

# Current Condition Report for Forest Biodiversity: Lakes Timber Supply Area

## APPENDIX 5

### Habitat Change Hazard Rating, Early Seral Increase Indicator Rating, and Mature-plus-Old and Old Forest Loss Indicator Rating in the Lakes Timber Supply Area (TSA)

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## Habitat Change Rating Overview

### Rating Description

The *Habitat Change Hazard Rating* provides an estimate of how likely the distribution of habitats (the amount of young, mid, mature and old aged forests) has departed from the expected range of habitat based on the natural disturbance regime. The *Habitat Change Hazard Rating* considers both the increase in young (early seral) forest and the loss of mature and old forest habitats on the historic forest land base (HFLB) due to:

- Permanent conversion of habitats to non-forest through land uses such as urban or agricultural development, mining or oil and gas developments, and right-of ways for transportation or pipelines, forest
- Forest harvesting that alters forest structure, converting mature and old forest stands to young regenerating forests,
- Natural disturbances such as severe wildfires and insect attack that alters the structure and composition of forests.

The *Habitat Change Hazard Rating* is a combination of the *Early Seral Increase* rating and *Mature and Old Forest Loss* rating. By combining those two ratings the *Habitat Change Hazard Rating* identifies ecosystems that have been highly modified by human land use and natural disturbances, and that are more likely to increased early forest and reduced levels of mature and old forests compared to what would be expected under natural historic conditions.

		Mature and Old Forest Loss Rating				
		Very Low	Low	Moderate	High	Very High
Early Seral Forest Increase Rating	Very Low	V. Low	V. Low	Low	Low	Moderate
	Low	V. Low	V. Low	Low	Moderate	Moderate
	Moderate	Low	Low	Moderate	High	High
	High	Low	Moderate	High	V. High	Very High
	Very High	Moderate	Moderate	High	Very High	Very High

### Interpretation Key

**[VL – Very Low] [Very Unlikely]** Habitat Change Hazard is *Very Low* – The current distribution of early, mature, and old habitats is *very unlikely* to be different than what was historically on the land base and habitat conditions to support native forest biodiversity have been maintained over time.

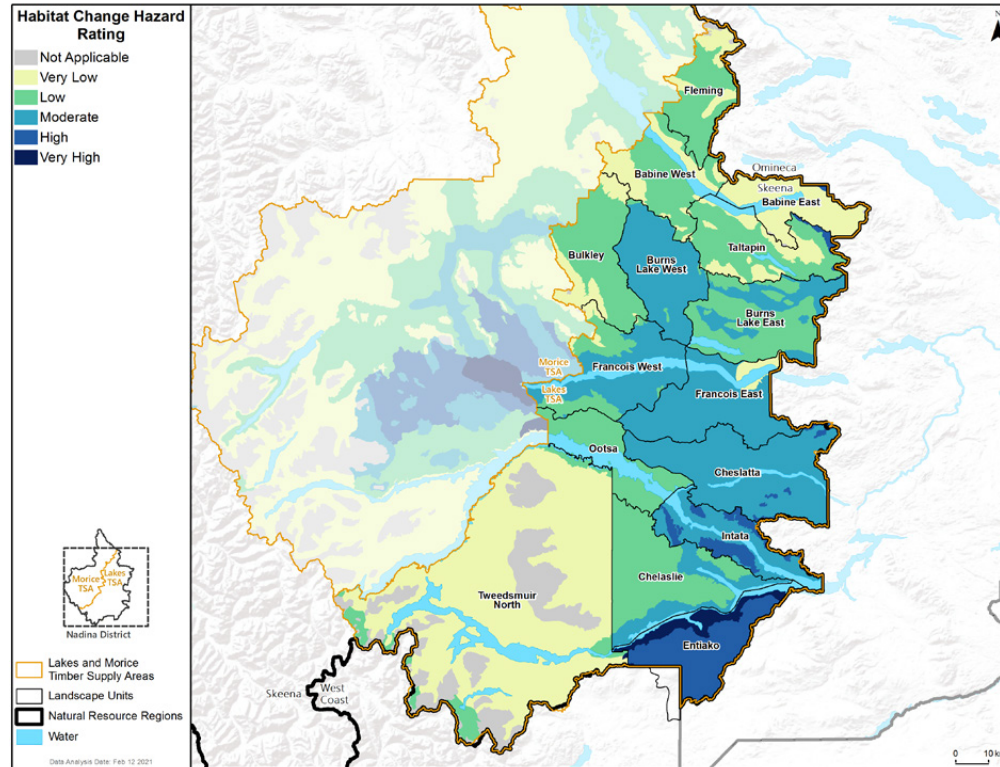
**[L – Low] [Unlikely]** Habitat Change Hazard is *Low* – The current distribution of early, mature, and old habitats is *unlikely* to be different than what was historically on the land base and habitat conditions to support native forest biodiversity have been maintained over time.

**[M – Moderate] [May]** Habitat Change Hazard is *Moderate* – The current distribution of early, mature, and old habitat *may* differ from historic conditions.

