

# APPENDIX 1- ALTERNATIVE LANDSCAPE LEVEL BIODIVERSITY TARGETS

## 1 INTRODUCTION

In summary, these Alternative Targets treat FNWL NII as a Landscape Unit, with some slight modifications to seral and patch assumptions.

This Appendix contains both the specific Alternative Landscape Level Biodiversity Targets for FNWL NII, and provides a roadmap and rationale to show how and why these Alternative Targets were developed and determined. Key findings or assumptions used in developing the alternatives are numbered in this introduction.

Landscape Units (LUs) are intended to delineate ecological units to describe ecological processes and facilitate landscape level management, as described by the Cariboo-Chilcotin Regional Biodiversity Strategy<sup>1</sup>. In the more complex mountainous terrain of the Cariboo, the Biodiversity Strategy states the scale of landscape-level processes including natural disturbance and habitat representation is generally smaller (than in the Cariboo-Chilcotin plateau) with a target size LU of 30,000 ha and acceptable ranges between 10,000–50,000 ha.

- 1. FNWL NII, at 22,000 ha, is within the acceptable size range to be managed as an LU. Therefore the use of Partition (to emulate an LU) for Biodiversity targets is deemed appropriate. Furthermore, FNWL NII is embedded in the larger no-harvest area tied to Canim's Treaty, the Key Interest Area.*

The Biodiversity Strategy outlines LU-NDTs as the current basic unit of assessment for landscape-level biodiversity results and strategies, including patch size and seral stage requirements. For more traditional volume-based tenure-holders, who operate in multiple LUs, current LU-NDTs offer a reasonable unit to benchmark and facilitate the coordinated management of ecological processes and development activities at a strategic-level.

However, the existing model can become problematic for community area based tenure holders. For example, Canim's tenure, FNWL NII spans five different LUs and is then further subdivided into three NDTs, which are then further subdivided by Biogeoclimatic Zone

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<sup>1</sup> [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/cariboo-region/cariboochilcotin-rlup/bio\\_strategy\\_report.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/cariboo-region/cariboochilcotin-rlup/bio_strategy_report.pdf)

(BEC) differences. This creates many small management units. If applied inflexibly, a CCLUP seral table can become limiting, constraining on other management values and goals on the community tenure. A small area based tenure holder simply does not have the option of focusing operations elsewhere, as do larger volume based RFL holders. In addition, analyzing and managing seral and patches by multiple non-partitioned LU-BGZ combinations at the landscape level, may tend to mask localized conditions.

***2. On a smaller area based tenure, partition and then some further lumping of management units is appropriate.***

On page 4 of the Biodiversity Conservation Strategy it says “Where a disturbance type accounts for only a small, isolated part of a landscape unit, meeting the landscape level objectives for the small area may not be possible. In such cases include the small area in an adjacent disturbance type”.

***3. It is not clear what constitutes a small, isolated part of a landscape unit. However, since Woodlots (like FNWLs and CFORs) are independent area based tenures with their own Annual Allowable Cut that can be up to 1,200 ha in size and are exempt from Landscape Level Biodiversity Targets, the FSP holder has assumed that the minimum management size for a disturbance type can reasonably be set at around 1,200 ha. However, additional factors, such as other constraints and spatial distribution of the disturbance type must also be considered.***

The Biodiversity Guidebook defines an NDT as an area that is characterized by a natural disturbance regime. For FNWL N1I that is mainly (>95%) a stand-initiating fire regime. When a stand-initiating fire burns, to a large extent, it changes both the seral stages and the patches at the same time, on the same land, as does logging, which is our main management tool used to emulate fire. It therefore makes sense that for forests with stand-initiating fire regimes, the seral management unit matches the patch management unit, and it is operationally easier to manage and analyze. However, the Biodiversity Guidebook does sometimes provide different management units between seral and patch, based on BGZ. This likely makes sense when considering multiple landscape units, stand maintaining fire regimes, etc., however it is not as feasible on a small area based tenure.

***4. For NDTs where the main disturbance factor is fire, and where the fires are stand initiating, seral management units should match patch management units.***

On page 3 of the Biodiversity Guidebook it states, “Management for biodiversity must be flexible and adaptive. This guidebook provides recommendation rather than specific prescriptions for managing biodiversity. Success in meeting the intent of these recommendations depends on the innovativeness and creativity of the land managers”. The FSP holder asserts that these Alternative Landscape Level Biodiversity Targets are consistent with the original intent of the Biodiversity Guidebook.

