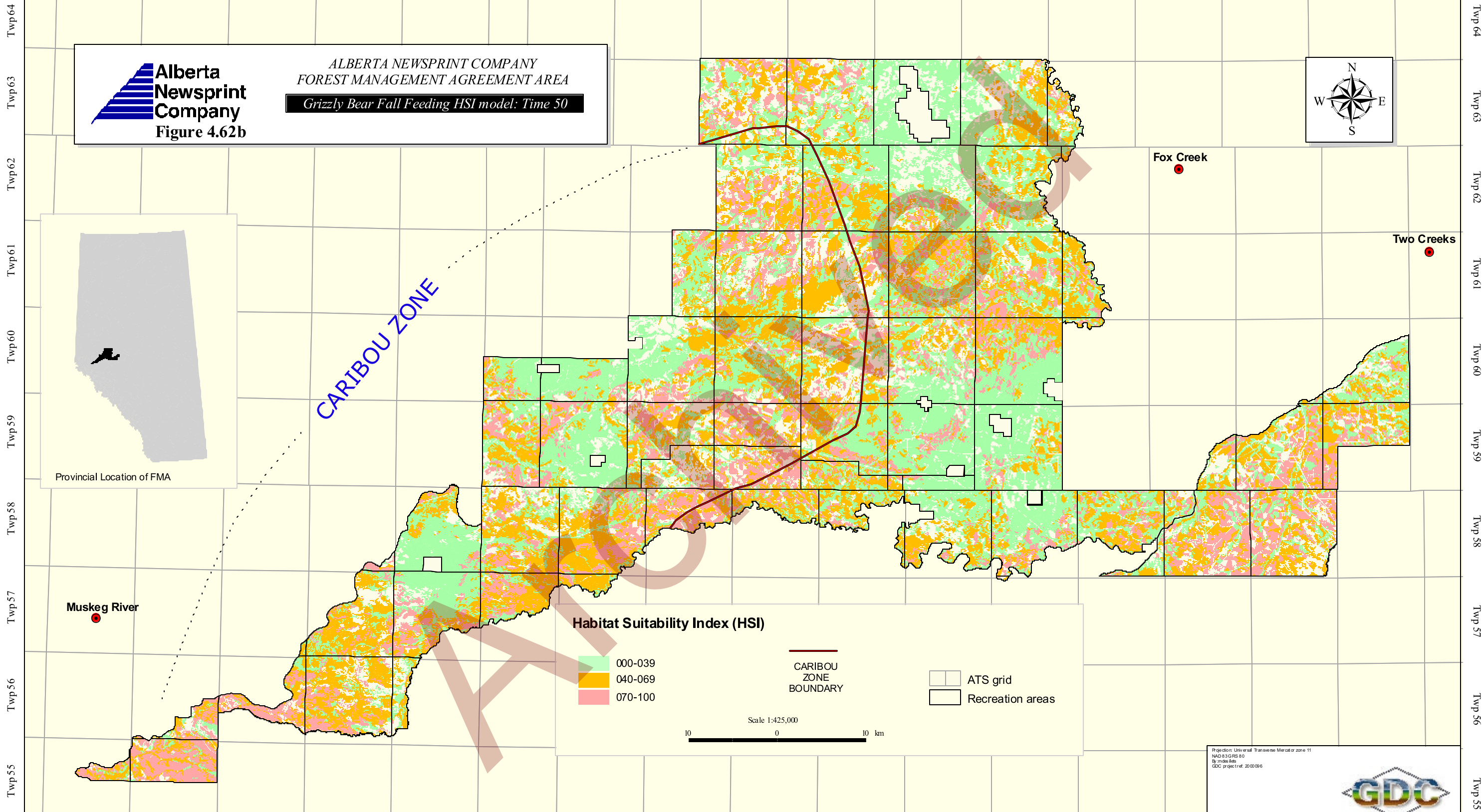
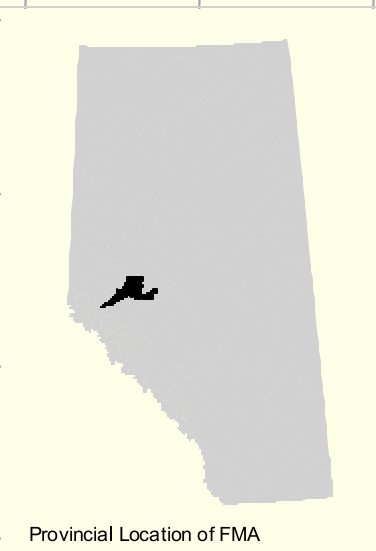


Rge 5 Rge 4 Rge 3 Rge 2 Rge 1 6th MER Rge 27 Rge 26 Rge 25 Rge 24 Rge 23 Rge 22 Rge 21 Rge 20 Rge 19 Rge 18 Rge 17



