

**Provincial Level Projection of the Current
Mountain Pine Beetle Outbreak:
An
Overview of the Model (BCMPBv.2)
and
Results of Year 2 of the Project**

**Appendix 5
Results of a Reconnaissance Trip from Vanderhoof to
the Kenney Dam; September 2004**

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Introduction

On September 22, 2004 Nathan Voth (Stewardship Technician, Vanderhoof District) and I drove from Vanderhoof to Kenney Dam and back. Our intent was to get some indication as to how well the projection was matching with reality. The results are presented below. We made 6 stops and investigated 8 plots. We also hiked through the Kenney Dam fire and found very heavy levels of mortality in all the remaining pine.

Observations at Plots

- ❖ Plot 1 53:46:25.3 124:21:9.1
 - 65 year old spaced natural stand. Very heavy attack in all stems above 12.5 cm (80 to 100% kill). Large larvae, some starting to pupate, indicating attack is the result of an early flight.
 - Projection underestimates kill. Pixels in the area range from <10 % kill to 50 to 80% kill
- ❖ Plot 2 53:33:47.8 124:35:15.2
 - 100% kill in pine above 12.5 cm dbh. Some small pine appear to have survived the MPB attack but no are attacked and killed by Ips.
 - Projection underestimates kill. Pixels in the area are in the 50-80% and 80 to 100% categories
- ❖ Plot 3 53:34:8.7 125:00:4.7
 - Approximately 20 year old spaced and pruned stand. 50% of stems (counted) killed by MPB. Blue stain present but no brood appears to have been produced.
 - Projection significantly under-estimates kill. This is a plantation. The trees are < 60 years old and therefore are not subject to kill in the model

- ❖ Plot 3a 53:34:8.7 125:00:4.7
 - mature stand ~100 years old with good spruce understory. Approximately 20 of the volume in the stand is spruce. 100% mortality in pine.
 - Projection underestimates kill. Pixels in the area are in the 50-80% and 80 to 100% categories
- ❖ Plot 4 53:33:2.3 125:03:5.75
 - Mature stand nearly pure pine. All stems above 12.5 cm dbh are killed. The “green” stems in the photo are all green attack and dead.
 - Projection underestimates kill. Pixels in the area are in the 50-80% and 80 to 100% categories
- ❖ Plot 5 53:40:15.8 124:56:59.8
 - Mixed pine – spruce (50% 50%) stand. 1 live pine tree found. Lots of spruce blowdown
 - Projection underestimates kill to some extent. Pixels in the area are in the 50-80% and 80 to 100% categories
- ❖ Plot 6 53:43::09.7 124:57:19.8
 - pure pine with a good pine understory. 80-100 years old. Recent kill with some green attack. ~80 of all stems in the canopy have been killed.
 - Projection significantly under-estimates kill. Pixels in the area are predominantly in the 11-25% kill category
- ❖ Plot 6a 53:43::09.7 124:57:19.8
 - 80 – 100 year old stand of pure pine with a poorly developed understory. 3 prisms sweeps (5 BAF) counted 22 trees larger than 12.5 cm dbh. 81% killed (71% red and dead, 10% green attack).
 - Projection significantly under-estimates kill. Pixels in the area are predominantly in the 11-25% kill category

Summary

Mortality at or near 100% of merchantable volume was observed in all mature plots south of the “Holy Cross Mountain salvage line” (plots 2, 3a, 4 and 5).

Mortality levels above 80% of merchantable volume were observed in mature (plots 6 and 6a) and a 65 year old plot (plot 1) north of the “Holy Cross Mountain salvage line”.

Mortality levels in 20 year old spaced and pruned stands (plot 3) are not expected in the model.

Plot 1 53:46:25.3 124:21:9.1

65 year old spaced natural stand. Very heavy attack in all stems above 12.5 cm. Large larvae, some starting to pupate, indicating attack is the result of an early flight.



Plot 1 showing early faders



Plot 2

53:33:47.8 124:35:15.2

100% kill in pine above 12.5 cm dbh. Some small pine appear to have survived the MPB attack but no are attacked and killed by Ips.



Plot 3

53:34:8.7 125:00:4.7

Approximately 20 year old spaced and pruned stand. 50% of stems (counted) killed by MPB. Blue stain present but no brood appears to have been produced.



Plot 3a

53:34:8.7 125:00:4.7

mature stand ~100 years old with good spruce understory. Approximately 20% of the volume in the stand is spruce. 100% mortality in pine.



Plot 4

53:33:2.3 125:03:5.75

Mature stand nearly pure pine. All stems above 12.5 cm dbh are killed. The “green” stems in the photo are all green attack and dead



Plot 4



Plot 5

53:40:15.8 124:56:59.8

Mixed pine – spruce (50% 50%) stand. 1 live pine tree found. Lots of spruce blowdown



Plot 6

53:43::09.7 124:57:19.8

pure pine with a good pine understory. 80-100 years old. Recent kill with some green attack. ~80 of all stems in the canopy have been killed.



Plot 6a

53:43::09.7 124:57:19.8

80 – 100 year old stand of pure pine with a poorly developed understory. 3 prism sweeps (5 BAF) counted 22 trees larger than 12.5 cm dbh. 81% killed (71% red and dead, 10% green attack).

