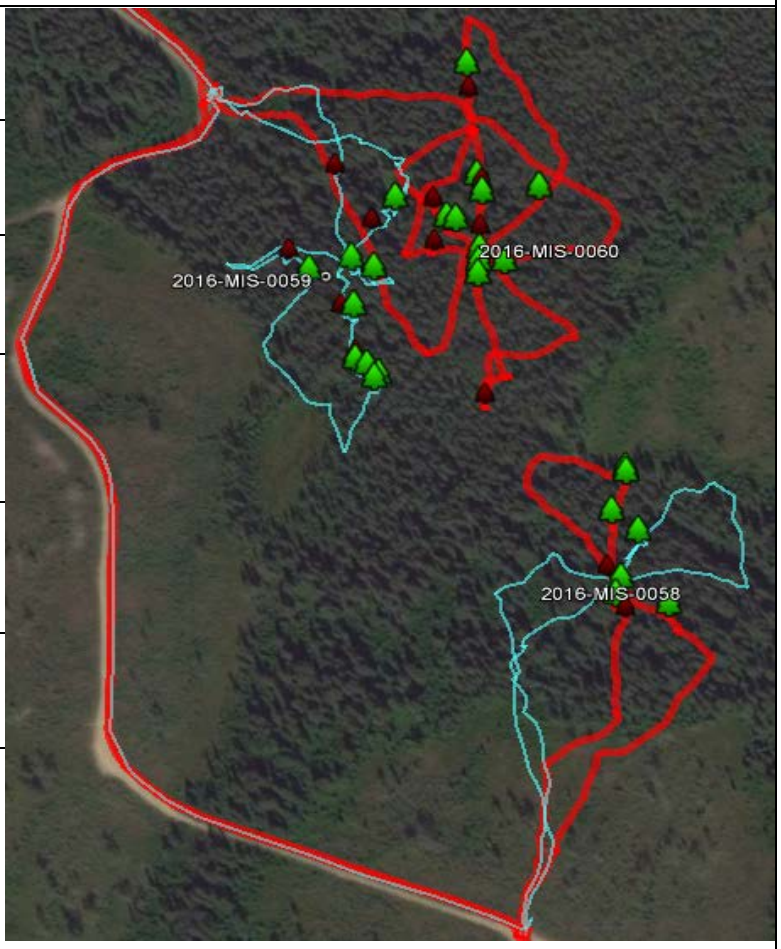
Moderate attack densities and overall moderate sanitation priority ratinf between the three sites. (Site MIS-0058 Heavy rating, 0059,0060 Light Ratings)

RISK OF BEETLE SPREAD and SURROUNDING SITES

These three sites have good access with moderate attack. Attack can move east and northward and trees are on a 1 and 2 year cycle with large DBH trees in area. Moderate risk of beetle spread from these sites and only identified sites in area

ACCESS, OPERABILITY and INTEGRATED RESOURCE MGMT ISSUES

Edge os plantations, SIteMIS-0058 has creek running through it, all flat, some wet areas.



