

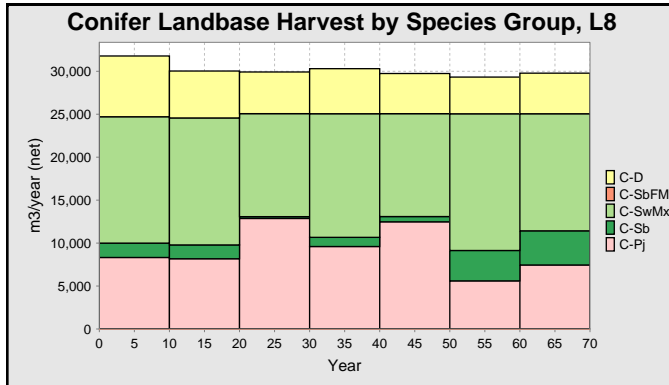
The Alberta-Pacific FMA Area 2015 Timber Supply Analysis
FMU L8 - V1_L8_refinement_v5b



Summary Category	Primary Conifer	Primary Deciduous	Total
Net Harvestable Landbase (ha)	-	-	43,328
2011 Approved AAC (net m3/yr)	28,588	54,861	83,449
Initial LRSY (net m3/yr)	27,096	61,347	88,443
2015 Patchworks AAC (net m3/yr)	24,942	57,550	82,492
Stand Retention Deduction	3% Pri only	5% Pri only	
Cull Deduction	2% Pri/Inc	4% Pri/Inc	

The landbase designation for this FMU is based on initial broad cover group assignments of D to deciduous and C/CD/DC to conifer.

Patchworks Conifer Landbase Harvest Summary by Species Group: 70 Year Average



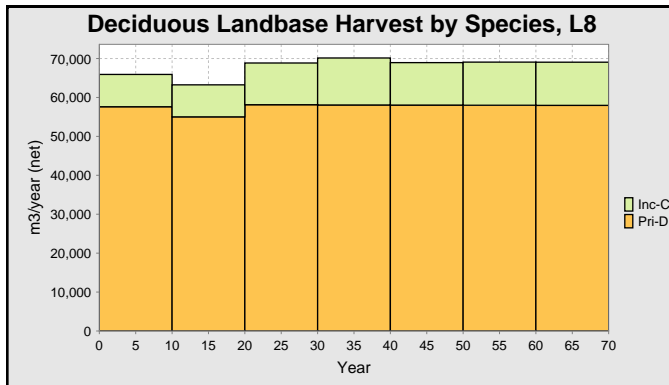
Primary Coniferous Average Harvest		
Species Group		net m3/year
C-SwMx	56%	13,914
C-Sb	7%	1,811
C-Pj	37%	9,217
Total		24,942

Primary SbFM Average Harvest		
Species Group		net m3/yr
C-SbFM	100%	0
Total		0

Incidental Deciduous Average Harvest		
Species Group		net m3/yr
D	100%	5,184
Total		5,184

Conifer Landbase Harvest 30,126

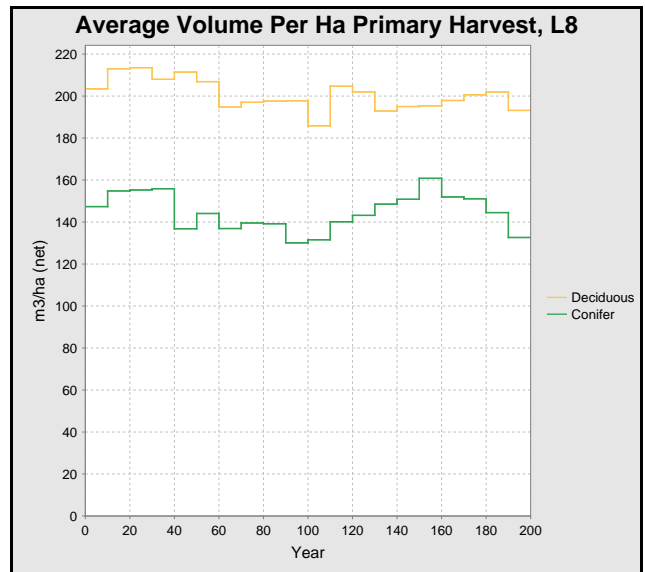
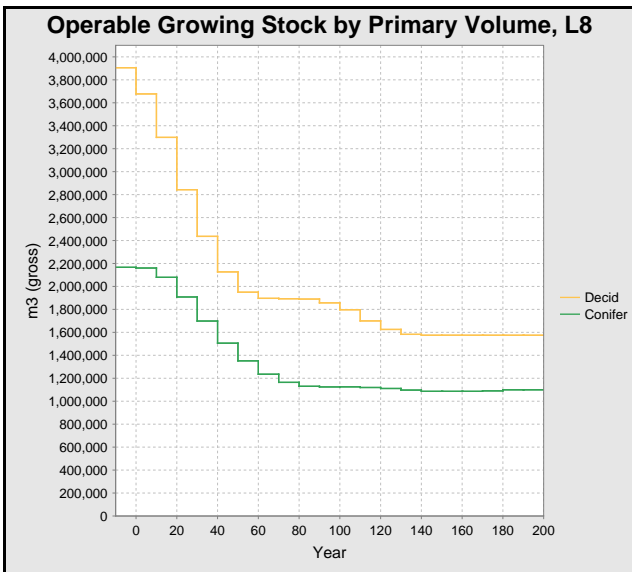
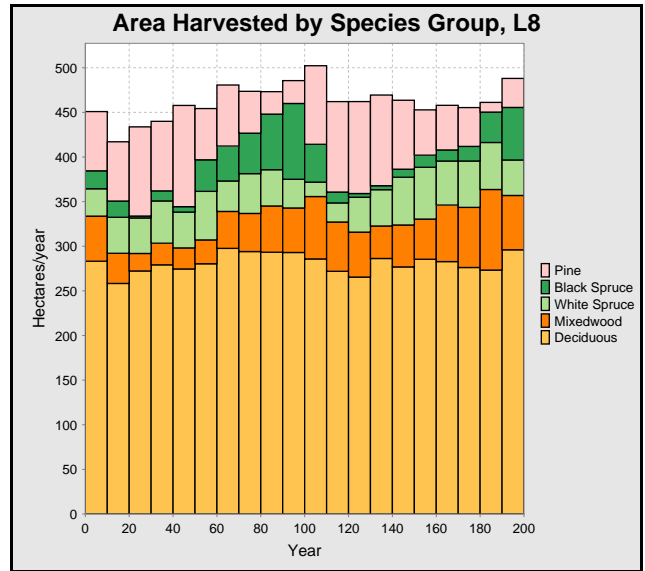
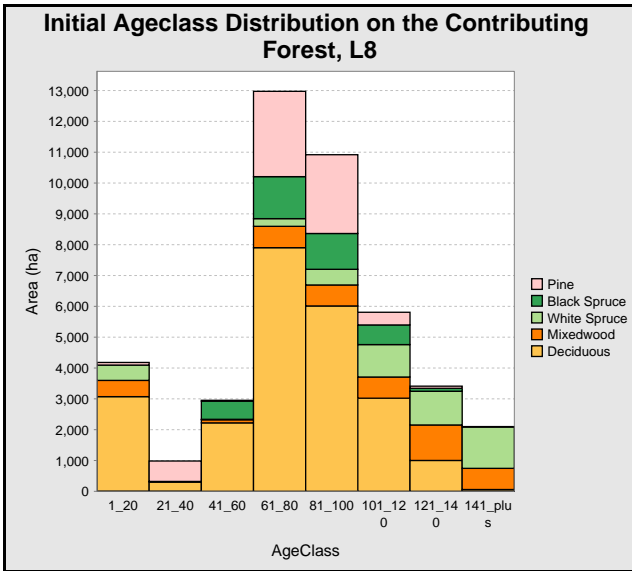
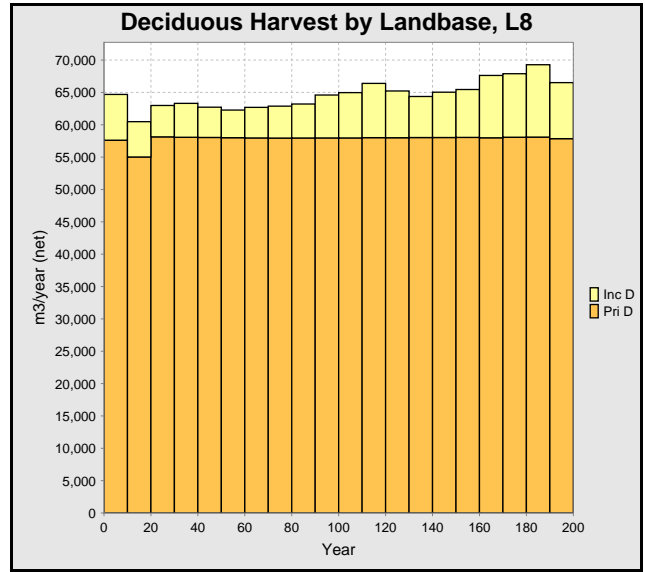
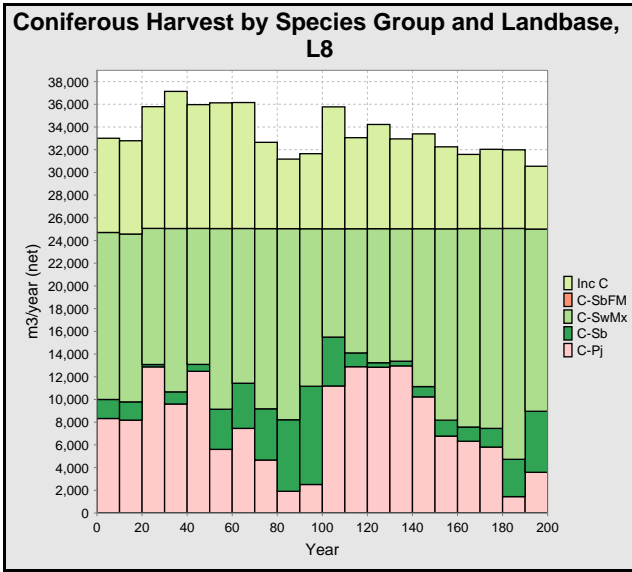
Patchworks Deciduous Landbase Harvest Summary by Species Group: 70-year Average

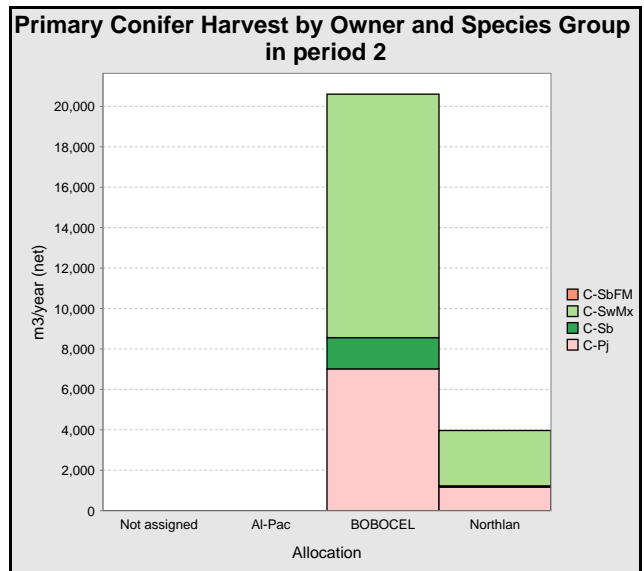
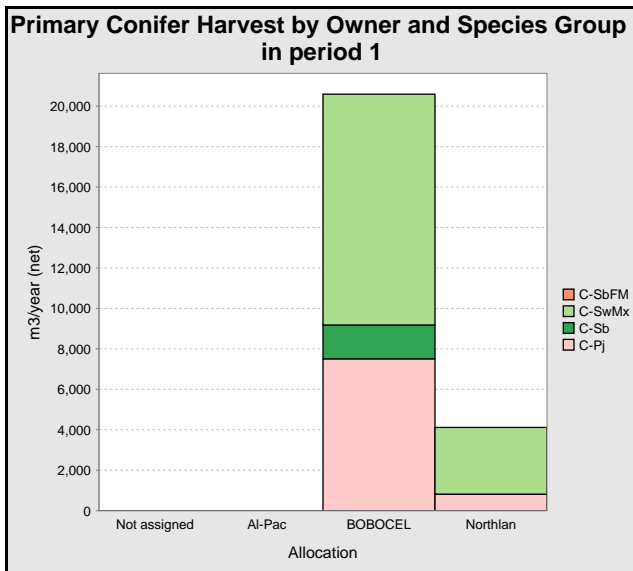
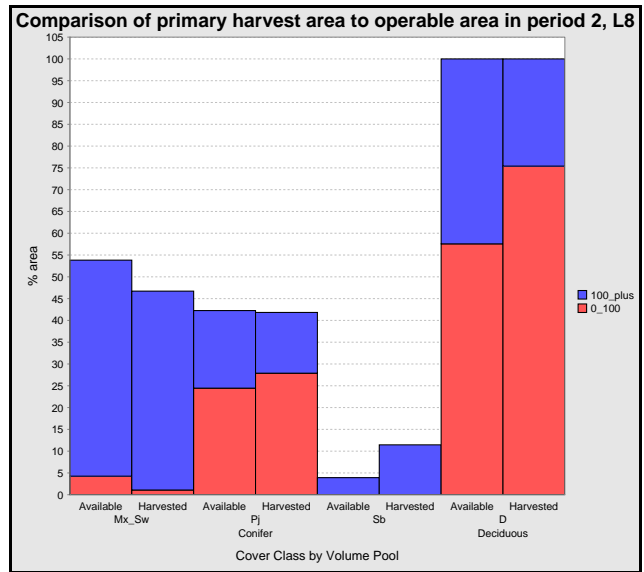
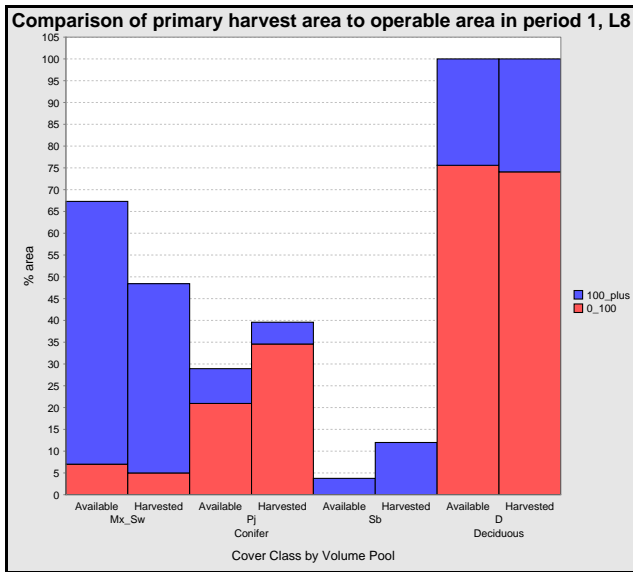


Primary Deciduous Average Harvest		
Species Group		net m3/yr
D	100%	57,550
Total		57,550

Incidental Coniferous Average Harvest		
Species Group		net m3/yr
C	100%	10,340
Total		10,340

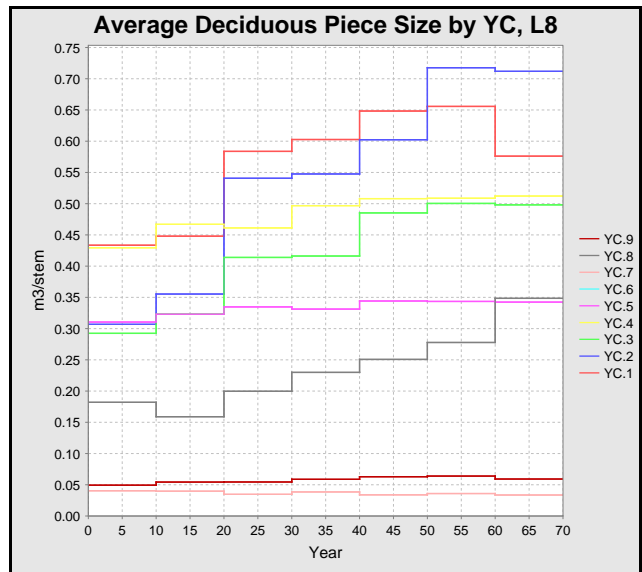
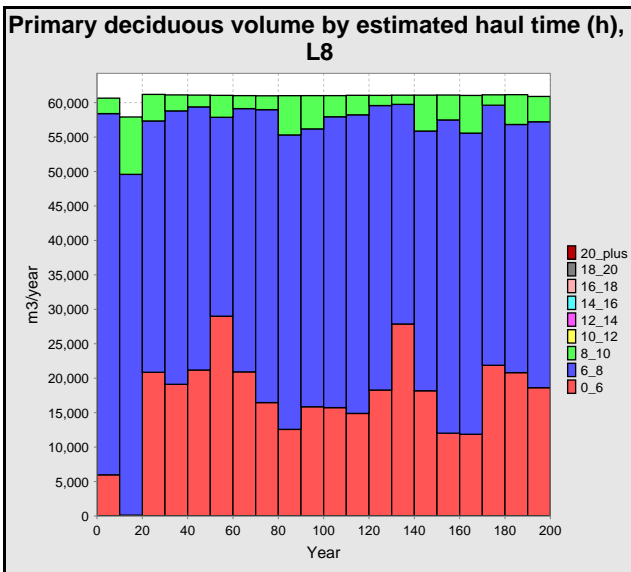
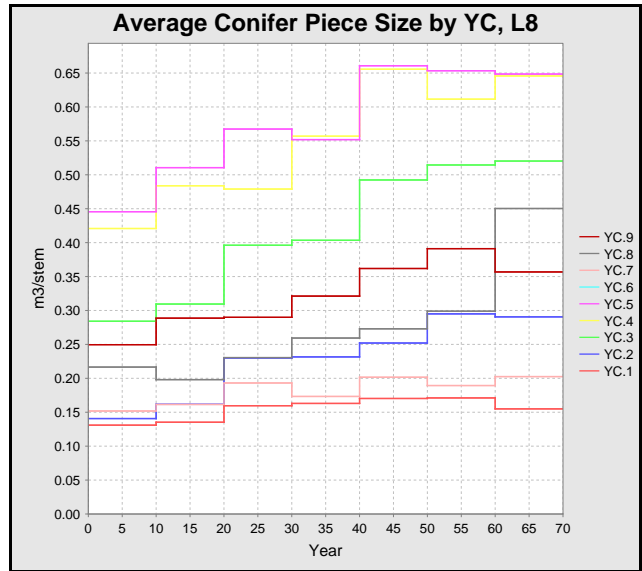
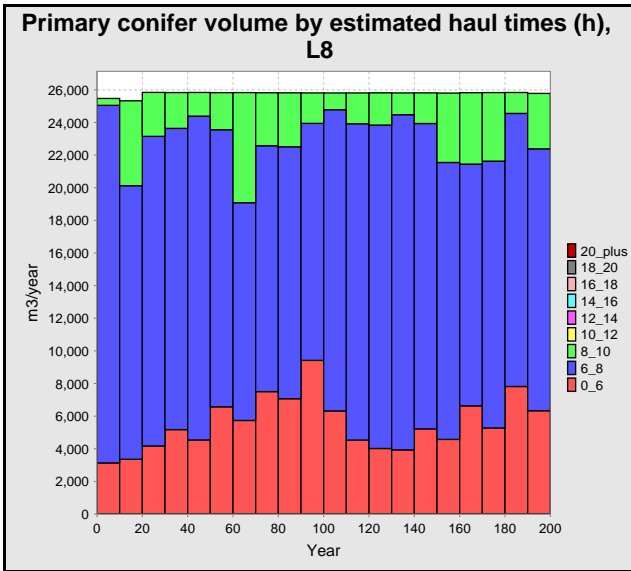
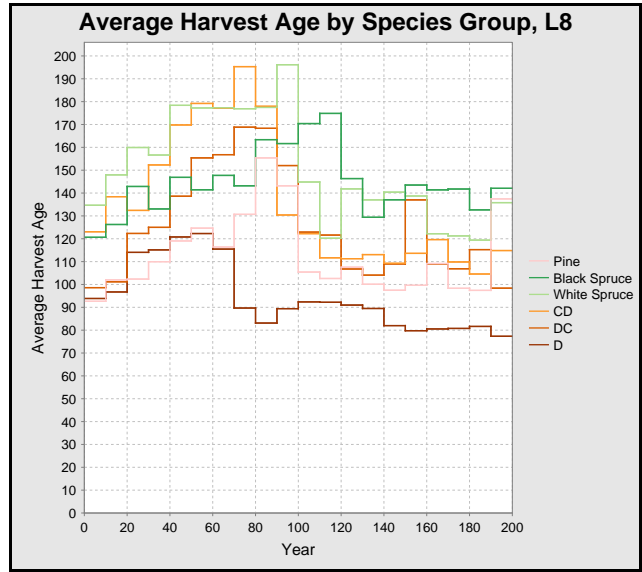
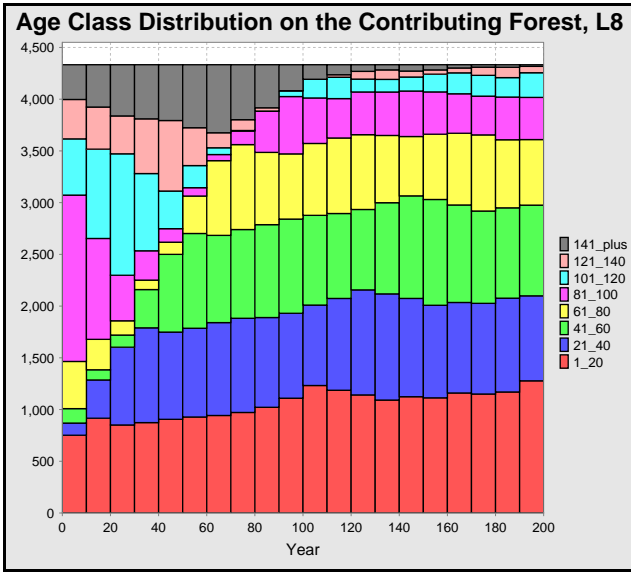
Deciduous Landbase Harvest 67,890





	C-Pj	C-Sb	C-SwMx	C-SbFM	Total
Not assigned	0	0	0	0	0
Al-Pac	0	0	0	0	0
BOBOCEL	7,508	1,674	11,414	0	20,595
Northlan	817	0	3,299	0	4,115

	C-Pj	C-Sb	C-SwMx	C-SbFM	Total
Not assigned	0	0	0	0	0
Al-Pac	0	0	0	0	0
BOBOCEL	7,013	1,547	12,044	0	20,604
Northlan	1,168	59	2,740	0	3,966



Strata description report - period 1

Area harvested by yield strata and age (hectares). This is an FMU summary of the digitally submitted file that details these areas by compartment.

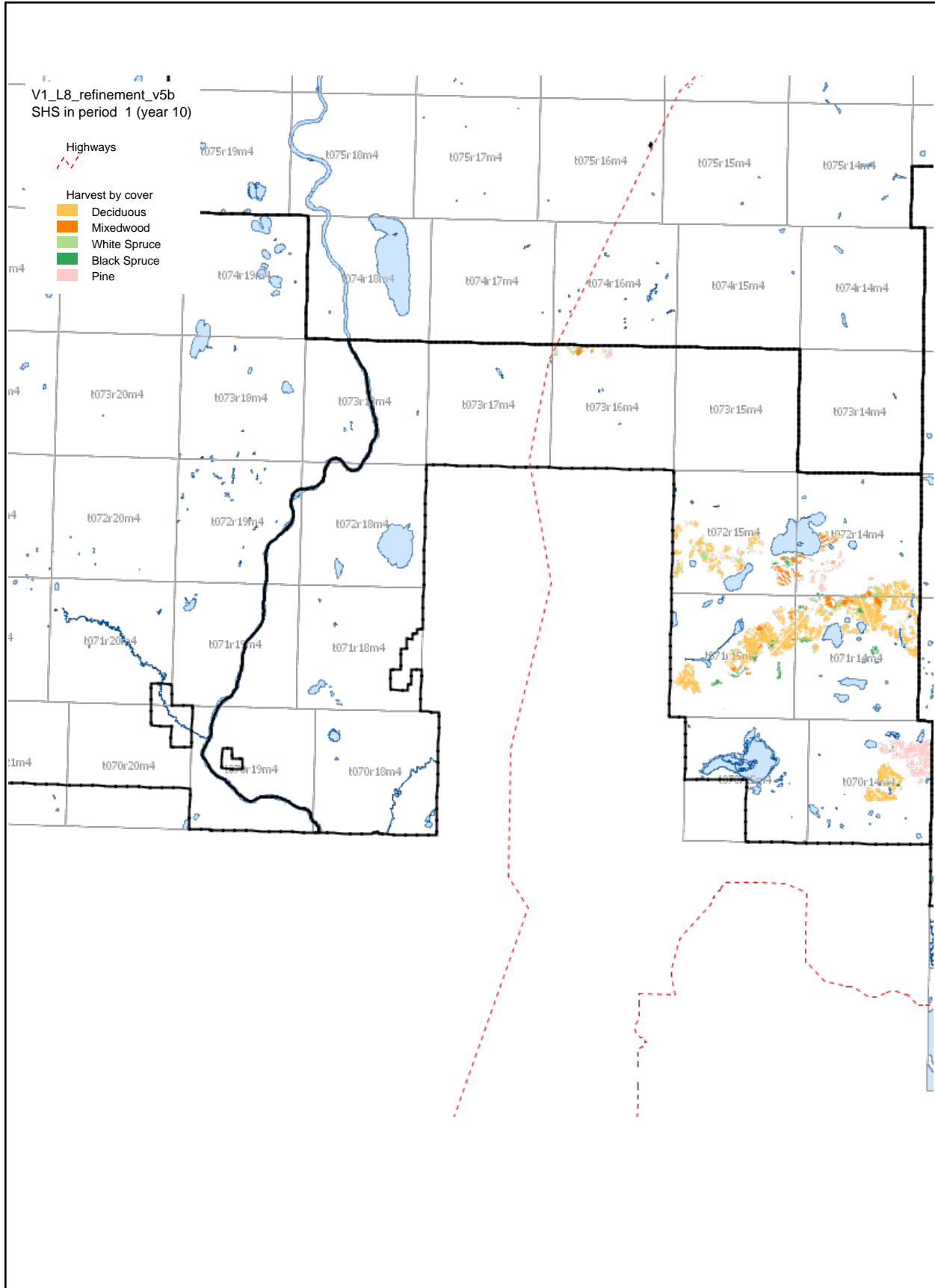
		Age Class										Total
		0_60	60_70	70_80	80_90	90_100	100_110	110_120	120_130	130_140	140_plus	
Strata	Aw-Nat	0	25	690	511	181	202	141	185	121	0	2,056
	AwU-Nat	0	0	367	311	14	28	0	57	0	0	776
	AwSx-Nat	0	0	0	44	27	110	15	18	14	0	228
	SxAw-Nat	0	0	0	13	0	0	0	0	141	124	277
	Sw-Nat	0	0	0	0	0	55	22	12	105	112	307
	SbFM-Nat	0	0	0	0	0	0	0	0	0	0	0
	SbG-Nat	0	0	0	0	0	0	0	198	3	0	201
	PjMx-Nat	0	0	0	0	9	3	3	0	0	0	15
	Pj-Nat	0	0	0	0	570	49	30	0	0	0	649
	Hw-RSA	0	0	0	0	0	0	0	0	0	0	0
	HwSx-RSA	0	0	0	0	0	0	0	0	0	0	0
	SwHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	Sw-RSA	0	0	0	0	0	0	0	0	0	0	0
	SbHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	Sb-RSA	0	0	0	0	0	0	0	0	0	0	0
	HwPI-RSA	0	0	0	0	0	0	0	0	0	0	0
	PIHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	PI-RSA	0	0	0	0	0	0	0	0	0	0	0
	AwSx-Int	0	0	0	0	0	0	0	0	0	0	0
	SxAw-Int	0	0	0	0	0	0	0	0	0	0	0
	Sw-Int	0	0	0	0	0	0	0	0	0	0	0
	AwSw-UP	0	0	0	0	0	0	0	0	0	0	0
	SwAw-UP	0	0	0	0	0	0	0	0	0	0	0
Total	0	25	1,057	879	802	446	211	470	384	236	4,509	

Strata description report - period 2

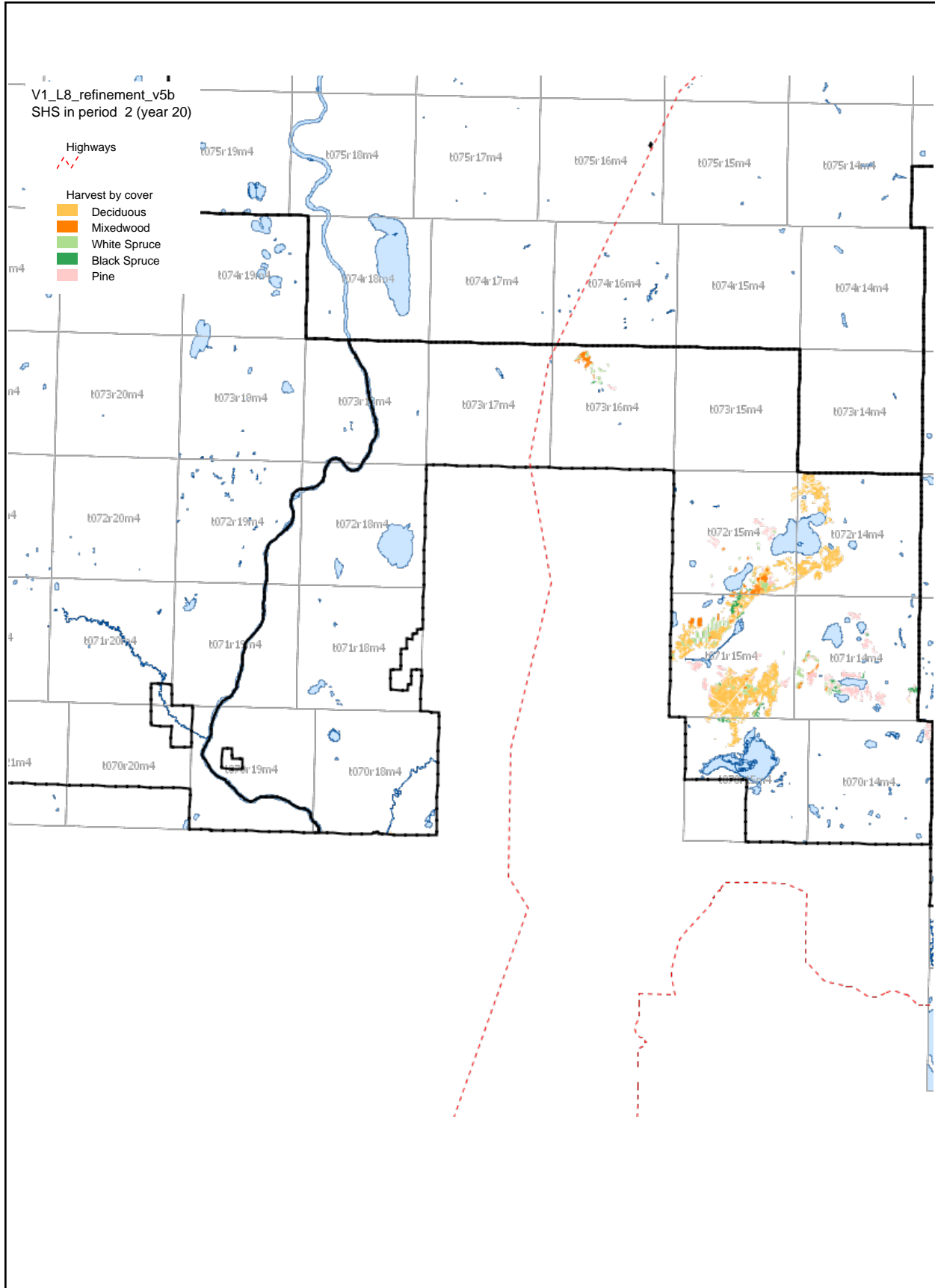
Area harvested by yield strata and age (hectares). This is an FMU summary of the digitally submitted file that details these areas by compartment.

