

## 11.0 FOREST INVENTORY DATA

Initially GPRC used Phase III inventory information supplied by Public Lands and Forest Division while a new inventory was conducted to Alberta Vegetation Inventory standards. This inventory was completed in early 2004 based on aerial photography dated 2001. Field checking of the photo interpreted inventory was completed during the summer of 2003.

### Gross FMU area, gross and net productive and non-productive landbase

As shown in **Table 11.1**, the total gross area of the Training Forest amounts to 25,171 hectares. Non-productive land, dominated by non-forested vegetative land, accounts for some 5.5 percent of the total.

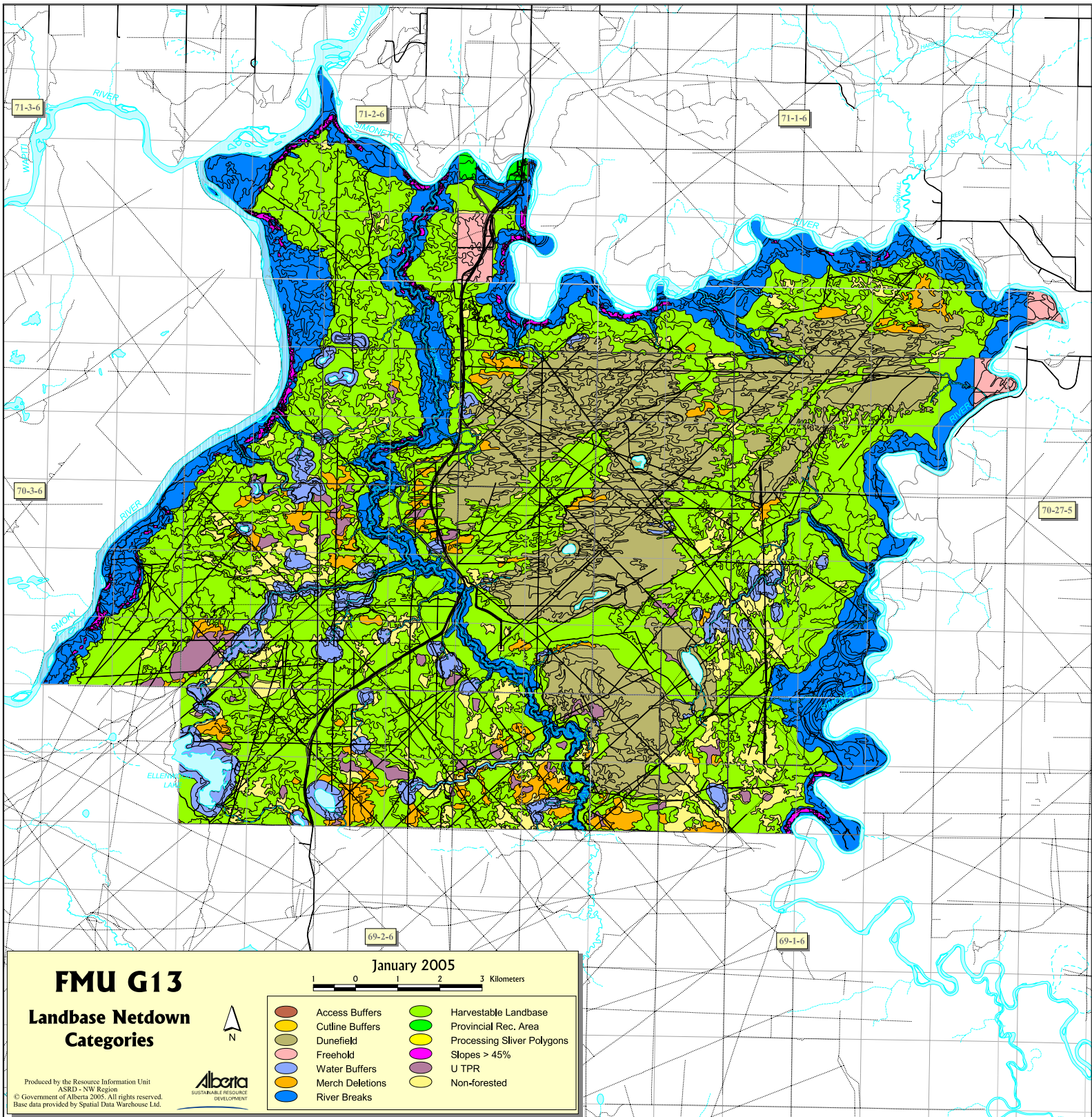
Of the nearly 24 thousand hectares in the gross productive landbase, approximately one-half, or 12,058 ha, has been deleted. The principle reasons for the deletions are: (1) forest located on sand dune complexes (4,540 ha); (2) forest located on steep breaks in slopes to the Smoky River, Simonette River and Economy Creek (4,378 ha); and (3) hydrography buffer deletions along lakes and waterways other than those identified in (2) (1,174 ha).