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FOREST MANAGEMENT AGREEMENT AREA  
Grizzly Bear Fall Feeding HSI model: Time 50



Provincial Location of FMA

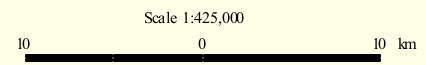
CARIBOU ZONE

Habitat Suitability Index (HSI)

- 000-039
- 040-069
- 070-100

CARIBOU ZONE BOUNDARY

- ATS grid
- Recreation areas



Projection: Universal Transverse Mercator zone 11  
NAD 83 GRS 80  
30 m x 30 m cells  
GDC project ref: 2000086



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Rge 5 Rge 4 Rge 3 Rge 2 Rge 1 6th MER Rge 27 Rge 26 Rge 25 Rge 24 Rge 23 Rge 22 Rge 21 Rge 20 Rge 19 Rge 18 Rge 17

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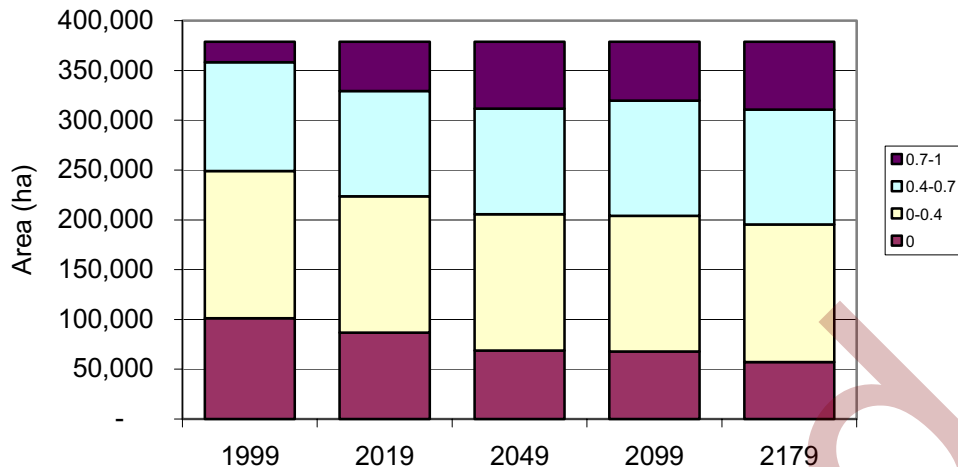


Figure 4.60 Area Summary of Grizzly Bear HSI in the FMA Area.

Table 4.24 Area summary of grizzly bear HSI in the FMA area, by 9-km<sup>2</sup> grid cells

HSI	1999	2019	2049	2099	2179
0	118	117	117	118	117
0-0.4	357	285	238	247	213
0.4-0.7	44	110	160	144	175
0.7-1	3	10	7	13	17
Total	522	522	522	522	522

Table 4.25 Percent area summary of grizzly bear HSI, by 9-km<sup>2</sup> grid cells

HSI	1999	2019	2049	2099	2179
0	22.6%	22.4%	22.4%	22.6%	22.4%
0-0.4	68.4%	54.6%	45.6%	47.3%	40.8%
0.4-0.7	8.4%	21.1%	30.7%	27.6%	33.5%
0.7-1	0.6%	1.9%	1.3%	2.5%	3.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

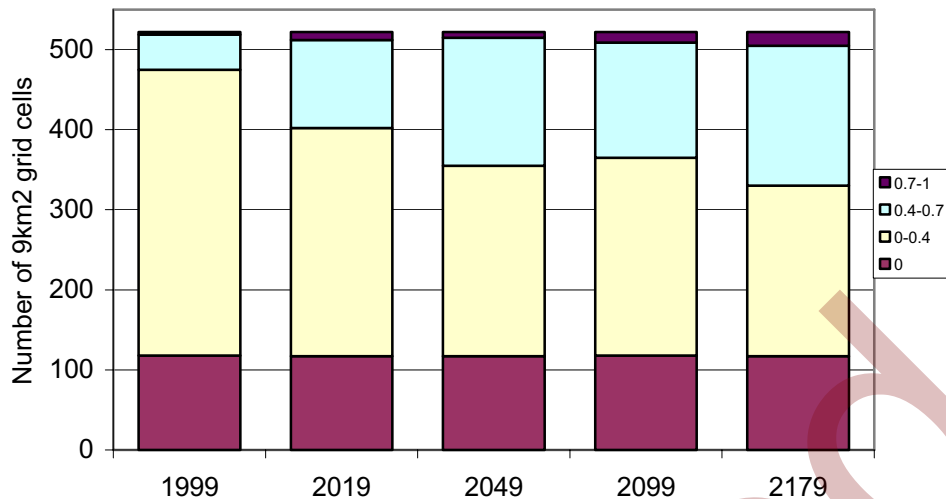


Figure 4.61 Area Summary of Grizzly Bear HSI By 9-km<sup>2</sup> Grid Cells.