		Age Class										Total
		0_60	60_70	70_80	80_90	90_100	100_110	110_120	120_130	130_140	140_plus	
Strata	Aw-Nat	0	0	34	1,235	77	172	71	317	0	2	1,908
	AwU-Nat	0	0	27	490	84	0	0	73	0	0	675
	AwSx-Nat	0	0	0	6	11	28	18	12	9	0	84
	SxAw-Nat	0	0	0	0	0	0	12	10	16	216	254
	Sw-Nat	0	0	0	0	0	24	34	97	33	216	404
	SbFM-Nat	0	0	0	0	0	0	0	0	0	0	0
	SbG-Nat	0	0	0	0	0	0	0	153	21	8	182
	PjMx-Nat	0	0	0	0	37	0	0	1	0	0	38
	Pj-Nat	0	0	0	0	405	85	45	91	0	0	626
	Hw-RSA	0	0	0	0	0	0	0	0	0	0	0
	HwSx-RSA	0	0	0	0	0	0	0	0	0	0	0
	SwHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	Sw-RSA	0	0	0	0	0	0	0	0	0	0	0
	SbHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	Sb-RSA	0	0	0	0	0	0	0	0	0	0	0
	HwPI-RSA	0	0	0	0	0	0	0	0	0	0	0
	PIHw-RSA	0	0	0	0	0	0	0	0	0	0	0
	PI-RSA	0	0	0	0	0	0	0	0	0	0	0
	AwSx-Int	0	0	0	0	0	0	0	0	0	0	0
	SxAw-Int	0	0	0	0	0	0	0	0	0	0	0
	Sw-Int	0	0	0	0	0	0	0	0	0	0	0
	AwSw-UP	0	0	0	0	0	0	0	0	0	0	0
	SwAw-UP	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	61	1,731	615	310	179	754	79	441	4,170

Spatial Harvest Sequence - period 1 (years 1 - 10)

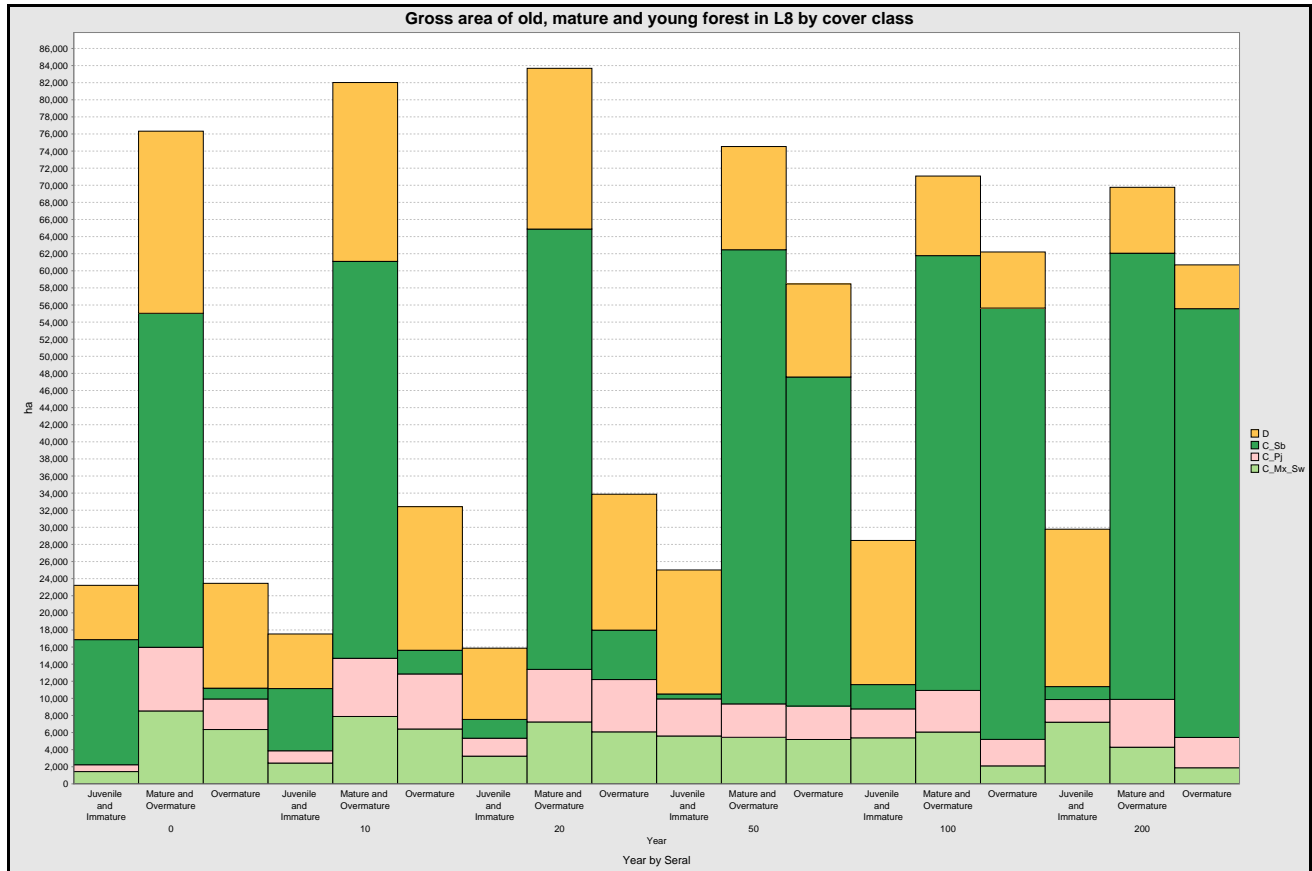


Spatial Harvest Sequence - period 2 (years 11 - 20)



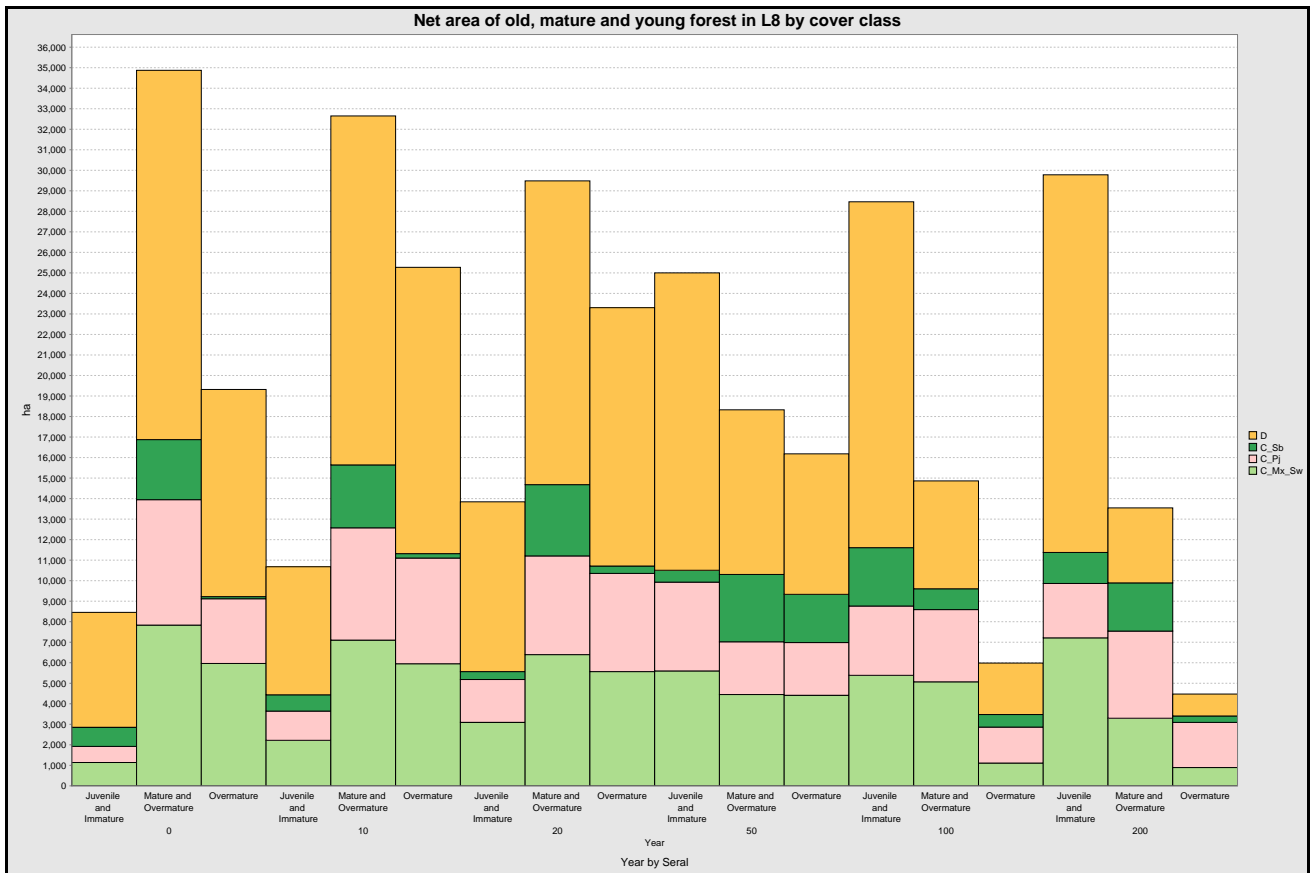
Voit 1.1.1.1 a) Gross area of old, mature and young forest

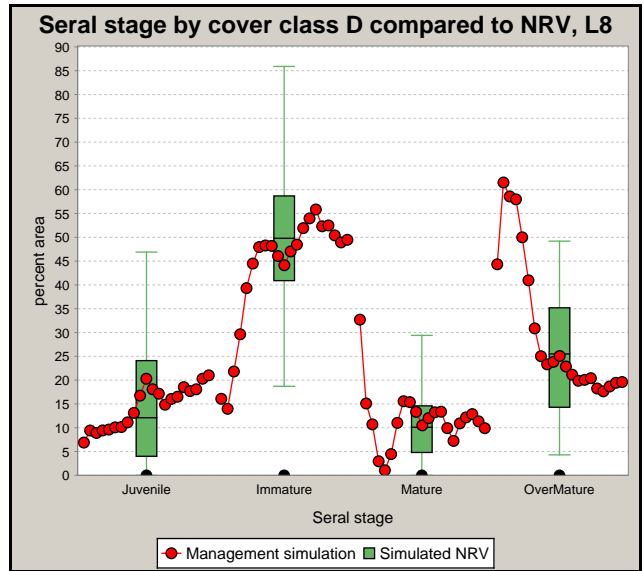
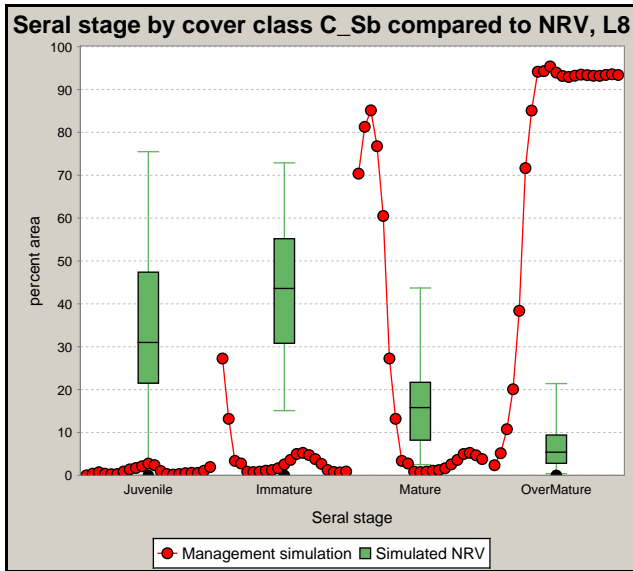
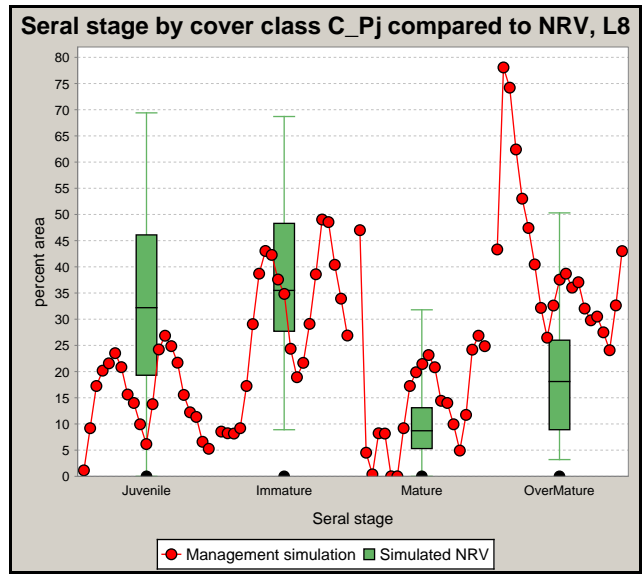
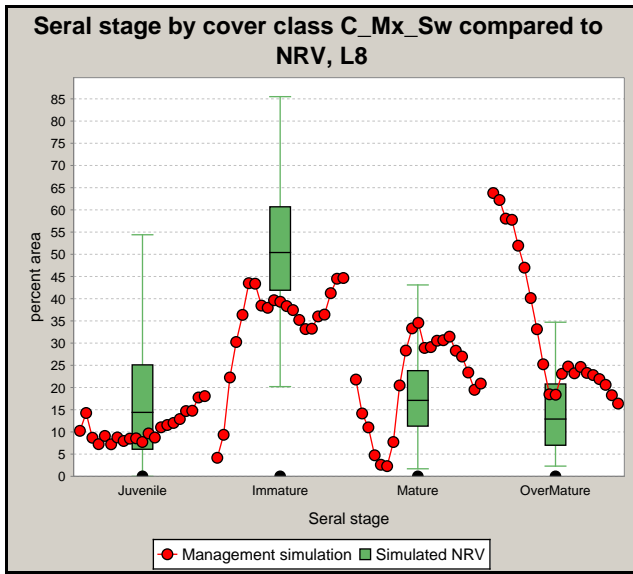
		C_Mx_Sw	C_Pj	C_Sb	D	Total	
Year	0	Juvenile and Immature	1,437	798	14,634	6,347	23,216
		Mature and Overmature	8,529	7,444	39,057	21,300	76,330
		Overmature	6,357	3,570	1,265	12,258	23,450
	10	Juvenile and Immature	2,436	1,435	7,275	6,384	17,530
		Mature and Overmature	7,879	6,807	46,416	20,914	82,016
		Overmature	6,419	6,435	2,770	16,794	32,418
	20	Juvenile and Immature	3,244	2,094	2,197	8,331	15,866
		Mature and Overmature	7,240	6,148	51,494	18,798	83,680
		Overmature	6,084	6,117	5,779	15,894	33,874
	50	Juvenile and Immature	5,601	4,334	579	14,499	25,013
		Mature and Overmature	5,444	3,909	53,112	12,069	74,533
		Overmature	5,190	3,909	38,479	10,884	58,462
	100	Juvenile and Immature	5,387	3,378	2,844	16,857	28,466
		Mature and Overmature	6,063	4,864	50,847	9,307	71,080
		Overmature	2,105	3,096	50,441	6,559	62,201
200	Juvenile and Immature	7,214	2,649	1,511	18,406	29,781	
	Mature and Overmature	4,287	5,593	52,179	7,705	69,765	
	Overmature	1,885	3,545	50,144	5,119	60,692	



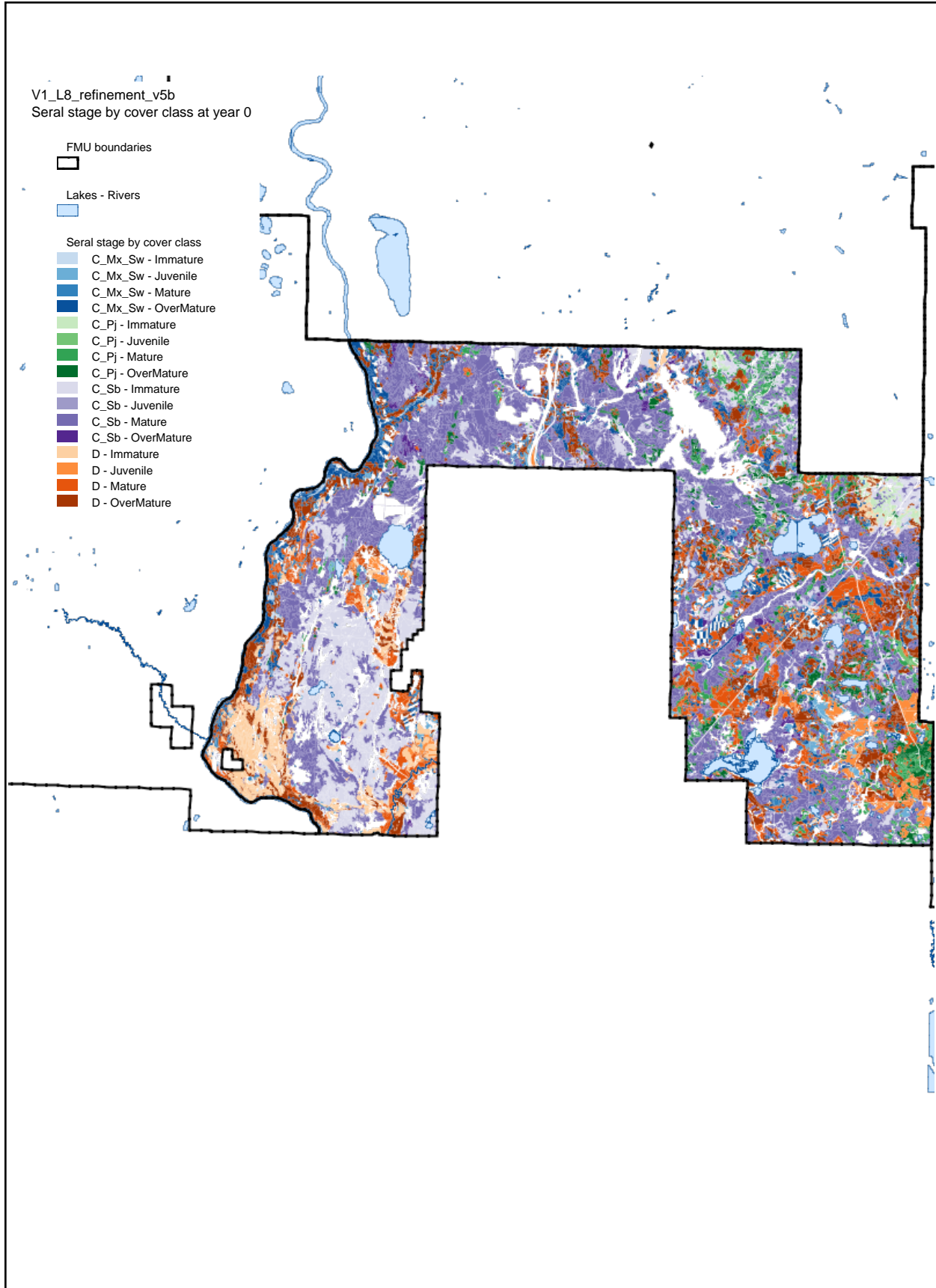
Voit 1.1.1.1 b) Net area of old, mature and young forest

			C_Mx_Sw	C_Pj	C_Sb	D	Total
Year	0	Juvenile and Immature	1,138	785	933	5,599	8,455
		Mature and Overmature	7,835	6,113	2,928	17,998	34,873
		Overmature	5,966	3,154	105	10,095	19,319
	10	Juvenile and Immature	2,220	1,424	795	6,240	10,679
		Mature and Overmature	7,103	5,474	3,065	17,007	32,649
		Overmature	5,953	5,151	215	13,954	25,272
	20	Juvenile and Immature	3,096	2,087	386	8,274	13,843
		Mature and Overmature	6,396	4,810	3,475	14,804	29,485
		Overmature	5,569	4,785	359	12,591	23,305
	50	Juvenile and Immature	5,601	4,328	578	14,494	25,001
		Mature and Overmature	4,452	2,569	3,283	8,023	18,327
		Overmature	4,415	2,569	2,350	6,848	16,182
	100	Juvenile and Immature	5,387	3,378	2,844	16,857	28,466
		Mature and Overmature	5,071	3,519	1,016	5,256	14,862
		Overmature	1,113	1,751	612	2,508	5,984
200	Juvenile and Immature	7,214	2,649	1,511	18,406	29,781	
	Mature and Overmature	3,295	4,248	2,349	3,655	13,547	
	Overmature	893	2,200	314	1,068	4,475	

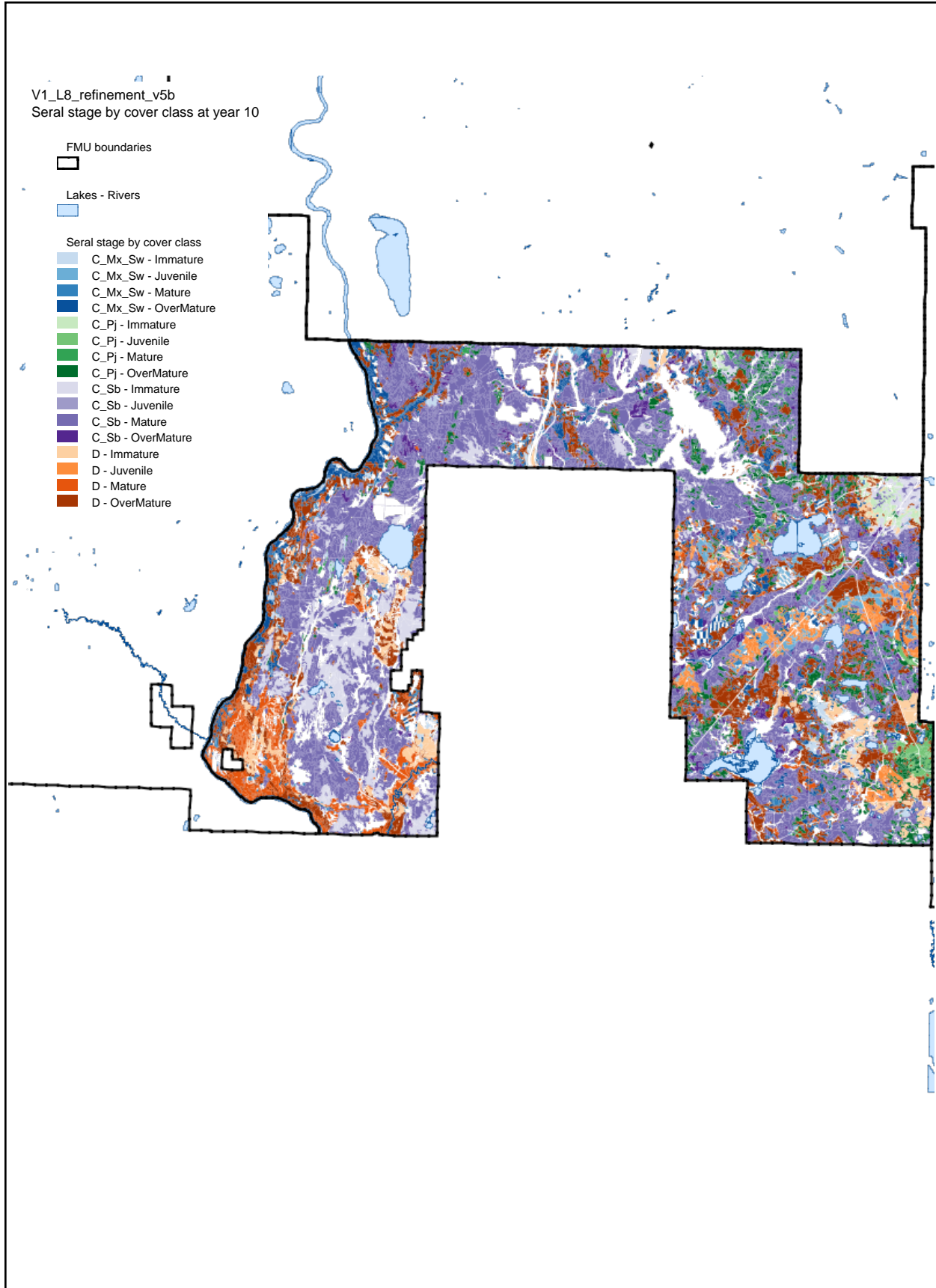




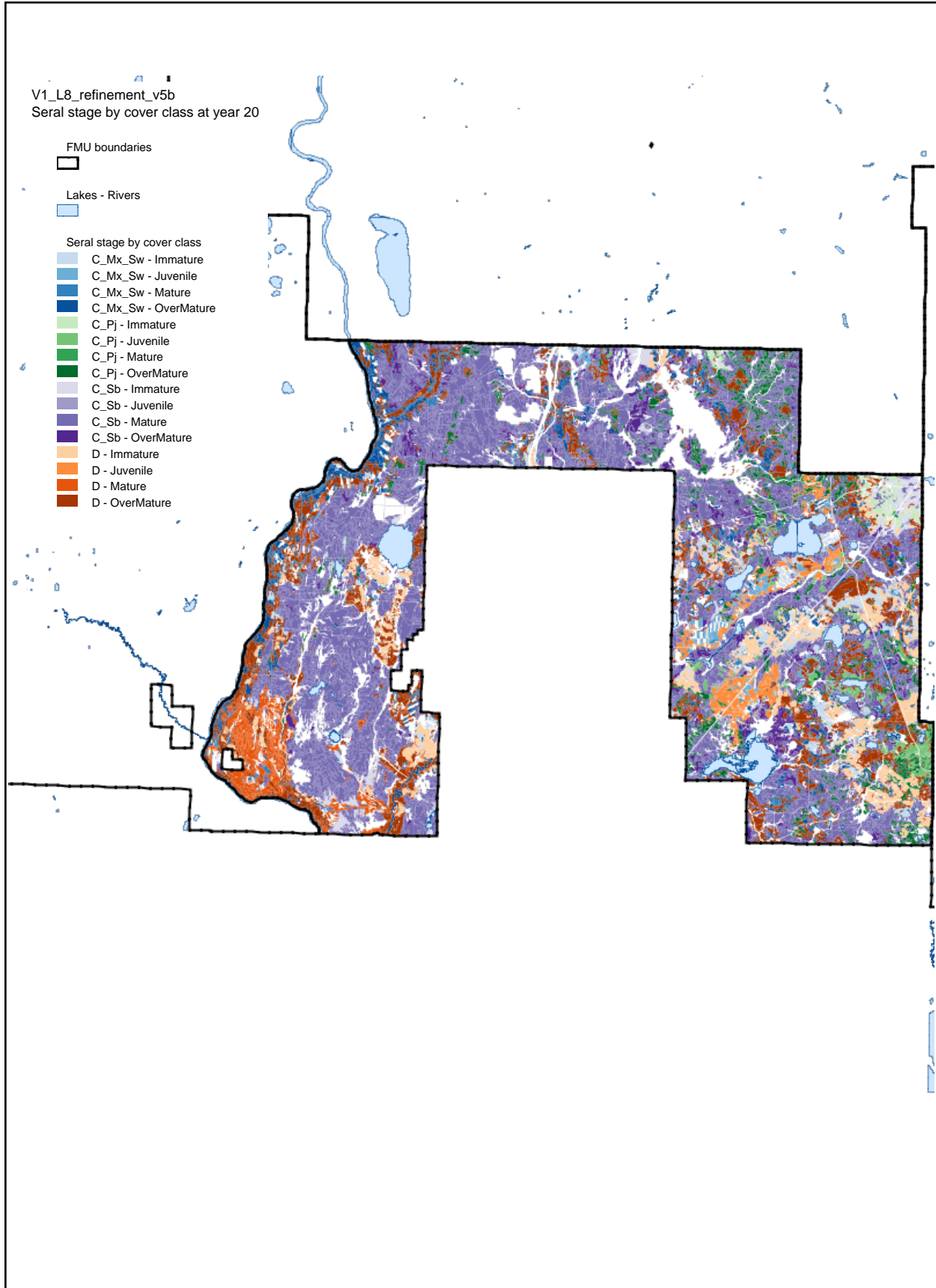
Voit 1.1.1.1 Seral stage by cover class - period 0