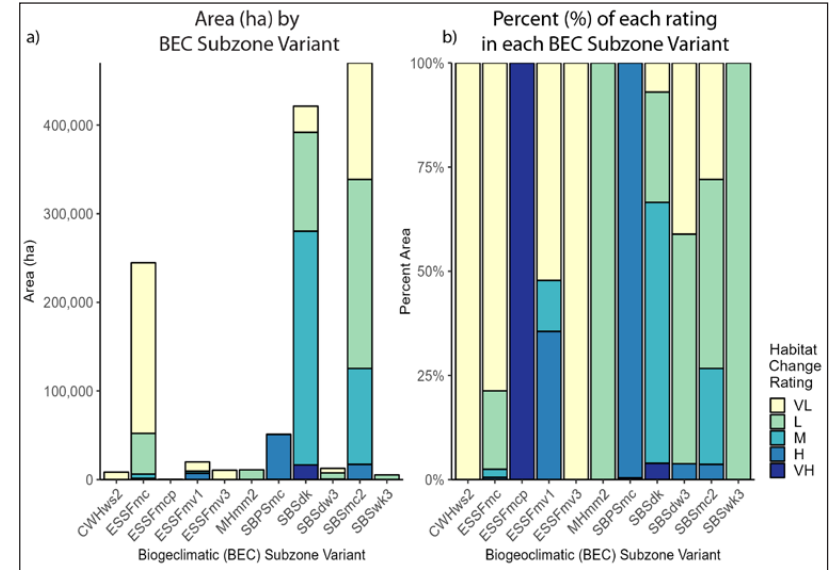
**[H – High] [Likely]** Habitat Change Hazard is *High* – The current distribution of early, mature, and old habitats is *likely* to differ from the historic conditions. Early seral forests have likely increased, and mature and old forest habitats are likely lower than historically, likely affecting forest biodiversity.

**[VH – Very High] [Very Likely]** Habitat Change Hazard is *Very High* – The current distribution of early, mature, and old forest is *very likely* to differ from historic conditions. Early seral forests have very likely increased, and mature and old forest habitats are very likely lower than historically, likely affecting forest biodiversity.

## Habitat Change Rating: Lakes TSA



**Figure 1:** Habitat Change Ratings in the Lakes Timber Supply Area.



**Figure 2:** Habitat Change Ratings Summarized by Total Area (a: Left) and Proportion of Area (b: Right) for Biogeoclimatic (BEC) Subzone Variants in the Lakes Timber Supply Area.

**Table 1:** Percent of Early, Mature-plus-Old, and Old Forest and the Habitat Change Hazard Rating by Landscape Unit, Biogeoclimatic (BEC) Subzone Variant, and Natural Disturbance Type (NDT) in the Lakes Timber Supply Area.

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early (%)	Mature plus Old (%)	Old (%)	Habitat Change Rating
Babine East	ESSFmc	NDT2	3,307	3,287	11.5	74.0	2.2	VL
	ESSFmv1		8,701	8,674	3.6	55.4	0.0	VL
	SBSdk	NDT3	21,749	15,173	14.5	64.0	28.0	VL
	SBSdw3		519	468	74.1	22.2	8.5	H
	SBSmc2		18,308	18,013	14.0	51.7	25.1	VL
Babine West	ESSFmc	NDT2	14,467	13,563	15.0	80.2	7.3	VL
	ESSFmv1		1,693	1,681	5.9	79.8	0.0	VL
	SBSdk	NDT3	12,156	7,700	23.2	53.9	13.1	VL
	SBSmc2		42,607	39,543	39.1	48.3	28.5	L
Bulkley	ESSFmc	NDT2	17,355	16,104	19.7	59.9	7.7	VL
	SBSdk	NDT3	41,139	35,375	42.0	35.4	14.9	L
	SBSmc2		18,998	18,168	38.5	38.1	16.8	L
Burns Lake East	ESSFmc	NDT2	10,757	10,526	11.1	27.6	1.3	L
	ESSFmv1		1,181	1,165	26.2	14.1	0.0	M
	SBSdk	NDT3	47,192	41,283	30.6	27.2	8.5	L
	SBSdw3		7,302	7,011	21.3	24.8	11.2	L
	SBSmc2		31,187	30,307	41.6	15.3	7.4	M
Burns Lake West	ESSFmc	NDT2	1,803	1,737	34.0	52.0	0.7	L
	SBSdk	NDT3	49,700	45,023	46.7	34.5	10.4	M
	SBSmc2		20,724	20,184	48.8	42.0	24.8	M
Chelaslie	ESSFmc	NDT2	32,852	31,147	29.0	57.3	1.8	L
	SBSdk	NDT3	31,599	23,263	55.8	32.2	23.9	M
	SBSmc2		45,955	42,505	47.3	49.4	43.3	L
Cheslatta	ESSFmv1	NDT2	3,811	3,792	36.1	14.8	0.0	H
	SBSdk	NDT3	74,218	63,499	49.6	32.3	18.3	M
	SBSmc2		43,961	42,324	52.3	28.7	18.3	M

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early (%)	Mature plus Old (%)	Old (%)	Habitat Change Rating
Fleming	ESSFmv3	NDT2	10,733	10,644	5.0	81.4	3.2	VL
	SBSdk	NDT3	3,399	2,990	19.2	66.5	39.9	VL
	SBSmc2		34,662	33,674	37.0	48.2	19.4	L
	SBSwk3		5,283	5,252	39.1	60.6	56.2	L
François East	ESSFmc	NDT2	858	857	2.0	21.0	0.0	M
	ESSFmv1		1,196	1,169	51.6	47.3	0.1	M
	SBSdk	NDT3	64,924	54,387	49.7	27.3	16.2	M
	SBSdw3		8,933	5,239	16.2	46.8	25.9	VL
	SBSmc2		15,964	15,769	47.5	34.7	28.3	M
François West	ESSFmc	NDT2	3,911	3,799	8.3	58.0	1.9	VL
	SBSdk	NDT3	66,766	51,455	44.9	25.8	16.0	M
	SBSmc2		24,286	23,708	36.5	34.7	18.5	L
Intata	ESSFmc	NDT2	4,089	3,952	38.5	42.2	3.2	M
	ESSFmv1		103	103	18.8	21.8	0.0	M
	SBSdk	NDT3	39,832	27,190	50.0	31.5	15.1	M
	SBSmc2		17,693	17,105	62.8	25.0	19.2	H
Ootsa	ESSFmc	NDT2	2,633	2,587	8.3	40.0	1.0	L
	SBSdk	NDT3	45,596	26,576	33.1	32.7	17.0	L
	SBSmc2		9,173	8,864	31.6	34.5	18.5	L
Taltapin	ESSFmc	NDT2	17,474	17,251	22.1	61.0	1.9	VL
	ESSFmv1		3,307	3,281	54.0	35.6	0.0	H
	SBSdk	NDT3	6,784	3,612	33.5	56.9	40.5	VL
	SBSmc2		52,928	47,336	44.6	41.9	29.8	L
Tweedsmuir North	CWHws2	NDT2	13,431	8,371	0.0	98.3	52.2	VL
	ESSFmc		148,755	138,944	24.8	63.4	3.2	VL
	MHm2	NDT1	15,293	11,020	0.1	83.9	11.3	L
	SBPSmc	NDT3	214	212	100.0	0.0	0.0	VH
	SBSdk		9,710	8,891	35.0	38.1	11.3	L
	SBSmc2		142,141	113,650	33.4	61.2	48.4	VL

