

Table 5.3.8: Major, moderate and minor abiotic (A) and biotic (B) defects that reduce quality potential in conifers and recommended action. Defects are listed in decreasing order of priority for removal (from top to bottom).

	Defect agent	How to identify	Effects on tree quality potential	Recommended action	
Most Damaging ↑	Major defect—trees with these defects will degrade rapidly (UGS)	<ul style="list-style-type: none"> infects trees in previously thinned conifer plantations causes roughly circular patches of dead trees infected trees have thin, off-colored foliage 	<ul style="list-style-type: none"> spreads via root grafts and exposed surfaces (stumps and wounds) of any conifer trees will gradually decline then die 	<ul style="list-style-type: none"> remove infected trees stumps in plantations should be treated with borax during thinning operations 	
	Fomes root rot (B)	<ul style="list-style-type: none"> see description for dead top in Table 5.3.6 			
	Dead top (A or B)	<ul style="list-style-type: none"> see description for darkface scar in Table 5.3.5 			
	Darkface scar > 968 cm ² (A)	<ul style="list-style-type: none"> see description for butt flare, barreling in Table 5.3.5 			
	Butt barreling (B)	<ul style="list-style-type: none"> shelf-like conk with shiny reddish surface occur only on dying or dead trees (i.e., a scavenger rot) infects hemlock 	<ul style="list-style-type: none"> indicates decay 	<ul style="list-style-type: none"> remove infected trees 	
	Varnish conk (B)	<ul style="list-style-type: none"> see description for butt flare, barreling in Table 5.3.5 			
	Significant defects—trees with these defects will degrade slowly (AGS), but are considered UGS if defect is severe				
	Porcupine feeding damage (B)	<ul style="list-style-type: none"> feeding usually takes place high in the tree and girdling usually results in dead tops 	<ul style="list-style-type: none"> tree defect class will be either AGS or UGS depending on severity and position 	<ul style="list-style-type: none"> remove tree if UGS, otherwise retain 	
	Red ring rot (B)	<ul style="list-style-type: none"> rust-brown shelf-like fruiting body sometimes located beneath a branch stub infection occurs through wounds, broken branch stubs and possibly branches damaged by white pine weevil 	<ul style="list-style-type: none"> causes a white pocket rot <i>P. pini</i> is the most common and causes extensive heart rot 	<ul style="list-style-type: none"> remove infected trees, unless required for seed production or crown closure 	
	Darkface scar < 968 cm ² (A)	<ul style="list-style-type: none"> see description for darkface scar in Table 5.3.5 			
	White pine weevil (B)	<ul style="list-style-type: none"> evidence of past damage is usually indicated by deformed stems 	<ul style="list-style-type: none"> tree defect class will be either AGS or UGS depending on severity and position 	<ul style="list-style-type: none"> maintain 50 % crown closure to protect establishing regeneration from weevil damage 	
	White pine blister rust (B)	<ul style="list-style-type: none"> early stages: patches of yellow to orange bark later stages: swollen cankers on branches or trunk; heavy resin flow is usually associated with cankers 	<ul style="list-style-type: none"> tree defect class will be either AGS or UGS depending on severity and position 	<ul style="list-style-type: none"> remove tree if UGS, otherwise retain 	
	Crown dieback (B)	<ul style="list-style-type: none"> see description for crown 50 % defoliated in Table 5.3.5 			
Pine bark beetle (B)	<ul style="list-style-type: none"> male beetles cut holes through the bark to the wood where beetles construct egg-laying galleries kills the vascular system of the tree 	<ul style="list-style-type: none"> is a major defect if found on the main stem, moderate if found on lateral branches smaller trees are killed quickly whereas on larger trees, branches are killed and cankers girdle the stem 	<ul style="list-style-type: none"> remove tree if feeding damage is found on main stem or if feeding damage is found on small-diameter trees 		