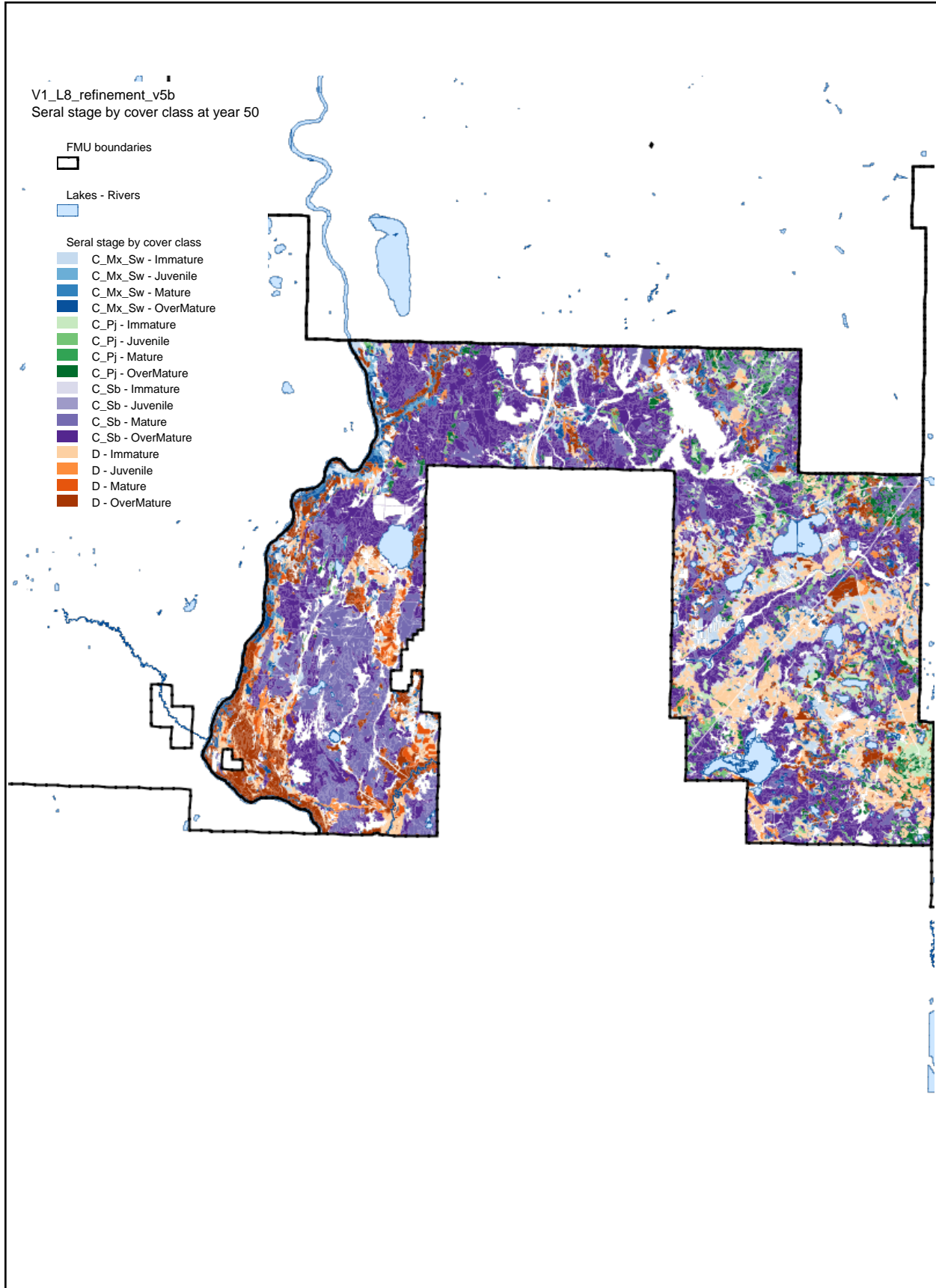
Voit 1.1.1.1 Seral stage by cover class - period 1



Voit 1.1.1.1 Seral stage by cover class - period 2



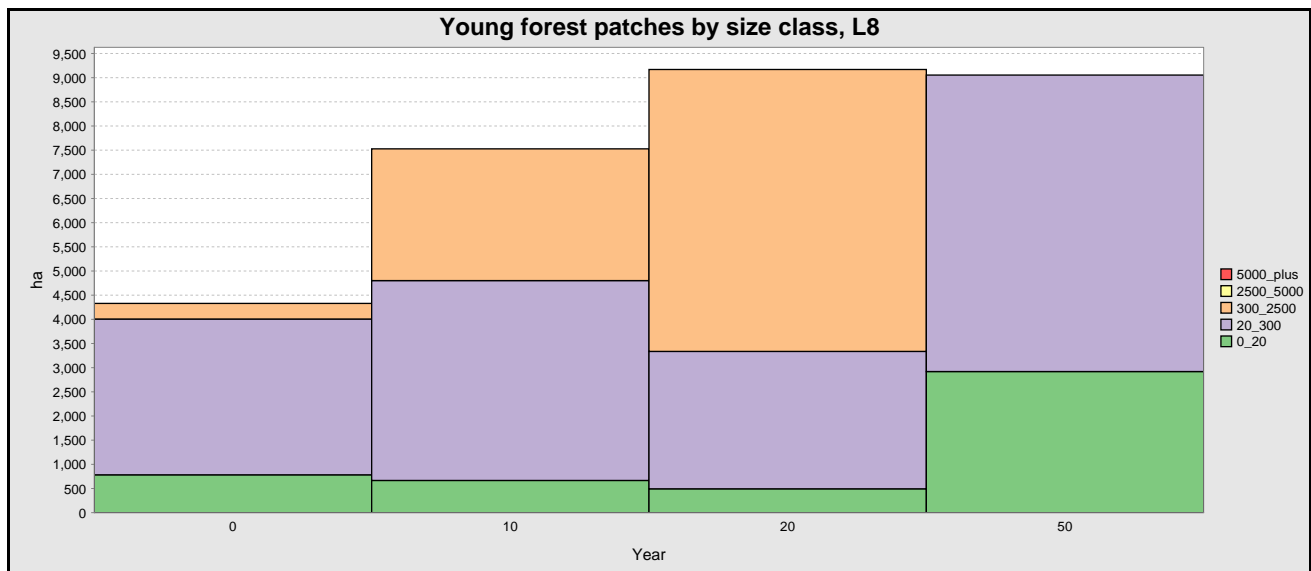
Voit 1.1.1.1 Seral stage by cover class - period 5



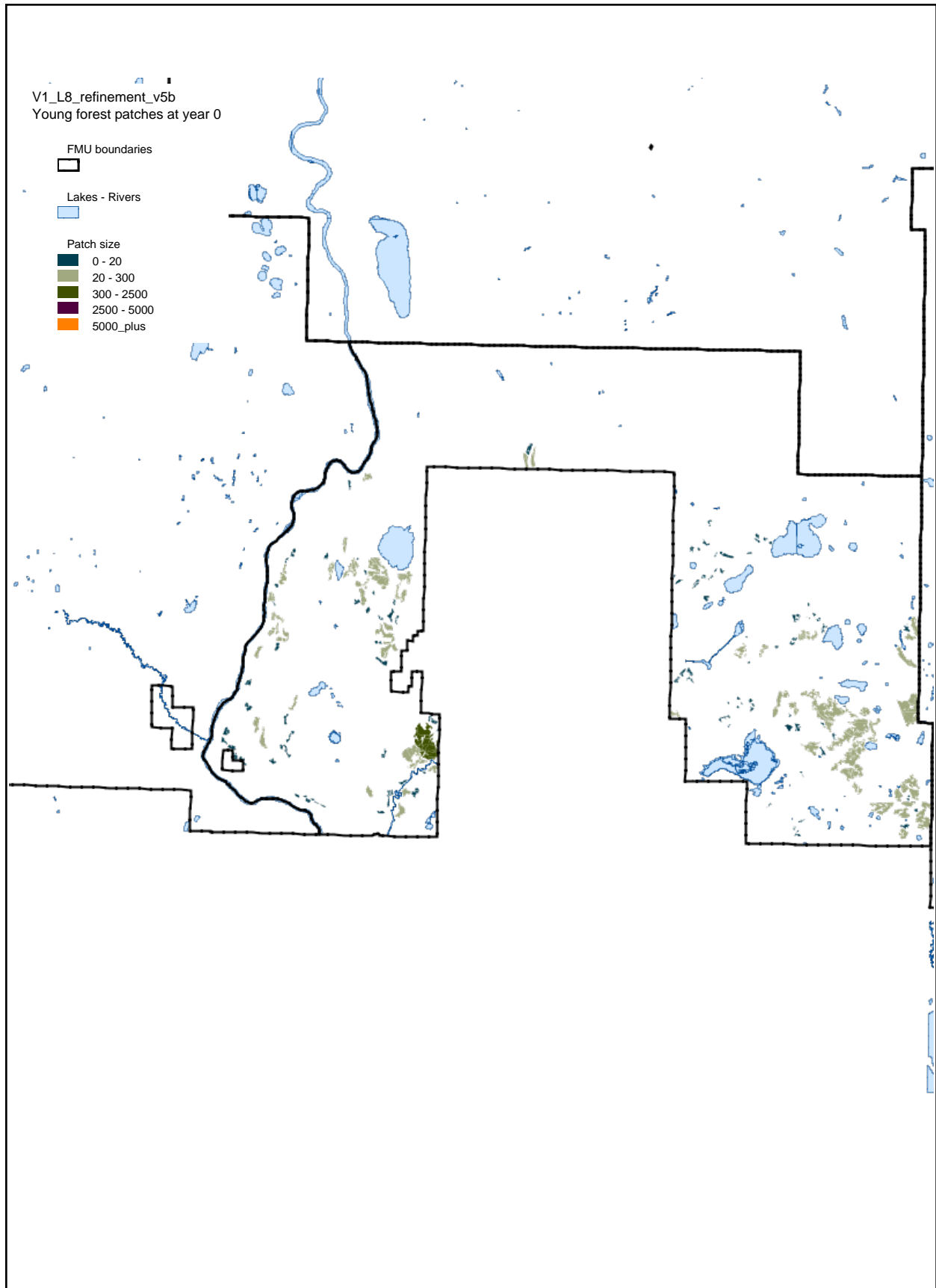
Voit 1.1.1.2a - Young Forest Patches

The following table shows the area (in hectares) and frequency (count) of the young forest patches by size class

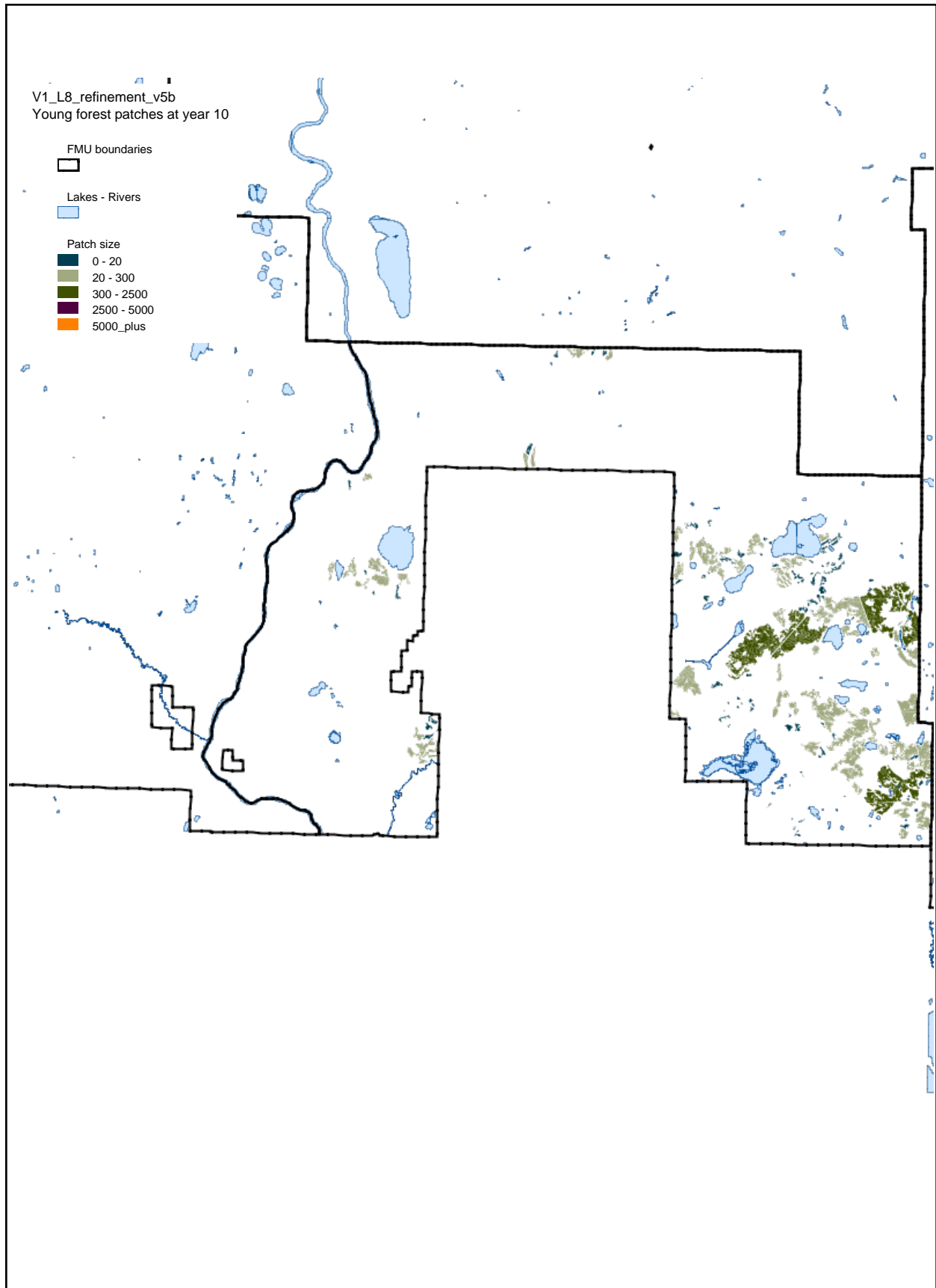
PERIOD	YEAR	Area						Frequency					
		0_20	20_300	300_2500	2500_5000	5000_plus	Total	0_20	20_300	300_2500	2500_5000	5000_plus	Total
0	0	784	3,223	323	0	0	4,330	118	52	1	0	0	171
1	10	667	4,135	2,726	0	0	7,527	110	54	5	0	0	169
2	20	494	2,843	5,833	0	0	9,169	101	44	8	0	0	153
5	50	2,920	6,134	0	0	0	9,054	597	104	0	0	0	701



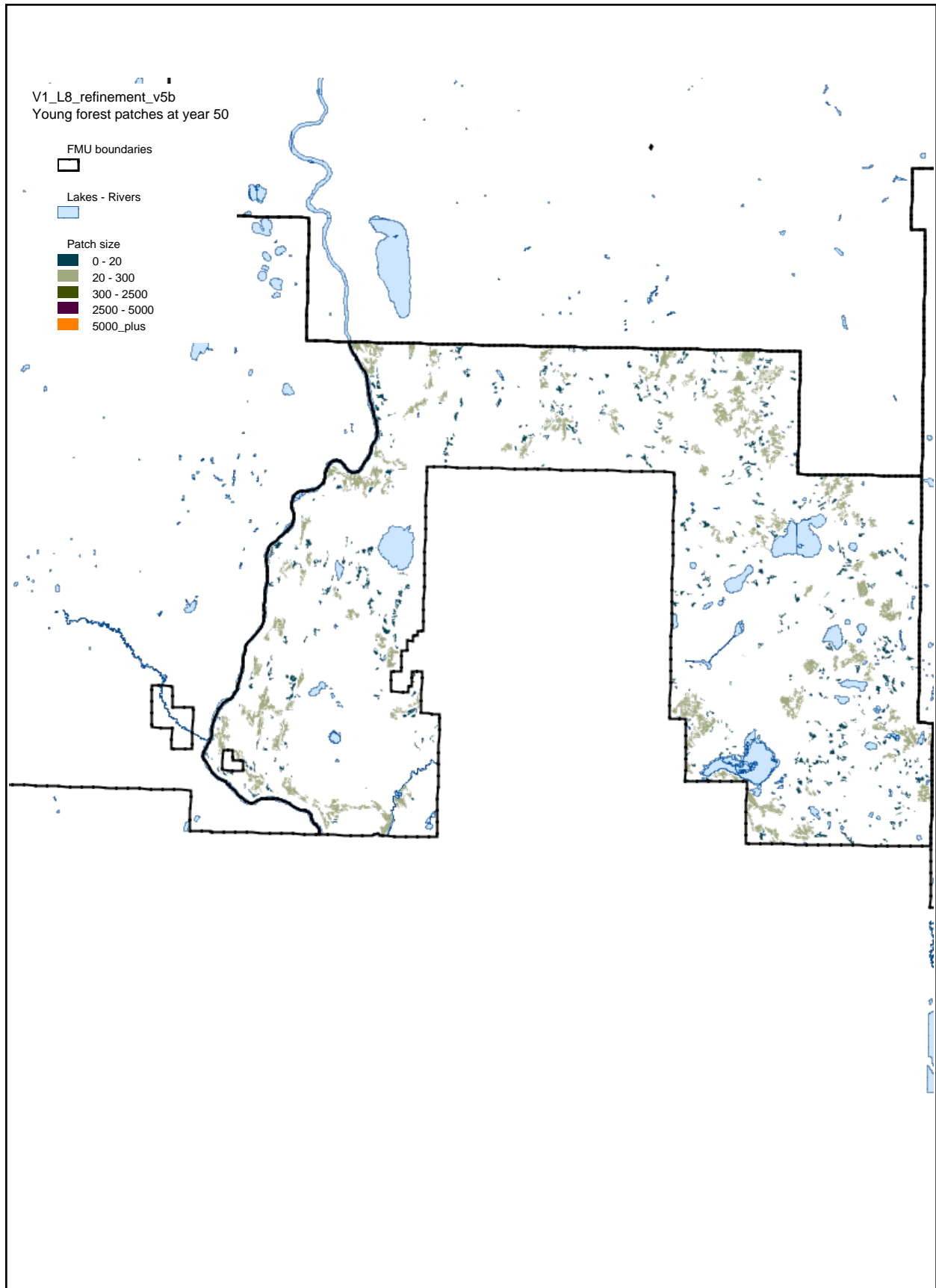
Voit 1.1.1.2a - Young Forest Patches - period 0



Voit 1.1.1.2a - Young Forest Patches - period 1



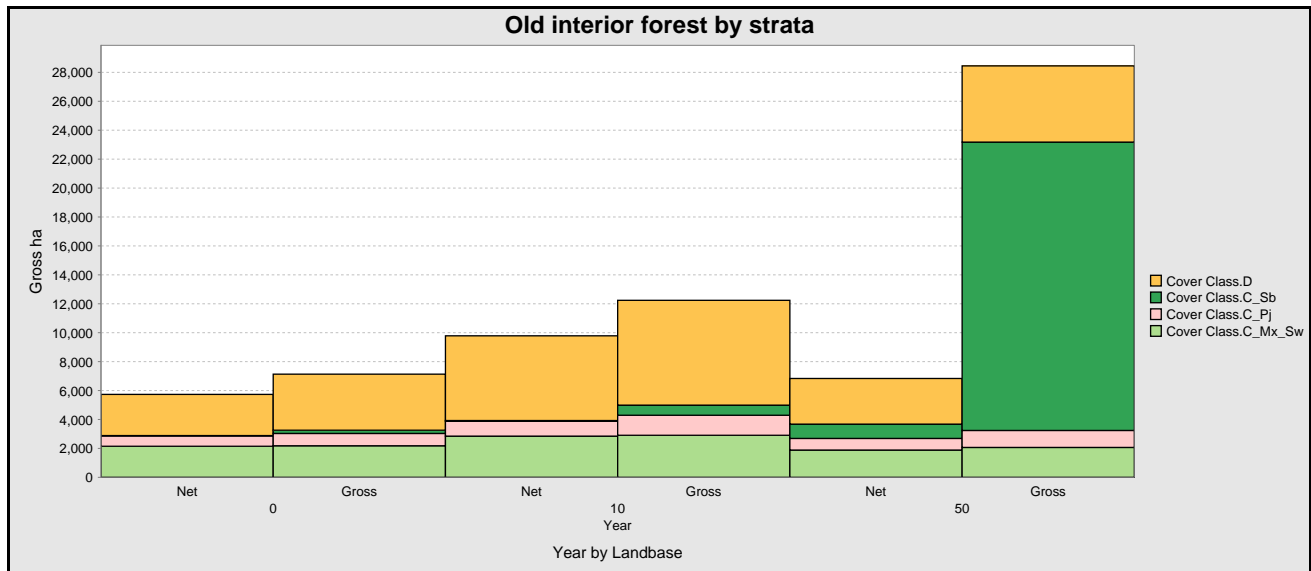
Voit 1.1.1.2a - Young Forest Patches - period 5



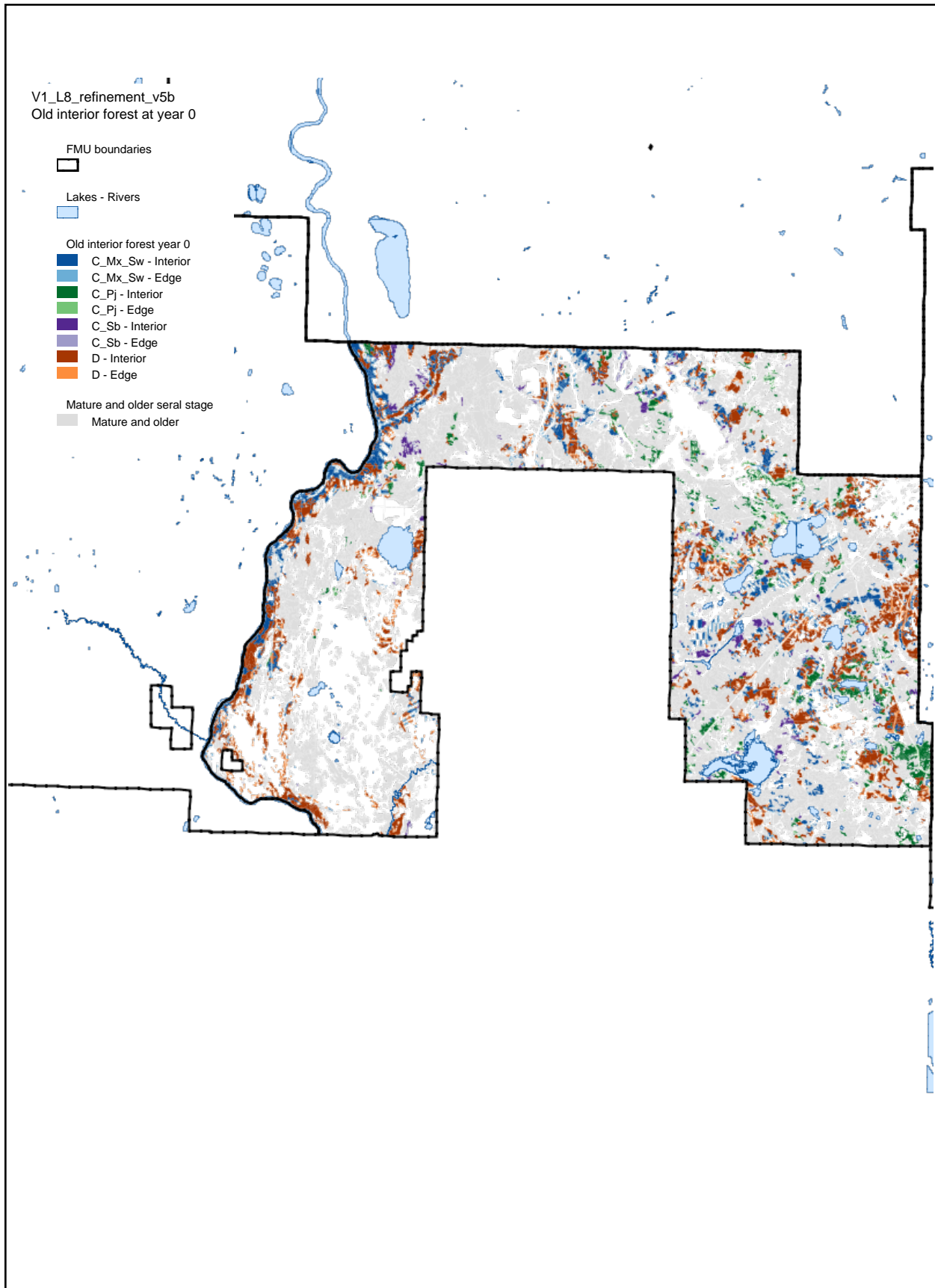
Voit 1.1.1.2b - Interior Core Summary

Area in hectares of old interior cores larger than 100 hectares

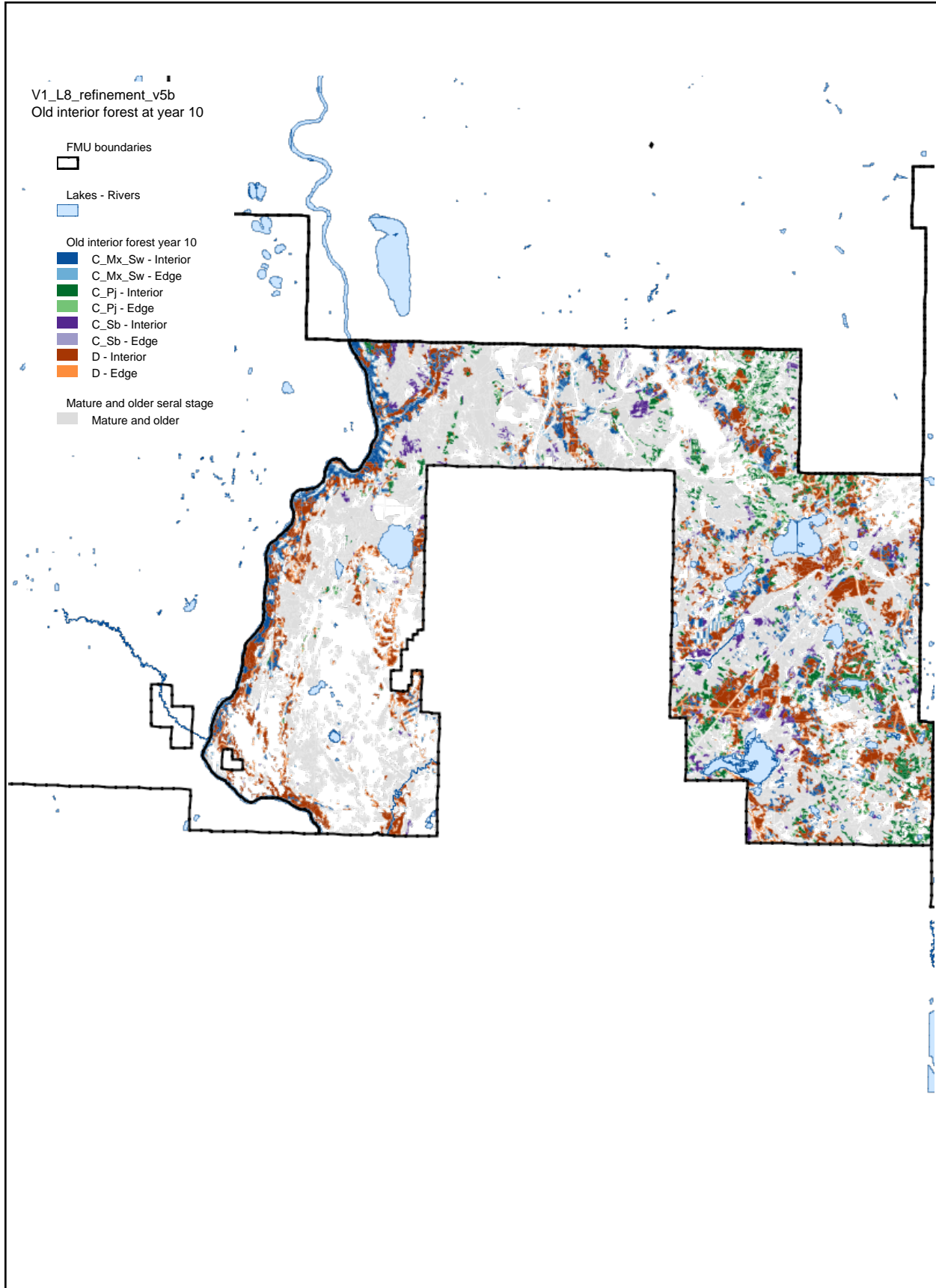
			Cover Class				Total
			C_Mx_Sw	C_Pj	C_Sb	D	
Year	0	Net	2,148	726	14	2,847	5,735
		Gross	2,183	852	222	3,877	7,134
	10	Net	2,849	1,035	43	5,858	9,786
		Gross	2,908	1,384	698	7,249	12,239
	50	Net	1,886	805	988	3,156	6,835
		Gross	2,067	1,176	19,935	5,269	28,446



