

MIGRATORY BIRD STRATEGY:
REDUCING INCIDENTAL TAKE FOR MIGRATORY BIRDS

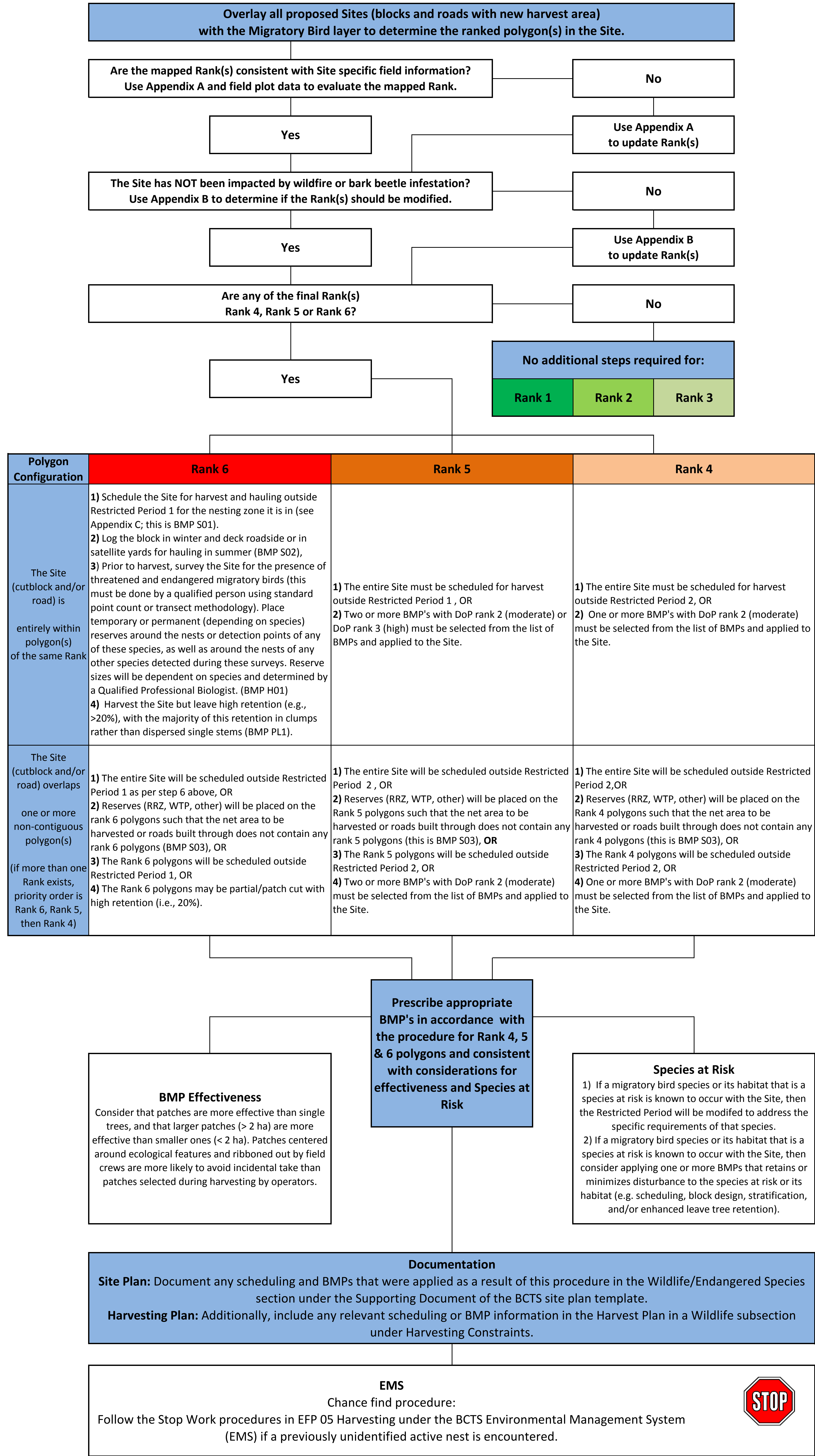
PROCEDURE

SCOPE		RISK RANKING LEGEND	#	Tier	RESPONSIBILITY	
Purpose: Provide guidance on how to identify times and areas of concern for migratory birds, to incorporate migratory bird management strategies into operational plans, and to implement the management strategies during harvesting activities			1	Very Low	Sustainability Officer, Woodlands Supervisor, Planning Foresters, Practices Foresters, Operations Technicians, Timber Technicians, Multiphase contractors	
Intended Result: Reduce the risk of and mitigate incidental take of migratory bird nests during forestry activities			2	Low		
CRITICAL OUTCOMES			3	Moderate		
1. Compliance with legal requirements			4	Moderately High		
2. Compliance with certification objectives/strategies			5	High		
3. Avoid/Reduce incidental take (unintended destruction) of active migratory bird nests			6	Very High		
STEP #	DESCRIPTION OF WORK ELEMENT (Use in conjunction with the flowchart)			ROLE	SUPPORTING INFORMATION	
1	BCTS staff and contractors are required to take the training on Migratory Birds and Incidental take, so that they are familiar with key points of federal and provincial legislation surrounding incidental take of migratory birds, and the parts of the Migratory Bird Strategy that apply to their job. Training will be an annual requirement for the first few years to accommodate changes due to continuous improvement.			BCTS Staff and Contractors working in the forest	Training presentations for staff, made available for contractors.	
2	Forested stands within BCTS's operating areas are ranked as to the relative density of migratory bird nests within them during the peak nesting season, based on characteristics including ecosystem type, age, height, and species composition. This ranking is made into a digital layer (hereafter called the Migratory Bird layer) in GIS and made available to forestry staff and contractors through data sharing agreements.			BCTS Sustainability Officer	Appendix A - Nest Density Ranking Matrix	
3	Planning Foresters will overlay all proposed Sites (blocks and roads with new harvest area) with the Migratory Bird layer to determine the ranked polygon(s) contained in the Site. 1) If the Site contains entirely ranks 1, 2 or 3, the planning and permitting process continues as usual with no additional steps required due to migratory bird nests, unless nests are found during layout (see training presentations if so). Silviculture must follow procedures as outlined in the training presentations. 2) If the Site contains any polygons of Ranks 4, 5 or 6, additional steps to eliminate, reduce, or mitigate incidental take must be implemented as outlined in steps 4 through 14.			Planning Forester, Silviculture	Migratory Bird Layer bctsdata.bcgov(X:)\tka_rot\Layer_Files\Wildlife\Migratory Bird Risk Ranking by TSA.lyr	