Table 4.26. Area summary in hectares of grizzly bear fall feeding Habitat Suitability Index, including 9-km<sup>2</sup> grid level component (i.e., HSI= s1\*s2\*s3\*s4\*s5\*s6).

HSI	1999	2019	2049	2099	2179
0	172,247	161,905	148,583	146,919	139,727
0-0.39	106,542	98,469	97,393	97,814	97,488
0.4-0.69	83,069	81,145	81,262	89,077	86,914
0.7-1.0	16,867	37,205	51,487	44,915	54,595
Total (ha)	378,725				

Table 4.27 Percentage of grizzly bear fall feeding Habitat Suitability Index area, including 9-km<sup>2</sup> grid level component (i.e., HSI= s1\*s2\*s3\*s4\*s5\*s6).

HSI	1999	2019	2049	2099	2179
0	45.5%	42.8%	39.2%	38.8%	36.9%
0-0.39	28.1%	26.0%	25.7%	25.8%	25.7%
0.4-0.69	21.9%	21.4%	21.5%	23.5%	22.9%
0.7-1.0	4.5%	9.8%	13.6%	11.9%	14.4%
Total (ha)	100.0%	100.0%	100.0%	100.0%	100.0%

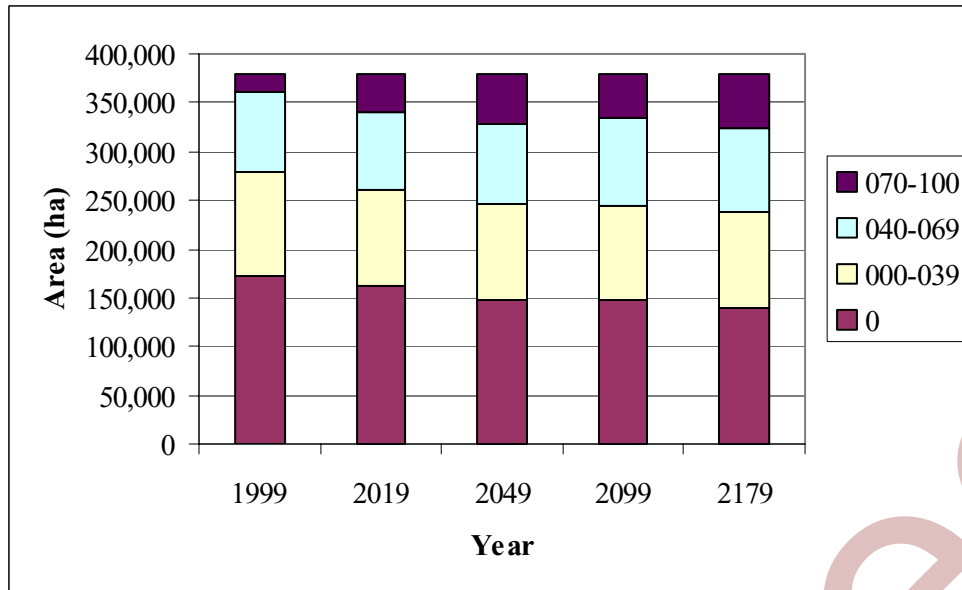


Figure 4.62 Summary, by area, of habitat suitability index classification of grizzly bear habitat

Area predictions of suitable future grizzly bear habitat indicate a steady increase in the most suitable habitat areas over the planning horizon. Area summaries indicate that the most suitable habitat type (HSI = '0.7-1') will increase from 49,266 ha (5.4%) to 68,150 ha (18%) at the end of the 180-year planning period. Unsuitable habitat areas (HSI = 0) will decrease by 43.3% from 101,092 ha to 57,300 ha at the end of planning horizon. Areas in '0-0.4' and '0.4-0.7' HSI classes, on average, are predicted to maintain their current levels.

Similar results are predicted using 9-km<sup>2</sup> grid cells. In the prediction of the most suitable grizzly bear habitat (HSI = '0.7-1'), a number of 9-km<sup>2</sup> grid cells increases from 3 to 17 by the end of 180-year planning horizon. Similarly, the next best HSI (0.4-0.7) class will increase from 44 to 175 9-km<sup>2</sup> grid cells. These increases are offset by area decrease in the (0-0.4) HSI class, for which there is an area decrease from 357 to 247 9-km<sup>2</sup> grid cells. The unsuitable HSI class (HSI = 0) is predicted to remain at the current levels, which is around 118 9-km<sup>2</sup> grid cells or 22.6% of the total FMA area. Figures 4.62-4.68 shows the predicted change in habitat suitability index according to the HSI model and the grid cell model, each at four points in time.

**Literature Cited**

1999. Silvacom Ltd. Forest Inventory, Timber Supply Analysis.

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