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early (%)	Mature plus Old (%)	Old (%)	Habitat Change Rating
Entiako	ESSFmc	NDT2	1,306	1,303	71.3	28.7	0.0	H
	ESSFmcp		1,650	165	73.3	7.3	0.0	VH
	SBPSmc	NDT3	54,374	50,851	75.9	16.8	5.5	H
	SBSdk		22,990	16,428	90.7	6.6	3.5	VH

## Early Seral Increase Rating Overview

### Indicator Description

In the CEF Forest Biodiversity protocol, the early seral forest indicator captures a wide range of young forest (forests less than 40 years old) and conditions where previously forested areas have been converted to a non-forest condition, and includes:

- **Wild young forest** – forest less than 40 years that originates following a severe natural disturbance event, usually where more than 80% of the original forest stand has been killed. These areas re-establish through natural regeneration and retain post-disturbance structures.
- **Managed young forest** – forest less than 40 years that is established following forest harvesting.
- **Converted forest** – previously forested areas that have been converted to a non-forest condition such as urban and agricultural development. These areas are included as they often provide habitats for some early seral specialist and generalist species.

### Rating Description

The *Early Seral Increase Rating* estimates how likely the amount of early seral forest on the landscape has increased relative to what would have occurred under a natural disturbance regime. Early seral or young forest (less than 40 years old) provides important habitats for many wildlife and plant species. However, landscapes with too much early seral forest can pose a risk to species that rely on mature and old forest, and early seral forest provides habitats for species that may outcompete other species for resources, or that prey upon species that use mature and old forests, contributing to their decline.

The amount of early seral forest that is expected in an ecosystem is based on the natural disturbance type (NDT). Ecosystems with frequent stand-initiating disturbances (e.g., NDT3 ecosystems) will naturally have more young forest compared to ecosystems that experience less disturbance (e.g., NDT1 and NDT2 ecosystems).

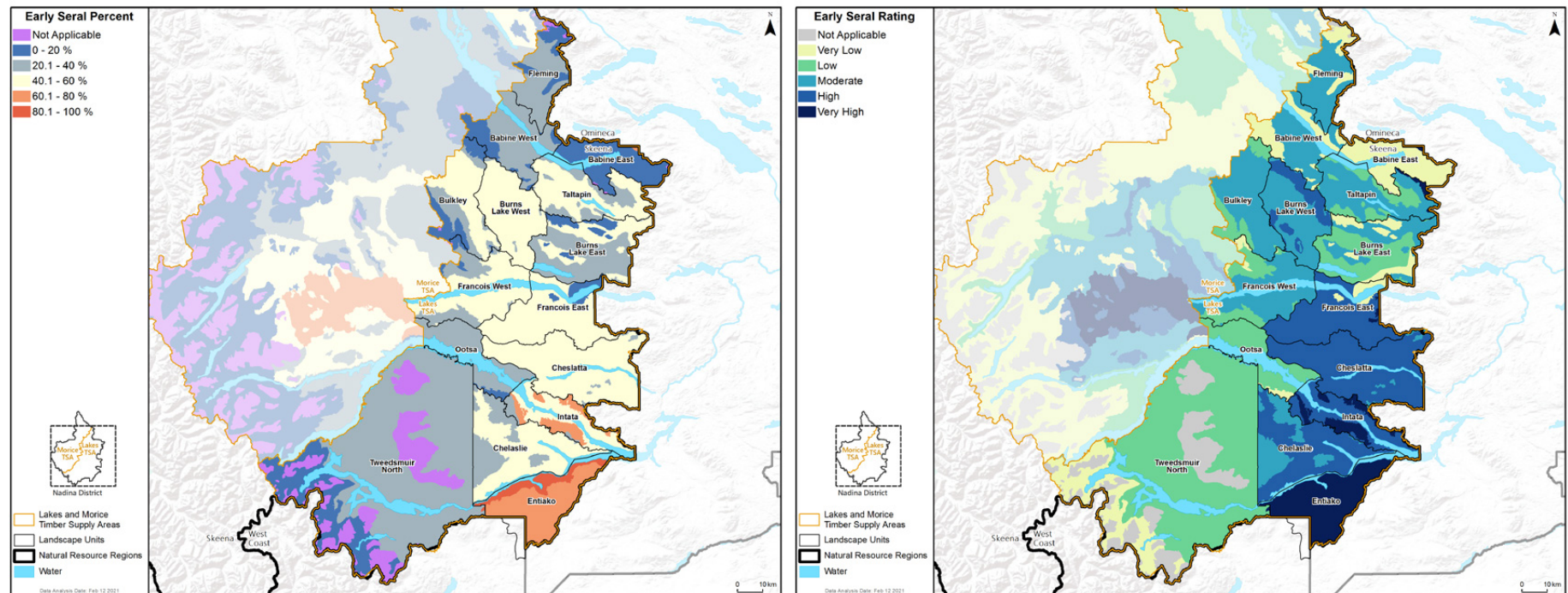
NDT	Biogeoclimatic (BEC) Zone	Disturbance Return Interval (years)	Age-based Definitions of Seral Stage (years)			Percent (%) of the Forest Land Base in each Seral Stage		
			Early	Mature	Old	Early	Mat+Old	Old
1	ESSF	350	<40	>120	>250	<11	>71	>49
	ICH	250	<40	>100	>250	<15	>67	>37
2	ESSF	200	<40	>120	>250	<18	>55	>29
	ICH	200	<40	>100	>250	<18	>61	>29
	SBS	200	<40	>100	>250	<18	>61	>29
3	ESSF	150	<40	>100	>140	<23	>51	>39
	MS	150	<40	>100	>140	<23	>51	>39
	SBS	125	<40	>100	>140	<27	>45	>33
	SBPS	100	<40	>100	>140	<33	>37	>25
5	BAFA, IMA	na <sup>a</sup>	na	na	na	na	na	na