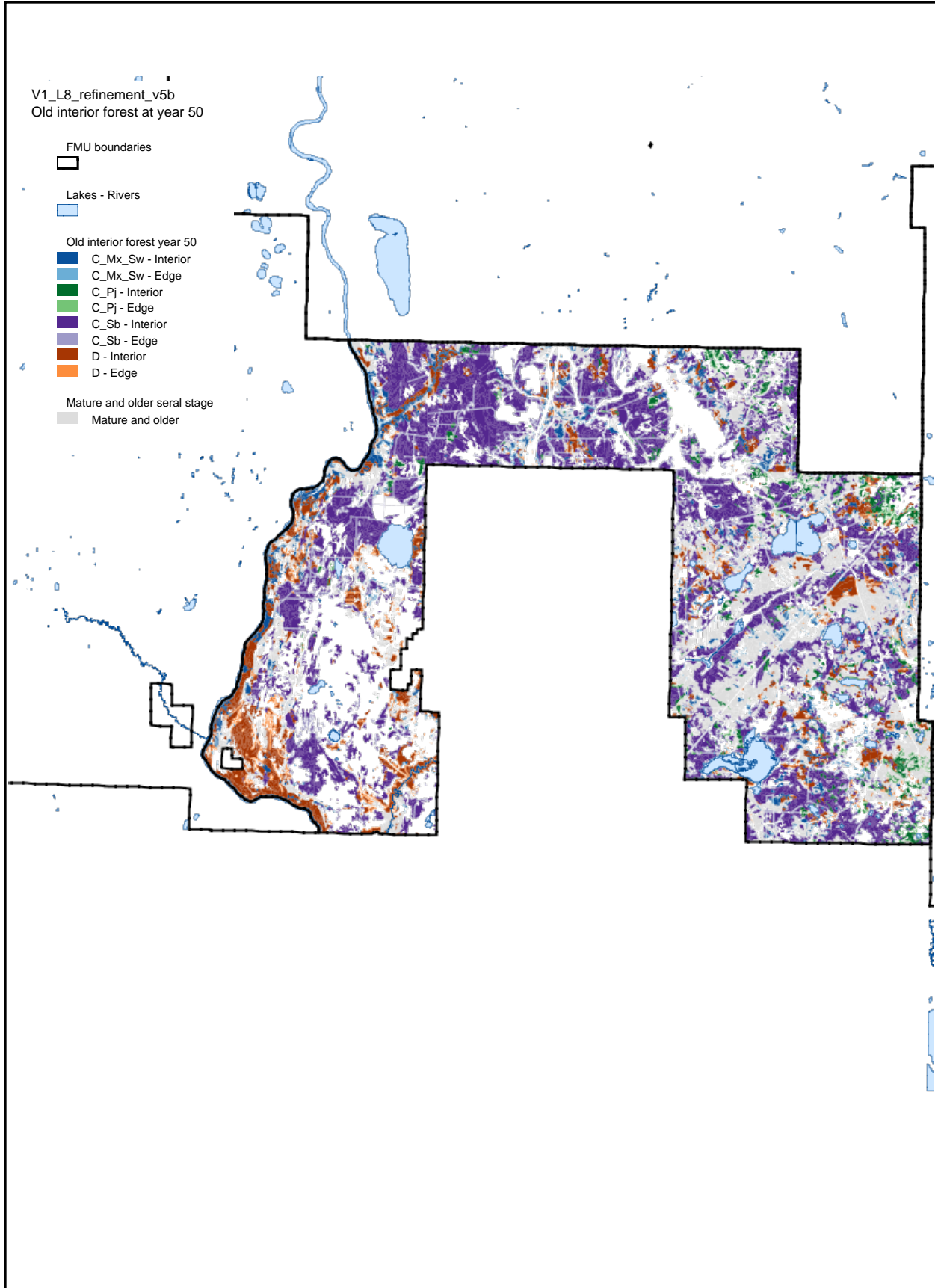
Voit 1.1.1.2b - Old interior core - period 0



Voit 1.1.1.2b - Old interior core - period 1



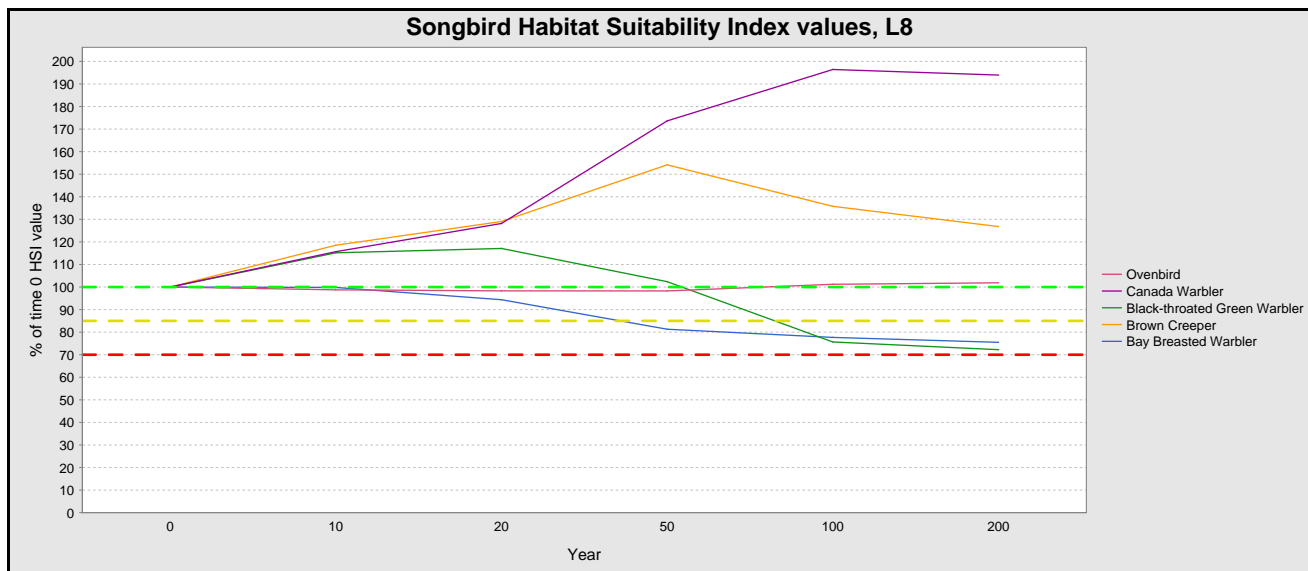
Voit 1.1.1.2b - Old interior core - period 5



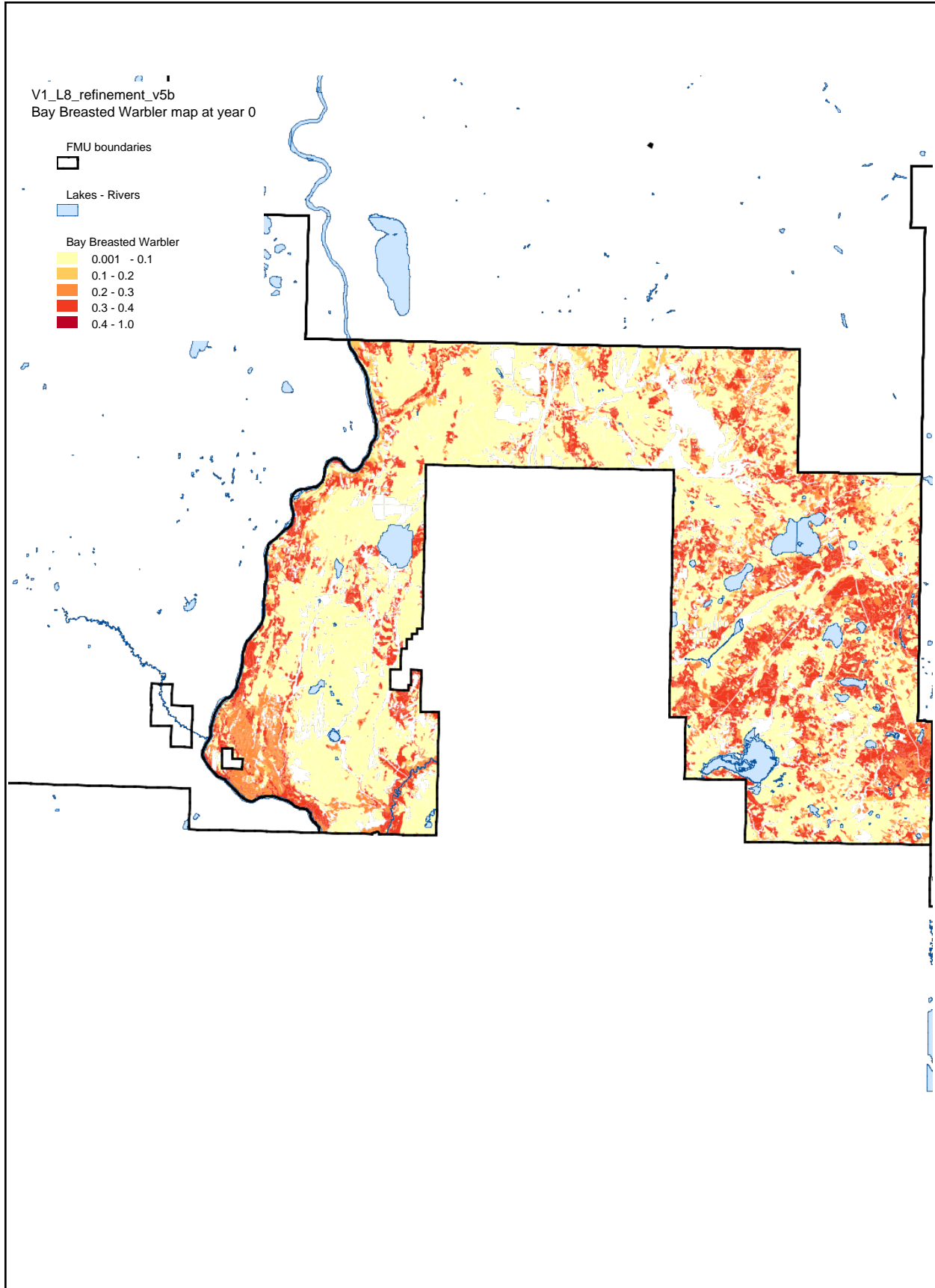
Songbird Habitat Suitability Index values

This table shows the songbird Habitat Suitability Index values as a percentage of levels that occurred at time zero. The line chart shows change relative to the time zero values. The dashed yellow reference line is 15% below the time zero value. The dashed red reference line is 30% below the time zero value.

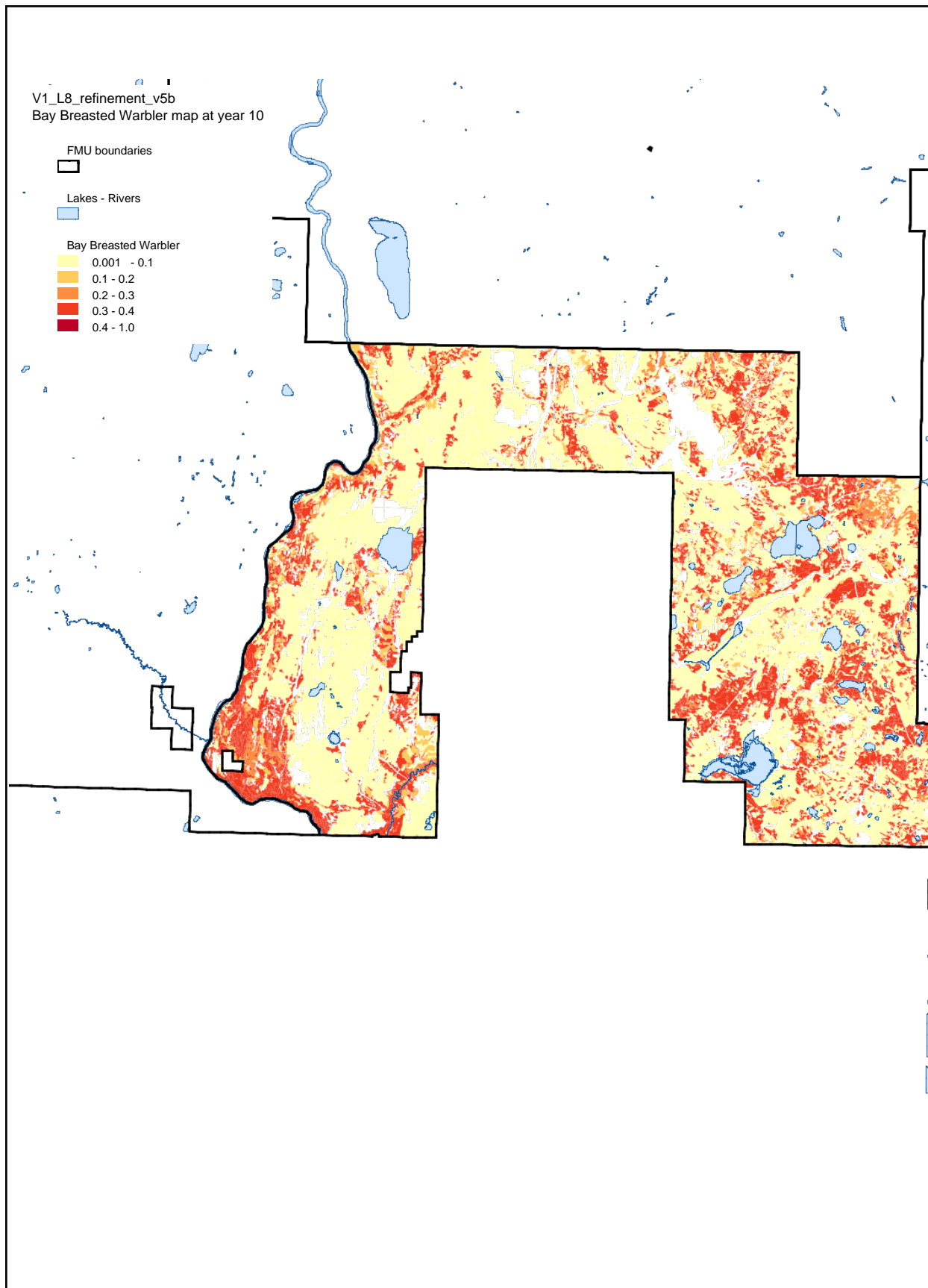
Period	Year	Bay Breasted Warbler	Brown Creeper	Black throated Green Warbler	Canada Warbler	Ovenbird
0	0	100	100	100	100	100
1	10	100	119	115	116	99
2	20	94	129	117	128	98
5	50	81	154	102	174	98
10	100	78	136	76	196	101
20	200	76	127	72	194	102