***5. With climate change, fires, beetle etc. a more flexible and adaptive management approach is needed for seral and patch. We need to apply adaptive management to find out what a resilient forest is. Creating a single cohesive management unit is seen as the first step in this process.***

## 2 ALTERNATIVE SERAL STAGE TARGETS

### 2.1 CROWN RULES SERAL TARGETS

**Table 1** below shows the NDT-BEC assessment units for FNWL N1I, as represented by the Biodiversity Conservation Strategy. There are 3 NDT types, four unique BEC combinations and one BEC (IDF) is further subdivided by the Pine Group/Fir Group designation. In addition there are five landscape units that intersect FNWL N1I. Three of these; Bradley, Forest Grove and Canim Lake, have a low Biodiversity Emphasis Option (BEO). Spanish has a high BEO and Hendrix has an intermediate BEO.

**Table 1.** Seral stage requirements with minimum retention thresholds for mature-plus-old stands (CCLUP) for NDT-BEC units present across FNWL N1I.

NDT	BEC zone	BEC variant	Group	Stand Age		% Retention (Mat+Old/Old) by biodiversity emphasis		
				Mature	Old	Low	Intermediate	High
2	ICH	mk3, mw3		100	250	15/9	31/9	46/13
3	ICH	Dk		100	140	14/14	23/14	34/21
	SBS	dw1, dw2, mc1, mm		100	140	11/11	23/11	34/16
4	IDF	dk3, mw2, xh2, xm, xw	Pine	100	140	11/11	23/11	34/16
			Fir	100	250	22/21	43/21	65/32

Seral numbers, based on the Biodiversity Conservation Strategy rules and the five landscape units were then run for FNWL N1I. **See Table 2.** Eight distinct seral units were produced, ranging in size from about 426 ha to 10,000 ha in size. Four of these seral assessment units are in deficit, resulting in restricted harvest across these units. The assessment units in deficit are the four smallest units, and in total they make up about 14% of the tenure area.

**Table 2 . Seral Stage requirements and proportional mature-plus-old targets with amalgamations for Canim FNWL N11.**

Landscape Unit	BEC Assessment Unit	Total Forest Area (ha)	Early Seral (ha)	Mid Seral (ha)	Mature Seral (ha)	Old Seral (ha)	Mature + Old Seral (ha)	Old %	M+O %	Old Required (ha)	M+O Required (ha)	M+O Surplus (ha)	Old Surplus (ha)
Bradley Creek	ICH dk	1,307.82	285.19	428.66	495.38	98.59	593.98	14.00	14.00	183.09	183.09	410.88	-84.50
Bradley Creek	IDF mw2 Fir <sup>1</sup> & Pine	426.67	4.51	131.82	290.34	-	290.34	19.86	19.86	84.74	84.74	205.60	-84.74
Canim Lake	SBS dw1	570.03	187.11	85.38	258.88	38.66	297.54	11.00	11.00	62.70	62.70	234.84	-24.04
Canim Lake	ICH mk3/ IDF mw2 Fir <sup>2</sup> & Pine	520.15	2.46	182.98	334.53	0.18	334.71	9.63	13.9	50.09	72.30	262.41	-49.91
Forest Grove	SBS dw2	1,726.77	254.28	525.60	464.71	482.17	946.89	11.00	11.00	189.94	189.94	756.94	292.23
Forest Grove	SBS dw1 & mm <sup>3</sup> /ICH mk3/ IDF mw2 Fir & Pine	10,011.23	2,318.83	2,761.86	2,747.97	2,182.57	4,930.54	11.36	11.42	1,137.27	1,143.39	3,787.16	1,045.30
Hendrix Lake	ICH dk/IDF mw2 Fir & Pine	3,457.44	1,414.26	431.36	793.36	818.46	1,611.82	14.11	24.17	488.00	835.68	776.14	330.46
Spanish	ICH dk/IDF mw2 Fir & Pine	2,429.36	100.07	720.07	774.81	834.41	1,609.22	21.29	35.46	517.23	861.56	747.65	317.17
<b>TOTAL</b>		<b>20,449.46</b>	<b>4,566.71</b>	<b>5,267.73</b>	<b>6,159.98</b>	<b>4,455.05</b>	<b>10,615.03</b>			<b>2,713.08</b>	<b>3,433.41</b>	<b>7,181.62</b>	<b>1,741.97</b>

1- Bradley Creek IDFmw2 Fir is not amalgamated with Pine on official regional amalgamation but should be

2- Canim Lake IDFmw2 Fir is not amalgamated with Pine on official regional amalgamation but should be

3- Forest Grove SBSmm is amalgamated regionally but is a significant mgmt. unit in the FNWL and would benefit biodiversity if optionally not amalgamated

## 2.2 ALTERNATIVE SERAL TARGETS

The FSP holder wants to manage FNWL N1I as a distinct unit, similar to an LU. However, FNWL N1I is intersected by five different LUs, with three different Biodiversity Emphasis Options (BEO) which is further subdivided by BEC assessment units. Therefore, a single BEO for the tenure was needed to produce a single set of seral retention targets for each assessment group.