<sup>a</sup> NDT5 ecosystems include alpine Biogeoclimatic zones and sparsely forested parkland biogeoclimatic subzone variants. Disturbance return intervals and age-based definitions are not defined for NDT5 ecosystems in the Biodiversity Guidebook.



- Interpretation Key**
- **[VL – Very Low] [Very Unlikely]** Early Seral Increase rating is *Very Low* – The current amount of early seral habitat is *very unlikely* to be more than what was historically on the land base and habitat conditions to support native forest biodiversity have been maintained over time.
  - **[L – Low] [Unlikely]** Early Seral Increase rating is *Low* – The current amount of early seral habitat is *unlikely* to be different than what was historically on the land base and habitat conditions to support native forest biodiversity have been maintained over time.
  - **[M – Moderate] [May]** Early Seral Increase rating is *Moderate* – The current amount of early seral habitat *may* be higher than historic conditions.
  - **[H – High] [Likely]** Early Seral Increase rating is *High* – The current amount of early seral habitat is *likely* to have increased beyond levels expected under a historic natural disturbance regime, likely affecting forest biodiversity.
  - **[VH – Very High] [Very Likely]** Early Seral Increase rating is *Very High* – The current amount of early seral forest is *very likely* to have increased beyond levels expected under a historic natural disturbance regime, very likely affecting forest biodiversity.

## Early Seral Amount and Rating: Lakes TSA



**Figure 3:** The Percent of the Historic Forest Land Base (HFLB) that is Early Seral Forest (Left) and the Early Seral Forest Increase Rating (Right) in the Lakes Timber Supply Area. Darker Blue Colours Illustrate Areas where the Amount of Early Seral Forest is More Likely to have Increased Compared to Levels Expected under a Historic Natural Disturbance Regime.

**Table 2:** Summary of Early Seral by Landscape Unit, Biogeoclimatic (BEC) Subzone Variant, and Natural Disturbance Type (NDT) and the Resulting Early Seral Ratings in the Lakes Timber Supply Area.

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early Forest HFLB Area (ha)	Urban Agricultural (ha)	Mining (ha)	Power, ROW & Rail (ha)	Recreation (ha)	Oil and Gas, Seismic Infrastructure (ha)	Total Forest Converted as early (ha)	Very Severe Insect Mortality (ha)	Med-High Severity Wildfire (ha)	Percent Early Converted (%)	Percent Early Adjusted Insect and Wildfire (%)	Percent Early Adjusted (%)	Early Seral Increase Rating
Babine East	ESSFmc	NDT2	3,307	3,287	377	0	0	0	0	0	0	0	0	0.0	0.0	11.5	VL
	ESSFmv1		8,701	8,674	164	0	0	0	0	0	0	148	0	0.0	1.7	3.6	VL
	SBSdk	NDT3	21,749	15,173	1,720	0	5	0	0	0	5	482	0	0.0	3.2	14.5	VL
	SBSdw3		519	468	357	0	4	0	0	0	4	0	0	0.9	0.0	74.1	VH
	SBSmc2		18,308	18,013	1,622	0	3	0	0	0	3	897	0	0.0	5.0	14.0	VL
Babine West	ESSFmc	NDT2	14,467	13,563	1,975	0	0	0	0	0	0	38	0	0.0	0.3	15.0	VL
	ESSFmv1		1,693	1,681	100	0	0	0	0	0	0	0	0	0.0	0.0	5.9	VL
	SBSdk	NDT3	12,156	7,700	1,715	1	0	10	0	0	11	71	0	0.1	0.9	23.2	VL
	SBSmc2		42,607	39,543	15,048	89	17	12	0	0	118	393	0	0.3	1.0	39.1	M
Bulkley	ESSFmc	NDT2	17,355	16,104	2,870	0	368	3	0	12	383	132	161	2.4	1.8	19.7	L
	SBSdk	NDT3	41,139	35,375	14,250	817	7	139	0	38	1,001	567	7	2.8	1.6	42.0	M
	SBSmc2		18,998	18,168	6,372	0	4	0	0	0	4	516	104	0.0	3.4	38.5	M
Burns Lake East	ESSFmc	NDT2	10,757	10,526	1,011	0	0	0	0	25	25	16	135	0.2	1.4	11.1	VL
	ESSFmv1		1,181	1,165	84	0	0	0	0	0	0	5	214	0.0	18.8	26.2	L
	SBSdk	NDT3	47,192	41,283	10,386	1,915	76	274	27	23	2,315	478	1,673	5.6	5.2	30.6	L
	SBSdw3		7,302	7,011	1,435	247	92	58	0	7	404	62	0	5.8	0.9	21.3	VL
	SBSmc2		31,187	30,307	7,632	0	211	0	0	17	228	423	4,544	0.8	16.4	41.6	M
Burns Lake West	ESSFmc	NDT2	1,803	1,737	509	0	0	0	0	1	1	90	0	0.1	5.2	34.0	M
	SBSdk	NDT3	49,700	45,023	19,929	5,658	91	318	46	59	6,172	974	0	13.7	2.2	46.7	M
	SBSmc2		20,724	20,184	9,484	7	7	7	0	10	31	312	0	0.2	1.5	48.8	H
Chelaslie	ESSFmc	NDT2	32,852	31,147	4,880	0	0	0	0	0	0	539	3,623	0.0	13.4	29.0	M
	SBSdk	NDT3	31,599	23,263	3,899	0	5	6	0	0	11	1,270	7,598	0.0	38.1	55.8	H
	SBSmc2		45,955	42,505	9,580	0	0	0	0	0	0	862	9,639	0.0	24.7	47.3	H