4	Field verify the Rank in each polygon associated with the Site. If the field plot data (recce data, SP data, or cruise data) is not consistent with the VRI data for the proposed Site: 1) Use the Nest Density Matrix (Appendix A) to rank the stand types within the Site using the field plot data, rather than using the Migratory Bird Layer in GIS. The intention is to use the best available information on the stand, that most accurately matches what it looks like on the ground. 2) Changes in rank classification must be supported with plot data and not simply a field visit to the stand, in order for them to be defensible. 3) Field plot data should be examined at the VRI polygon or timber type level, and not at the overall Site level. Using the Site level could mask stand types with higher ranks that are very important to nesting birds.			Practices Forester/ Ops Tech/ Multiphase contractors	Appendix A - Nest Density Ranking Matrix	
5	If the Site has been impacted by wildfire, Mountain Pine Beetle, or another forest health issue: See Appendix B for guidance in determining the rank as a result of the forest health issue. Note: A rationale is required if a stand is being logged to control the spread of an insect pest, and it is critical to log during the breeding season before the insects fly.			Practices Forester/ Ops Tech/ Multiphase contractors	Appendix B - Forest Health Guidance	
6	If the Site lies entirely within Rank 6 (Very High) polygon(s), there are four options for the block, in order of preference and effectiveness. Option 4 should be used only as a last resort when no other practicable option exists, and must not be used for all Rank 6 blocks. 1) Schedule the Site for harvest and hauling outside Restricted Period 1 for the nesting zone it is in (see Appendix C; this is BMP S01). 2) Log the block in winter and deck roadside or in satellite yards for hauling in summer (BMP S02), 3) Prior to harvest, survey the Site for the presence of threatened and endangered migratory birds (this must be done by a qualified person using standard point count or transect methodology). Place temporary or permanent (depending on species) reserves around the nests or detection points of any of these species, as well as around the nests of any other species detected during these surveys. Reserve sizes will be dependent on species and determined by a Qualified Professional Biologist. (BMP H01) 4) Harvest the Site but leave high retention (e.g., >20%), with the majority of this retention in clumps rather than dispersed single stems (BMP PL1).			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs. BMP Compendium Document (Sharepoint)	
7	If the Site overlaps one or more non-contiguous Rank 6 (Very High) polygons, then choose: 1) The entire Site will be scheduled outside Restricted Period 1, OR 2) Reserves (RRZ, WTP, other) will be placed on the rank 6 polygons such that the net area to be harvested or roads built through does not contain any rank 6 polygons (BMP S03), OR 3) The Rank 6 polygons will be scheduled outside Restricted Period 1, OR 4) The Rank 6 polygons may be partial/patch cut with high retention (i.e., 20%).			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs	
8	If the Site lies entirely within Rank 5 (High) polygon(s), then choose: 1) Then entire Site must be scheduled for harvest outside Restricted Period 1 , OR 2) Two or more BMP's with DoP rank 2 (moderate) or DoP rank 3 (high) must be selected from the list of BMPs and applied to the Site.			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs	