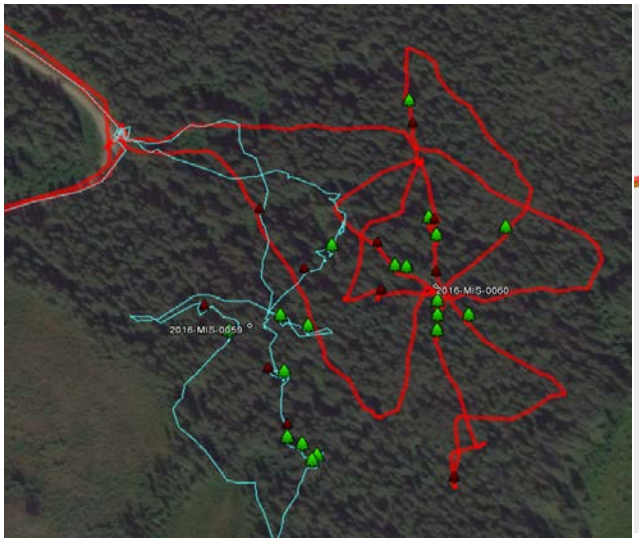
RECOMMENDATIONS

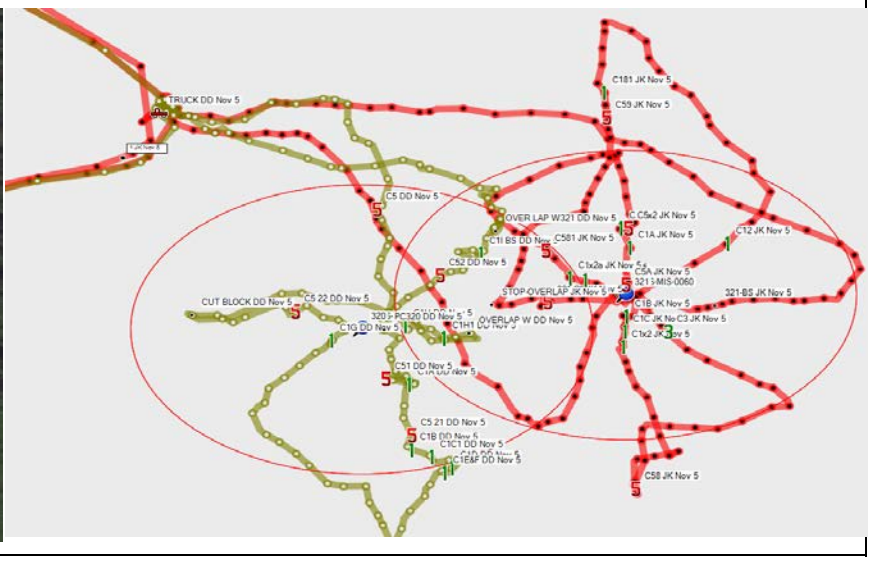
OPTION 1 **TRAP TREES**

As three sites with good access grouped together, it is best to treat the three together. A few trap tree trails could be utilizied to capture any additional attack. As moderate attack density, may be more efficient to fall and burn sites however some large DBH Trees would make it wasteful. Much of the attack is on a 2 year cycle, although some of the beetle in area will fly in 2017.

OPTION 2 **HARVEST**

Although sanitation rating Moderate, good access sites that could be harvested in fall/ winter 2017.





Summary

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TABLE 5- Spruce Beetle Infestation Summary Sheet

OF NOTE- Results taken from a 100m Probe Line

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	0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
25.1-30.0	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	31.8
30.1-35.0	7.1	28.4	0.0	0.0	0.0	0.0	0.0	0.0	127.8
35.1-40.0	9.4	112.8	9.4	0.0	0.0	0.0	0.0	0.0	75.2
40.1-45.0	11.6	301.6	11.6	0.0	0.0	0.0	0.0	0.0	11.6
45.1-50.0	13.8	96.6	41.4	0.0	0.0	0.0	13.8	0.0	0
50.1-55.0	16.2	64.8	16.2	0.0	0.0	0.0	48.6	0.0	0
55.1-60.0	18.7	18.7	0.0	0.0	0.0	0.0	0.0	0.0	18.7
60.1 +	25.3	0	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	769.2	628.2	78.6	0	0.0	0.0	62.4	0	275

TABLE 4- Spruce Beetle Attack Density and Larval Density Rating

MEAN NO. OF ENTRANCE HOLES PER 225 cm2 PHLOEM SAMPLE		MEAN NO. OF LIVING LARVAE PER 225 cm2 PHLOEM SAMPLE	
	< 1 LOW Attack Density		< 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
3.17	< 3.9 SEVERE Attack Density	3.33	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

			SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2016 ATTACK	10.2%	##				902.1
% 2015 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	
% 2014 ATTACK	8.1%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	73.7%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS: 3

ACCESS - From truck, walk 200-300m into sites. All flat ground, heavy blowdown

SITE FEATURES - Large DBH Spruce, Heavy blowdown , Flat ground, some areas wet. Plantations surround the sites. Overall 60% Spruce, 40% Balsam

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	0	0	0	0	0	0	0	3	0
25.1-30.0	5.3	1	0	0	0	0	0	0	6	0
30.1-35.0	7.1	4	0	0	0	0	0	0	18	0
35.1-40.0	9.4	12	1	0	0	0	0	0	8	0
40.1-45.0	11.6	26	1	0	0	0	0	0	1	0
45.1-50.0	13.8	7	3	0	0	0	1	0	0	0
50.1-55.0	16.2	4	1	0	0	0	3	0	0	0
55.1-60.0	18.7	1	0	0	0	0	0	0	1	0
60.1 +	25.3	0	0	0	0	0	0	0	0	0
TOTALS		55	6	0	0	0	4	0	37	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 Y r	Y r ____	Unattacked
6	19	11	20	0	0	0	0	0