APPENDIX 5: Habitat Change Hazard Rating, Early Seral Increase Indicator Rating, and Mature-plus-Old and Old Forest Loss Indicator Rating in the Lakes Timber Supply Area (TSA)

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early Forest HFLB Area (ha)	Urban Agricultural (ha)	Mining (ha)	Power, ROW & Rail (ha)	Recreation (ha)	Oil and Gas, Seismic Infrastructure (ha)	Total Forest Converted as early (ha)	Very Severe Insect Mortality (ha)	Med-High Severity Wildfire (ha)	Percent Early Converted (%)	Percent Early Adjusted Insect and Wildfire (%)	Percent Early Adjusted (%)	Early Seral Increase Rating
Cheslatta	ESSFmv1	NDT2	3,811	3,792	945	0	0	0	0	0	0	231	180	0.0	10.8	36.1	M
	SBSdk	NDT3	74,218	63,499	19,405	2,144	20	4	0	0	2,168	1,515	10,521	3.4	19.0	49.6	H
	SBSmc2		43,961	42,324	16,025	15	7	0	0	0	22	1,804	4,271	0.1	14.4	52.3	H
Fleming	ESSFmv3	NDT2	10,733	10,644	482	0	0	0	0	0	0	51	0	0.0	0.5	5.0	VL
	SBSdk	NDT3	3,399	2,990	570	0	0	0	0	0	0	3	0	0.0	0.1	19.2	VL
	SBSmc2		34,662	33,674	12,210	0	20	0	0	0	20	229	0	0.1	0.7	37.0	M
	SBSwk3		5,283	5,252	2,029	0	0	0	0	0	0	24	0	0.0	0.5	39.1	M
François East	ESSFmc	NDT2	858	857	6	0	0	0	0	0	0	11	0	0.0	1.3	2.0	VL
	ESSFmv1		1,196	1,169	284	0	0	0	0	0	0	28	295	0.0	27.6	51.6	VH
	SBSdk	NDT3	64,924	54,387	19,945	3,604	62	3	54	0	3,723	1,112	5,882	6.8	12.9	49.7	H
	SBSdw3		8,933	5,239	657	0	0	0	0	0	0	193	0	0.0	3.7	16.2	VL
	SBSmc2		15,964	15,769	6,002	123	0	0	0	0	123	441	1,052	0.8	9.5	47.5	H
François West	ESSFmc	NDT2	3,911	3,799	271	0	0	0	0	0	0	44	0	0.0	1.2	8.3	VL
	SBSdk	NDT3	66,766	51,455	20,488	7,049	43	130	27	0	7,249	1,429	1,132	14.1	5.0	44.9	M
	SBSmc2		24,286	23,708	6,212	305	10	0	0	0	315	662	1,680	1.3	9.9	36.5	L
Intata	ESSFmc	NDT2	4,089	3,952	1,185	0	0	0	0	0	0	44	281	0.0	8.2	38.5	H
	ESSFmv1		103	103	19	0	0	0	0	0	0	0	0	0.0	0.0	18.8	L
	SBSdk	NDT3	39,832	27,190	11,971	437	21	2	0	0	460	998	580	1.7	5.8	50.0	H
	SBSmc2		17,693	17,105	8,425	0	0	0	0	0	0	753	1,531	0.0	13.4	62.8	VH
Ootsa	ESSFmc	NDT2	2,633	2,587	186	0	1	0	0	0	1	29	0	0.0	1.1	8.3	VL
	SBSdk	NDT3	45,596	26,576	6,631	1,255	15	8	0	0	1,278	2,075	74	4.8	8.1	33.1	L
	SBSmc2		9,173	8,864	1,855	10	4	0	0	0	14	312	623	0.2	10.5	31.6	L

APPENDIX 5: Habitat Change Hazard Rating, Early Seral Increase Indicator Rating, and Mature-plus-Old and Old Forest Loss Indicator Rating in the Lakes Timber Supply Area (TSA)