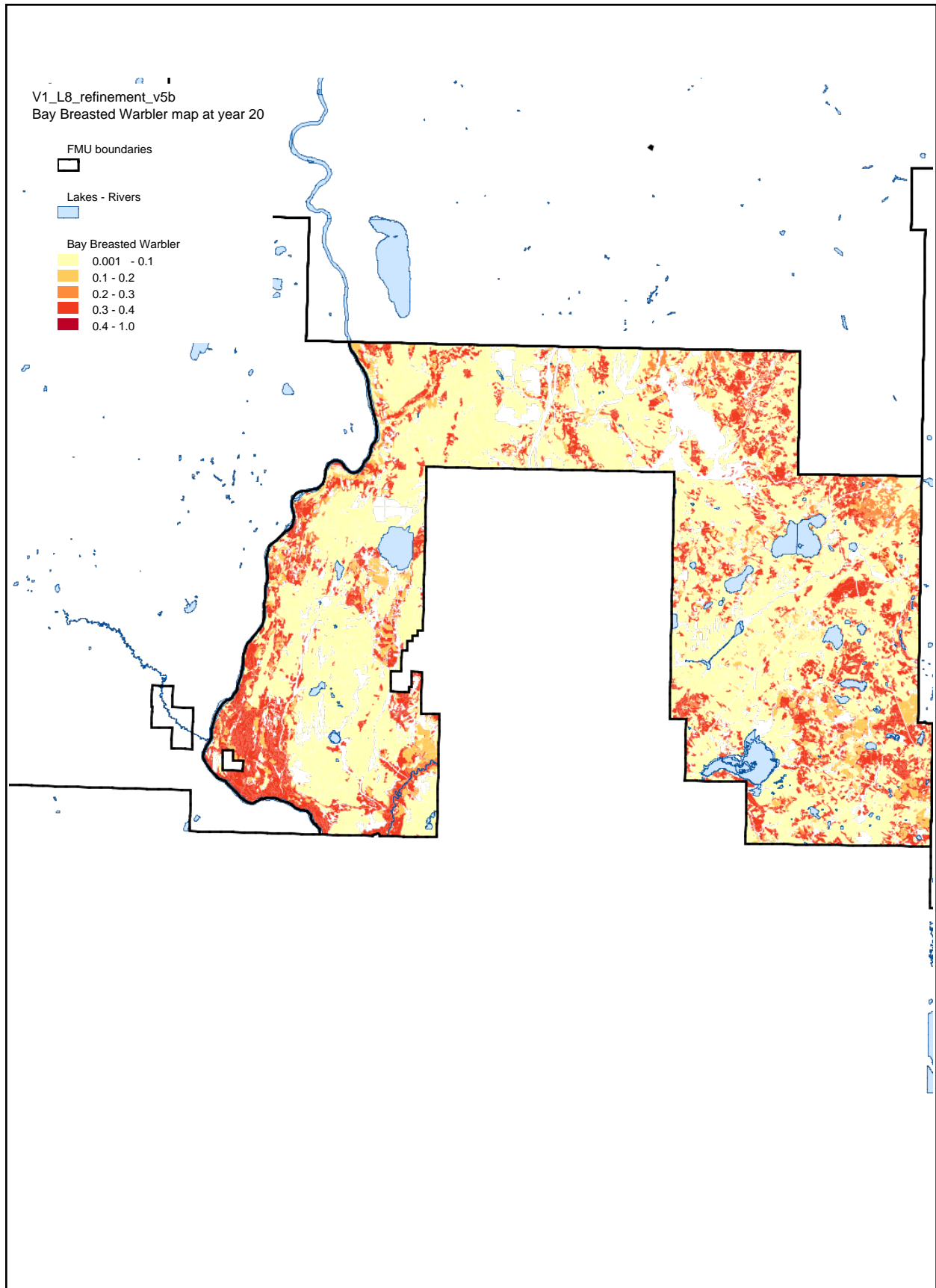
Bay Breasted Warbler HSI - period 0



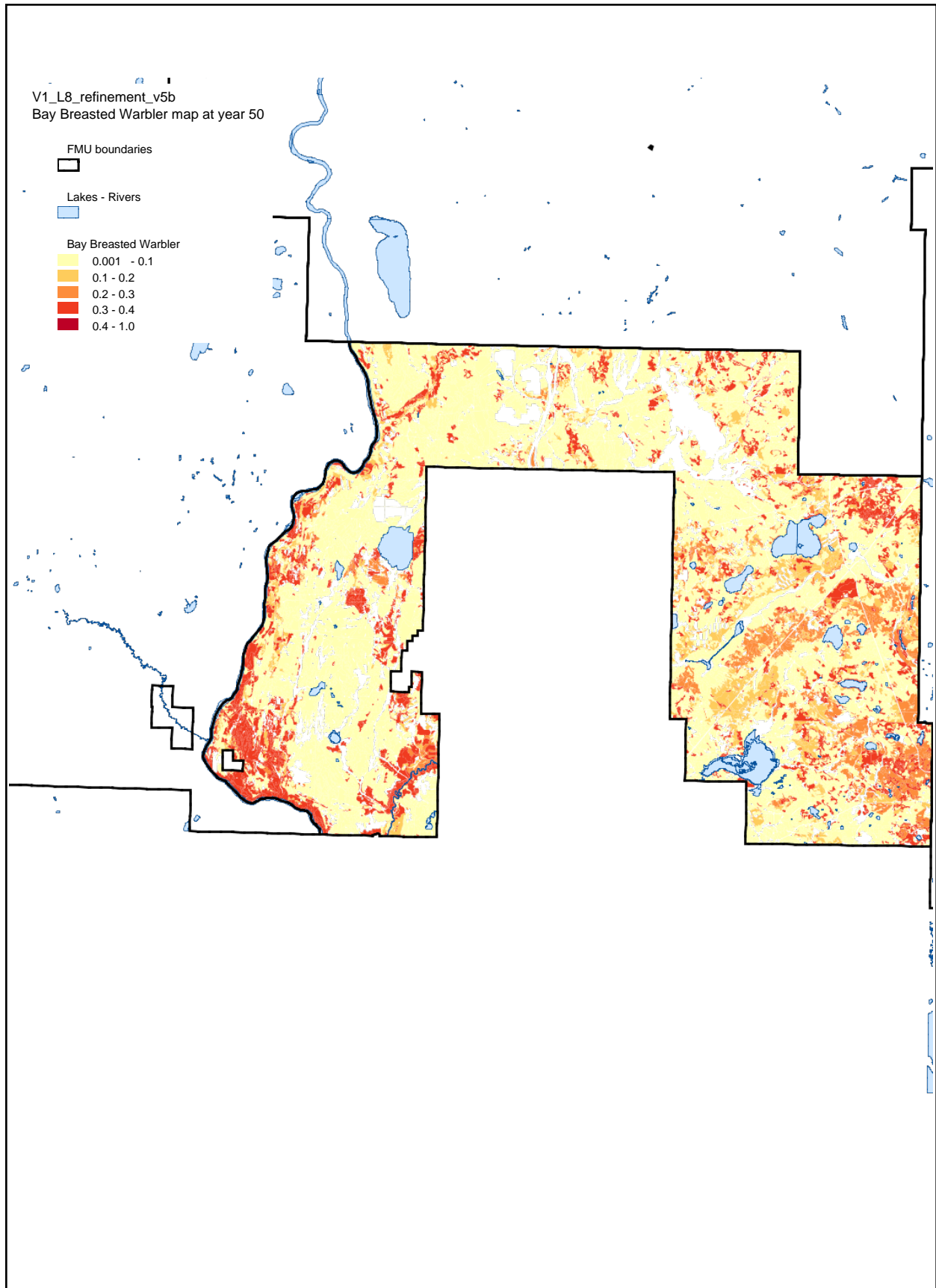
Bay Breasted Warbler HSI - period 1



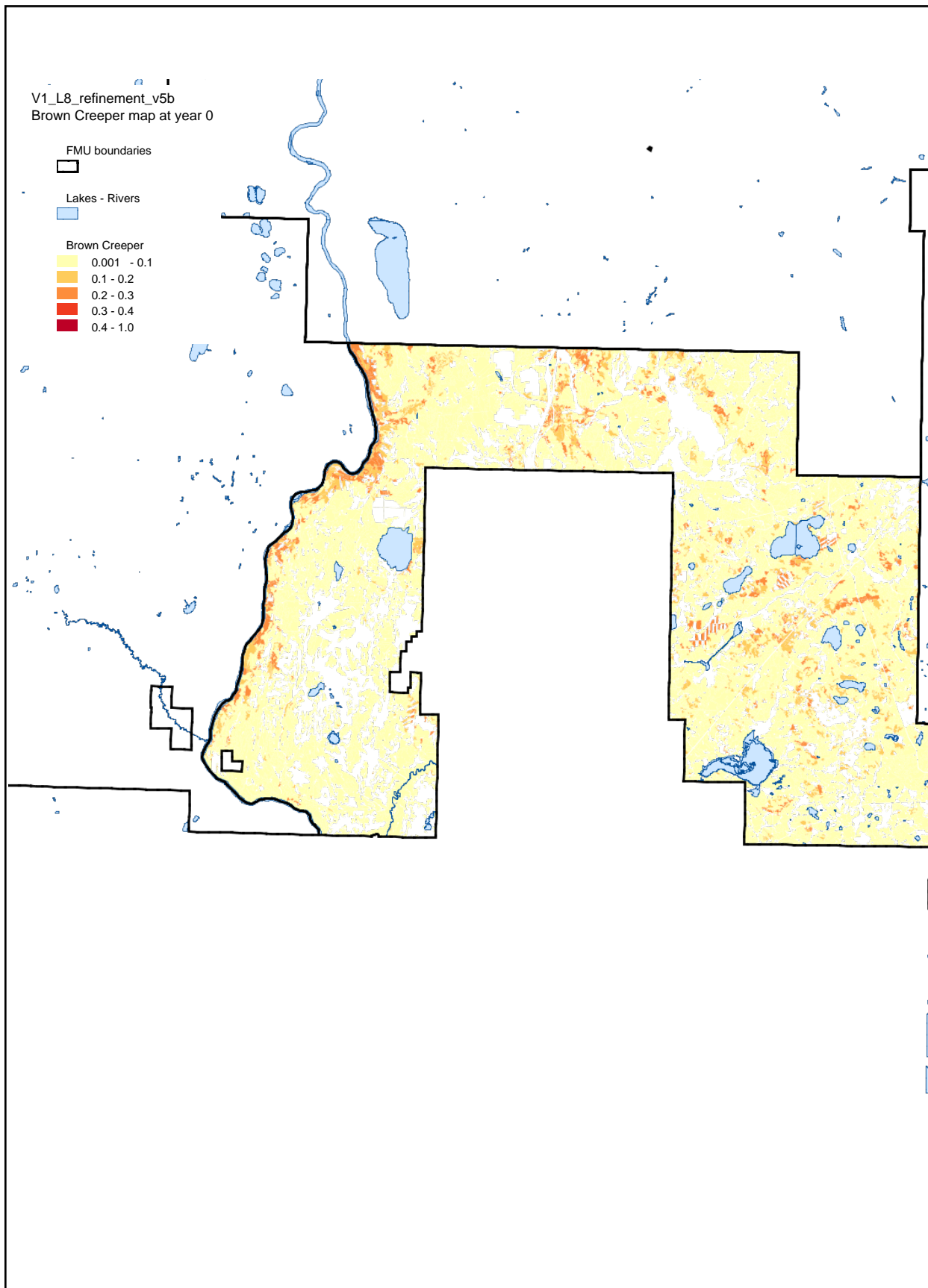
Bay Breasted Warbler HSI - period 2



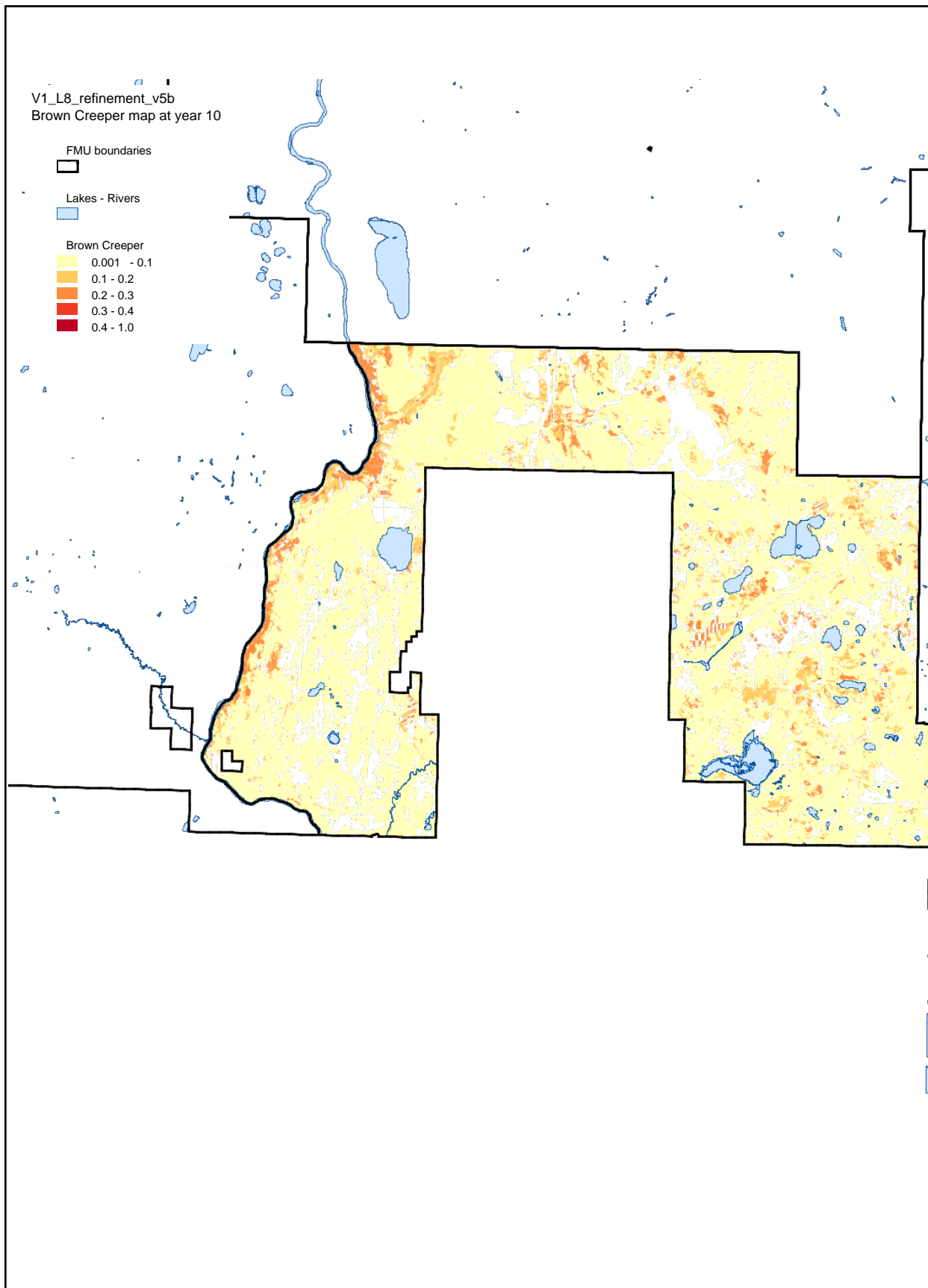
Bay Breasted Warbler HSI - period 5



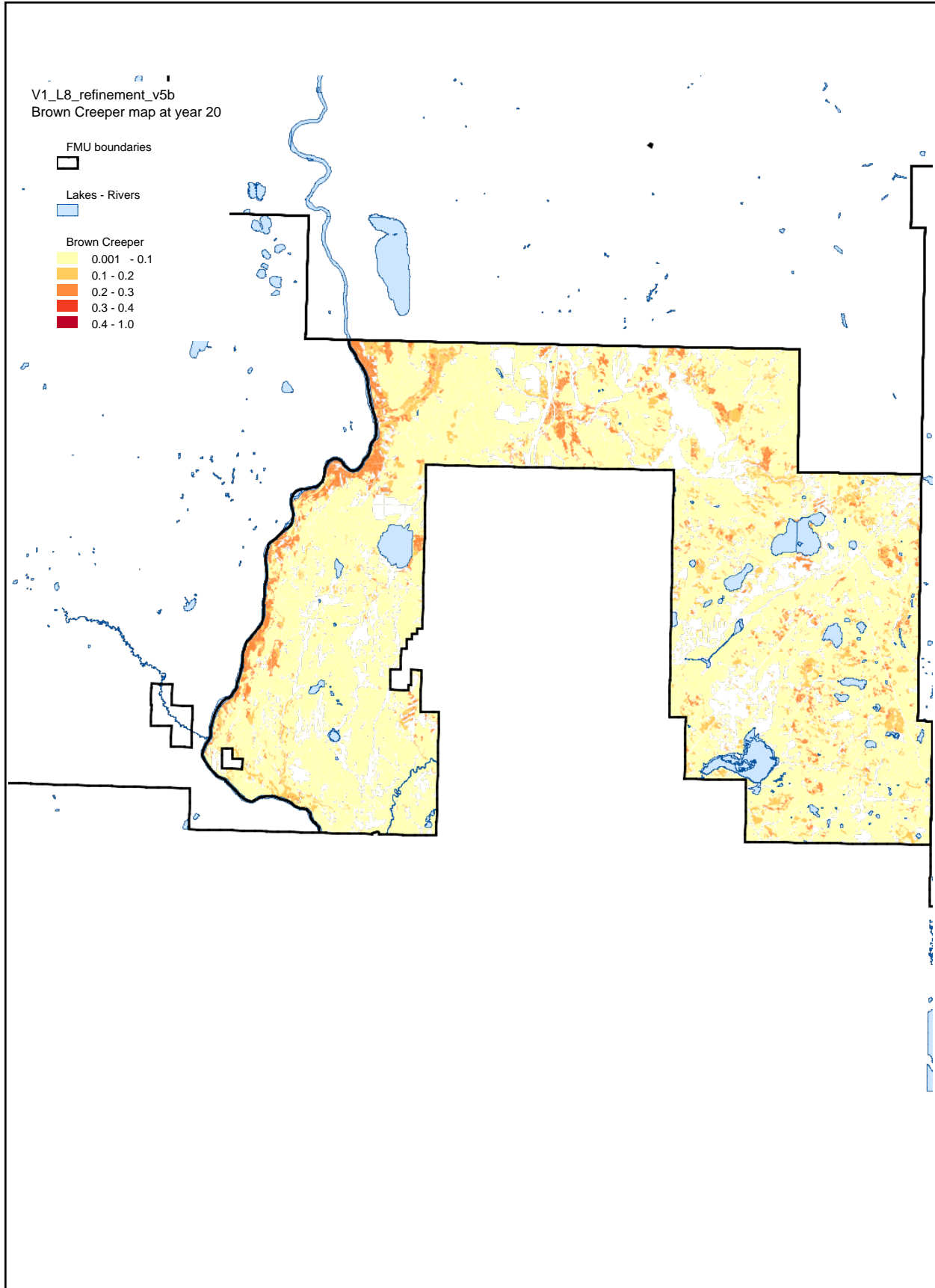
Brown Creeper HSI - period 0



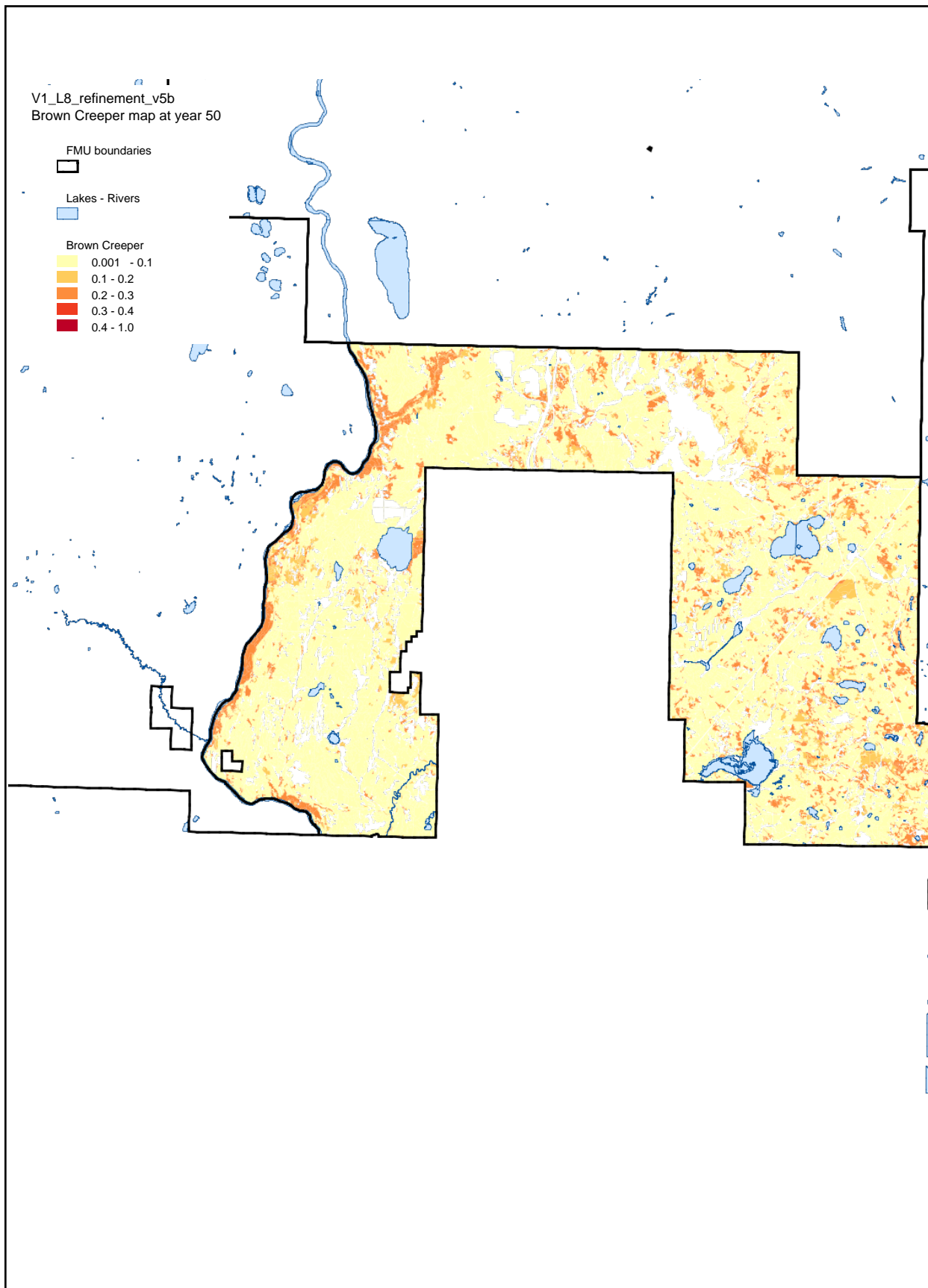
Brown Creeper HSI - period 1



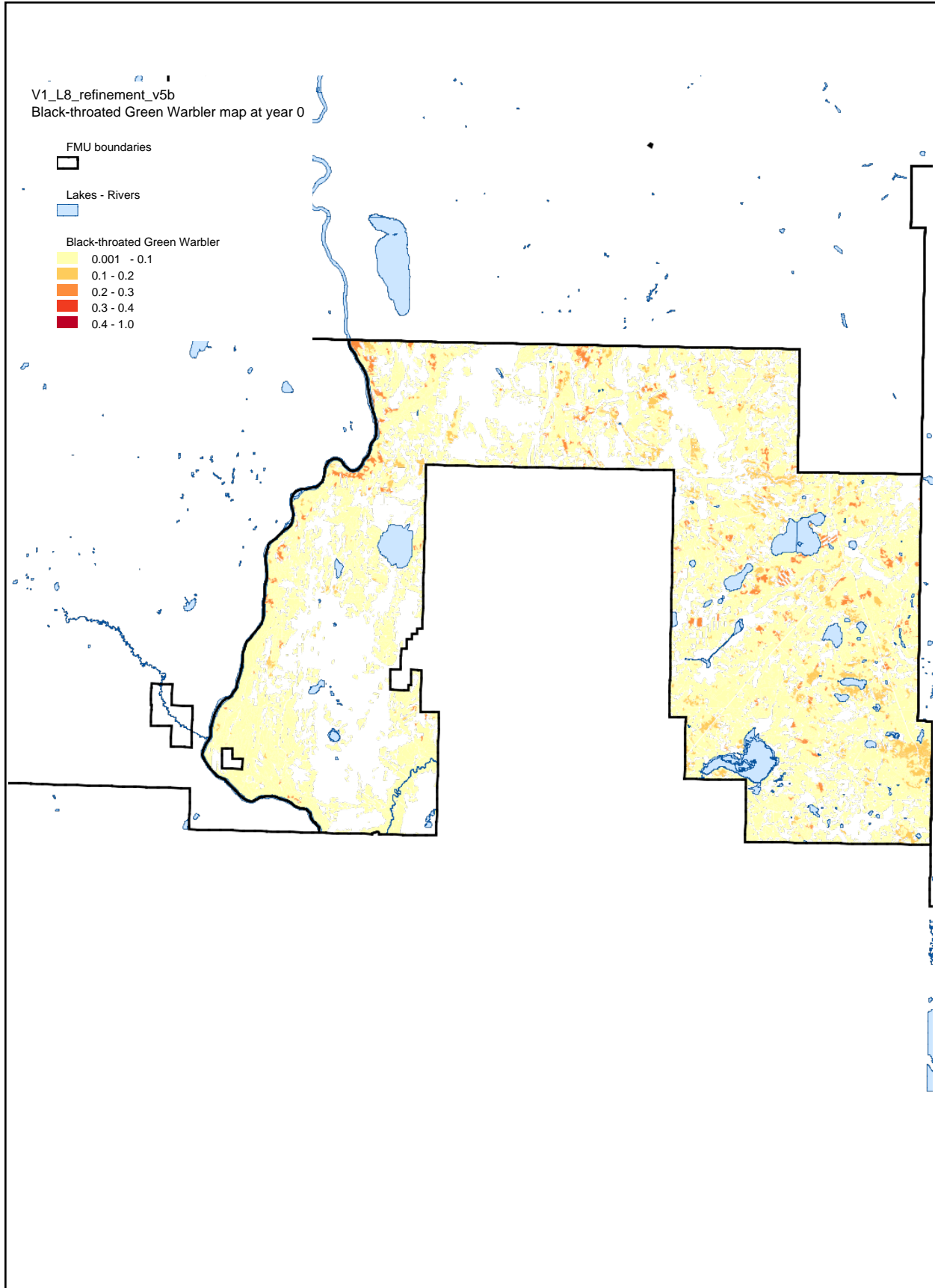
Brown Creeper HSI - period 2



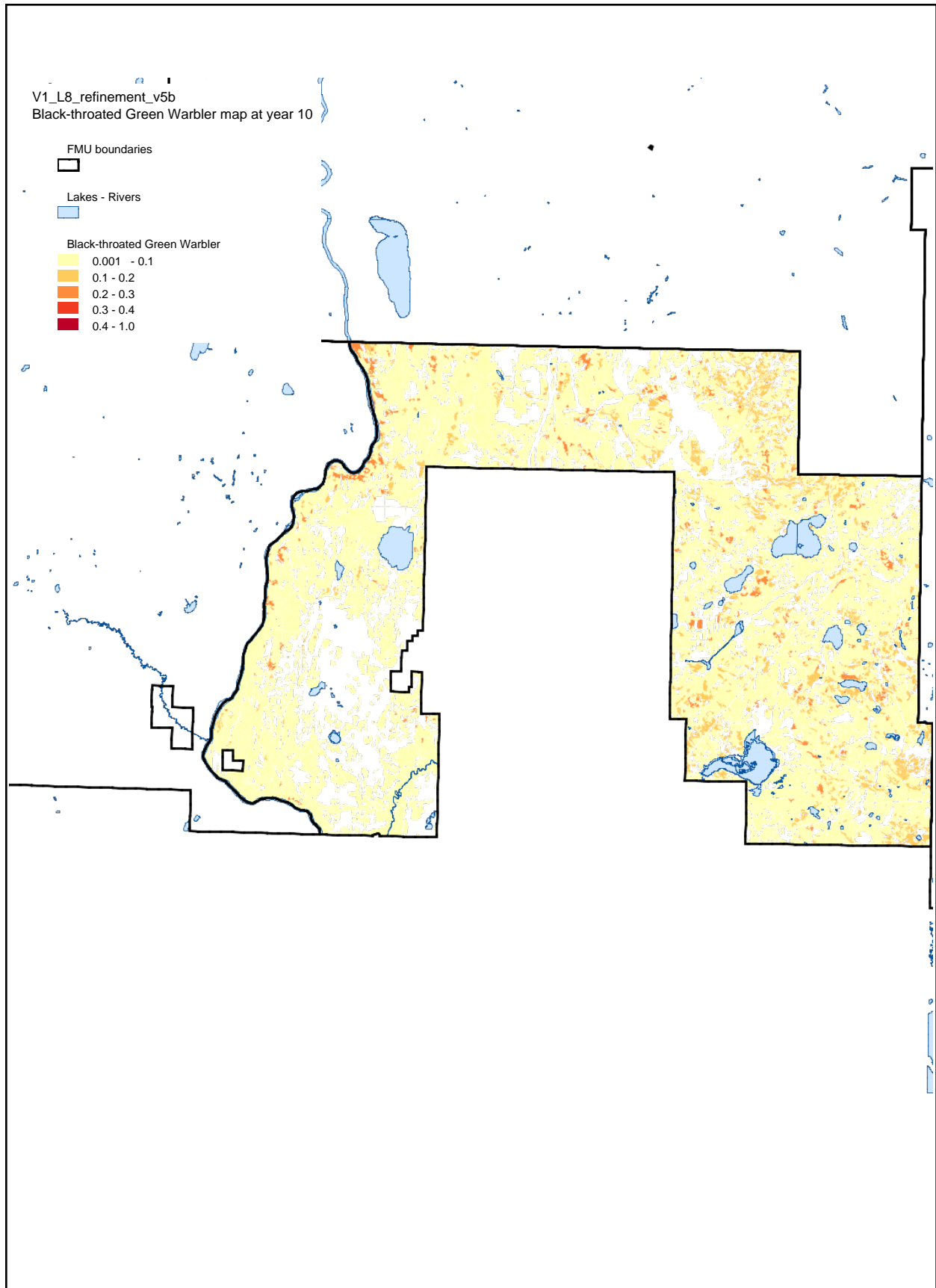
Brown Creeper HSI - period 5



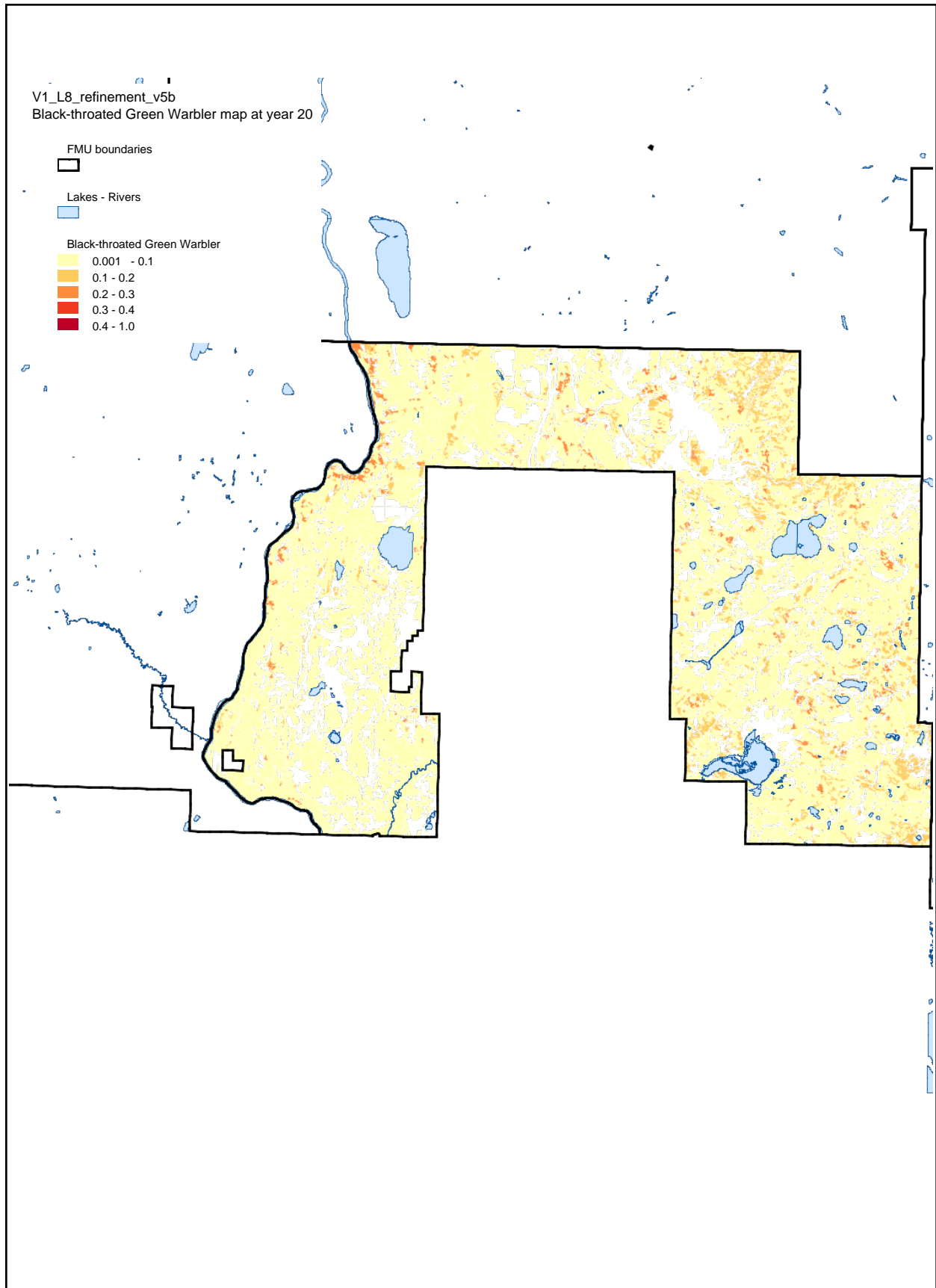
Black-throated Green Warbler HSI - period 0



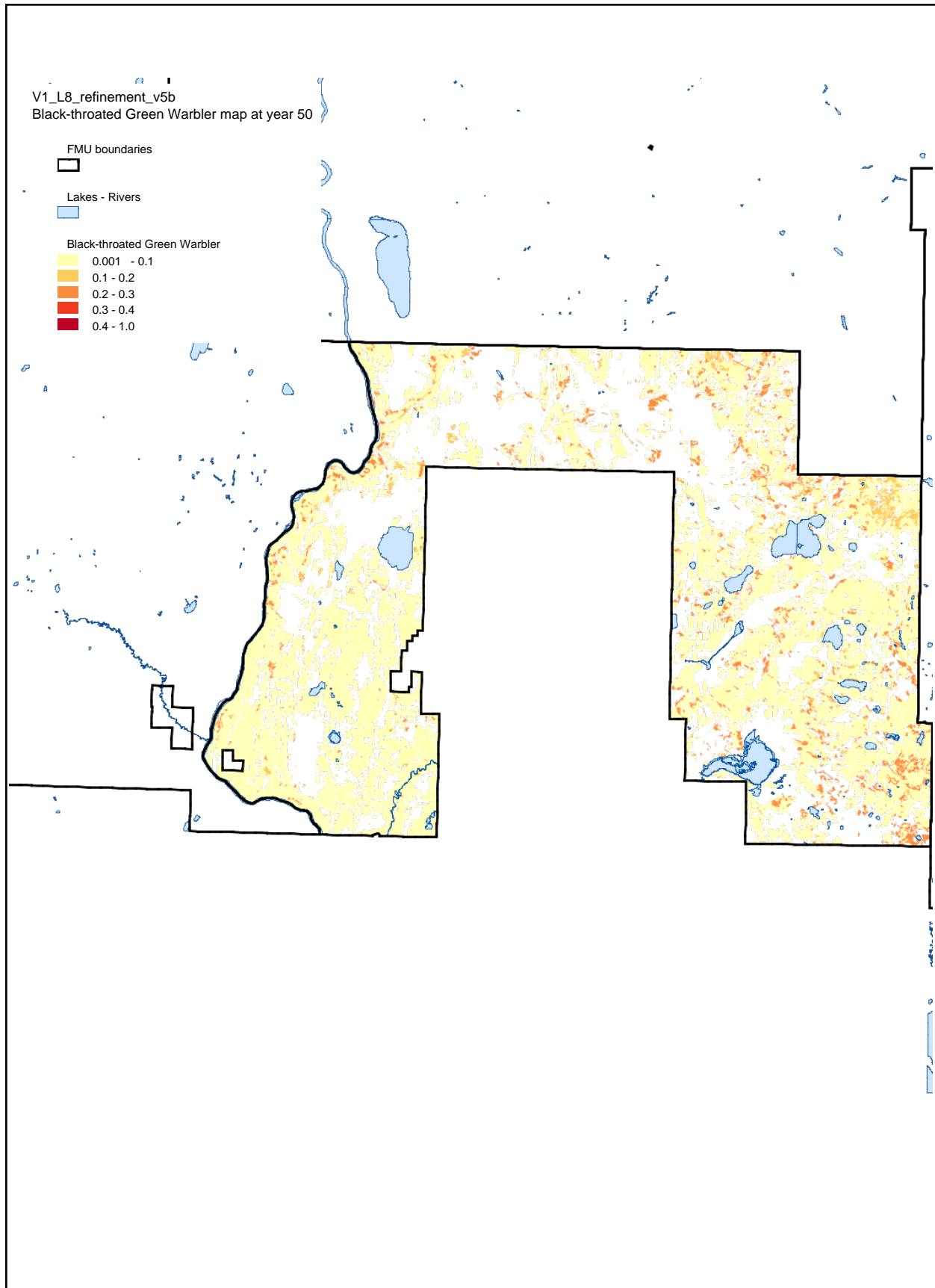
Black-throated Green Warbler HSI - period 1



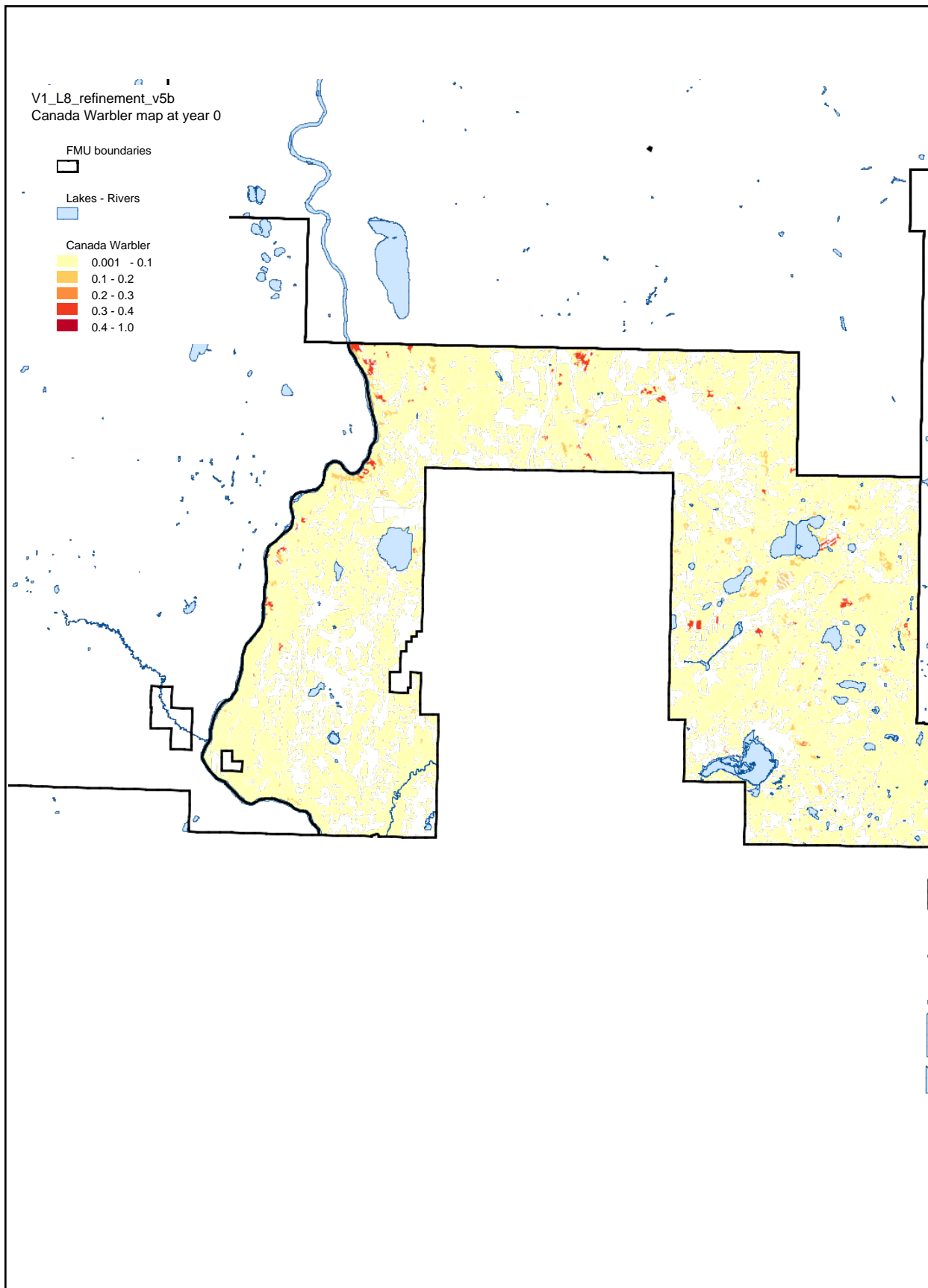
Black-throated Green Warbler HSI - period 2



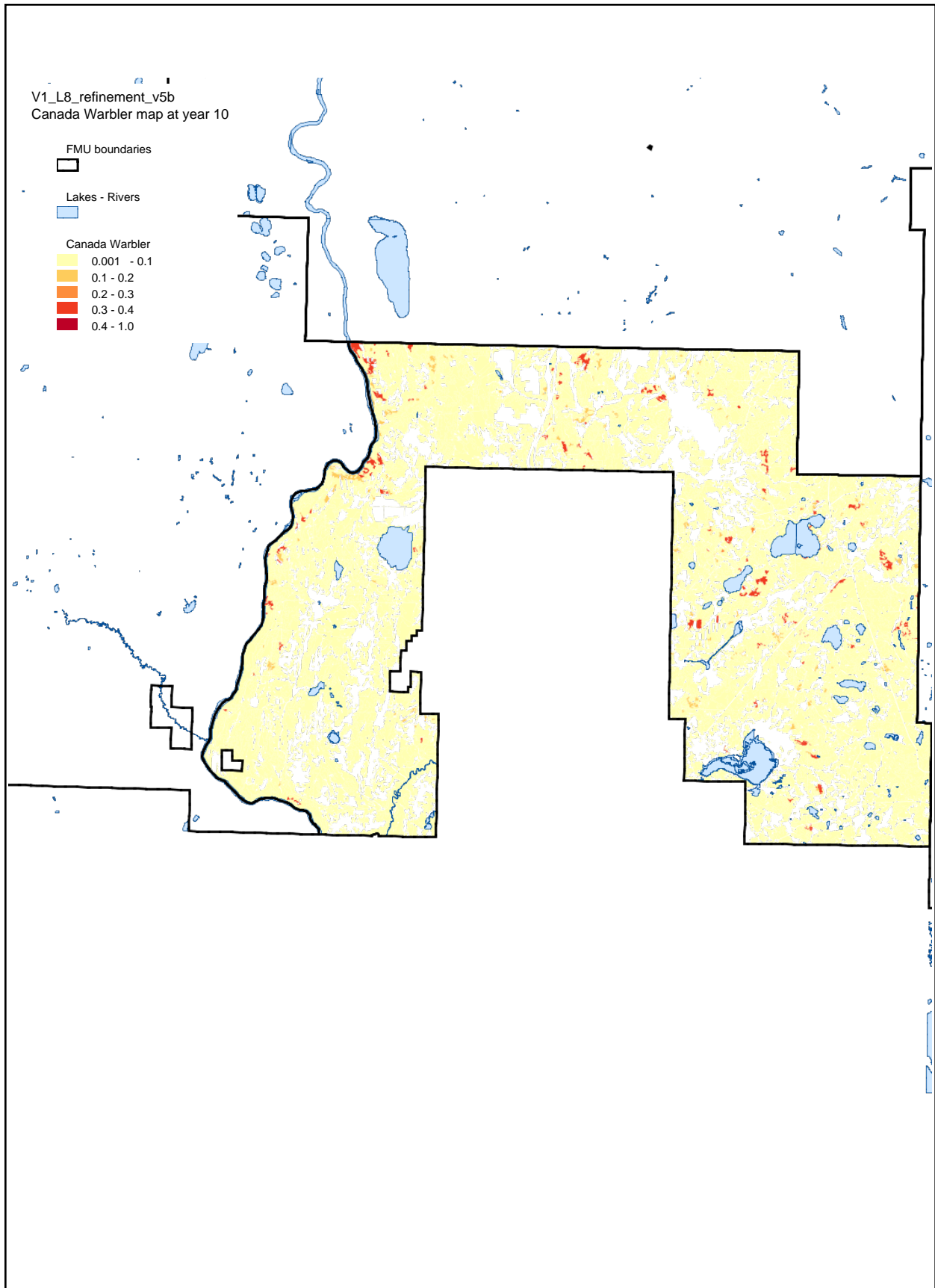
Black-throated Green Warbler HSI - period 5