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

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INCIDENCE AND SEVERITY OF THE INFESTATION

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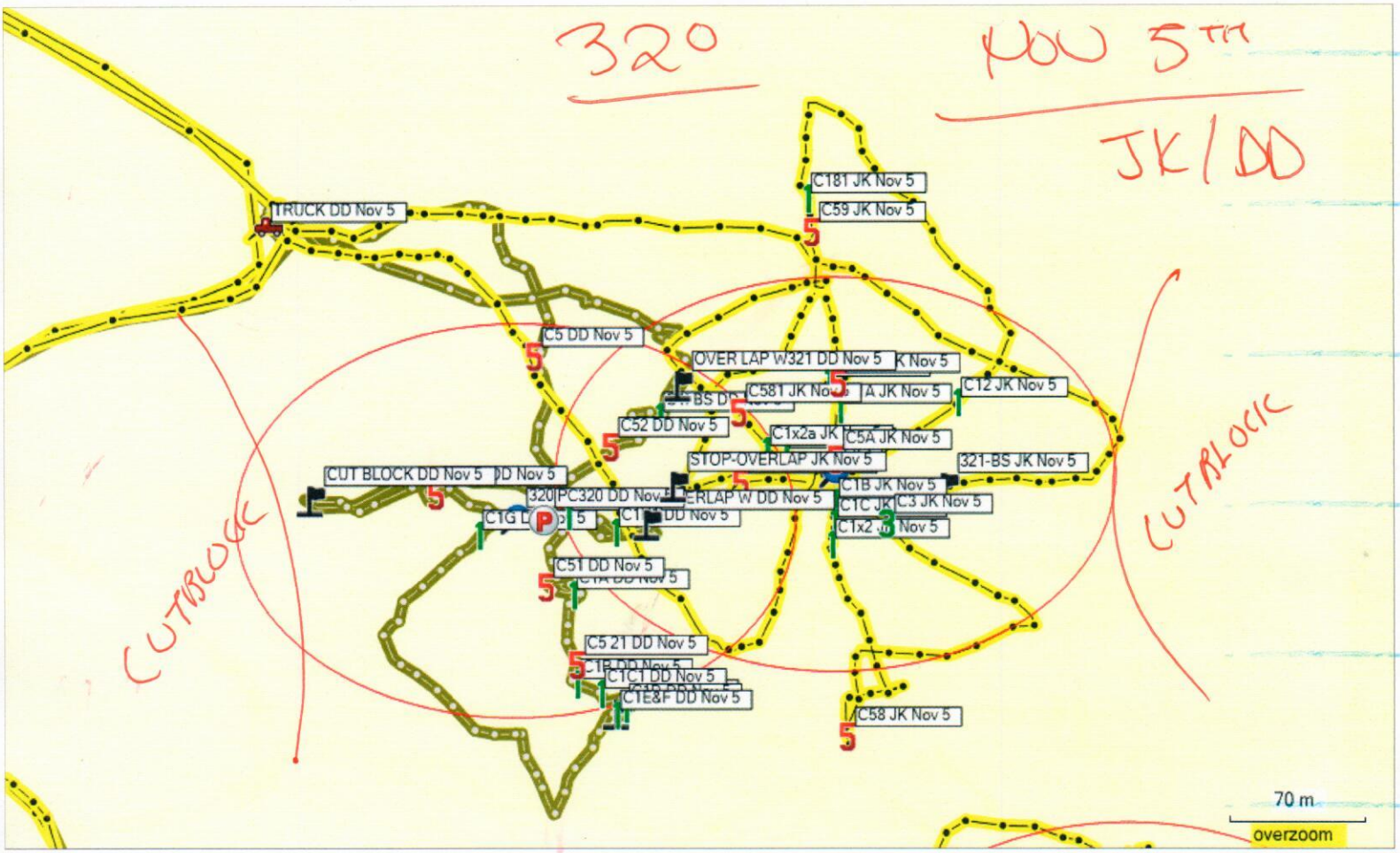
RISK OF BEETLE SPREAD

These three sites have good access with moderate attack. Attack can move east and northward and trees are on a 1 and 2 year cycle with large DBH trees in area. Moderate risk of beetle spread from these sites and only identified sites in area