9	If the Site overlaps one or more non-contiguous Rank 5 (High) polygons, then choose: 1) The entire Site will be scheduled outside Restricted Period 2 , OR 2) Reserves (RRZ, WTP, other) will be placed on the Rank 5 polygons such that the net area to be harvested or roads built through does not contain any rank 5 polygons (this is BMP S03), OR 3) The Rank 5 polygons will be scheduled outside Restricted Period 2, OR 4) Two or more BMP's with DoP rank 2 (moderate) must be selected from the list of BMPs and applied to the Site.			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs	
10	If the Site lies entirely within a Rank 4 (Moderately High) polygon, then choose: 1) The entire Site must be scheduled for harvest outside Restricted Period 2, OR 2) One or more BMP's with DoP rank 2 (moderate) must be selected from the list of BMPs and applied to the Site.			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs	
11	If the Site overlaps one or more non-contiguous Rank 4 (Moderately High) polygons, then choose: 1) The entire Site will be scheduled outside Restricted Period 2,OR 2) Reserves (RRZ, WTP, other) will be placed on the Rank 4 polygons such that the net area to be harvested or roads built through does not contain any rank 4 polygons (this is BMP S03), OR 3) The Rank 4 polygons will be scheduled outside Restricted Period 2, OR 4) One or more BMP's with DoP rank 2 (moderate) must be selected from the list of BMPs and applied to the Site.			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs	
12	Restricted Period Dates: 1) If the specified end date of Restricted Period 2 is simply not workable, an earlier end date of July 15th may be used as an end date. This is in recognition that many of nests still active after mid-July are second nests, and these nests usually fail to hatch or fledge young. Thus, harvesting mid-July or later should not significantly impact the fledgling rate from the Site in question. However, strong attempts should be made to comply with the full extent of the timing restrictions where this will not significantly impact the contractor workforce or mill inventory requirements. At least some Sites should be delayed beyond the July 15 date to the original end dates. 2) SAR: If a migratory bird species or its habitat that is a species at risk is known to occur with the Site, then the Restricted Period will be modified to address the specific requirements of that species.			Practices Forester/ Ops Tech/ Multiphase contractors	Migratory Bird Layer in Resources, Appendix C - Restricted Periods, Appendix D - BMPs BCTS Wildlife SOP	
13	BMP Effectiveness: 1) Consider that patches are more effective than single trees, and that larger patches (> 2 ha) are more effective than smaller ones (< 2 ha). Patches centered around ecological features and ribboned out by field crews are more likely to avoid incidental take than patches selected during harvesting by operators. 2) SAR: If a migratory bird species or its habitat that is a species at risk is known to occur with the Site, then consider applying one or more BMPs that retains or minimizes disturbance to the species at risk or its habitat (e.g. scheduling, block design, stratification, and/or enhanced leave tree retention).			Practices Forester/ Ops Tech/ Multiphase contractors	BCTS Wildlife SOP	