The net productive land base, amounting to 11,725 hectares, or nearly 47% of the total area of the FMU, is shown in **Map 11.1** and **Map C2** in **Appendix C.**

**Table 11.1: FMU area and net down categories**

LANDBASE CATEGORY	AREA (HA)	% OF Gross Area
Gross FMU Area	25,171	100
Non-forest vegetated lands	1,266	5
Other	123	1
Non-productive lands – Sub-total	1,388	6
Gross Productive Forest Landbase	23,783	94
Sand dune complex	4,540	18
Hydrographic buffer	1,174	5
Interpreted river breaks	4,378	17
Other	1,966	8
Gross productive deletions	12,058	48
Net productive Landbase	11,725	47

**Source:** GPRC and SRD, Forest Management Unit G13 – Landbase Determination, January 2005



## Species

Aspen is the dominant specie throughout the training forest. It accounts for nearly two-thirds of the forested area as the leading specie in the stand description. Black poplar, the second most important deciduous specie, is the principal specie in only 7 percent of the forested area. Together, these two deciduous species account for virtually all of the deciduous species growing in the training forest.

While black poplar does not account for a significant share of the inventory as the leading specie, it has accounted for one-third of the harvested deciduous volume over the course of the 2002-3 and 2003-4 operating seasons. Aspen has contributed two-thirds of the volume while birch represents an insignificant amount.

Forest in which larch and black spruce dominate the canopy account for some 18 percent of the total forested landbase and two-thirds of its coniferous component. While contributing a significant share of the coniferous forest, both of these forest types have been deleted from the landbase supporting harvest activity due to their location on moisture dependent environments and or low volumes per hectare stands.

White spruce and pine dominated stands represent some 10 percent of the total forest area and about one-third of the coniferous forest. While both of these stand types contribute to the AAC, only those stands that lie outside of the land deleted from the productive land base are available to support harvest activity.

**Table 11.2 shows the distribution of forested land by leading specie.**

	Leading specie in stand descriptor	Percentage of forested area
1	Aspen	64
2	Birch	<1
3	Poplar	7
4	Larch	8
5	Pine	4
6	White spruce	6
7	Black spruce	10

**Source:** GPRC and SRD, Forest Management Unit G13 – Landbase Determination, January 2005

### Broad forest cover group

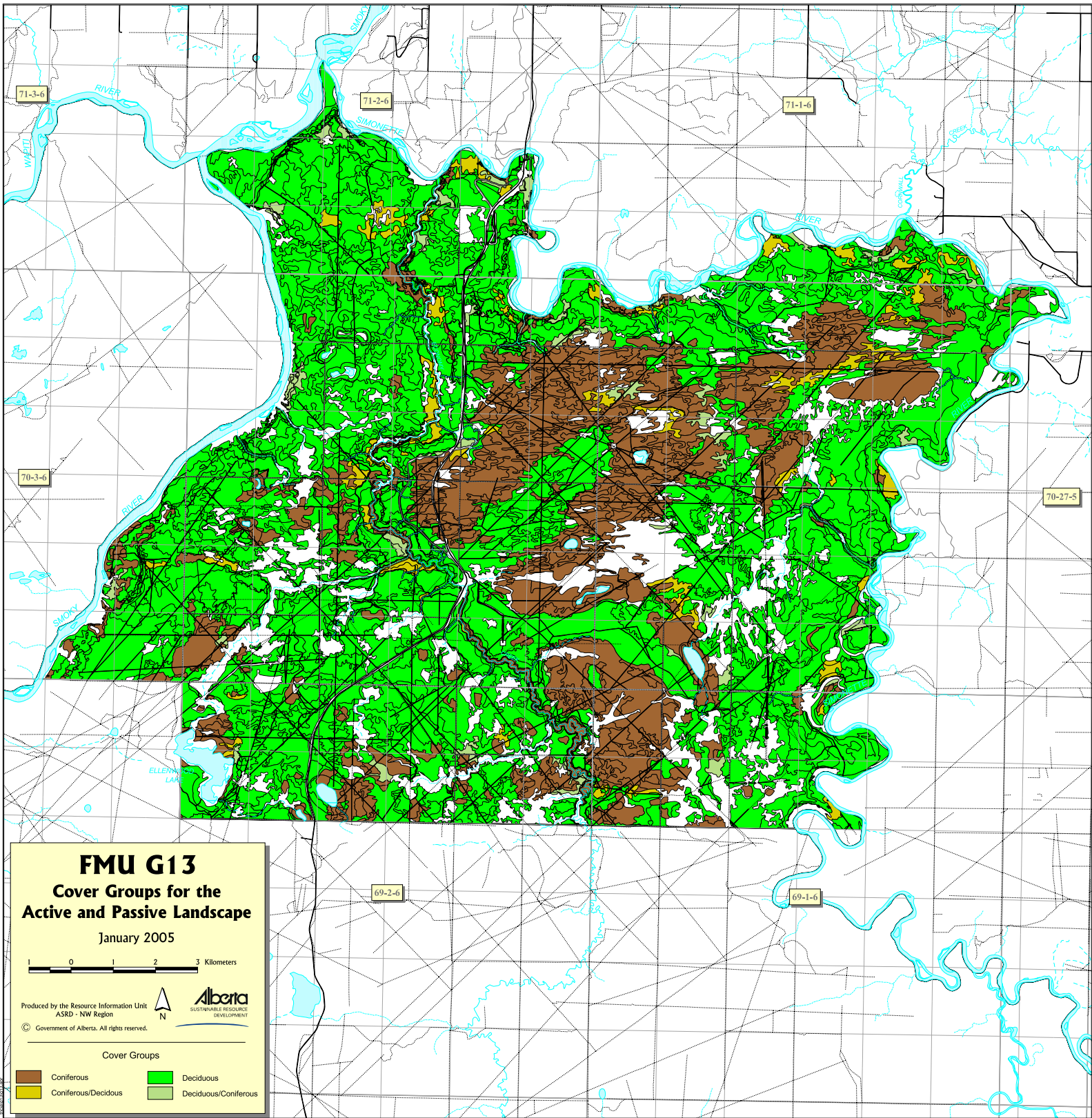
The net productive land base is dominated by pure deciduous or mixed deciduous-coniferous stands in which conifers form a minor component (**Map 11.2** and **Map C.3** in **Appendix C**). These deciduous dominated stands account for 95% of the net productive land base, or slightly more than 11 thousand hectares (**Table 11.3**). Pure deciduous of either AB or CD densities represent most of the deciduous dominated stands. Mixed deciduous forest, amounting to some 1,600 ha., represent a minor component of the deciduous dominated forest.