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	HFLB Area (ha)	Early Forest HFLB Area (ha)	Urban Agricultural (ha)	Mining (ha)	Power, ROW & Rail (ha)	Recreation (ha)	Oil and Gas, Seismic Infrastructure (ha)	Total Forest Converted as early (ha)	Very Severe Insect Mortality (ha)	Med-High Severity Wildfire (ha)	Percent Early Converted (%)	Percent Early Adjusted Insect and Wildfire (%)	Percent Early Adjusted (%)	Early Seral Increase Rating
Taltapin	ESSFmc	NDT2	17,474	17,251	3,753	0	5	0	0	0	5	26	34	0.0	0.3	22.1	L
	ESSFmv1		3,307	3,281	1,399	0	0	0	0	0	0	85	303	0.0	11.8	54.0	VH
	SBSdk	NDT3	6,784	3,612	1,175	30	5	0	0	0	35	40	0	1.0	1.1	33.5	L
	SBSmc2		52,928	47,336	18,853	0	18	13	0	0	31	362	1,857	0.1	4.7	44.6	M
Tweedsmuir North	CWHws2	NDT2	13,431	8,371	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	VL
	ESSFmc		148,755	138,944	12	0	0	0	0	0	0	2,550	31,837	0.0	24.7	24.8	L
	MHm2	NDT1	15,293	11,020	5	0	0	0	0	0	0	6	0	0.0	0.1	0.1	VL
	SBPSmc	NDT3	214	212	0	0	0	0	0	0	0	0	218	0.0	102.8	100.0	VH
	SBSdk		9,710	8,891	11	0	0	0	0	0	0	1,285	1,807	0.0	34.8	35.0	L
	SBSmc2		142,141	113,650	331	0	0	3	0	0	3	2,153	35,408	0.0	33.0	33.4	L
ESSFmc	NDT2		1,306	1,303	0	0	0	0	0	0	0	0	929	0.0	71.3	71.3	VH
ESS-Fmcp		1,650	165	0	0	0	0	0	0	0	0	121	0.0	73.3	73.3	VH	
Entiako	SBPSmc	NDT3	54,374	50,851	844	0	0	0	0	0	0	1,533	36,198	0.0	74.2	75.9	VH
	SBSdk		22,990	16,428	2,189	0	0	3	0	0	3	213	12,493	0.0	77.3	90.7	VH

## Mature and Old Forest Loss Rating Overview

**Indicator Description**

In the CEF Forest Biodiversity protocol, the mature and old forest indicator includes:

- **Mature forest** – characterized as forest greater than 100 or 120 years old based on the natural disturbance type (NDT) and ecosystem.
- **Old forest** – characterized as forest greater than 140 years or 250 years old based on the natural disturbance type (NDT) and ecosystem.

**Rating Description**

The *Mature and Old Forest Loss rating* estimates how likely the amount of mature and old forest is lower than would have occurred under a natural disturbance regime. Mature and old forests contain unique forest structural attributes (e.g., large live and dead trees, large amounts of downed wood) and microclimatic conditions that provide important habitats for a range of species.

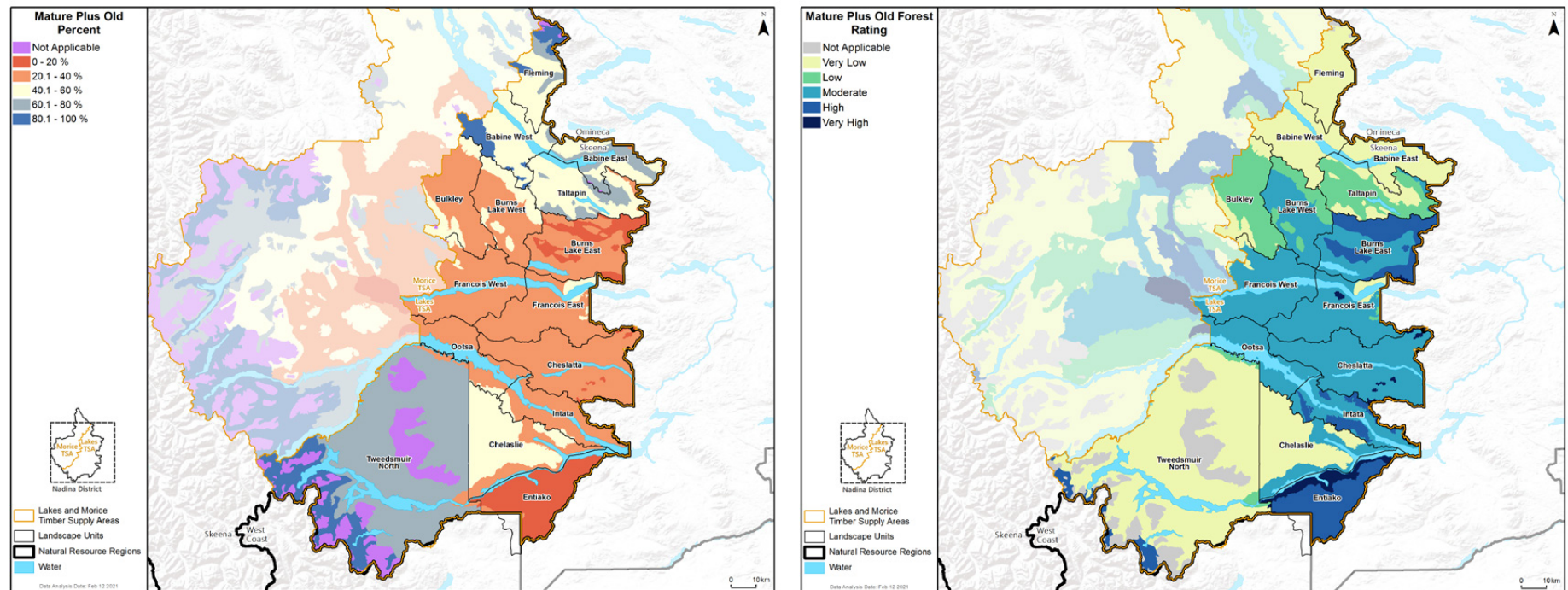
The amount of mature and old forest that is expected in an ecosystem is based on the natural disturbance type (NDT). Ecosystems with frequent stand-initiating disturbances (e.g., NDT3 ecosystems) with a lower disturbance return interval will naturally have more young forest compared to ecosystems that experience less disturbance (e.g., NDT1 and NDT2 ecosystems) that have a greater disturbance return interval; that is, it takes more years for natural disturbances to affect the same amount of area.