In response, **Table 3** was developed. It calculates the percent of land by BEO, within each unique NDT-BEC combination. This was then used to develop **Table 4**, which creates new, area-weighted BEO targets for each unique NDT-BEC. This eliminated the need to model and report on five separate LUs, while retaining an appropriate landscape level biodiversity target for the tenure.

**Table 3.** Proportion of each NDT-BEC combination present within the various BEOs across FNWL N1I and respective CCLUP percent retention thresholds.

NDT	BEC Zone	BEC Variant	Grp	FMLB Area (ha)	Total FMLB Area by BEO (ha)			Percent (%) FMLB in BEO			CCLUP % Retention (Mat+Old / Old) by BEO		
					Low	Int.	High	Low	Int.	High	Low	Int.	High
2	ICH	mk3, mw3		612	612	-	-	100%	0%	0%	15/9	31/9	46/13
3	ICH	dk		6,730	1,308	3,192	2,230	19%	47%	33%	14/14	23/14	34/21
	SBS	dw1, dw2, mc1, mm		12,067	12,067	-	-	100%	0%	0%	11/11	23/11	34/16
4	IDF	dk3, mw2, xh2, xm, xw	Pine	156	71	76	9	46%	48%	6%	11/11	23/11	34/16
			Fir	884	504	190	190	57%	21%	21%	22/21	43/21	65/32

**Table 4.** Area-weighted partitioned seral targets for the tenured area based on proportion BEO in each NDT-BEC group.

NDT	BEC zone	BEC variant	Group	Stand Age		BEO-Weighted % Retention (Mat+Old / Old)
				Mature	Old	
2	ICH	mk3, mw3		100	250	15/9
3	ICH	dk		100	140	25/16
	SBS	dw1, dw2, mc1, mm		100	140	11/11
4	IDF	dk3, mw2, xh2, xm, xw	Pine	100	140	18/11
			Fir	100	250	36/23

Based on **Table 4**, a seral analysis was completed using the area-weighted partitioned BEO targets without incorporating Landscape Units (**Table 5**).

**Table 5.** Partitioned area-weighted seral stage requirements for mature-plus-old targets within Canim FNWL N1I.

NDT	BEC Assessment Unit	Total Forest Area (ha)	Early Seral (ha)	Mid Seral (ha)	Mature Seral (ha)	Old Seral (ha)	Mature + Old Seral (ha)	Old %	M+O %	M+O Required (ha)	Old Required (ha)	M+O Surplus (ha)	Old Surplus (ha)
2	ICH mw3	612.48	2.46	217.49	374.93	17.59	392.52	9	15	91.87	55.12	300.65	-37.53
3	ICH dk	6,730.15	1,799.52	1,421.28	1,863.77	1,645.57	3,509.35	16	25	1,682.54	1,076.82	1,826.81	568.75
3	SBS dw1, dw2, mm	12,066.91	2,760.22	3,313.08	3,316.68	2,676.94	5,993.61	11	11	1,327.36	1,327.36	4,666.25	1,349.58
4	IDF mw2 – Fir	884.02	-	286.83	557.97	39.22	597.19	11	18	159.12	97.24	438.06	-58.02
4	IDF mw2 - Pine	155.91	4.51	29.04	46.63	75.73	122.36	23	36	56.13	35.86	66.23	39.87
<b>TOTAL</b>		<b>20,449.46</b>	<b>4,566.71</b>	<b>5,267.73</b>	<b>6,159.98</b>	<b>4,455.05</b>	<b>10,615.03</b>			<b>3,317.02</b>	<b>2,592.41</b>	<b>7,298.01</b>	<b>1,862.64</b>

Based on an assessment of **Table 5**, a spatial review of the location of smaller units and of other constraints (i.e. OGMAs, MDWR, visual quality objectives), the 1,200 ha assumption from the Introduction (3) was developed, and further grouping was undertaken. Three functional ecotypes/forest management units emerged.

Firstly, IDF pine and fir groups were merged. These groups were considered too small to manage separately, together totaling just over 1,000 ha. Both areas are also highly constrained, being mainly on the lakeshore of Canim Lake. Access is limited, and where there is access, there are cottages. Management is expected to mainly consist of fuel and beetle management. BEC zones within the NDT4 IDF Fir and Pine groups were combined through area-weighting associated targets by the percent of their respective forested area, resulting in area-weighted targets for each NDT-BEC combo for NDT4 IDF. These were then combined to develop a single-set of pro-rated IDF targets to create a more meaningful assessment group in terms of size.