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14	Documentation. Document any scheduling and BMPs that were applied as a result of this procedure in the Wildlife/Endangered Species section under the Supporting Document of the BCTS site plan template. Additionally, include any relevant scheduling or BMP information in the Harvest Plan in a Wildlife subsection under Harvesting Constraints.	Practices Forester/ Ops Tech/ Multiphase contractors	BCTS Site Plans
15	Chance find procedure: Follow the Stop Work procedures in EFP 05 Harvesting under the BCTS Environmental Management System (EMS) if a previously unidentified active nest is encountered.	 Woodlands Supervisor/ Timber Tech	BCTS EMS



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APPENDIX A
NEST DENSITY MATRIX*

BEC Zone	Leading Species	Age 3-30 years (Class 1 and part of 2)				Age 30-80 years (Class 2 (part), 3, 4)				Age 80-120 years (Class 5 and 6)				Age 121-250 (Class 7 and 8)				Age 250+ (Class 9)			
		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
BG/PP	Act	3	2	0	0	2	2	3	0	0	3	4	5	0	0	5	6	0	0	0	0
	At_Con	3	2	0	0	2	2	3	0	0	3	4	5	0	0	5	6	0	0	0	0
	CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Decid	3	2	0	0	2	2	3	0	0	3	4	4	0	0	0	0	0	0	0	0
	Fd>75%	1	1	0	0	1	1	2	0	1	2	3	3	2	3	4	4	0	4	4	4
	FdLw	3	2	0	0	1	2	3	0	0	3	4	4	3	4	5	5	0	0	5	5
	FdLw_Decid	2	1	0	0	1	1	3	0	2	3	4	4	3	3	4	5	0	4	5	5
	MixCon	2	1	0	0	1	1	2	0	1	2	3	4	2	3	4	4	0	5	5	5
	MixCon_Decid	3	2	0	0	2	2	0	0	0	0	4	0	0	0	5	5	0	0	0	0
	PI	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PI_Decid	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PI_Mix	2	0	0	0	0	1	0	0	0	2	3	0	0	0	0	0	0	0	0	0
	PyFd	2	1	0	0	1	1	2	3	1	2	3	3	0	3	4	4	0	0	4	5
	PyFd_Decid	3	2	0	0	1	2	0	0	1	2	4	4	0	3	4	5	0	0	5	5
	SB	0	0	0	0	0	0	3	0	1	3	4	0	0	0	4	5	0	0	5	5
	SB_Decid	0	0	0	0	0	0	0	0	0	4	5	0	0	0	5	5	0	0	5	6
BEC Zone	Leading Species	Age 3-30 years (Class 1 and part of 2)				Age 30-80 years (Class 2 (part), 3, 4)				Age 80-120 years (Class 5 and 6)				Age 121-250 (Class 7 and 8)				Age 250+ (Class 9)			
		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
IDF	Act	3	2	0	0	2	2	3	0	1	3	4	5	0	5	6	6	0	0	6	6
	At_Con	3	2	0	0	2	2	3	0	1	3	5	5	0	5	6	6	0	0	6	6
	CH	2	0	0	0	0	0	0	0	0	2	3	3	0	2	0	0	0	0	0	0
	CH_Decid	3	0	0	0	0	0	0	0	0	3	4	5	0	3	0	0	0	0	0	0
	Decid	3	2	0	0	2	2	3	0	1	2	4	5	0	3	4	5	0	0	6	6
	Fd>75%	1	1	0	0	1	1	2	3	1	3	3	4	1	2	3	4	0	4	5	5
	FL	3	2	0	0	1	2	3	4	2	3	4	5	2	3	5	5	0	0	5	6
