

Damage Reports

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Whenever the codes for Blowdown, Fire and/or Insect damage are detected on card type 2s, damage reports are produced in addition to the normal (non-damage related) output. These reports will segregate the reported volumes into separate damage types and/or codes, as indicated. Root rot damage is reported for block summaries only and is optional.

The damage reports will be the same as the normal output, only there will be a designation of species and damage type and damage codes on the report.

Damage Type	Code	Description	Species
Blowdown	E	Down trees	All Species
	G	Down and shattered trees	All Species
Fire	A	Light fire	All Species
	B	Medium fire	All Species
	C	Heavy fire	All Species
Insect/Disease	1	Green attack	Balsam, Pine
	2	Red attack	Balsam, Pine
	3	Grey attack	Balsam, Pine
	4	Blister rust	White Pine
	5	Green attack - alive	Spruce, Douglas Fir
	6	Green attack - dead	Spruce, Douglas Fir
	7	Grey attack - dead	Spruce, Douglas Fir

Damage Type	Code	Description	Species
	8	Red attack	Douglas Fir
	X	Defoliator G live cambium	All Species
	Y	Defoliator D dead cambium	All Species
Root Rot	J	Light	All Species
	K	Moderate	All Species
	L	Heavy	All Species

4.1 List of Damage Reports

The following damage reports are required for damage types Blowdown, Fire, and Insect:

1. 006 Extended Forest Type Stand and Stock Table, one page with all trees, one page with non-damaged trees, and one page for each Blowdown, Fire, or Insect damage code.
2. 007 Stand and Stock Tables, one page for each species and damage type containing each of the damage codes for that damage type.
 - i 007a Block Stand Table.
 - ii 007b Block Stock Table.
 - iii 007c Block Basal Area.
 - iv 007d Timber Type Stand Table.
 - v 007e Timber Type Stock Table.
 - vi 007f Timber Type Basal Area.
 - vii 007g Cutting Permit Stand Table.
 - viii 007h Cutting Permit Stock Table.
 - ix 007i Cutting Permit Basal Area.
3. 009 Volume Summaries, one page for each species and damage type reporting each of the damage codes for that damage type.
 - i 009a Timber Type Summary.
 - ii 009b Block Summary.
 - iii 009c Cutting Permit Summary.
 - iv 009d Treatment Unit within Block Summary - Coast only.
4. 011 Plot Summary, damage code volumes segregated for each species.
5. 015 Harvesting Method Summary, percent net volumes will be segregated for each Harvesting Method under the headings Fire, Heavy Fire (Damage code C), Down trees, and Insect damage.

The following damage reports are optional:

1. 009b Root Rot Block Summary.

4.2 Damage Report Calculation

Trees with multiple damage codes will report each damage type in the *Damage Summary Reports*. The damage code or codes that will assign the highest risk group will be used in the calculation of the net volume for each of the damage types. If pathological indicator(s) move the risk group higher than the damage code(s) then use the risk group from the pathological indicator(s) to calculate the *Damage Summary Reports*.

Example 1:

Cruise = 1 ha, 1 plot, 1.0 m³ mature Lodgepole Pine tree that represents 100 stems/ha with down tree code G, fire code C and insect 3:

Risk groups (RG) -Down Tree = RG3, Fire = RG2, Insect 3 = RG 2. Use RG 3 since it is the highest risk group.

Volume - Hypothetical loss factor DWB = 30% plus 28% for the grey attack breakage add-on plus 40% Fire C breakage add-on = 98%.

Tree = 1.0 m³ - 0.98 m³. Cruise volume per hectare = 0.02 * 100 stems = 2 m³.

Damage reports -Type, Block and Cutting Permit Damage Report Net Volume = 2 m³ for Lodgepole pine Down Tree (G), Fire (C) and Insect (3).

Example 2:

Cruise = 1 ha, 1 plot, 1.0 m³ mature Lodgepole Pine tree that represents 100 stems/ha with down tree code G, fire code B and insect 3:

Risk groups (RG) -Down Tree = RG3, Fire = RG2, Insect 3 = RG 2. Use RG 3 since it is the highest risk group.

Volume - Hypothetical loss factor DWB = 30% plus 28% for the grey attack breakage add-on plus 5% Fire B breakage add-on = 63%.

Tree = 1.0 m³ - 0.63 m³. Cruise volume per hectare = 0.37 * 100 stems = 37 m³.

Damage reports -Type, Block and Cutting Permit Damage Report Net Volume = 37 m³ for Lodgepole pine Down Tree (G), Fire (B) and Insect (3).

4.3 Sample Damage Report Listings

Some of the DBH classes have been removed from these sample listing.

4.3.1 Extended Forest Type Stand and Stock Damage Report - Sample Listing

(006) PAGE 4
 COMPUTED 2001-03-19 17:42:54
 AVERAGE LINE
 USELESS VOLUMES EXCLUDED
 NO. OF LIVE TREES 1.
 NO. OF DEAD TREES 0.