The next unit considered was the NDT 2-ICHmw3, of which there is just over 600 ha. Again, this is considered too small a unit to meaningfully manage. This type is largely adjacent to the NDT 3-ICHdk. Since they are both stand-initiating fire regimes, the NDT 2-ICHmw3 was combined with the NDT-3-ICHdk using the same area-weighted process described above to create a pro-rated target. This amalgamated ICH unit is mainly on the north side of the lake, and operationally considered a distinct ecotype or operating area. It is characterized by moister, richer forests, high brush hazard, larger, higher value timber, and is considered less prone to fires than the south side of the lake (mainly SBS). This area has so far proven to be less susceptible to fir beetle than the south side of the lake (mainly SBS).

The third natural ecotype or operating area on the tenure consists of what is left, all SBS, concentrated mainly on the south side of the lake. It is characterized by drier forests, low to moderate brush hazard and moderate to high value timber. This area was heavily impacted by pine beetle and has started to develop persistent fir beetle issues. It has also proven more susceptible to wildfire, having a number of fires in 2017 and 2018. This is the area in which the main community for the Canim Lake Band is located, making fire and fuel management a new and priority management objective on this unit.

The area-weighted seral stage requirements for each NDT-BEC group are as follows (**Table 6**).

**Table 6.** Area-weighted partitioned seral targets for the tenured area based on proportion BEO and BEC assessment unit(s) within each NDT.

NDT	BEC zone(s)	BEO+BEC-Weighted % Retention (Mat+Old / Old)
3	ICH	24/15
	SBS	11/11
4	IDF	33/21



The seral stage analysis for FNWL N1I consistent with partitioned area-weighted targets (**Table 6**) results in the following reporting units, seral thresholds, and surplus/deficit areas by seral stage, **Table 7**. The result is considered easier to work with, and the targets match the logical, functional ecotypes/forest management units. This is considered important to move forward with fire related adaptive management, particularly for the SBS.

**Table 7.** Partitioned area-weighted seral stage requirements for mature-plus-old targets within Canim FNWL N1I.

NDT	BEC Zone(s)	Total Forest Area (ha)	Early Seral (ha)	Mid Seral (ha)	Mature Seral (ha)	Old Seral (ha)	Mature + Old Seral (ha)	Old %	M+O %	M+O Required (ha)	Old Required (ha)	M+O Surplus (ha)	Old Surplus (ha)
3	ICH	7,342.63	1,801.98	1,638.78	2,238.70	1,663.17	3,901.87	24	15	1,762.23	1,101.39	2,139.64	561.77
	SBS	12,066.91	2,760.22	3,313.08	3,316.68	2,676.94	5,993.61	11	11	1,327.36	1,327.36	4,666.25	1,349.58
4	IDF	1,039.93	4.51	315.87	604.60	114.95	719.55	21	33	343.18	218.38	376.37	-103.44
<b>TOTAL</b>		<b>20,449.46</b>	<b>4,566.71</b>	<b>5,267.73</b>	<b>6,159.98</b>	<b>4,455.05</b>	<b>10,615.03</b>			<b>3,442.58</b>	<b>2,717.13</b>	<b>7,172.45</b>	<b>1,737.92</b>

Tables 6 and 7 are the Alternative Landscape Level Seral Targets for FNWL N1I and will be used under the Kenkeknem FSP Version 4.0 to manage for Seral.

### 3 ALTERNATIVE PATCH TARGETS

#### 3.1 CROWN RULES PATCH TARGETS

**Table 8** includes the patch size criteria and thresholds set out by the Landscape Unit Planning Guidebook<sup>2</sup>. There are 3 NDT types across FNWL N1I, one of which is further subdivided into NDT 3a (fir absent) and NDT 3b (fir present) for patch size assessment units. These patch units do not match the Crown Seral Units, nor do they match the Alternative Seral Units. A decision was made to utilize the Alternative Seral Units for patch, as discussed under the seral section of this document. Therefore patch analysis by Crown rules is not presented in this Appendix.

**Table 8. Patch Size Criteria and Thresholds**

NDT	BEC Unit(s)*	Percent of the FMLB	Patch Size Class Targets (% range)				
			Small	Medium		Large	
			0-40 ha	41-80 ha	41-250 ha	80-250 ha	250-1000 ha
2	ICHmk3	3%	30-40%	30-40%	n/a	20-40%	n/a
3a (Fdi absent)	SBSmm	6%	10-20%	n/a	10-20%	n/a	60-80%
3b (Fdi present)	SBSdw, ICHdk	86%	20-30%	25-40%	n/a	30-50%	n/a
4	IDFmw	5%	30-40%	30-40%	n/a	20-30%	n/a

*Note: results are expected to trend, over time, towards these patch size target ranges.*

\* BEC Variants SBSdw, ICHdk

\*\* The 'Very Large' class was added for reporting and mapping but should be included with 'Large' to assess target range

<sup>2</sup> [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/policies-guides/lup\\_guide.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/land-use-plans-and-objectives/policies-guides/lup_guide.pdf)

Patches are defined as a contiguous area with a common seral stage based on age, NDT, and BEC variant consistent with the Landscape Unit Planning Guide<sup>2</sup> and Biodiversity Guidebook<sup>3</sup> (**Table 9**).