NDT	Biogeoclimatic (BEC) Zone	Disturbance Return Interval (years)	Age-based Definitions of Seral Stage (years)			Percent (%) of the Forest Land Base in each Seral Stage		
			Early	Mature	Old	Early	Mat+Old	Old
1	ESSF	350	<40	>120	>250	<11	>71	>49
	ICH	250	<40	>100	>250	<15	>67	>37
2	ESSF	200	<40	>120	>250	<18	>55	>29
	ICH	200	<40	>100	>250	<18	>61	>29
	SBS	200	<40	>100	>250	<18	>61	>29
3	ESSF	150	<40	>100	>140	<23	>51	>39
	MS	150	<40	>100	>140	<23	>51	>39
	SBS	125	<40	>100	>140	<27	>45	>33
	SBPS	100	<40	>100	>140	<33	>37	>25
5	BAFA, IMA	na <sup>a</sup>	na	na	na	na	na	na

<sup>a</sup> NDT5 ecosystems include alpine Biogeoclimatic zones and sparsely forested parkland biogeoclimatic subzone variants. Disturbance return intervals and age-based definitions are not defined for NDT5 ecosystems in the Biodiversity Guidebook.

- Interpretation Key**
- **[VL – Very Low] [Very Unlikely]** Mature and Old Forest Loss is *Very Low* – The current amount of mature and old habitats is *very unlikely* to be less than what was historically on the land base, and habitat conditions to support native forest biodiversity have been maintained over time.
  - **[L – Low] [Unlikely]** Mature and Old Forest Loss is *Low* – The current amount of mature and old habitats is *unlikely* to be less than what was historically on the land base and habitat conditions to support native forest biodiversity have been maintained over time.
  - **[M – Moderate] [May]** Mature and Old Forest Loss is *Moderate* – The current amount of mature and old habitat *may* be less than historic conditions.
  - **[H – High] [Likely]** Mature and Old Forest Loss is *High* – The current amount of mature and old habitats is *likely* lower than expected historically, likely affecting forest biodiversity.
  - **[VH – Very High] [Very Likely]** Mature and Old Forest Loss is *Very High* – The current amount of mature and old forest is *very likely* lower than expected historically. These conditions are *very likely* to have negative affects on species that rely on mature and old forests.

## Mature and Old Forest Amount and Rating: Lakes TSA



**Figure 4:** The Percent of the Historic Forest Land Base (HFLB) that is Mature and Old Forest (Left) and the Mature and Old Forest Loss Rating (Right) in the Lakes Timber Supply Area. Darker Blue Colours Illustrate Areas where the Amount of Mature and Old Forest is More Likely to be Less than Levels Expected under a Historic Natural Disturbance Regime.

**Table 3:** Summary of Mature and Old Forest by Landscape Unit, Biogeoclimatic (BEC) Subzone Variant, and Natural Disturbance Type (NDT) and the Resulting Mature-plus-Old and Old Forest Loss Ratings in the Lakes Timber Supply Area.

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	Mature HFLB Area (ha)	Old Forest HFLB Area (ha)	Mature Very Severe Insect Attack Area (ha)	Old Very Severe Insect Attack Area (ha)	Mature Med-High Severity Wildfire Area (ha)	Old Med-High Severity Wildfire Area (ha)	Mature plus Old Forest (%)	Old Forest (%)	Mature plus Old Forest Loss Rating	Old Forest Loss Rating
Babine East	ESSFmc	NDT2	3,307	2,350	71	0	0	0	0	74.0	2.2	VL	H
	ESSFmv1		8,701	4,955	2	145	0	0	0	55.4	0.0	VL	H
	SBSdk	NDT3	21,749	5,748	4,397	306	152	0	0	64.0	28.0	VL	L
	SBSdw3		519	66	41	0	0	0	0	22.2	8.5	H	H
	SBSmc2		18,308	5,162	4,765	382	262	0	0	51.7	25.1	VL	L
Babine West	ESSFmc	NDT2	14,467	9,813	972	34	0	0	0	80.2	7.3	VL	H
	ESSFmv1		1,693	1,342	0	0	0	0	0	79.8	0.0	VL	H
	SBSdk	NDT3	12,156	3,186	1,035	42	29	0	0	53.9	13.1	VL	M
	SBSmc2		42,607	8,087	11,291	238	33	0	0	48.3	28.5	VL	L
Bulkley	ESSFmc	NDT2	17,355	8,558	1,231	26	0	139	0	59.9	7.7	VL	H
	SBSdk	NDT3	41,139	7,554	5,377	323	125	5	0	35.4	14.9	L	M
	SBSmc2		18,998	4,191	3,083	255	36	52	0	38.1	16.8	L	M
Burns Lake East	ESSFmc	NDT2	10,757	2,775	148	2	0	18	7	27.6	1.3	H	H
	ESSFmv1		1,181	285	0	0	0	122	0	14.1	0.0	VH	H
	SBSdk	NDT3	47,192	7,910	3,944	54	114	166	345	27.2	8.5	M	H
	SBSdw3		7,302	958	790	9	1	0	0	24.8	11.2	H	H
	SBSmc2		31,187	2,795	4,397	79	6	311	2,155	15.3	7.4	H	H
Burns Lake West	ESSFmc	NDT2	1,803	908	13	4	0	0	0	52.0	0.7	L	H
	SBSdk	NDT3	49,700	11,278	4,811	511	138	0	0	34.5	10.4	M	H
	SBSmc2		20,724	3,621	5,021	159	52	0	0	42.0	24.8	L	L
Chelaslie	ESSFmc	NDT2	32,852	19,919	584	358	25	2,292	0	57.3	1.8	VL	H
	SBSdk	NDT3	31,599	5,071	6,069	191	447	2,969	151	32.2	23.9	M	L
	SBSmc2		45,955	6,233	19,545	221	588	3,400	605	49.4	43.3	VL	VL