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

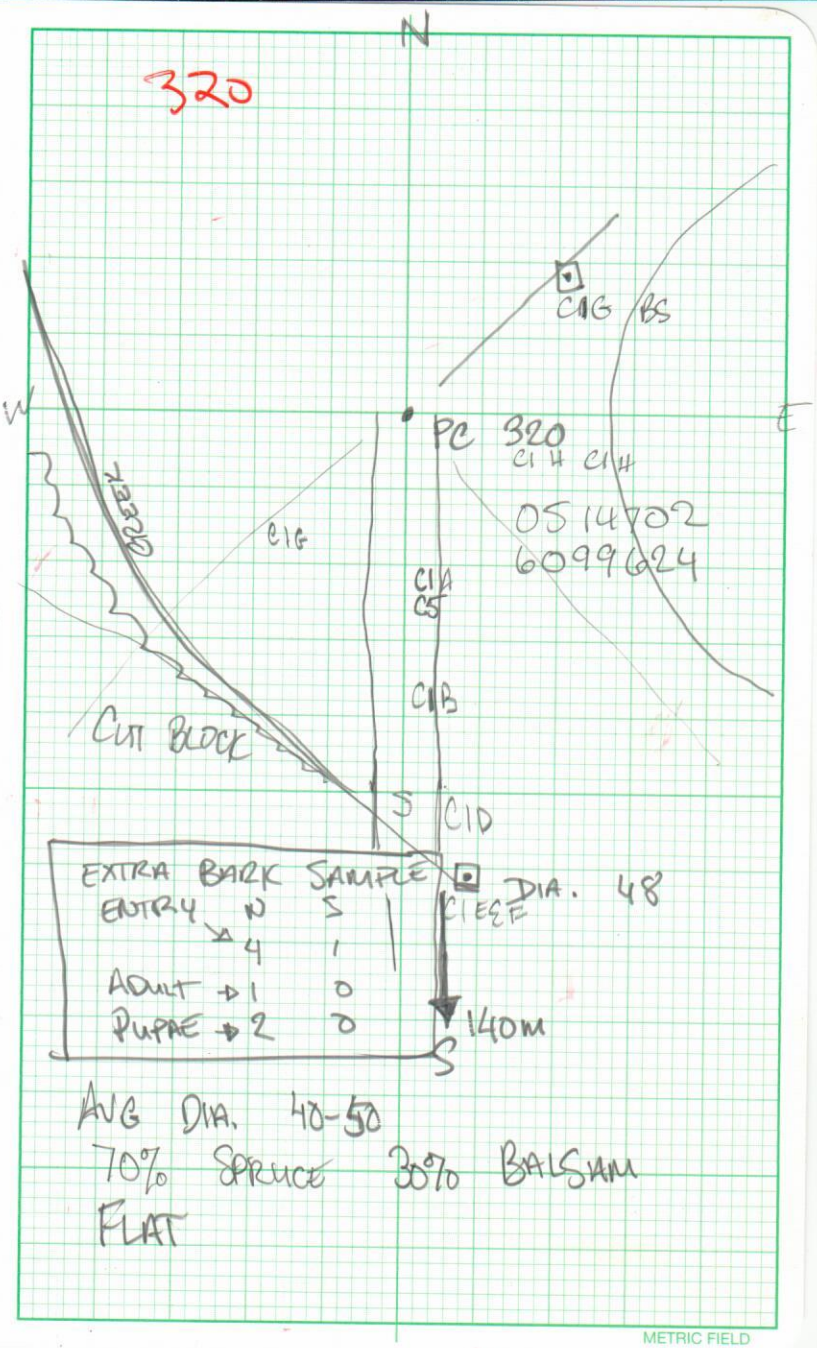
Edge os plantations, SIteMIS-0058 has creek running through it, all flat, some wet areas.



Attack - C1 = 6
C5 = 5

Access - From truck, walk 200 m @ 120°

Features - Heavy blow down in areas.
Large Sx. Moist ground.
66% Sx 33% Bl. flat ground



R.D. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

METRIC FIELD

320

SPRUCE BEETLE PROBE CARD

LOCATION		PAGE	OF
0514713	6099582	1	1
BEARING	**DISTANCE**	**STRIP WIDTH**	
180°	100 m	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								
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		10	1						5

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN	
						Attacked	Unattacked
♀	4	1	1				
♂	4	0	2				

COMMENTS ⊙ BARK SAMPLE - FLAT GROUND
- 66% spruce
- 33% balsam

CREW NAMES	DATE Y	M	D
DARLYL DORTHEE	16	11	5

FS 1111 RPG 2000/01 7530881048 (100/bdl)