**Table 9.** *Seral/Patch Definitions by NDT present within FNWL N1I.*

NDT	Very Early	Early	Mid	Mature	Old
2	0-20	21-40	41-120	121-250	250+
3A / 3B	0-20	21-40	41-120	121-140	140+
	0-20	21-40	41-100	101-140	140+
4 (Pine)	0-20	21-40	41-100	101-140	140+
4 (Fir)	0-20	21-40	41-100	101-250	250+

<sup>3</sup><https://www.for.gov.bc.ca/ftp/hfp/external/lpublish/FPC%20archive/old%20web%20site%20contents/fpc/fpcguide/biodiv/biotoc.htm>

## 3.2 ALTERNATIVE PATCH TARGETS

Under **1.2 Alternative Seral Targets** of this Appendix three functional ecotypes/forest management units emerged. As discussed, these three units were also selected to be patch management units.

The IDF is already combined under standard patch management. The NDT-3 was separated into two units, one for the entire SBS and another for the ICH. Again, the ICHmk3 was combined in with the larger ICHdk through area-weighting the associated patch size targets set out in the LU Planning Guidebook by the percent area of the FMLB they represent within the FNWL.

However, area-weighting was not applied to the SBSmm. The SBSmm fir absent group (i.e. NDT 3a) has a target to maintain 60-80% of the area in patches 250-1,000 ha in size (i.e. very large patch size). This is not consistent with community goals for long term fire management. The community wishes to avoid massive landscape level fires, not create conditions that are favourable to them. At about 1,200 ha this SBSmm unit is on the edge for being a distinct management unit. Examination of other constraints on the NDT 3a also showed that about 500 ha are heavily constrained with MDWR, visuals and OGMA's, which significantly limits patch management, this further supported the decision to amalgamate the SBSmm (NDT3a) in with the rest of the SBS NDT 3b using the maximum 250 ha patch rules.

Alternative Patch Targets were finalized in **Table 10**.

**Table 10.** *Alternative patch size criteria and thresholds*

NDT	BEC Unit(s)*	Patch Size Class Targets (% range)		
		Small 0-40 ha	Medium 41-80 ha	Large 80-250 ha
3b*	ICH	21-31%	25-40%	29-49%
3b**	SBS	20-30%	25-40%	30-50%
4	IDF	30-40%	30-40%	20-30%

\*Targets were created by area-weighted the FMLB area of NDT 2- ICH and NDT 3- ICH in order to create one set of area-weighted targets for the NDT3-ICH assessment unit, as the NDT 2 – ICH is less than 620 ha and represents only 3% of the FNWL. \*\*Includes the NDT 3a.

Industry standard patch analysis was undertaken, with one small change, as described. Although the CCLUP Regional Biodiversity Strategy Update Note #4 describes that administrative boundaries such as Timber Supply Areas (TSAs) and LUs, double-line watercourse s/lakes, and natural disturbance type where size thresholds are different (i.e. NDT 3) should split patches, this approach was not taken. Instead linework unrecognizable in the field (i.e. BEC variants/NDT, FNWL boundary) did not separate patches but was incorporated after the patch size was assigned for the compilation of statistics. Patch areas that spanned of these types of linework were prorated into the intersecting administrative units. **For example, if a 250 ha patch straddled the FNWL boundary (50 ha within the FNWL, 200 ha outside), then the FNWL would receive 50 ha of area tallied under ‘large’ patch size.** This was done to ameliorate the problem of clipping too many patches when using a fairly small area based tenure, possibly skewing the patch distribution towards small patches. In addition, for the purpose of this analysis, early seral stage is divided into two categories: Very Early (0-20 years) and Early (21-40 years) to allow for the evaluation against the patch size targets for Very Early patches (for proposed blocks).

The final patch analysis was run and **Tables 11-15** were produced. These tables, plus the revised % targets (**Table 10**) and the digital mapping data are the Alternative Landscape Level Patch Targets for FNWL N1I and will be used under the Keneknem FSP Version 4.0 to manage for Patches.

For interest, some graphs of the data are included in this Appendix. The tenure is clearly very over-represented on large and very large patches.

## VERY EARLY SERAL PATCHES

\*Large and Very Large patches were separated for reporting purposes, however the combination of these patch sizes should be compared with the patch size target set out for 'Large' patches in the LU Planning Guide.

