

Strategy 4.1.11

In meeting the strategies described above, the ten-year Spatial Harvest Sequence is situated in such a location that no new clearing is required to access the sequenced stands. Through the utilization of existing clearings on the landscape all stands scheduled for harvest within the first ten years can be accessed.

Strategy 4.1.12

The amount of effective caribou habitat is impacted by the implementation of the PFMS. The table below summarizes the level of impact in the two zones. The map on the following page shows the predicted spatial distribution of effective caribou habitat in twenty years.

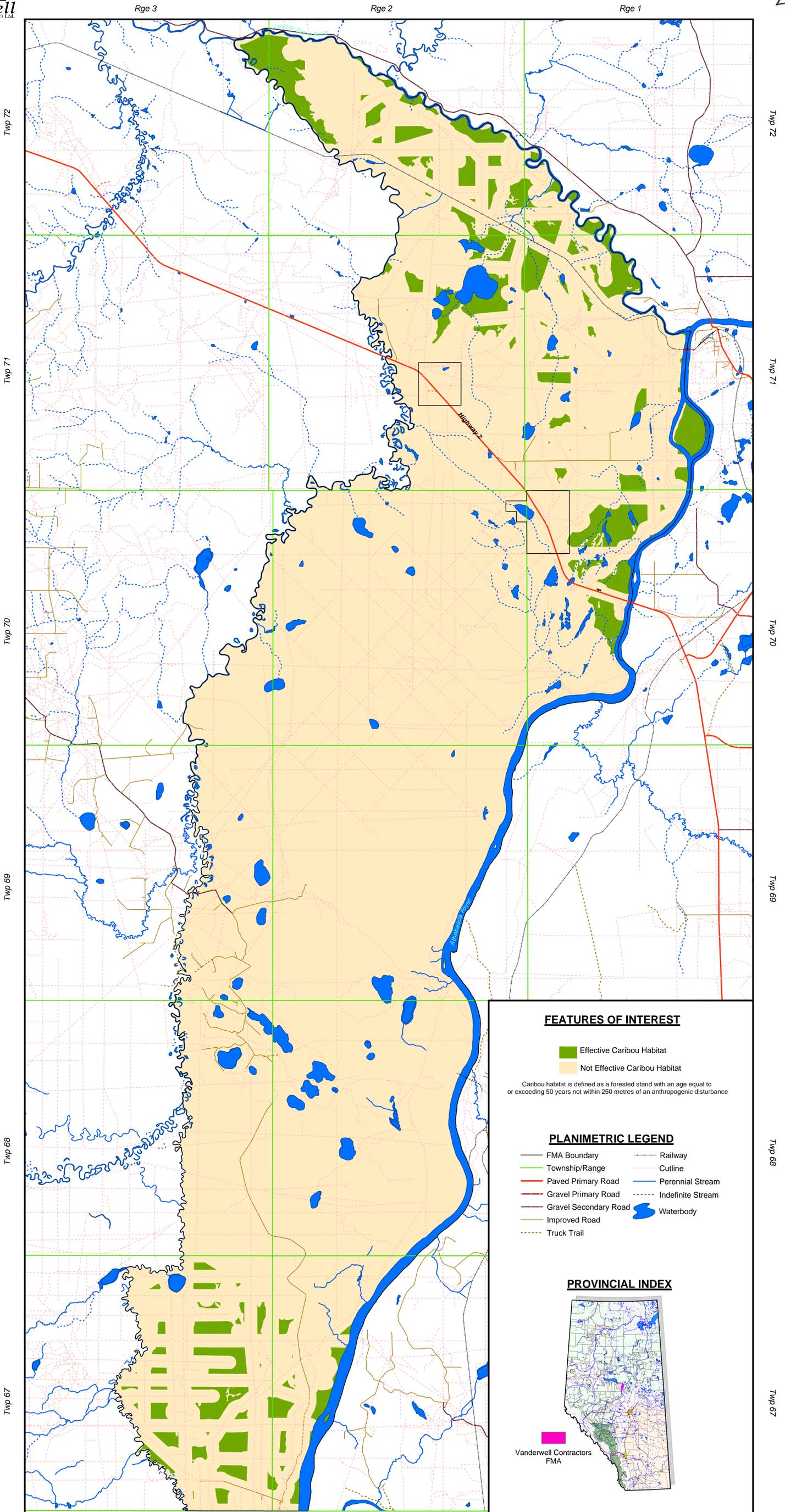
TABLE 9.11: PREDICTED AMOUNT OF EFFECTIVE CARIBOU HABITAT IN 20 YEARS.

Landbase Category	TWP 70 and North			TWP 69 and South		
	Effective Caribou Habitat	Not Effective Caribou Habitat	Total	Effective Caribou Habitat	Not Effective Caribou Habitat	Total
Net Landbase	920	3221	4141	135	823	958
Landbase Deletion	1794	23467	25261	849	27326	28175
Total	2714	26688	29403	984	28149	29133



CARIBOU HABITAT AREAS IN 20 YEARS

Within the Vanderwell FMA



FEATURES OF INTEREST

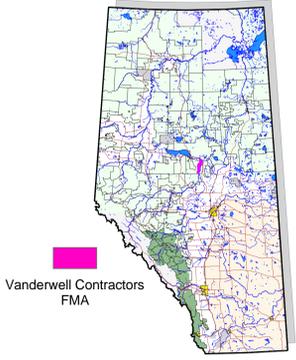
- Effective Caribou Habitat
- Not Effective Caribou Habitat

Caribou habitat is defined as a forested stand with an age equal to or exceeding 50 years not within 250 metres of an anthropogenic disturbance

PLANIMETRIC LEGEND

- FMA Boundary
- Township/Range
- Paved Primary Road
- Gravel Primary Road
- Gravel Secondary Road
- Improved Road
- Truck Trail
- Railway
- Cutline
- Perennial Stream
- Indefinite Stream
- Waterbody

PROVINCIAL INDEX



As shown, the amount of effective caribou habitat in the more critical southern portion the FMA is held constant while the amount of effective caribou habitat in the north decreases from 11.5% to 9.2%.