FOREST REVENUE BRANCH - 2001.0 FOREST TYPE STAND AND STOCK TABLE (STEMS/HA)
 NOT FOR APPRAISAL PURPOSES DUE TO NON-STANDARD UTILIZATION *** DOUBLE SAMPLING CRUISE ***
 NOTE - ALL TREES GREATER THAN 275 CM ARE INCLUDED IN THE 275 CM CLASS

LICENCE NUMBER CF7080 TYPE 1 - PA H C 9 4 1 SPECIES CDAR
 CUTTING PERMIT 000 ROAD/LANDINGS AREA - 5.0 OTHER AREA - 0.0 NO. OF PLOTS (M/C) 3. NO. OF DEAD TREES 0.

DOWN & SHATTERED - UPROOTED DAMAGE

DBH CL CM.	AVERAGE		LIVING TREES					TOTAL
	HT (M)	NET MESH PER TREE (M3)	RISK GROUP 0	RISK GROUP 1	RISK GROUP 2	RISK GROUP 3	POTENTIAL DEAD	
40								
45								
50	37.5	2.807			10.33			10.33
55								
60								
65								
70								
75								
80								
85								
90								
TOTAL OF AVERAGES		+		10.33				10.33
PERCENT BY TREE CLASS				100.00				100.00
			AVERAGE DBH(CM) AT 5 LEVELS					
TREES 12.5		+		55.50				55.50
TREES 17.5		+		55.50				55.50
TREES 22.5		+		55.50				55.50
TREES 27.5		+		55.50				55.50
TREES 32.5		+		55.50				55.50

Figure 4.1 Extended Forest Type Stand and Stock Damage Report - Sample Listing (Partial).

4.3.2 Block Stand Damage Table - Sample Listing

4.3.3 Block Volume Summary Damage Report - Sample Listing

FOREST REVENUE BRANCH - 2001.0		BLOCK SUMMARY	
NOT FOR APPRAISAL PURPOSES DUE TO NON-STANDARD UTILIZATION ***** DOUBLE SAMPLING CRUISE *****		(009B)	PAGE 51
		COMPUTED 2001-03-19	17:42:57
		AVERAGE LINE	
		12.5	
LICENCE NUMBER CF7080	P.S.Y.U. 34-0	NO. OF BLOCKS	2
CUTTING PERMIT 000	F.I.Z. J	USELESS VOLUMES EXCLUDED	6
BLOCK NUMBER 001	5.0 SELECTIVE	NO. OF PLOTS USED (M/C)	6
CLEARCUT		ALBICANDIS PINE - UPROOTED DAMAGE	
		SHATTERED	TOTAL
UTILIZATION	NORMAL		
COMPLETION TYPE	3		
MINIMUM DBH	12.5		
STUMP HEIGHT	30.0		
TOP DIAMETER	10.0		
LOG LENGTH	5.0		
VOLUME AND SIZE DATA			
GROSS MERCH VOLUME M3	1200.	81.	1742.
NET MERCH VOLUME M3	1026.	69.	1484.
NET MERCH./HECTARE M3	205.	14.	297.
% DISTRIBUTION/HECTARE	69.	5.	100.
DECAY	9.	9.	9.
% GROSS	3.	4.	3.
WASTE (BILLING) % NET	4.	4.	4.
BREAKAGE	2.	2.	2.
TOTAL CULL (DWB) % GROSS	15.	15.	15.
STEMS/HA (GREEN & DP)	82.9	6.9	46.6
SNAGS/HA (DU)	12.3	0.0	12.3
AVG. DBH (GREEN&DP) CM	0.4	0.8	0.4
AVG. DBH (SNAGS) CM	0.6	0.0	0.6
GROSS MERCH VOL/TREE M3	2.91	2.50	2.00
NET MERCH VOL/TREE M3	2.49	2.13	1.69
AVG. WEIGHT TOTAL HT M	0.0	0.1	0.0
AVG. WEIGHT MERCH HT M	0.0	0.1	0.0
AVG. 5M LOG NET MER M3	0.48	0.44	0.38
AVG. # OF 5M LOGS/TREE	5.34	5.00	4.53
LUMBER AND CHIPS			
% NET MERCH - STUD LOG	20	20	48
% NET MERCH - SMALL LOG	80	80	52
LRF SMALL LOGS ED FT/M3	10	9	4
LRF LARGE LOGS ED FT/M3	3	3	3
AVG LRF ED FT/M3	2	2	2
CHIP YIELD UNITS/M3	.26	.26	.27
ALGORITHM GRADE %			
#1 SAWLOG	63.	94.	55.
#3 SAWLOG	10.	0.	27.
#4 CHIPPER	27.	6.	19.
#5 CHIPPER	0.	0.	18.

Figure 4.3 Block Volume Summary Damage Report - Sample Listing.