	FL_Decid	2	1	0	0	1	1	2	3	1	3	4	4	2	3	4	4	0	4	5	5
	MixCon	2	0	0	0	1	1	2	3	2	2	3	4	2	3	4	4	0	4	5	5
	MixCon_Decid	3	0	0	0	0	0	0	0	0	3	4	4	0	4	0	0	0	0	0	0
	PI	1	1	0	0	1	1	2	0	1	2	3	3	2	2	3	3	0	0	3	0
	PI_Decid	2	2	0	0	1	2	3	0	0	3	4	4	0	3	4	0	0	0	0	0
	PI_Mix	2	1	0	0	1	1	2	0	2	3	4	4	3	3	4	4	0	0	4	0
	PyFd	2	1	0	0	1	1	2	3	1	3	4	4	1	3	4	5	0	0	4	5
	PyFd_Decid	3	2	0	0	1	2	3	3	2	3	4	5	1	3	4	5	0	0	4	5
	SB	2	0	0	0	1	1	2	0	1	2	4	4	0	3	4	5	0	0	5	5
	SB_Decid	3	0	0	0	1	2	3	0	2	3	4	5	0	3	4	5	0	0	6	6
BEC Zone	Leading Species	Age 3-30 years (Class 1 and part of 2)				Age 30-80 years (Class 2 (part), 3, 4)				Age 80-120 years (Class 5 and 6)				Age 121-250 (Class 7 and 8)				Age 250+ (Class 9)			
		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
ICH / MH	Act	3	3	4	0	3	3	3	4	2	4	5	5	3	4	5	6	0	0	6	6
	At_Con	3	2	3	0	3	2	3	4	2	4	5	5	3	4	5	6	0	5	6	6
	CH	2	1	0	0	2	1	3	3	1	3	3	4	2	3	4	4	2	3	4	5
	CH_Decid	3	2	0	0	3	2	3	0	1	3	4	4	3	3	5	5	2	3	4	6
	Decid	3	2	0	0	3	2	3	4	0	4	5	5	3	4	5	5	0	5	5	6
	Fd>75%	2	1	0	0	2	1	2	4	1	2	3	4	0	2	3	4	0	0	4	4
	FL	3	2	0	0	3	2	3	4	0	3	4	5	2	3	5	5	0	0	5	6
	FL_Decid	2	1	0	3	2	1	3	4	2	3	4	4	2	3	4	5	0	0	5	5
	MixCon	2	1	0	0	2	1	3	0	2	3	3	3	0	3	4	5	0	0	4	5
	MixCon_Decid	3	1	0	0	3	2	3	0	0	3	4	4	0	4	5	5	0	0	5	6
	PI	2	1	2	0	2	1	2	3	1	2	3	3	0	2	3	3	0	2	3	0
	PI_Decid	3	2	0	0	3	2	3	4	1	3	4	5	0	3	4	5	0	0	5	5
	PI_Mix	2	1	0	0	2	1	3	3	1	3	4	4	0	3	4	4	0	3	4	5
	PyFd	2	1	0	0	2	1	3	0	1	2	3	4	0	2	4	4	0	0	4	5
	PyFd_Decid	3	2	0	0	3	2	3	0	1	3	4	5	0	3	5	5	0	0	5	6
	SB	2	1	0	0	2	1	2	3	1	3	4	4	2	3	4	5	2	4	5	5
	SB_Decid	3	2	0	0	3	2	3	4	2	3	5	5	0	3	5	5	3	4	5	6
BEC Zone	Leading Species	Age 3-30 years (Class 1 and part of 2)				Age 30-80 years (Class 2 (part), 3, 4)				Age 80-120 years (Class 5 and 6)				Age 121-250 (Class 7 and 8)				Age 250+ (Class 9)			
		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
MS	Act	3	3	0	0	3	3	3	4	2	4	5	5	0	4	5	6	0	0	6	6
	At_Con	3	2	0	0	3	2	3	4	2	4	5	5	0	4	5	6	0	0	6	6
	CH	2	1	0	0	2	1	2	3	1	3	3	4	0	3	4	4	0	0	4	5
	CH_Decid	3	2	0	0	3	2	3	0	1	3	4	4	0	4	5	5	0	0	4	6
	Decid	3	2	0	0	3	2	3	4	0	4	5	5	0	4	5	5	0	5	5	6
	Fd>75%	2	1	0	0	2	1	2	3	1	2	3	3	0	3	4	4	0	0	4	4
	FL	3	2	0	0	3	2	3	3	0	4	5	5	0	4	5	5	0	0	5	6
	FL_Decid	2	1	0	0	2	1	2	3	2	4	4	4	0	4	4	5	0	0	5	5
	MixCon	2	1	0	0	2	1	2	0	2	3	3	3	0	4	4	5	0	0	4	5
	MixCon_Decid	3	2	0	0	3	2	3	0	0	4	4	4	0	5	5	5	0	0	5	6
	PI	2	1	0	0	2	1	2	2	1	3	3	3	2	3	3	3	0	3	3	0
	PI_Decid	3	2	0	0	3	2	3	0	1	3	4	5	0	3	4	5	0	0	4	5
	PI_Mix	2	1	0																	