**Table 11. Very Early seral patch size distribution in hectares for FNWL N11.**

NDT	BEC Unit(s)*	Patch Size Class (ha)			
		Small	Medium	Large	Very Large
		0-40 ha	41-80 ha	80-250 ha	>250 ha
3b	ICH	49.9	210.5	283.0	382.7
3b	SBS	230.5	154.2	144.8	2,002.5
4	IDF	-	-	-	-

## EARLY SERAL PATCHES

**Table 12. Early seral patch size distribution in hectares for FNWL N11.**

NDT	BEC Unit(s)*	Patch Size Class (ha)			
		Small	Medium	Large	Very Large
		0-40 ha	41-80 ha	80-250 ha	>250 ha
3b	ICH	193.8	271.4	416.5	-
3b	SBS	116.5	118.4	-	-
4	IDF	4.4	-	-	-

## MID SERAL PATCHES

**Table 13.** *Mid seral patch size distribution in hectares for FNWL N1I.*

NDT	BEC Unit(s)*	Patch Size Class (%)			
		Small	Medium	Large	Very Large *
		0-40 ha	41-80 ha	80-250 ha	>250 ha
3b	ICH	215.8	15.0	237.9	1,148.9
3b	SBS	532.5	422.8	129.5	2,224.5
4	IDF	57.3	-	81.7	176.8

## MATURE SERAL PATCHES

**Table 14.** *Mature seral patch size distribution in hectares for FNWL N1I.*

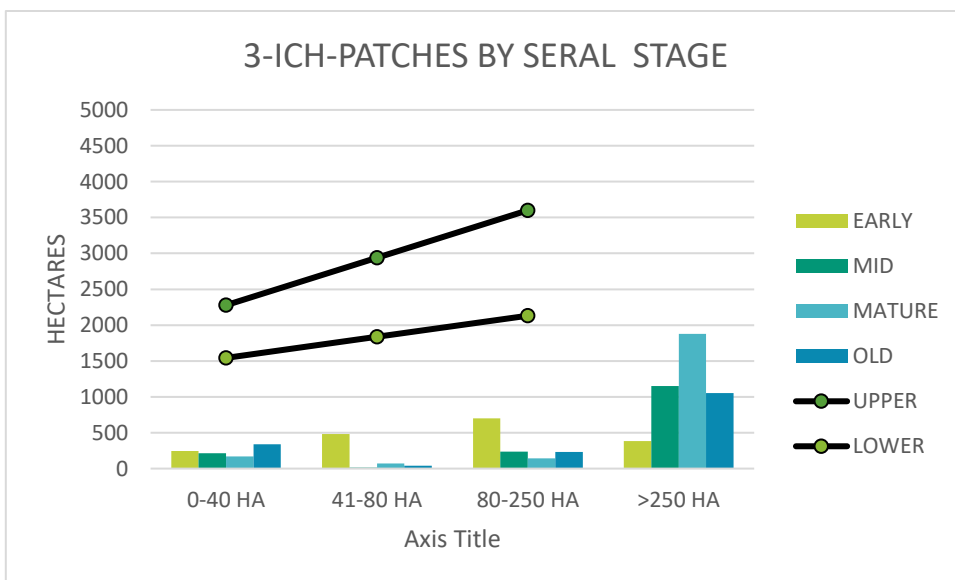
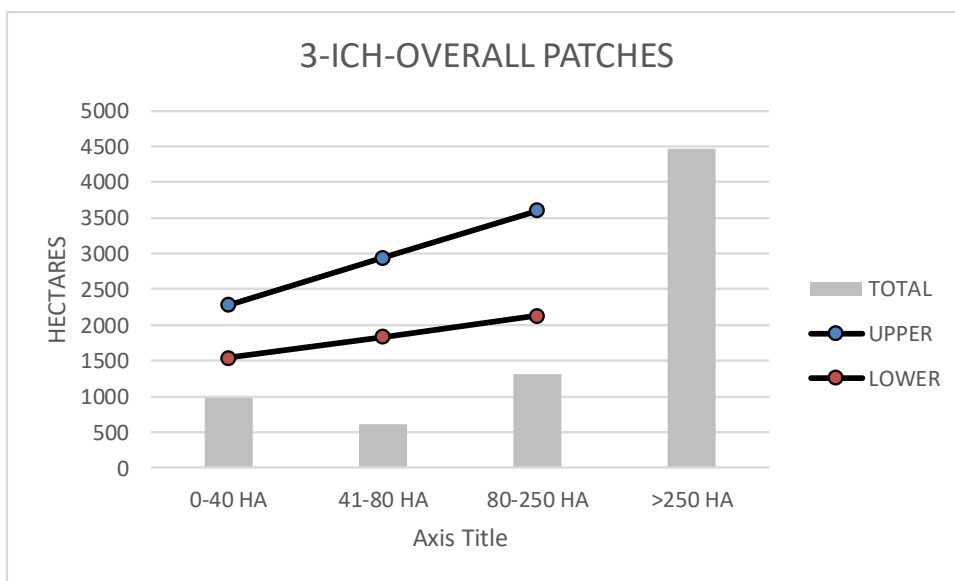
NDT	BEC Unit(s)*	Patch Size Class (%)			
		Small	Medium	Large	Very Large *
		0-40 ha	41-80 ha	80-250 ha	>250 ha
3b	ICH	171.6	69.2	143.2	1,876.0
3b	SBS	671.3	173.5	396.7	2,054.3
4	IDF	4.8	-	-	671.8