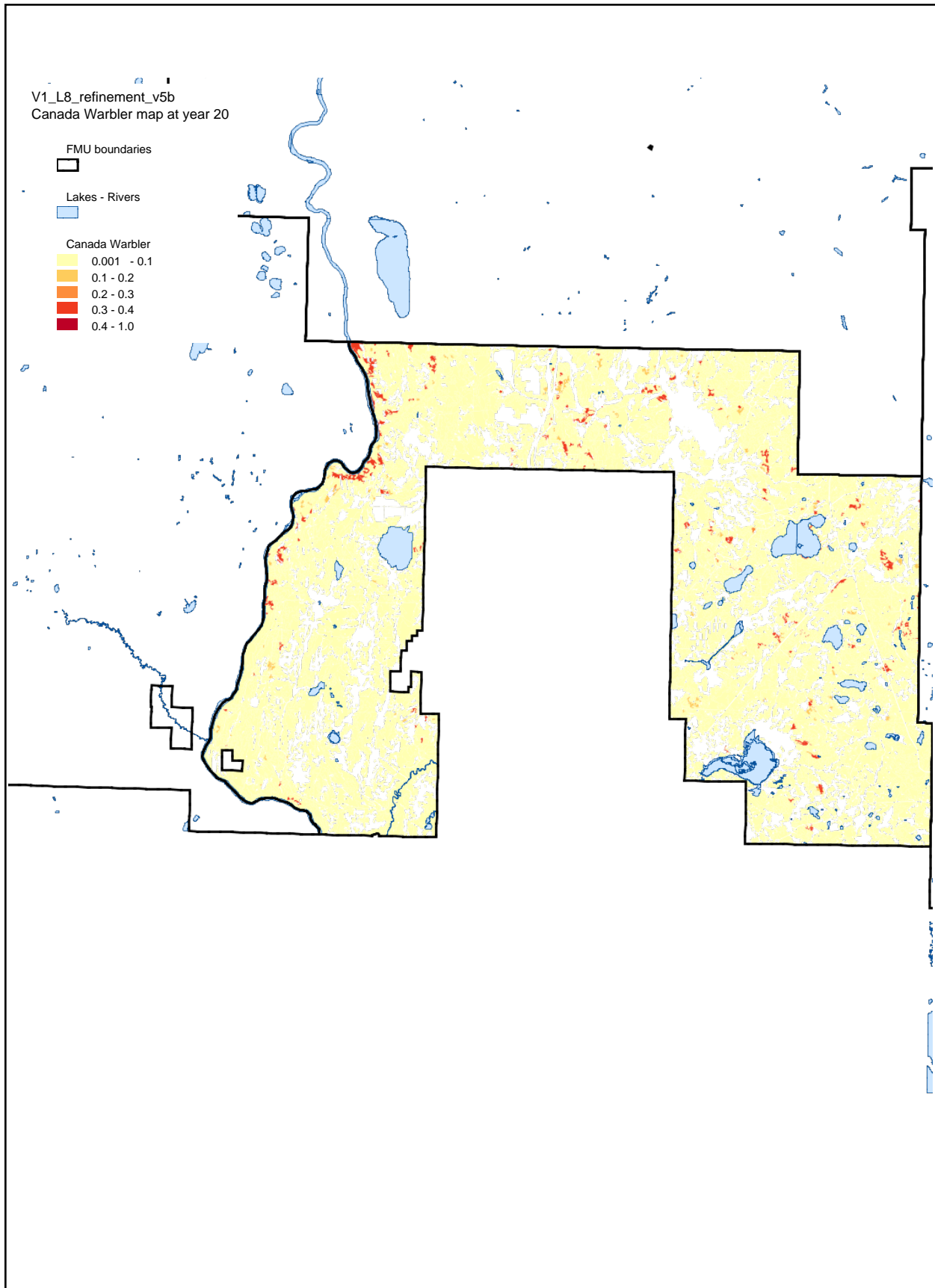
Canada Warbler HSI - period 0



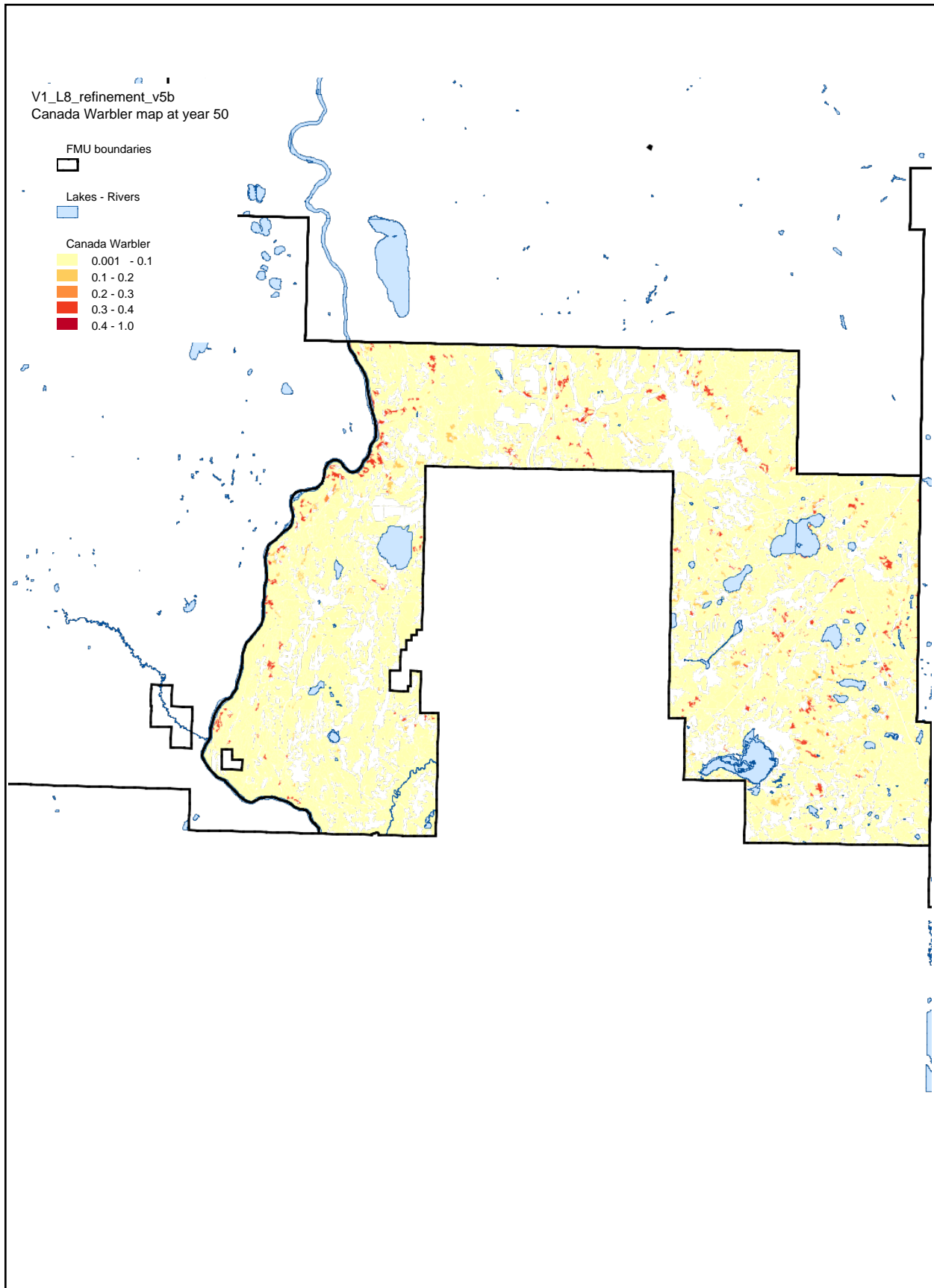
Canada Warbler HSI - period 1



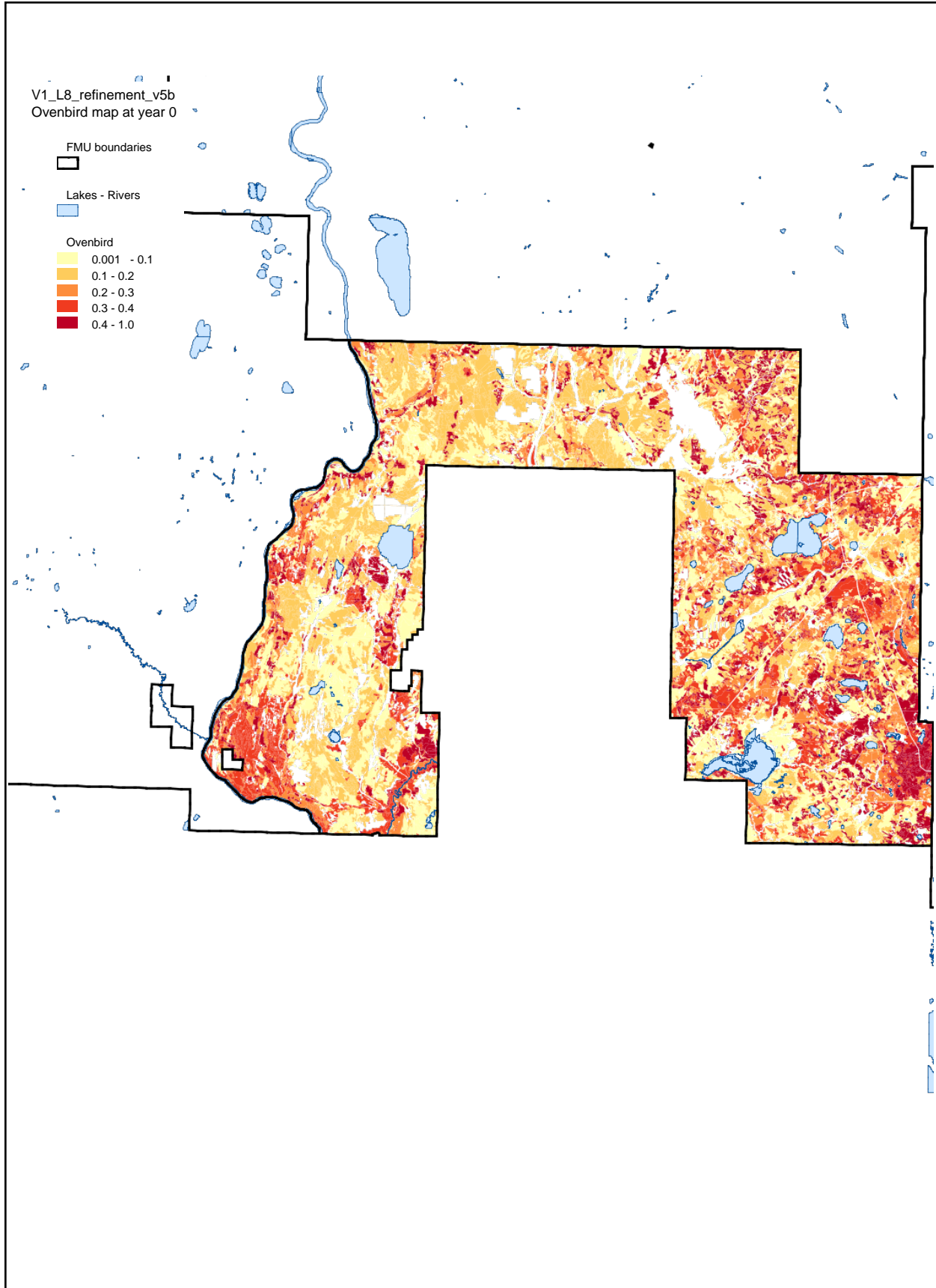
Canada Warbler HSI - period 2



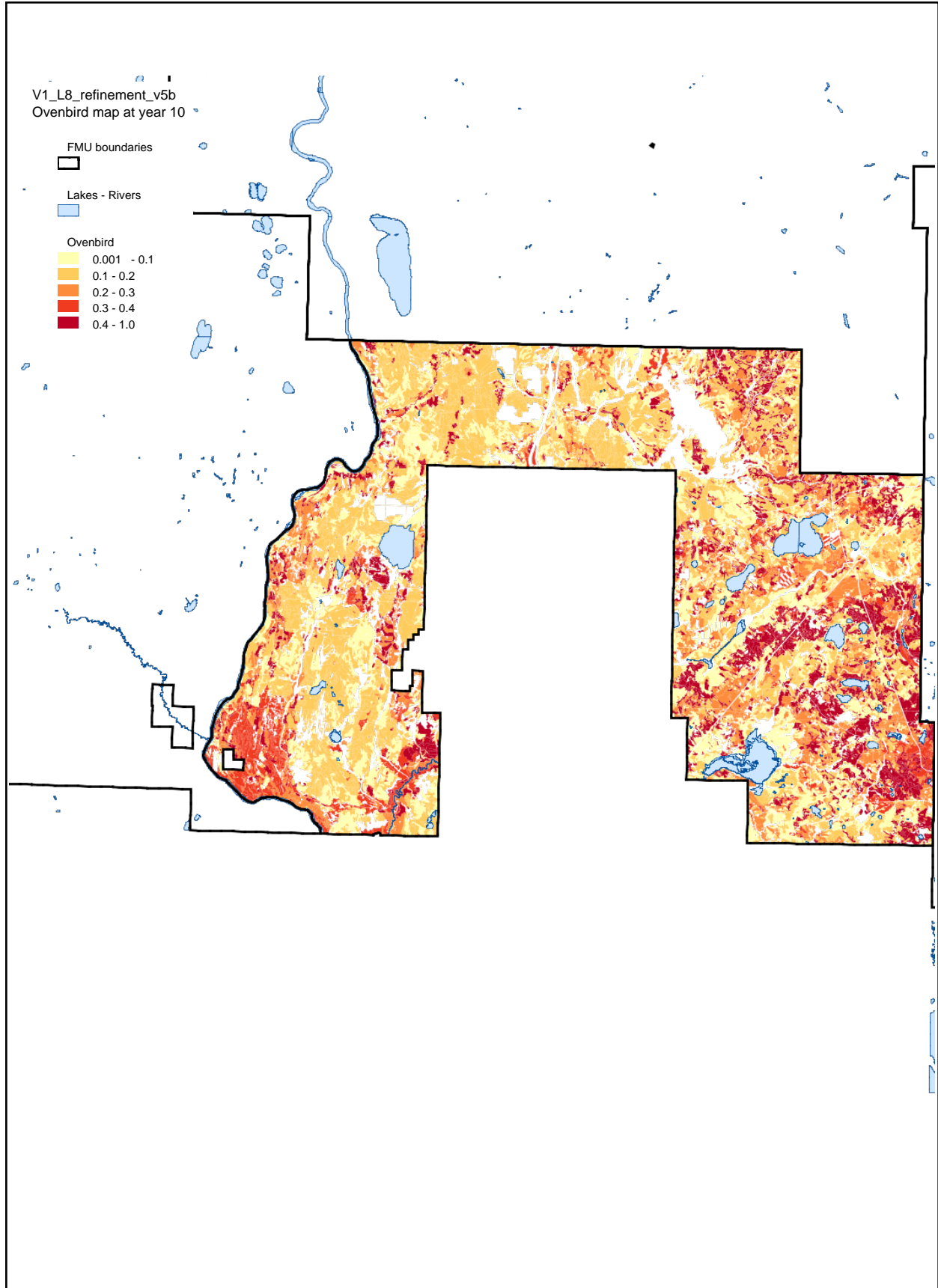
Canada Warbler HSI - period 5



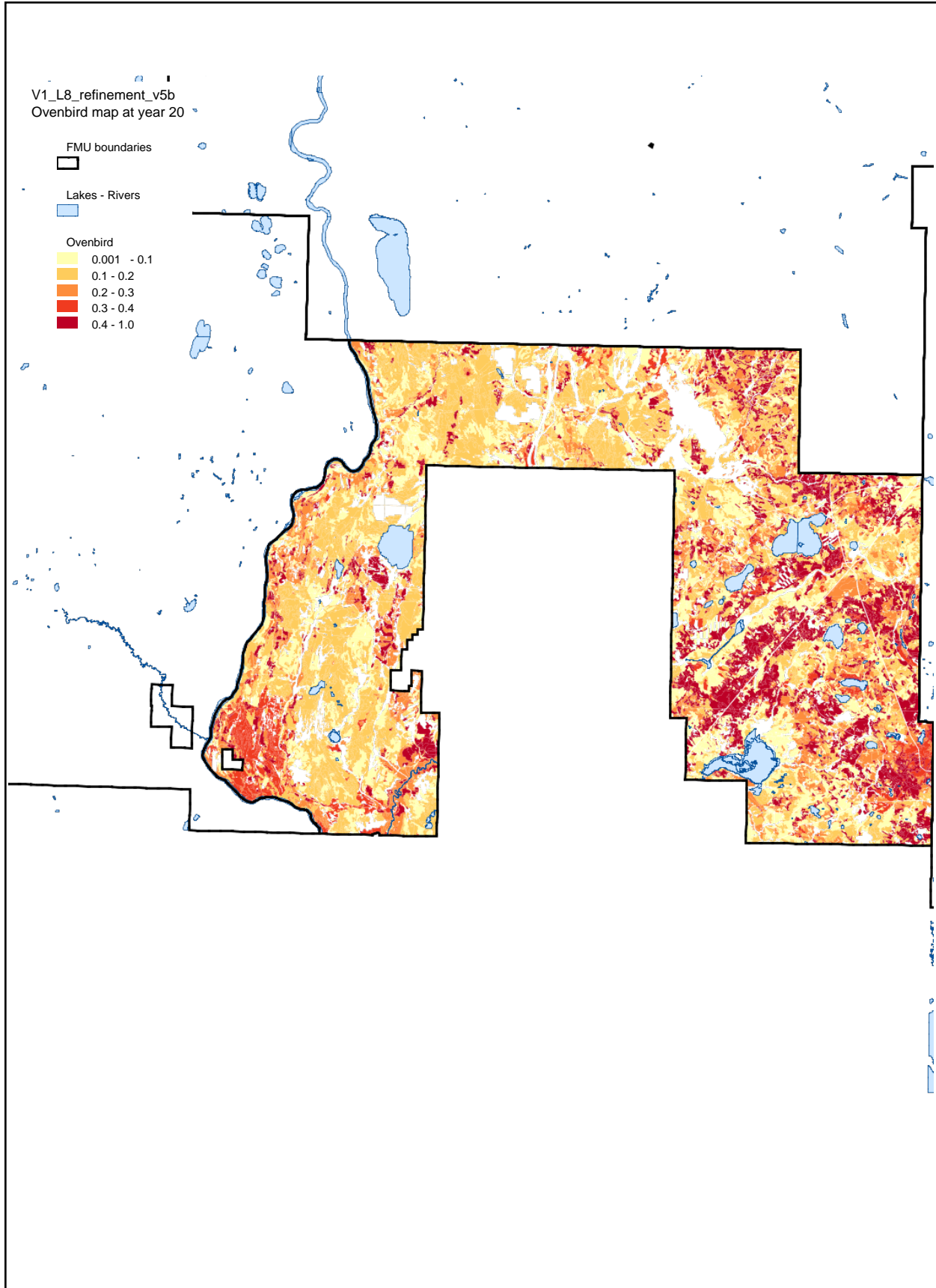
Ovenbird HSI - period 0



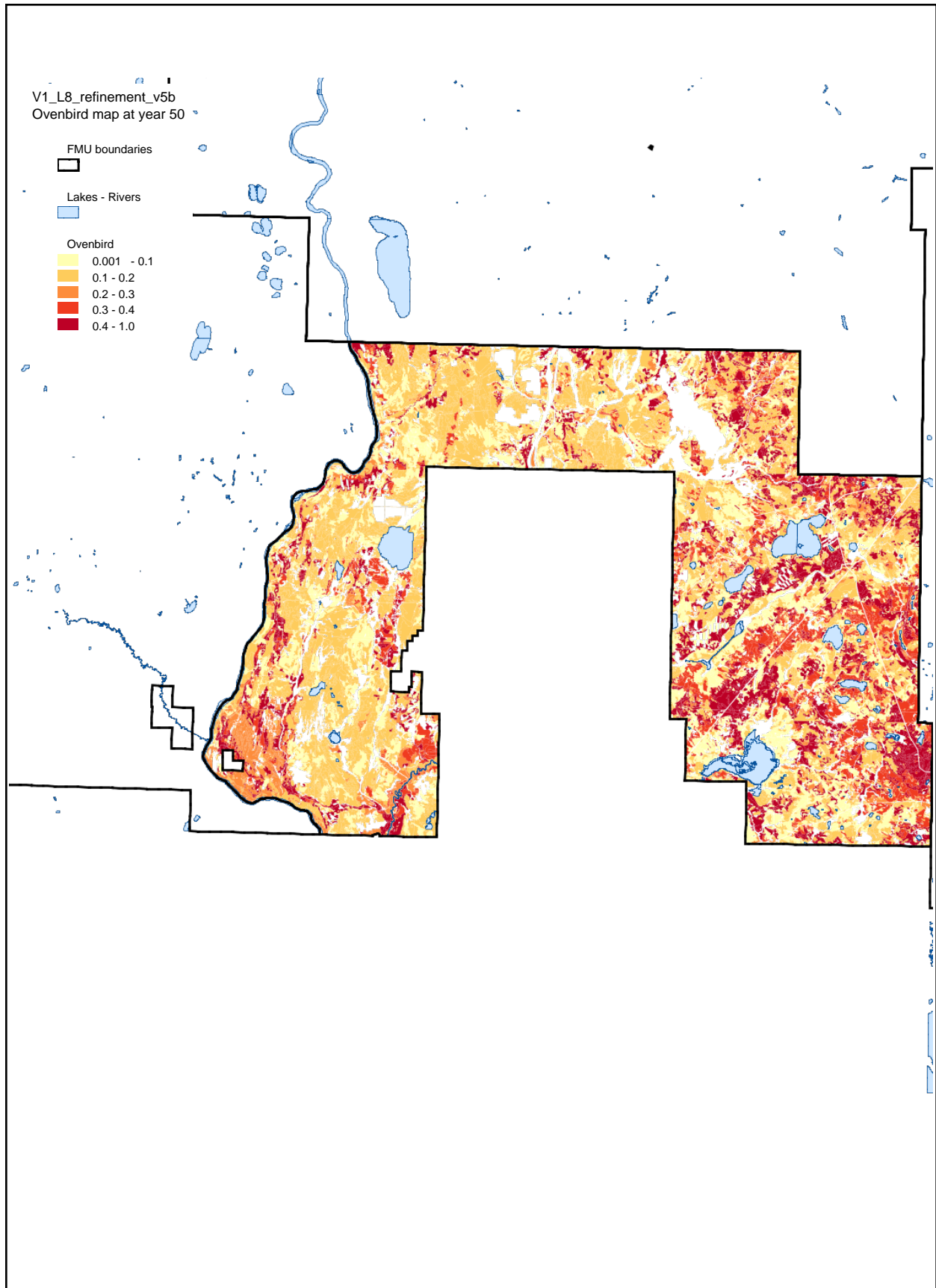
Ovenbird HSI - period 1



Ovenbird HSI - period 2



Ovenbird HSI - period 5

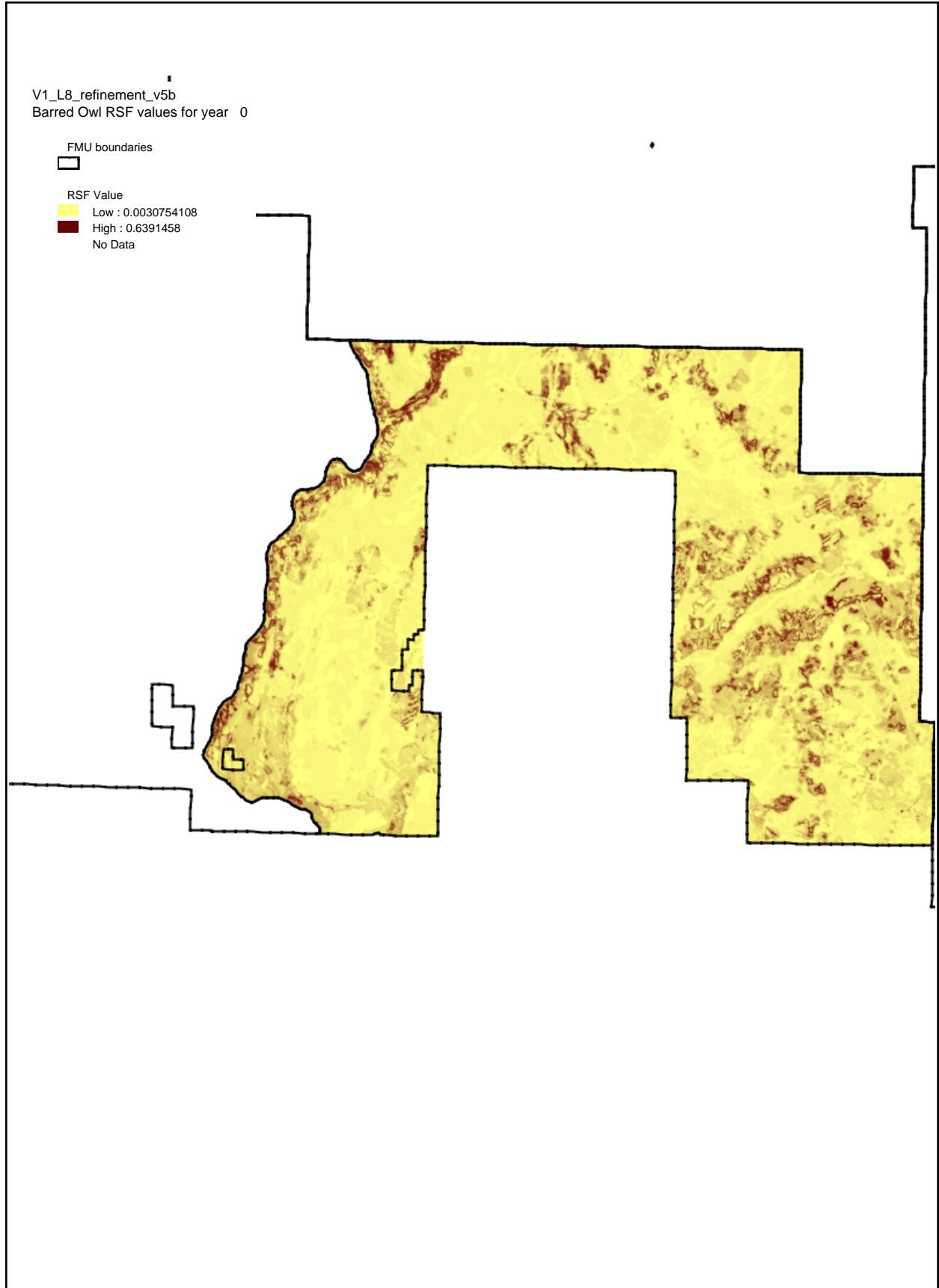


Barred Owl Model Summary

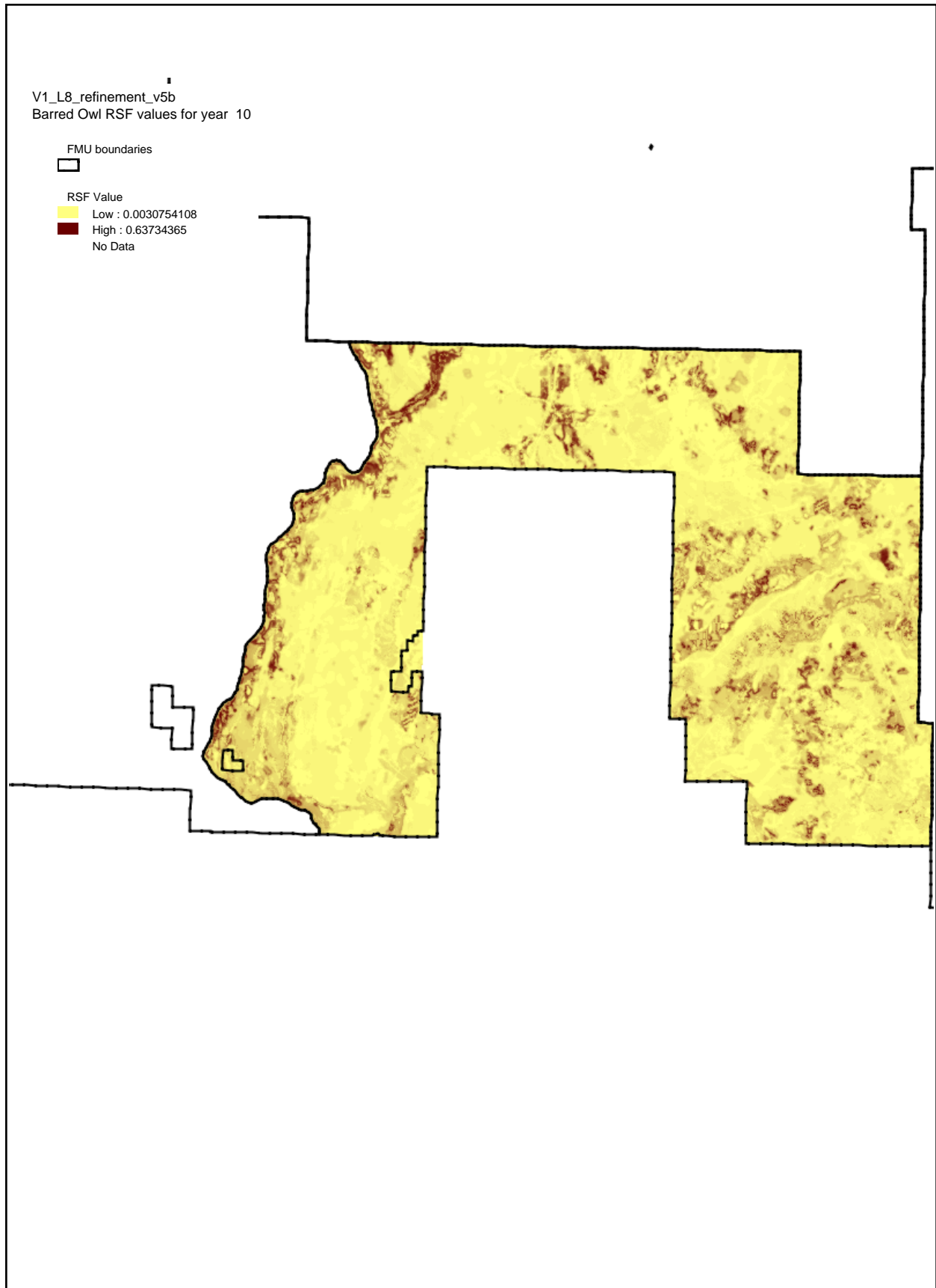
This table shows the results of the Barred Owl model. The breedpair value is a sum of the pixels from the breedpair layers. The Resource Selection Function (RSF) values are the mean and standard deviation of the values from the RSF model layers.