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		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
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SBS / SBPS	Act	3	3	0	0	3	3	3	4	2	4	5	5	3	4	5	6	0	0	6	6
	At_Con	3	2	0	0	3	2	3	4	2	4	5	5	2	4	5	6	0	0	6	6
	CH	2	1	0	0	2	1	0	0	0	3	4	4	0	3	4	5	0	0	5	5
	CH_Decid	3	2	0	0	3	2	0	0	0	3	4	4	0	3	5	5	0	0	5	6
	Decid	3	2	0	0	3	2	3	4	2	4	5	5	0	4	5	6	0	5	6	6
	Fd< 75%	2	1	0	0	2	1	2	0	0	2	3	3	0	3	4	4	0	0	4	5
	Fd>75%	2	1	0	0	2	1	3	3	0	3	4	4	0	4	4	5	0	0	4	5
	FL_Decid	3	2	0	0	2	2	3	0	0	3	4	5	0	4	5	5	0	0	5	6
	MixCon	2	1	0	0	2	1	3	0	1	3	4	0	2	3	4	5	0	4	5	5
	MixCon_Decid	3	2	0	0	3	2	3	0	2	4	4	0	3	4	4	5	0	5	5	6
	PI	2	1	0	0	1	1	2	3	1	3	3	3	2	3	3	3	0	3	3	3
	PI_Decid	3	2	0	0	2	2	3	0	1	3	4	4	3	3	4	4	4	4	4	4
	PI_Mix	2	1	0	0	2	2	3	3	1	3	4	4	3	3	4	4	3	4	4	5
	PyFd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PyFd_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SbB	2	2	0	0	1	2	3	3	1	3	4	4	3	4	4	5	3	4	4	5
	SbB_Decid	3	2	0	0	2	2	3	0	2	4	4	5	4	4	5	5	4	5	5	6
	SwB	2	1	0	0	1	1	3	3	0	2	3	3	2	3	3	4	0	4	4	4
	SWB_Decid	2	2	0	0	2	2	3	0	0	3	3	3	0	3	4	4	0	4	4	4
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		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
SWB	Act	3	3	0	0	3	3	3	4	2	4	5	5	3	4	5	5	0	0	5	5
	At_Con	3	2	0	0	3	2	3	4	2	4	5	5	3	4	5	6	0	0	6	6
	CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Decid	3	2	0	0	3	2	3	4	2	4	5	5	3	4	5	0	0	0	0	0
	Fd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FL_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MixCon	2	1	0	0	2	1	3	0	2	3	0	0	2	3	4	0	0	4	5	5
	MixCon_Decid	3	2	0	0	3	2	3	0	2	4	0	0	3	4	5	0	0	0	0	0
	PI	2	1	0	0	1	1	2	0	1	3	3	0	2	3	3	3	0	3	3	0
	PI_Decid	3	2	0	0	2	2	3	0	1	3	4	4	3	3	4	4	3	4	4	5
	PI_Mix	2	1	0	0	2	2	3	3	1	3	4	4	3	3	4	4	3	4	4	5
	PyFd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PyFd_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SB	2	0	0	0	1	2	3	0	1	4	4	0	3	4	4	5	3	5	5	5
	SB_Decid	3	0	0	0	2	3	3	0	2	4	4	0	3	5	5	6	0	0	6	0
	SbB	2	0	0	0	1	1	0	0	1	2	2	0	2	3	3	4	4	4	0	0
	SbB_Decid	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BEC Zone	Leading Species	Age 3-30 years (Class 1 and part of 2)				Age 30-80 years (Class 2 (part), 3, 4)				Age 80-120 years (Class 5 and 6)				Age 121-250 (Class 7 and 8)				Age 250+ (Class 9)			
		Height (m)				Height (m)				Height (m)				Height (m)				Height (m)			
		<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+	<10.4	10.5-19.4	19.5-28.4	28.5+
BWBS	Act	3	3	3	0	3	3	3	4	3	4	5	5	3	4	5	5	0	0	5	5
	At-Con	3	2	3	0	3	2	3	4	3	4	5	5	3	5	6	6	0	6	6	0
	CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Decid	3	2	0	0	3	2	3	4	0	4	5	5	3	4	5	5	0	0	0	0
	Fd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FL	0	0	0	0	2	2	3	0	2	3	4	0	3	4	5	0	0	0	5	6
	FL_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MixCon	2	1	0	0	2	1	3	3	2	3	4	0	2	3	4	5	3	5	0	0
	MixCon_Decid	3	2	0	0	3	2	3	0	2	4	4	0	3	4	5	6	3	5	0	0
	PI	2	1	0	0	1	1	2	3	1	3	3	3	2	3	3	3	0	3	3	3
	PI_Decid	3	2	0	0	2	2	3	3	1	3	4	4	3	3	4	4	0	0	0	0
	PI_Mix	2	1	0	0	2	2	3	3	1	3	4	4	3	3	4	4	3	4	4	5
	PyFd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PyFd_Decid	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SB	2	2	0	0	1	2	3	3	1	3	4	4	3	4	4	5	3	4	5	5
	SB_Decid	3	2	0	0	2	2	3	4	2	4	5	5	4	5	5	6	4	5	6	6
	Sb_Decid	2	0	0	0	1	1	3	3	1	2	3	3	2	3	3	4	3	4	4	0
	Sb_mix	2	0	0	0	2	2	3	0	1	3	3	3	2	3	4	4	0	4	0	0