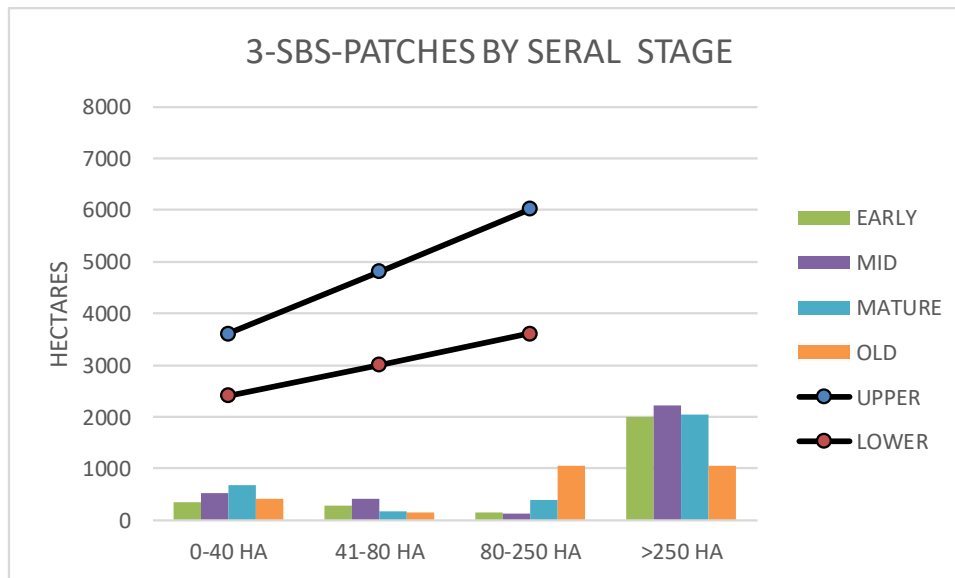
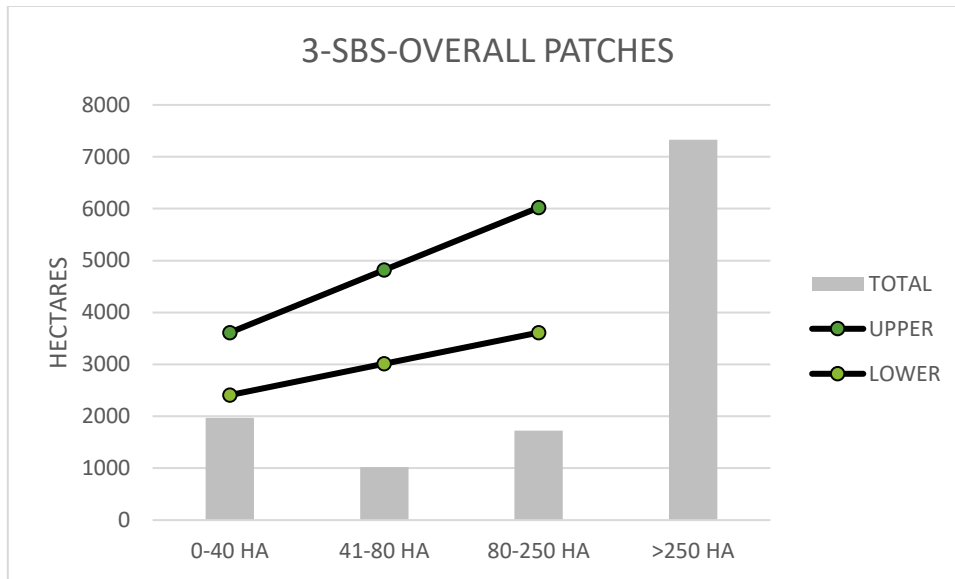
## OLD SERAL PATCHES