		Breedpair	RSF	
		Sum	Mean	StDev
Year	0	607,840	0.08563	0.10036
	10	445,738	0.08086	0.0945
	20	392,671	0.0772	0.09032
	50	334,847	0.07198	0.08173

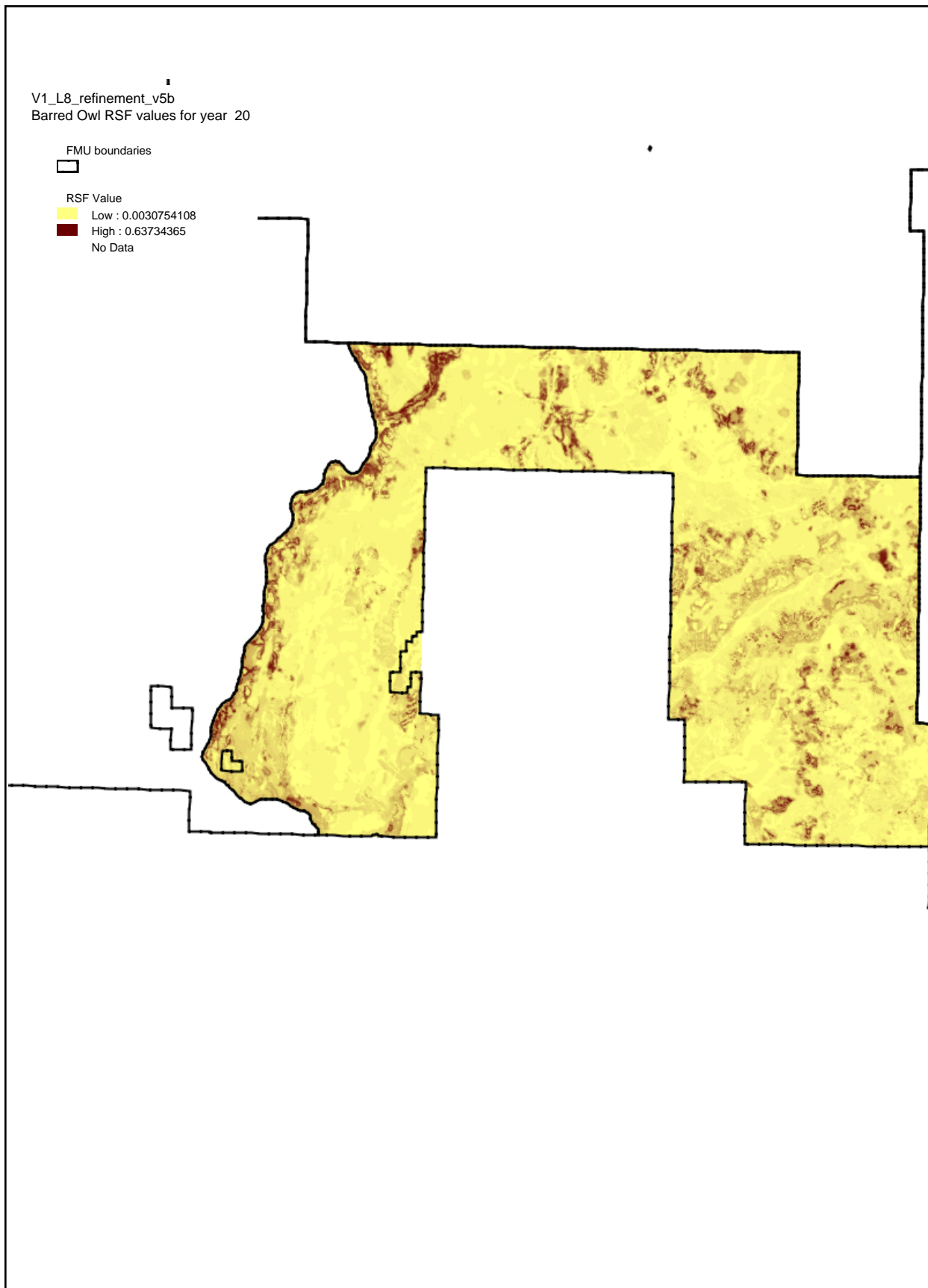
Barred Owl RSF - period 0



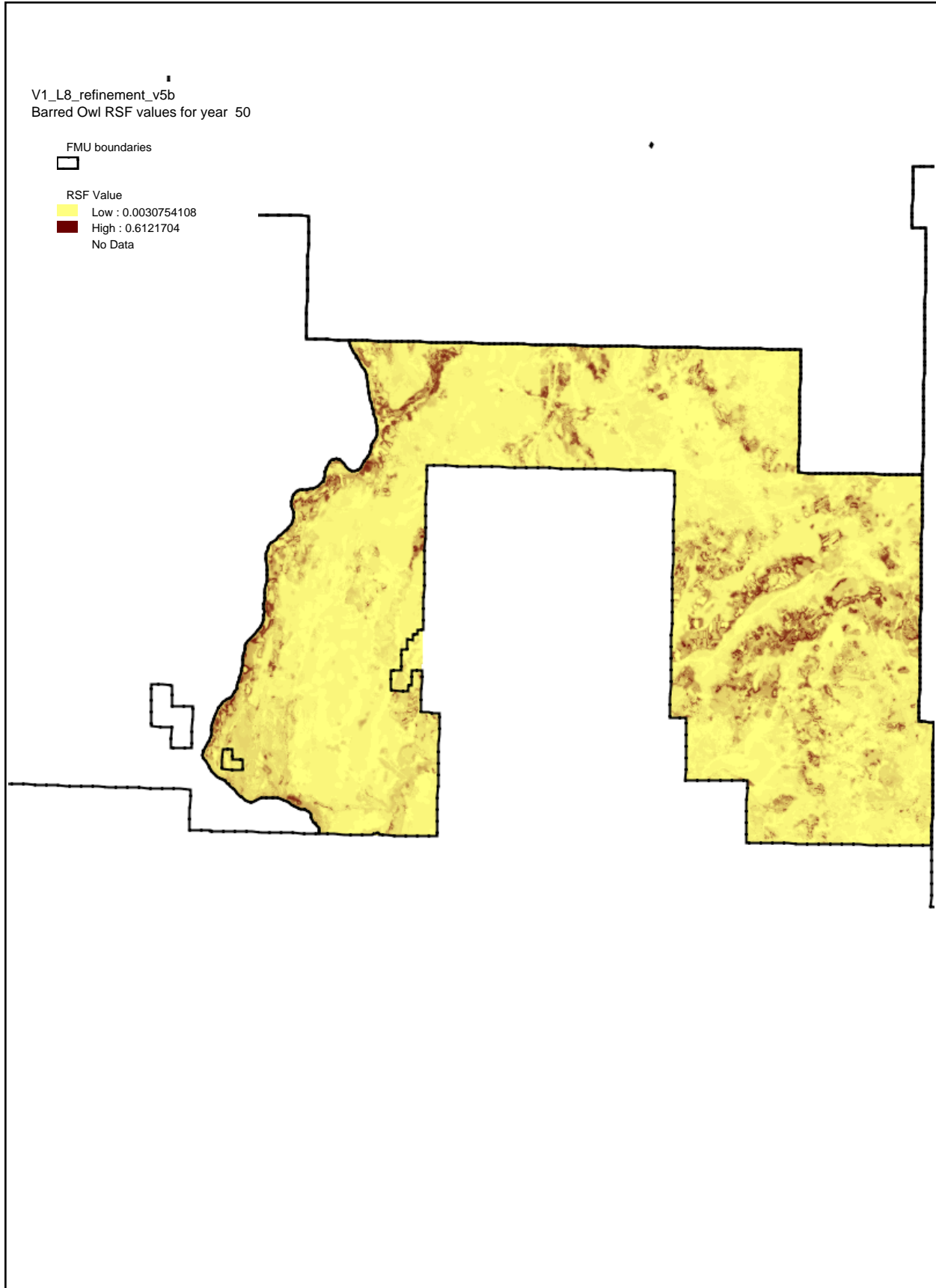
Barred Owl RSF - period 1



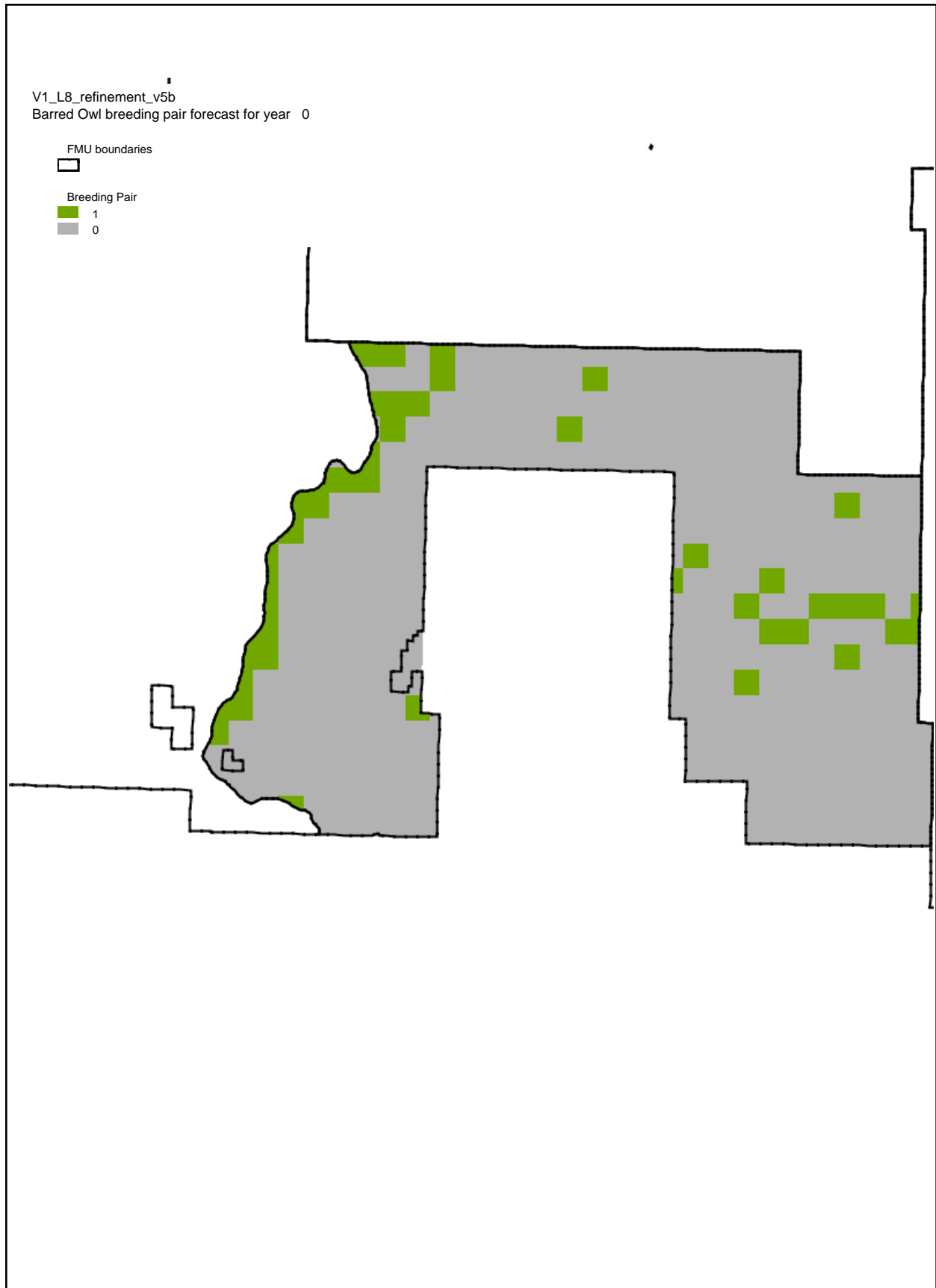
Barred Owl RSF - period 2



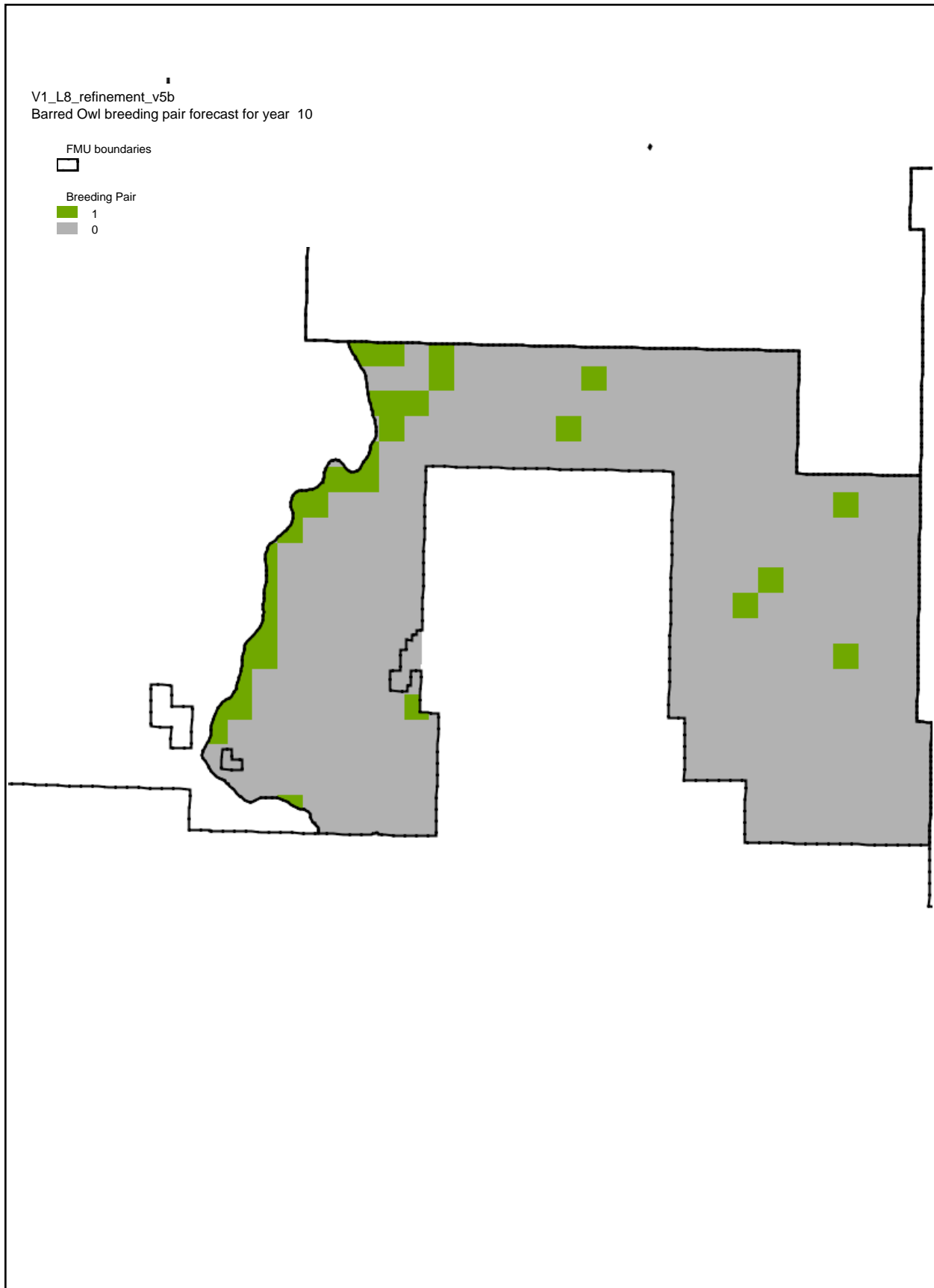
Barred Owl RSF - period 5



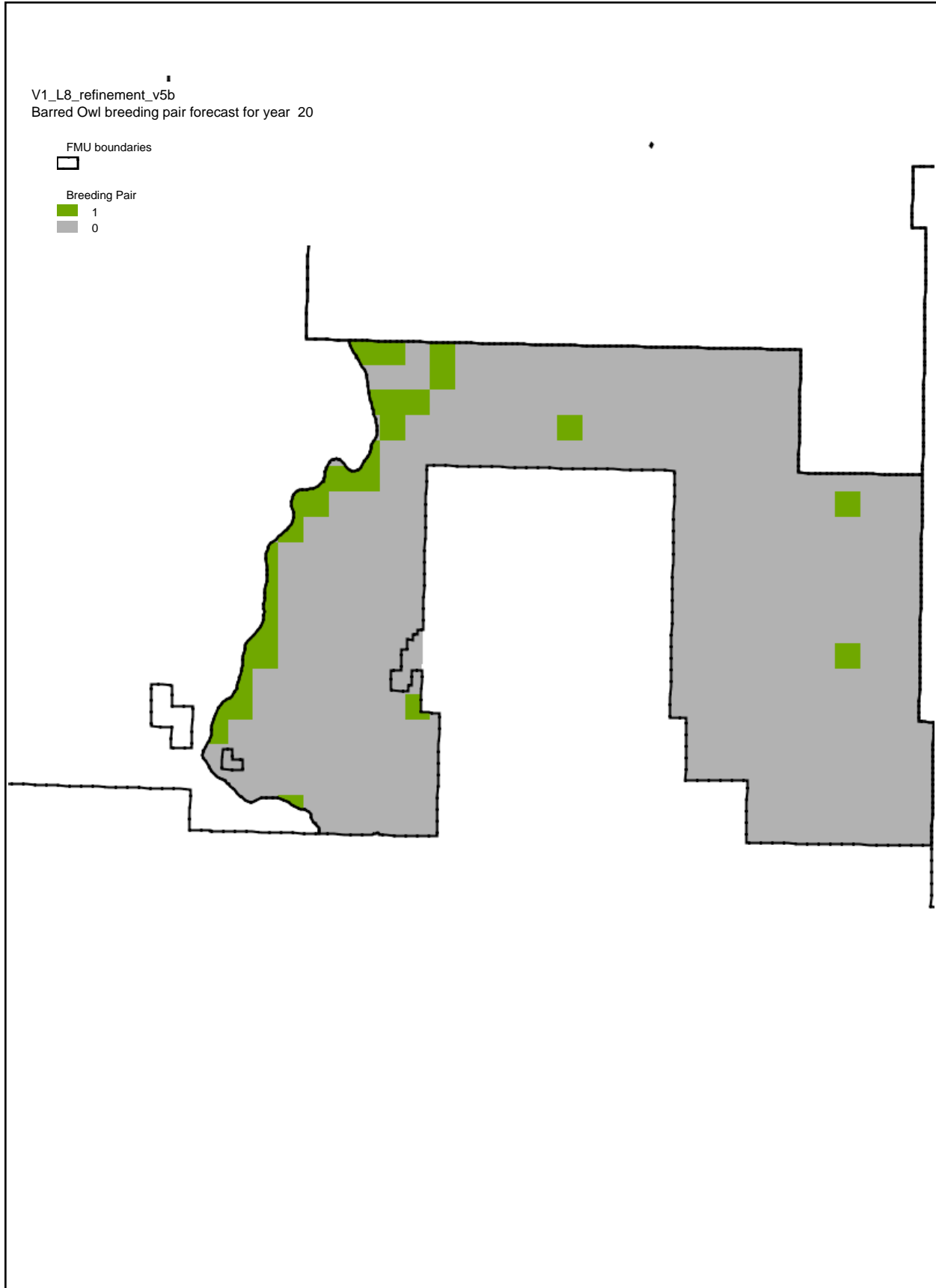
Barred Owl Breed Pair - period 0



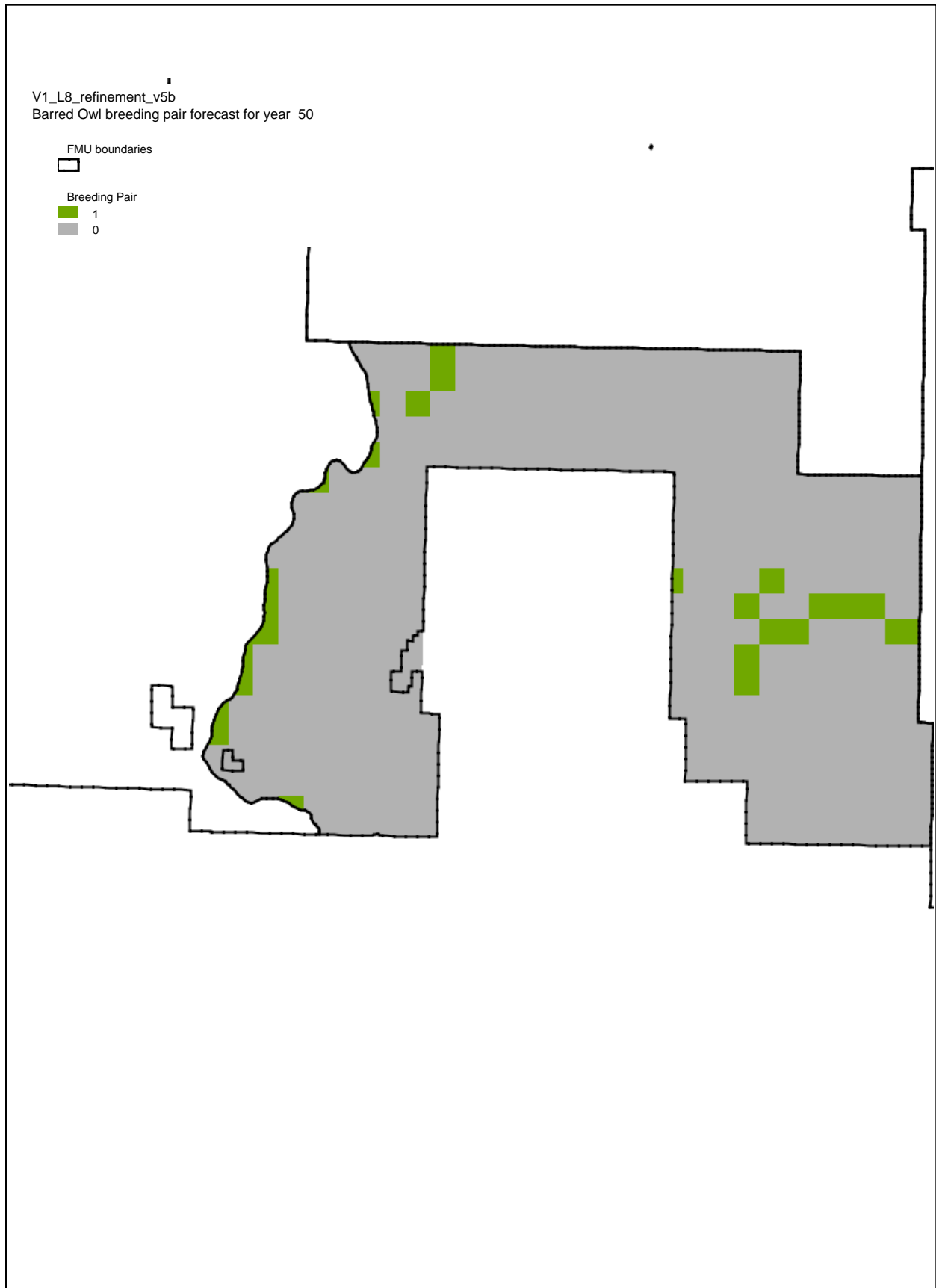
Barred Owl Breed Pair - period 1



Barred Owl Breed Pair - period 2



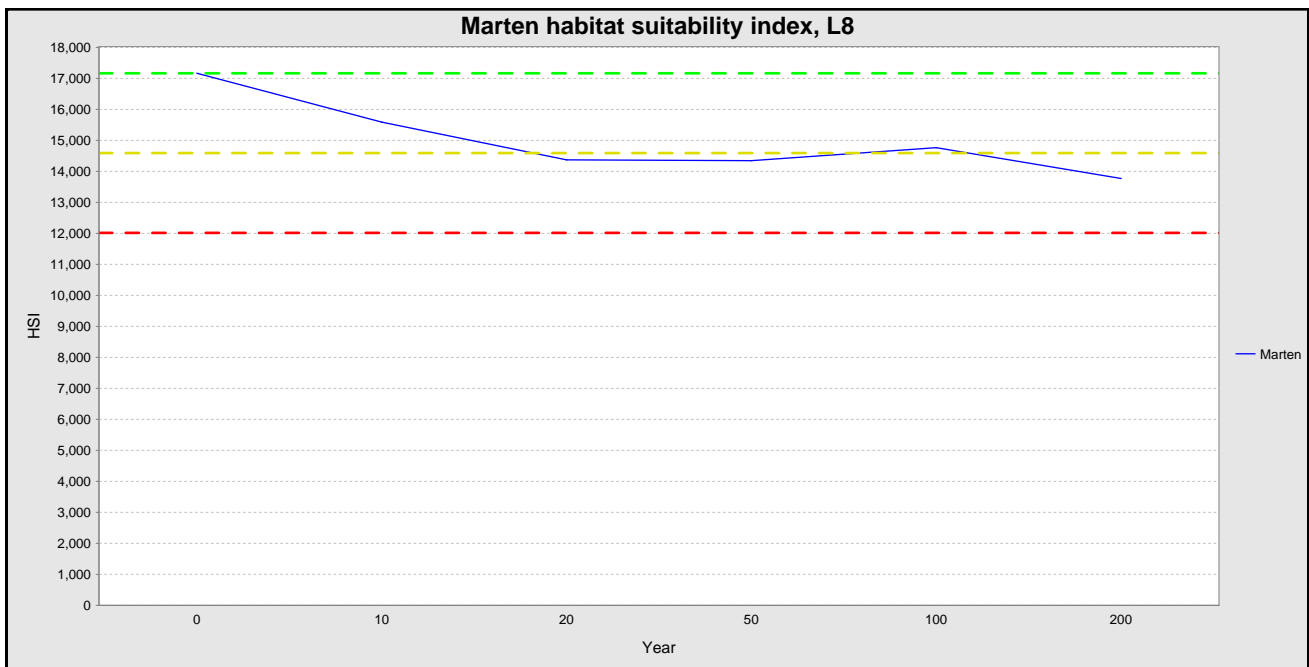
Barred Owl Breed Pair - period 5



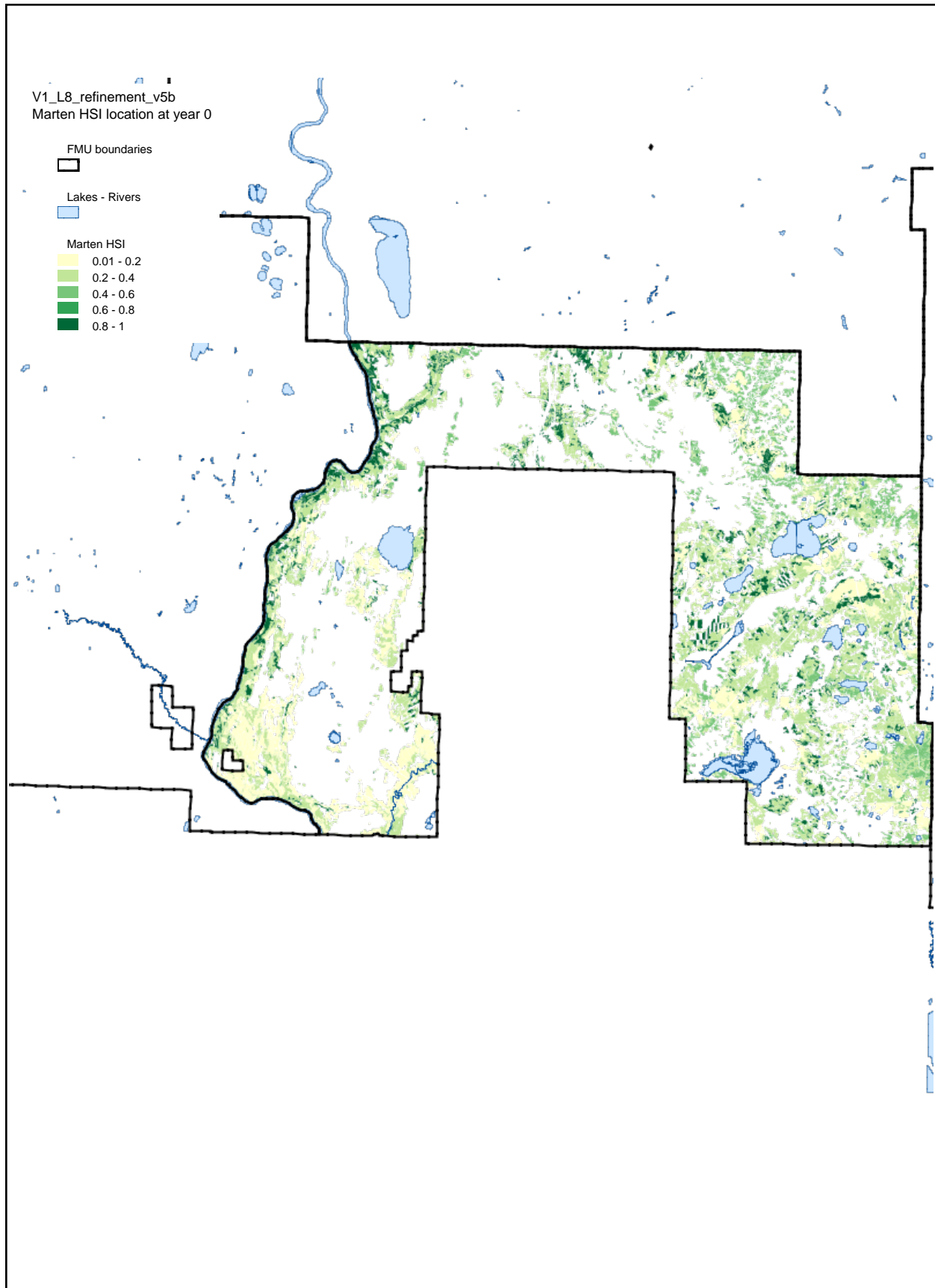
Marten Habitat Suitability Index values

This table shows the summed Habitat Suitability Index (HSI) values from the Marten model by period. The line chart shows the change in summed HSI values relative to the time zero values. The dashed yellow reference line is 15% below the time zero value. The dashed red reference line is 30% below the time zero value.