*A period in a cell means that a particular species/age/height class combination did not occur or occurred with less than 50 ha in the inventory and so was not rated.

MIGRATORY BIRD STRATEGY: REDUCING INCIDENTAL TAKE FOR MIGRATORY BIRDS

APPENDIX B FOREST HEALTH GUIDANCE*

Forest Health Criteria	Forest Conditions		Possible Rank Modification
Stands of Mountain pine beetle with >35% dead PI that have been dead for > 2 years	PI Leading PI >75% in the overstory	Little to no shrub or conifer understory (mostly grass, low vegetation or lichen)	Change to Rank 2
		Good shrub or conifer understory developing	Change to Rank 3
	PI_mix PI <75% in the overstory	Poor or moderate shrub or understory conifer layer.	Change to Rank 2
		White Spruce (Sw, Sx or Se) Good conifer understory and shrub layer	Change to Rank 4
Stands of Spruce or Douglas-fir bark beetle** that have been dead for > 2 years	If the stand was attacked	<2 years previous, its rank is the same as if it was a live stand	No Rank Modification
		>2 years ago, the rank can be dropped by 1 step from the rank it would be if it was a live stand	Drop rank by 1 step
Stands burned by wildfire that have been dead for > 2 years	If the stand has been dead	<2 years previous, the rank is the same as if it was a live stand, due to the presence of post-fire specialists using the stand extensively during that period	No Rank Modification
		>2 years ago, the rank can be dropped by 1 step from the rank it would be if it was a live stand	Drop rank by 1 step

*Stands dead >2 years can be rated differently than live stands. The percent dead variable in the VRI is only accurate the year it is measured, so data from the year of proposed harvest should be used instead.

**The larvae of Spruce and Douglas-fir bark beetle are very attractive to woodpeckers.

MIGRATORY BIRD STRATEGY:
REDUCING INCIDENTAL TAKE FOR MIGRATORY BIRDS

APPENDIX C
RESTRICTED PERIODS*

C-1: Resctricted Periods Table

Environment Canada Nesting Zone	R1 Restricted Period 1 for all but ESSF		R2 Restricted Period 2 for all but ESSF	
	ESSF - Add 7 days to each date to account for later nesting due to higher elevation			
	Start	End	Start	End
A1	April 14	July 31	May 6	July 19
A2	April 23	August 1	May 15	July 20
A3	May 3	August 2	May 20	July 21
A4	May 8	August 2	May 23	July 22
A5	May 13	August 3	May 26	July 23
B5	May 13	August 3	May 25	July 23
B6	May 15	August 4	May 29	July 23
B7	May 19	August 5	May 27	July 22

C-2: Resctricted Periods Chart

		April	May	June	July	August
A1	R1	April 14 July 31				
	R2	May 6 July 19				
A2	R1	April 23 August 1				
	R2	May 15 July 20				
A3	R1	May 3 August 2				
	R2	May 20 July 21				
A4	R1	May 8 August 2				
	R2	May 23 July 22				
A5	R1	May 13 August 3				
	R2	May 26 July 23				
B5	R1	May 13 August 3				
	R2	May 25 July 23				
B6	R1	May 15 August 4				
	R2	May 29 July 23				
B7	R1	May 19 August 5				
	R2	May 27 July 22				
ESSF		--> Add 7 days to each date to account for later nesting due to higher elevation -->				

*Information taken from the Environment Canada Nesting Calenders. For most information, see the Environment Canada website.