Development of a spatially explicit timber supply analysis

The development of a spatially explicit timber supply analysis was deemed essential to achieving the following management goals:

- Goal # 2: Reduce the level of fragmentation in the FMA.
- Goal # 4: Ensure special management considerations are in place for known threatened, endangered, rare or vulnerable species.
- Goal # 6: Maintain vegetative structure within the FMA in varying spatial patterns.
- Goal # 7: Maintain functionality of protected areas.
- Goal # 12: Enhance the area classified as ‘treed’ within the FMA.
- Goal # 13: Ensure the ability of the forest landbase to provide a flow of benefits to society.
- Goal # 14: Maintain an environment that allows the forest industry to remain competitive in provincial, national and international markets.

The use of a spatially explicit model allowed the Planning Team to determine if the goals are achieved. The Planning Team feels that the spatial harvest sequence contained in this PFMS does achieve the above goals.

Implementation of a single pass harvesting strategy

The reduction of fragmentation on the FMA was the main reason for implementing a single-pass as compared to a two-pass harvest strategy. A single-pass harvest strategy has the ability to ensure that through the implementation of the harvest sequence further fragmentation does not occur on the FMA. Timber supply analysis runs were complete to identify the impacts on the AAC of implementing a two-pass rather than single pass harvest strategy on the FMA. The results are summarized in the following table.

TABLE 9.12: SUMMARY OF RUN 5 AND 7 OBJECTIVES, CONSTRAINTS AND RESULTS.

Forest Management Strategy #	Landbase Strategy	Yield Curve Transition	Primary Species	Flow Constraint	Planning Horizon	Target Harvest Age	Minimum Harvest Age	Planned Blocks Sequenced	Adjacency	Adjacency Horizon	Green Up Period	Accum. Block Area (ha)	Conifer AAC	Deciduous AAC
5	Single	Status Quo	Conifer	Even Flow	160	80	70-Conifer 50- Deciduous	Applied	Off	N/A	N/A	N/A	6,398 (20yr Ave.)	4,378 (20yr Ave.)
7	Single	Status Quo	Conifer	Even Flow	160	80	70-Conifer 50- Deciduous	N/A	On	55 Years	60 years	50	6,496 (20yr Ave.)	1,893 (20yr Ave.)

The impact of implementing a two-pass harvest strategy on the deciduous AAC is a significant reduction (57%), while the coniferous AAC is increased by 0.8%. Another significant difference between the two harvest strategies is the resultant harvest pattern across the FMA. Whereas the single pass (page 155) results in a concentrated harvest the two pass (pages 156) results in a spatial harvest sequence that targets stands all over the FMA area. This resultant pattern is not acceptable. The

reason for this is that it will require the construction of new access into many areas of the FMA over a short time frame, causing an increase in the amount of fragmentation.

The two-pass scenario also requires stands in the Southern portion of the FMA to be harvested in order to achieve the AAC. In order to minimize the impact of the PFMS on Woodland Caribou and their habitat, strategies have been created to concentrate harvest activities in the North end of the FMA, and reduce/eliminate the amount of harvest activities in the South. The two-pass harvest scenario does not allow this to happen.

Maintain the current amount of over mature forest

In order to maintain habitat features, a strategy was created to maintain the current amount of over mature forest over time. The Planning Team felt it worthwhile not only to track the amount of over mature within the gross landbase, but to break the analysis down and track the amount of over mature as either being part of the net landbase or as being a deletion from the net landbase. The table below summarizes the amount of over mature forest that will be maintained over time through the implementation of the PFMS. Map 5-9 on page 30 shows the current spatial distribution of over mature stands within the FMA.

TABLE 9.13: OVER MATURE FOREST SUMMARY.

Cover Group	Landbase Status	Current Overmature*	Year 20 Overmature*
Conifer Pine Leading	Net Landbase	0	169
	Landbase Deletion	0	29
Conifer Spruce Leading	Net Landbase	565	533
	Landbase Deletion	929	2844
Mixedwood	Net Landbase	215	260
	Landbase Deletion	129	159
Deciduous	Net Landbase	247	250
	Landbase Deletion	5	5
Total	Gross Landbase	2090	4249

*Stands have been assumed to live forever, therefore once a stand contributes to the over mature category, it will continue to contribute to this category indefinitely. The ages at which stands are classified as over mature are defined in strategy 3.1.1 of Section 6.0.

The location of over-mature stands in 20 years is shown on page 157.

The Planning Team felt that not only was the maintenance of over mature forest by stand type important, but that the size of the over mature patches is also important. The Planning Team wanted to ensure that overmature stands were not left in small patches isolated from other overmature stands. The table below shows the current patch size distribution of over mature stands and the predicted distribution in 20 years from now.