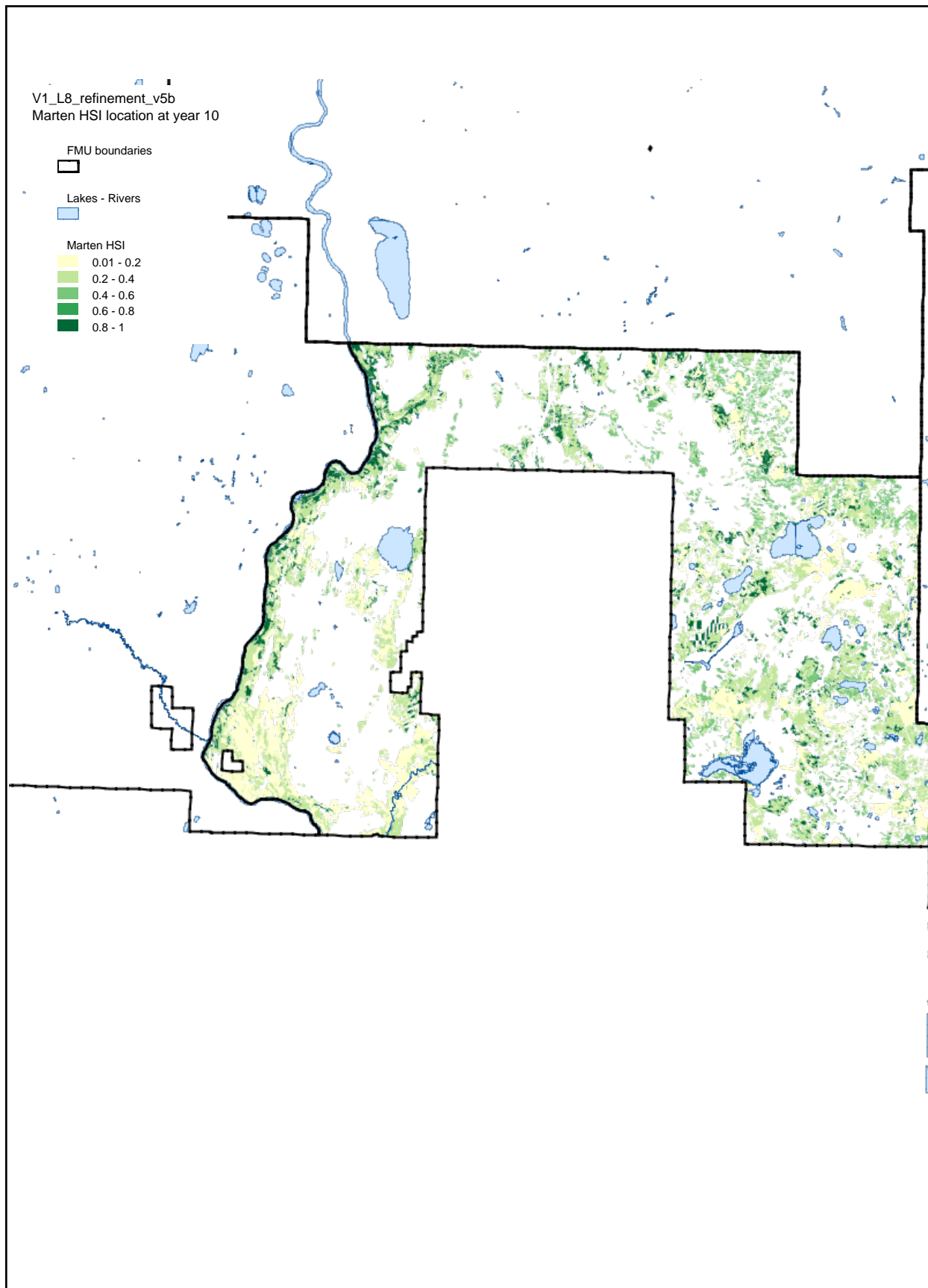
		Statistic		
		Mean	Stdev	Sum
Year	0	1.1855	3.3049	17,169
	10	1.0766	3.0929	15,592
	20	0.9926	2.8787	14,375
	50	0.9908	2.9099	14,349
	100	1.0198	2.9892	14,769
	200	0.9511	2.8291	13,774



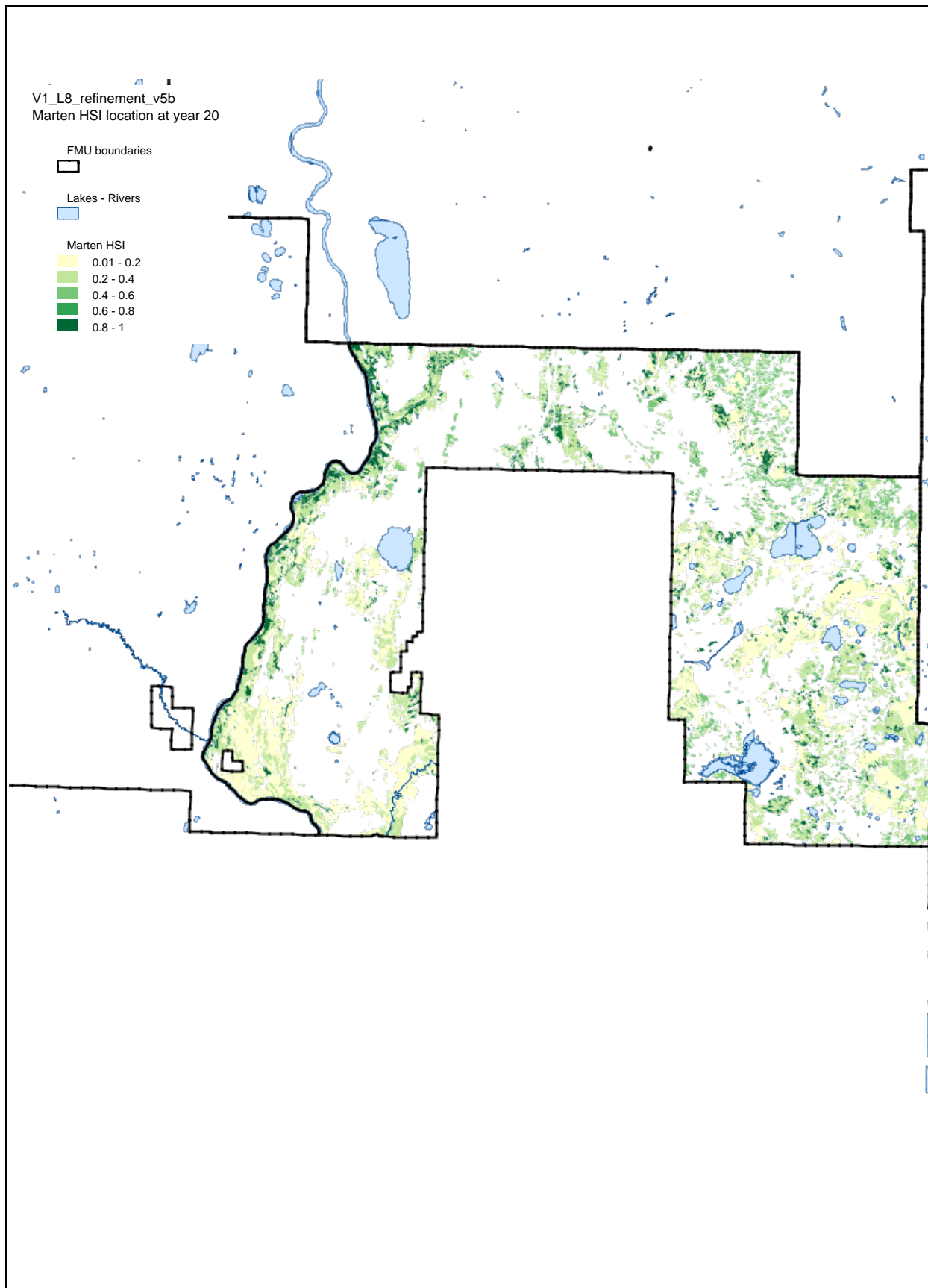
Marten Habitat Suitability Index - period 0



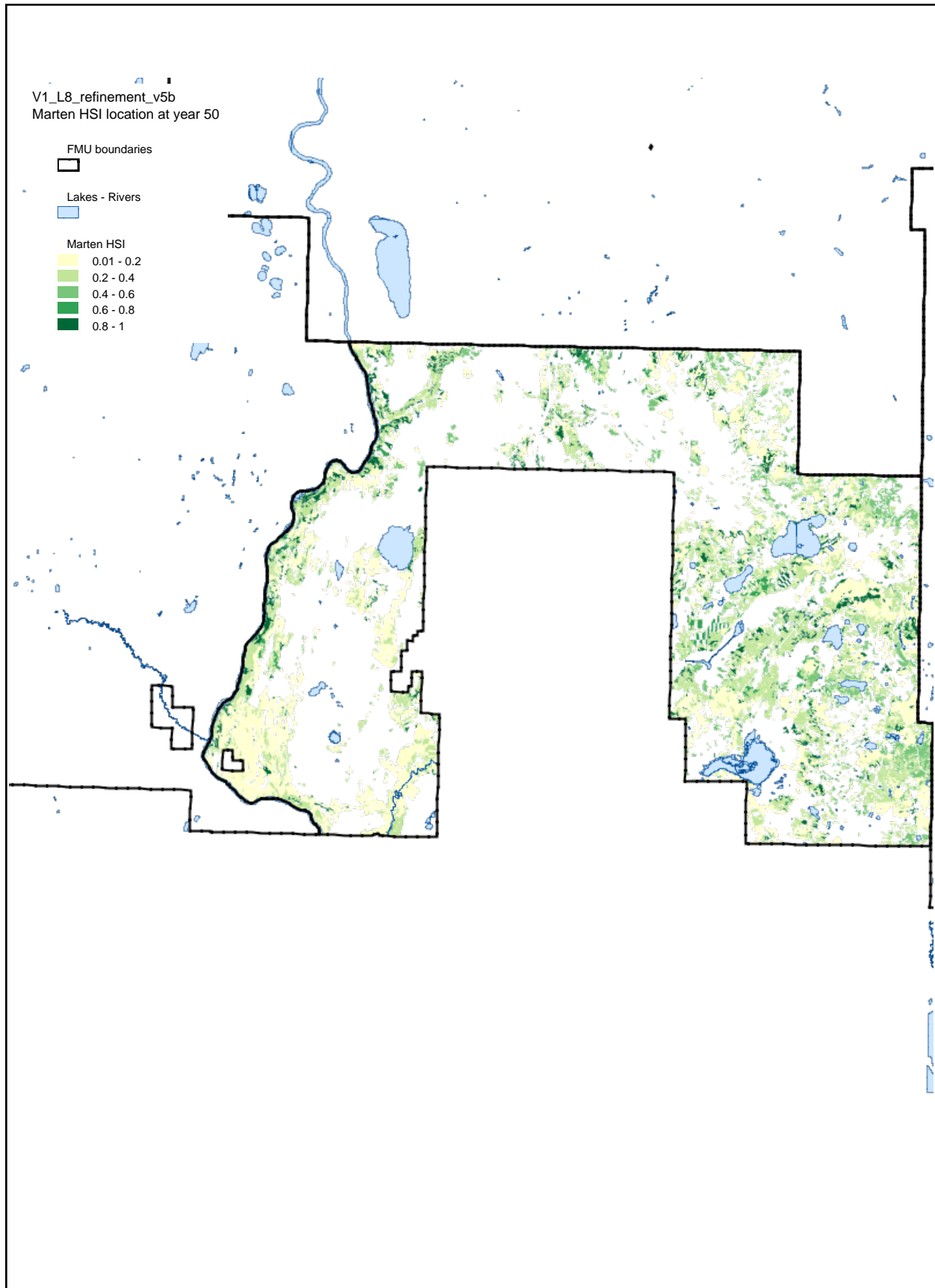
Marten Habitat Suitability Index - period 1



Marten Habitat Suitability Index - period 2



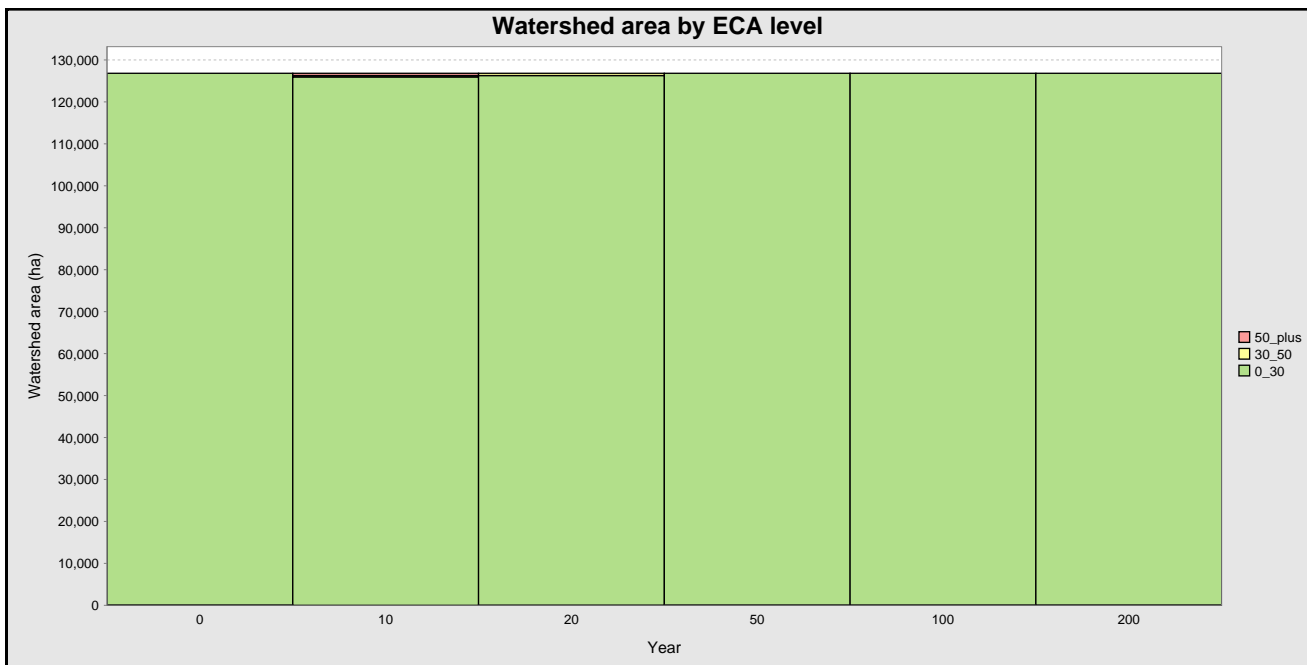
Marten Habitat Suitability Index - period 5



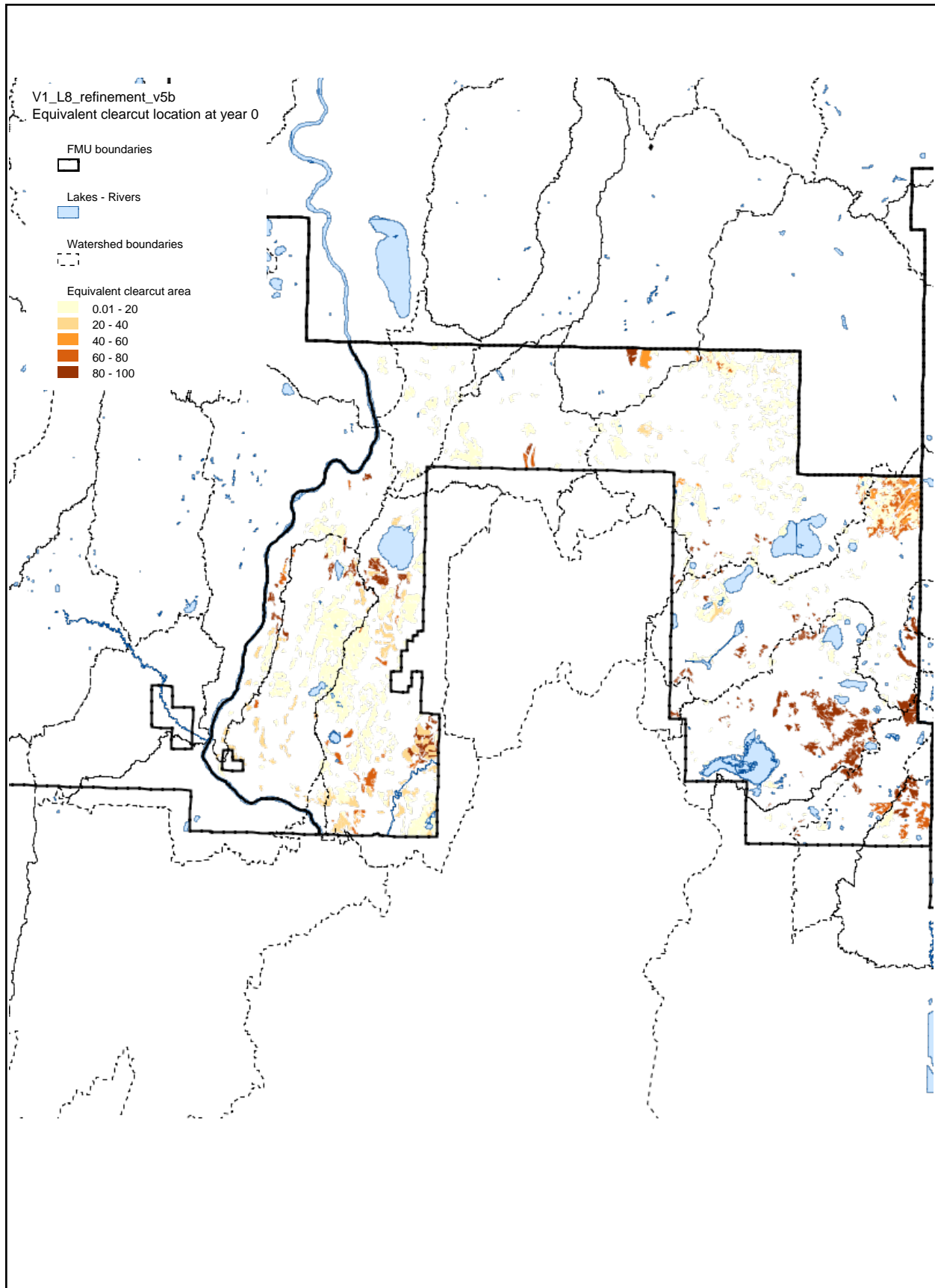
ECA Assessment Values

This table shows the summed values from the Equivalent Clearcut Area (ECA) model. The values are calculated by classifying the percent disturbance in each watershed, and then summing the watershed area by the percent disturbance classes. The target is to have less than 30% disturbance in each watershed. This target is sometimes not possible due to the occurrence of large natural disturbances, or not practical when small slivers of watersheds overlap the FMU boundary.

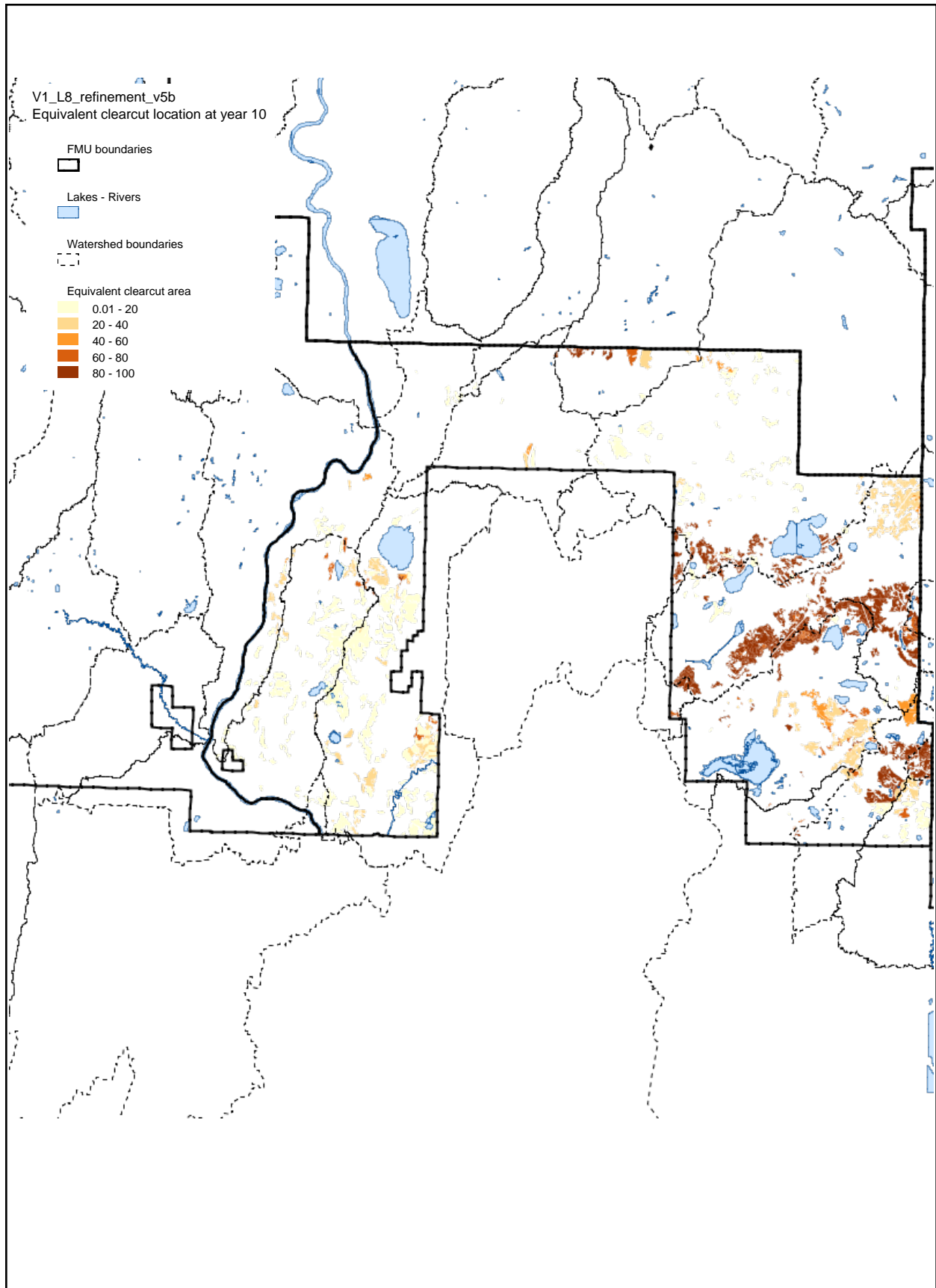
Period	Year	0_30	30_50	50_plus	Total
0	0	126,823	0	0	126,823
1	10	125,947	332	544	126,823
2	20	126,279	544	0	126,823
5	50	126,823	0	0	126,823
10	100	126,823	0	0	126,823
20	200	126,823	0	0	126,823



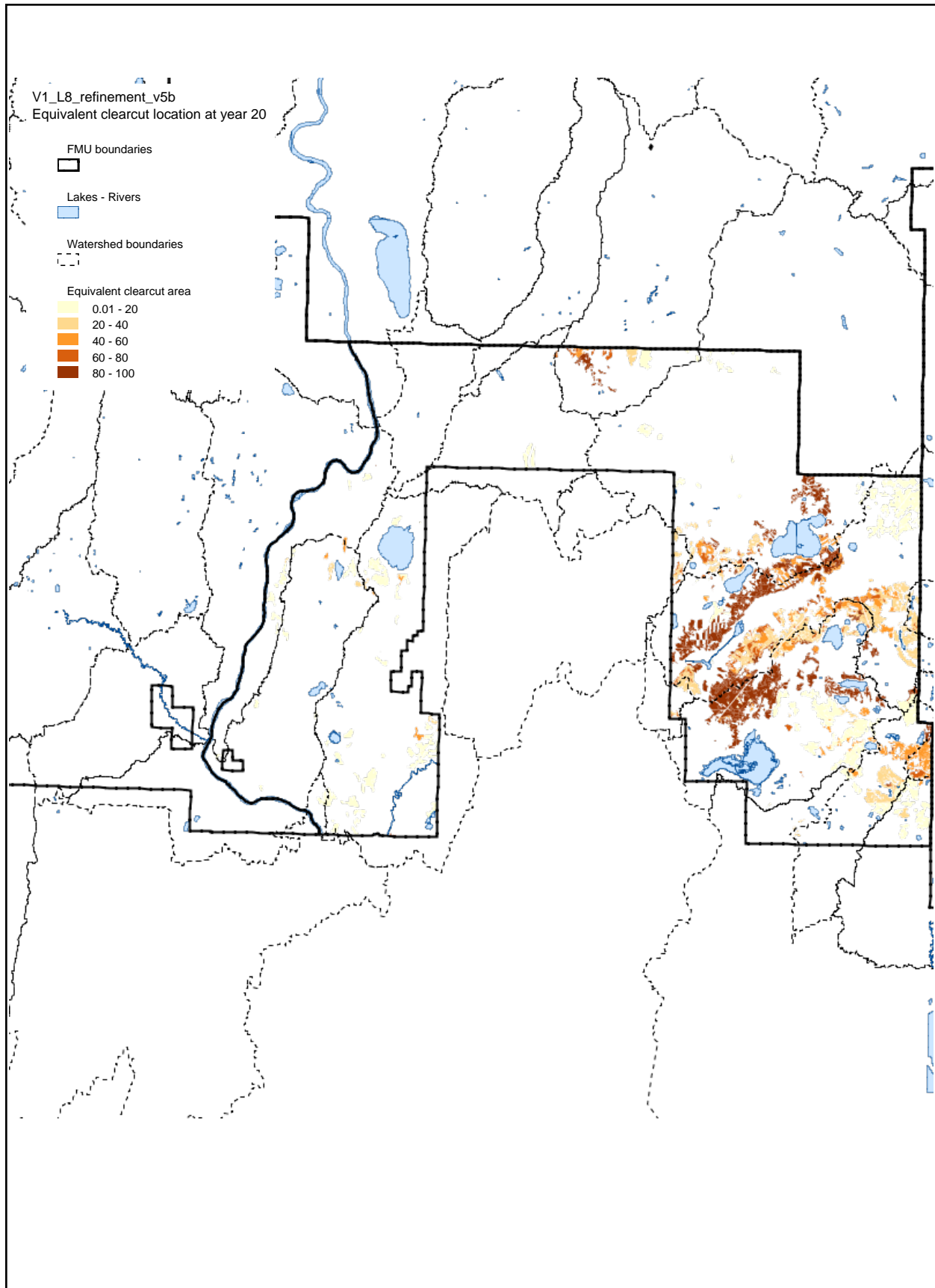
Voit 3.2.1.1 Equivalent clearcut area - period 0



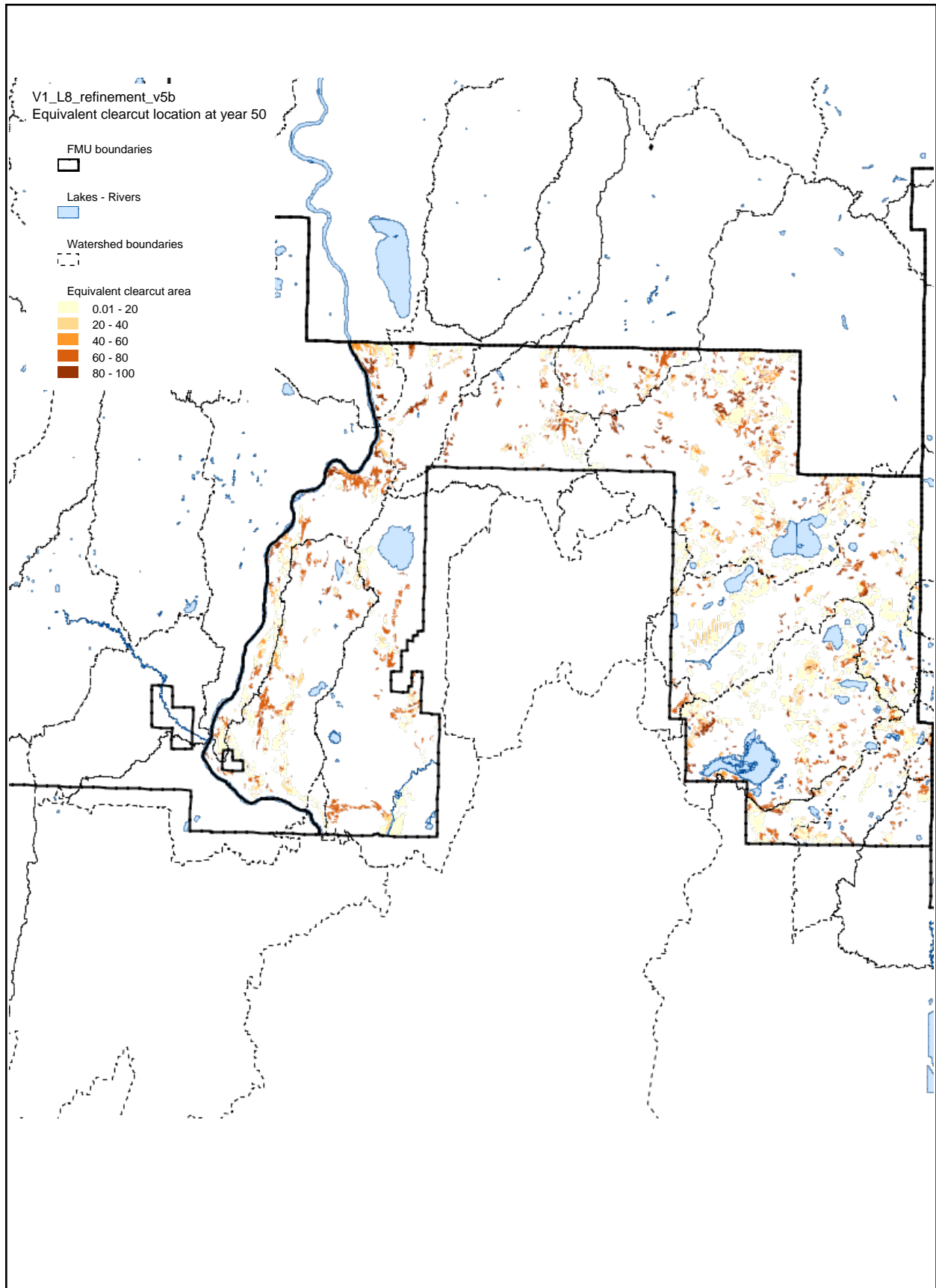
Voit 3.2.1.1 Equivalent clearcut area - period 1



Voit 3.2.1.1 Equivalent clearcut area - period 2



Voit 3.2.1.1 Equivalent clearcut area - period 5



Scenario parameters

The indicators in this appendix represent the Preferred Forest Management Scenario (PFMS) that was simulated with the Patchworks™ forest management planning model using the following set of parameter and objectives:

SHS Refinement Scenario - V5b. Schedule operationally refined SHS for Period 1 and Period 2 (no model allocations within first 20 years). Apply all base model objectives, caribou and NRV patches to determine long term sustainability impacts of SHS. Add NTA (Marten and Songbird) minimum objectives. Even-flow for 200 years.

This scenario has the following characteristics:

- Primary harvest for conifer and deciduous by FMU.
- Primary even flow harvest
- Primary non-declining managed GS by FMU for the last 50 years.
- Using the Adjust50 volume type
- Using the ORIG_AREA no succn tracks
- Using SHS version 5
- Silviculture transition ratios for AwU set to 70/15/15.
- Limit SbFM harvest
 - No SbFM harvest allowed in L8
- Cover/Seral targets at SRNV quartile levels with weight=10.0
- Initial planned harvest locked for 20 years.
- Pre-defined block schedule
 - Using ../fmus/L8/blocks/schedule_V5.csv
 - No MPB in Caribou zone
- Transportation budget set to limit road access footprint with least impact on wood supply
- Road construction budget places a maximum upper bound on captial construction
- Harvest patches follow NRV distribution for first 40 years - not targeting larger patches
- Marten HSI target to retain habitat
- Songbird HSI target to retain habitat