*This information is the date ranges when various proportions of bird species are estimated to be nesting, by region.

Migratory Bird Incidental Take Avoidance - Listing of Beneficial Management Practices*										
Management Practice Category	Reference No.	Application Phase	BMP Category	BMP Name	BMP Brief Description	Likelihood of Avoidance (LoA)	LoA Rank minimal = 1, partial = 2, true = 3	Degree of Protection (DoP)	DoP Rank low = 1, mod. = 2, high = 3	Relative Efficacy Rating (LoA Rank * DoP Rank)
Avoid	SO1	Strategic Operations	Timing	Block Scheduling	Scheduling high risk blocks outside the nesting period	True avoidance	3	High	3	9
Avoid	SO2	Strategic Operations	Timing	Spring Decking	Decking of logs for hauling in to or after the nesting season, to maintain log flows without reliance on active harvest operations	True avoidance	3	High	3	9
Avoid	SO3	Strategic Operations	Timing	Block Stratification	Delineating blocks into segments with differing harvest plans or schedules relative to MBCA risk status	True avoidance	3	Moderate	2	6
Avoid	PL2	Planning	Retention	Planned Retention: Biodiversity Anchors	Patch/edge retention designed around "biodiversity anchors"	Partial avoidance	2	Moderate	2	4
Avoid	HO1	Harvest Operations	Operations	Species-specific Surveys	Includes call playbacks for species presence/absence and reserve placed around nests detected	Partial avoidance	2	Moderate	2	4
Avoid	LO1	Layout	Retention	Enduring Nest Identification	Identification and management of conspicuous & enduring nests	Partial avoidance	2	Moderate	2	4
Avoid	LO2	Layout	Retention	Riparian Protection	Increasing riparian retention where possible i.e. to match ecosite where riparian-centric species may nest or feed	Partial avoidance	2	Moderate	2	4
Avoid	LO3	Layout	Retention	Unplanned/Unmarked Retention	Refers to directions given to operators for unmarked retention (e.g. single species retention)	Partial avoidance	2	Moderate	2	4
Avoid	PL1	Planning	Landscape	Partial Cut or High Retention Silviculture System	Partial cut or high retention silviculture system applied (low risk silviculture system)	Partial avoidance	2	Moderate	2	4
Avoid	LO4	Layout	Retention	Wildlife Tree, Snag and Stub Retention	Retention of individual trees or snags suitable for cavity nesting bird species	Partial or Minimal avoidance	1, 2	Low, Moderate	1, 2	1 to 4
Avoid	PL5	Planning	Landscape	Block Design	Avoid high value features and habitats during block design phase	Partial or Minimal avoidance	1, 2	Low, Moderate	1, 2	1 to 4
Avoid	PL3	Planning	Training	Staff and Contractor Training	Training of forest planners, layout personnel, and forest workers	Partial avoidance	2	Low	1	2
Avoid	HO2	Harvest Operations	Operations	Nest Sweeps	Pre-harvest nest sweep	Minimal avoidance	1	Low	1	1
Avoid	SO4	Strategic Operations	Operations	Chance Encounter SOP	Operation specific recommended practices when chance encounters of active nests occur	Minimal avoidance	1	Low	1	1
Avoid	PL4	Planning	Operations	Species-specific strategies	Refers to altered operational plans relative to a species of concern; variable	Variable	1, 2, 3	Variable	1, 2, 3	1 to 9

Beneficial Mitigation Practices						Matrix of Efficacy Rating				
Management Practice Category	Reference No.	Application Phase	BMP Category	BMP	BMP Brief Description			Degree of Protection		
Mitigate	i	Planning	Training	Awareness	Refers to efforts to generate a broader awareness			Likelihood of Avoidance	Low (1)	Mod. (2)
		Planning	Habitat Enhancement	Nest Supplementing	Refers to the use of artificial nests (nest boxes and raptor platforms)	Minimal (1)	1		2	3
		Harvest Operations	Habitat Enhancement	Stubbing	Refers to the use of stubbing to encourage the development of snags and wildlife trees	Partial (2)	2		4	6
		Strategic Operations	Landscape	Habitat Supply Modeling	Refers to the modeling of specific habitat types for species of concern for the landbase	True (3)	3		6	9

*For a more detailed description of these BMPs, see the document "Guidance for Forest Sector Management of Nesting Migratory Birds in the Interior of British Columbia"