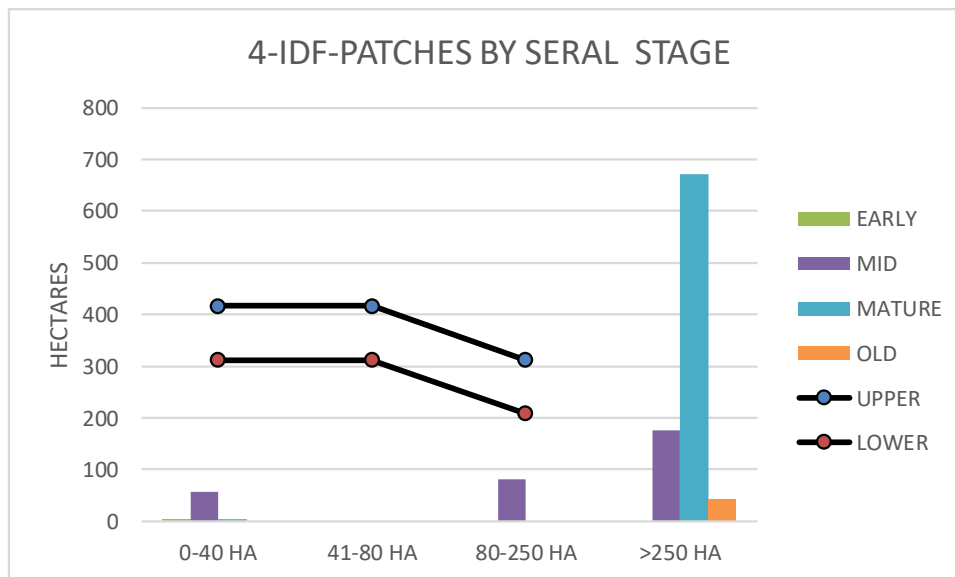
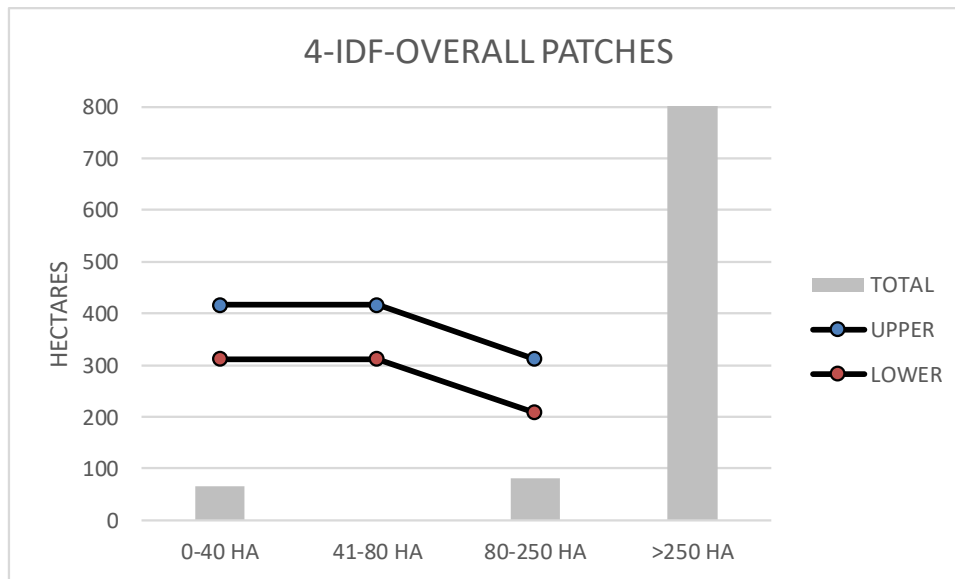
**Table 15.** *Old seral patch size distribution in hectares for FNWL N1I.*

NDT	BEC Unit(s)*	Patch Size Class (%)			
		Small	Medium	Large	Very Large *
		0-40 ha	41-80 ha	80-250 ha	>250 ha
3b	ICH	340.6	38.6	231.5	1,052.5
3b	SBS	420.3	152.2	1,051.2	1,048.4
4	IDF	-	-	-	43.0









## 4 CONNECTIVITY

Connectivity is subjective and very site specific. There was no need to deviate from the Crown recommended natural connectivity guidance. The standard Crown Natural Connectivity Characteristics Frequency Table, **Table 16**, and the Biodiversity Guidebook will be used on FNWL N1I under the Keneknem FSP Version 4.0 to manage for connectivity.

**Table 16 – Natural Connectivity Characteristics Frequency**

NDT	BEC unit	Natural Connectivity Characteristics Frequency						
		upland to upland	upland to stream	upland to wetland	cross-elevational	wetland complex	stream riparian	island remnants
2	ICHmk3	High	Moderate	Moderate	High	low	high	low
3	SBSdw1, SBSdw2	Low	Low	Low	Low	high	low	high
3	SBSmm, ICHdk	low-moderate	low-moderate	High	Moderate	moderate	high	moderate
4	IDFmw2	High	High	High	High	low-moderate	high	low