Landscape Unit	BEC	NDT	LU/BEC Area (ha)	Mature HFLB Area (ha)	Old Forest HFLB Area (ha)	Mature Very Severe Insect Attack Area (ha)	Old Very Severe Insect Attack Area (ha)	Mature Med-High Severity Wildfire Area (ha)	Old Med-High Severity Wildfire Area (ha)	Mature plus Old Forest (%)	Old Forest (%)	Mature plus Old Forest Loss Rating	Old Forest Loss Rating
Cheslatta	ESSFmv1	NDT2	3,811	758	0	39	0	162	0	14.8	0.0	VH	H
	SBSdk	NDT3	74,218	13,238	16,102	532	659	3,799	3,855	32.3	18.3	M	M
	SBSmc2		43,961	6,616	9,744	609	590	1,587	1,440	28.7	18.3	M	M
Fleming	ESSFmv3	NDT2	10,733	8,322	342	4	0	0	0	81.4	3.2	VL	H
	SBSdk	NDT3	3,399	795	1,190	0	0	0	0	66.5	39.9	VL	VL
	SBSmc2		34,662	9,772	6,595	105	79	0	0	48.2	19.4	VL	M
	SBSwk3		5,283	231	2,971	2	22	0	0	60.6	56.2	VL	VL
François East	ESSFmc	NDT2	858	179	0	0	0	0	0	21.0	0.0	VH	H
	ESSFmv1		1,196	869	1	25	0	289	0	47.3	0.1	L	H
	SBSdk	NDT3	64,924	7,827	11,178	394	523	1,395	1,884	27.3	16.2	M	M
	SBSdw3		8,933	1,194	1,421	102	64	0	0	46.8	25.9	VL	L
	SBSmc2		15,964	1,246	5,328	57	333	190	531	34.7	28.3	M	L
François West	ESSFmc	NDT2	3,911	2,132	72	2	0	0	0	58.0	1.9	VL	H
	SBSdk	NDT3	66,766	5,508	9,287	349	462	152	592	25.8	16.0	M	M
	SBSmc2		24,286	4,103	5,510	164	251	146	926	34.7	18.5	M	M
Intata	ESSFmc	NDT2	4,089	1,803	129	44	0	229	2	42.2	3.2	M	H
	ESSFmv1		103	22	0	0	0	0	0	21.8	0.0	VH	H
	SBSdk	NDT3	39,832	5,111	4,647	415	373	234	192	31.5	15.1	M	M
	SBSmc2		17,693	1,277	5,135	243	436	46	1,424	25.0	19.2	H	M
Ootsa	ESSFmc	NDT2	2,633	1,020	25	13	0	0	0	40.0	1.0	M	H
	SBSdk	NDT3	45,596	4,924	5,291	759	768	3	17	32.7	17.0	M	M
	SBSmc2		9,173	1,555	2,026	94	92	46	303	34.5	18.5	M	M



Landscape Unit	BEC	NDT	LU/BEC Area (ha)	Mature HFLB Area (ha)	Old Forest HFLB Area (ha)	Mature Very Severe Insect Attack Area (ha)	Old Very Severe Insect Attack Area (ha)	Mature Med-High Severity Wildfire Area (ha)	Old Med-High Severity Wildfire Area (ha)	Mature plus Old Forest (%)	Old Forest (%)	Mature plus Old Forest Loss Rating	Old Forest Loss Rating
Taltapin	ESSFmc	NDT2	17,474	10,260	320	18	0	34	0	61.0	1.9	VL	H
	ESSFmv1		3,307	1,545	4	69	0	298	3	35.6	0.0	M	H
	SBSdk	NDT3	6,784	592	1,507	0	39	0	0	56.9	40.5	VL	VL
	SBSmc2		52,928	5,841	16,103	47	260	69	1,786	41.9	29.8	L	L
Tweedsmuir North	CWHws2	NDT2	13,431	3,853	4,373	0	0	0	0	98.3	52.2	VL	H
	ESSFmc		148,755	114,496	6,253	2,120	6	28,933	1,775	63.4	3.2	VL	H
	MHmm2	NDT1	15,293	7,998	1,248	0	0	0	0	83.9	11.3	H	VH
	SBPSmc	NDT3	214	25	193	0	0	25	193	0.0	0.0	VH	H
	SBSdk		9,710	3,499	2,182	770	39	354	1,143	38.1	11.3	L	H
	SBSmc2		142,141	17,606	85,678	683	725	2,323	30,004	61.2	48.4	VL	VL
ESSFmc	NDT2		1,306	1,303	0	0	0	929	0	28.7	0.0	H	H
ESSFmcp		1,650	59	0	0	0	47	0	7.3	0.0	VH	VH	
Entiako	SBPSmc	NDT3	54,374	21,372	13,089	765	670	14,851	9,618	16.8	5.5	H	M
	SBSdk		22,990	5,707	5,888	75	89	5,125	5,224	6.6	3.5	VH	H