
A Field Guide for Identifying Summer Frost-prone Sites in the Cariboo Forest Region: A Supplement to FRDA Report 157

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Refer to: *Identification and Management of Frost-prone Sites in the Cariboo Forest Region, FRDA Report 157*, for explanation and use of these tables.

DEFINITION OF FROST HAZARD CLASSES FOR THE CARIBOO FOREST REGION

Summer frost hazard class	Expected damage and mortality							
	Douglas-fir		Interior spruce		Lodgepole pine			
	Damage	Mortality	Damage	Mortality	Damage	Mortality	Damage	Mortality
expected incidence								
Very Low VL								
0 in 10 years <-4°C	None	None	None	None	None	None	None	None
0 in 10 years <-8°C								
Low L								
1-2 in 10 years <-4°C	Moderate	Limited						
0 in 10 years <-8°C								
Medium M								
3-6 in 10 years <-4°C			Moderate					
1-2 in 10 years <-8°C								
High H								
7-10 in 10 years <-4°C								
3-5 in 10 years <-8°C	Severe	Extensive						
Very High VH								
10 in 10 years <-4°C								
>5 in 10 years <-8°C								

GUIDE TO PRELIMINARY FROST HAZARD CLASS RATINGS FOR CLEARCUTS IN THE CARIBOO FOREST REGION

Biogeoclimatic subzones/variants	Mesoslope position	Slope gradient	Frost hazard
Group 1: BGxh3,xw2 IDFxw PPxh2	Crest, Upper, Mid -----	>5% -----	VL
	Lower -----	>15% -----	VL
		<15% -----	L
	Toe, Depression, Level -----	< 5% -----	L
Group 2: IDFdk1 IDFmw2 IDFxm (Fraser R.) SBSmh	Crest -----	> 5% -----	VL
	Upper, Mid -----	>15% -----	VL
		<15% -----	L
	Lower -----	all slopes -----	L
	Toe, Depression -----	< 5% -----	M
Level -----	< 5% -----	L	
Group 3: ICHdk ICHmk3 ICHmw3 ICHwk2,wk4 SBSdw1	Crest -----	> 5% -----	VL
	Upper, Mid -----	>15% -----	VL
		<15% -----	L
	Lower -----	>15% -----	L
		<15% -----	M
	Toe, Depression -----	< 5% -----	H
Level -----	< 5% -----	L	
Group 4: IDFdk3 IDFxm (Chilcotin) SBSdw2 SBSmw	Crest -----	> 5% -----	VL
	Upper -----	>15% -----	VL
		<15% -----	L
	Mid -----	>15% -----	L
		<15% -----	M
	Lower -----	>15% -----	L
		<15% -----	M
	Toe, Depression -----	< 5% -----	H
Level -----	< 5% -----	M	
Group 5: IDFdk4	Crest -----	> 5% -----	VL
	Upper -----	>15% -----	VL
		<15% -----	M
	Mid -----	>15% -----	L
		<15% -----	M
	Lower -----	>15% -----	L
		<15% -----	H
Toe, Depression -----	< 5% -----	H	
Level -----	< 5% -----	M	

GUIDE TO PRELIMINARY FROST HAZARD CLASS RATINGS FOR CLEARCUTS IN THE CARIBOO FOREST REGION

Biogeoclimatic subzones/variants	Mesoslope position	Slope gradient	Frost hazard
Group 6: MSxk SBPSdc SBPSmc SBPSmk SBSmc1,mc2	Crest -----	> 5% -----	L
	Upper, Mid -----	>15% -----	L
		<15% -----	M
	Lower -----	>15% -----	M
		<15% -----	H
	Toe, Depression -----	< 5% -----	H
	Level -----	< 5% -----	M
Group 7: ESSFdc2 ESSFwk1 SBPSxc SBSwk1	Crest -----	> 5% -----	L
	Upper, Mid -----	>15% -----	M
		<15% -----	H
	Lower -----	>15% -----	M
		<15% -----	H
	Toe, Depression -----	< 5% -----	VH
	Level -----	< 5% -----	H
Group 8: ESSFwc3 ESSFxv MSxv	Crest -----	> 5% -----	M
	Upper, Mid -----	>15% -----	M
		<15% -----	H
	Lower -----	>15% -----	H
	Lower, Toe, Depression -----	<15% -----	VH
	Level -----	< 5% -----	VH

SITE FACTORS THAT MAY INCREASE OR DECREASE THE PRELIMINARY FROST HAZARD CLASS RATING

Factors that May Increase the Hazard¹

1. **Large upslope source area.**
2. **Impediment to downslope cold air flow**
3. **Microtopographic depression, especially on level terrain**
4. Cold air channel, gently sloping
5. Grass-dominated vegetation on level sites
6. North aspect

Factors that May Decrease the Hazard

1. **Tree or tall shrub canopy**
2. **Microtopographic crest or knob, especially on level terrain**
3. Mineral soil exposure on upper, mid- or level slope position
4. Abundant slash
5. South or south-west aspect

¹ Factors in bold may affect the hazard rating by as much as one class.