The net productive conifer stands amount to some 550 hectares, about one-fifth of the total conifer and mixed conifer forest. A large part of the coniferous forest is located either on the sand dune complex or on the steep drop offs to the major rivers and creeks. These stand types have been excluded from the active landbase and thus are unavailable to support harvest activity.

**Table 11.3: Net productive landbase classified by broad forest cover group**

Broad Cover Group	Details	Area (HA)	Percentage of net productive landbase
C and CD	Mixed deciduous AB density	48	<1
	Mixed deciduous CD density	12	<1
	White spruce based mixed wood	144	1
	Conifer, mainly white spruce	342	3
	Net productive conifer dominated stands	546	5
D and DC	Pure deciduous AB density	3,821	33
	Pure deciduous CD density	5,396	46
	Mixed deciduous AB density	824	7
	Mixed deciduous CD density	970	8
	White spruce mixed wood	168	1
	Net productive deciduous dominated stands	11,179	95
Net productive landbase		11,725	100

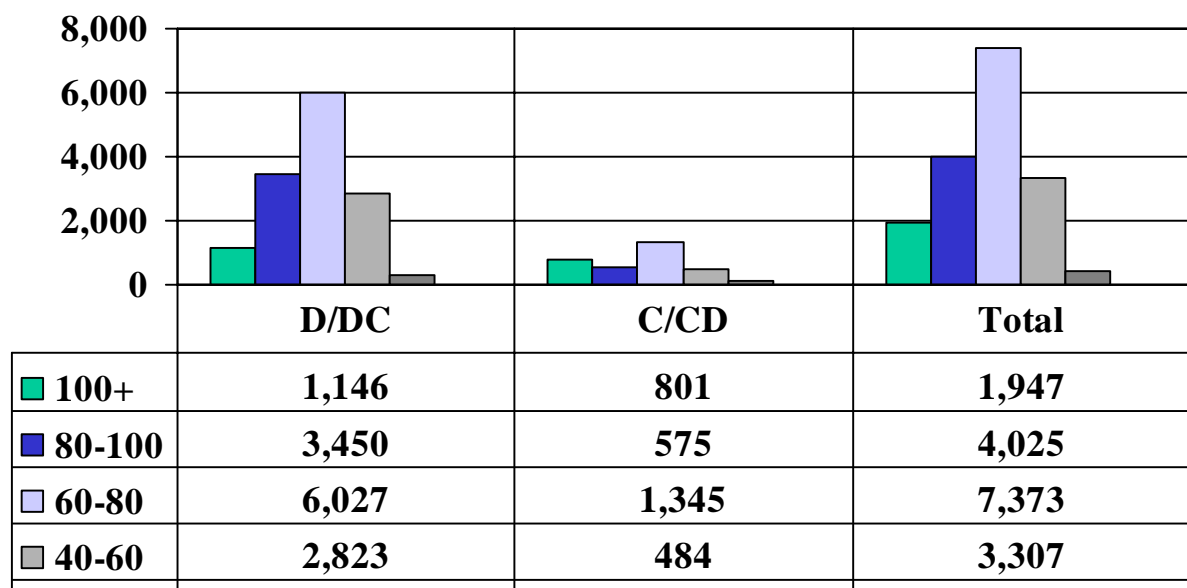
**Source:** GPRC and SRD, Forest Management Unit G13 – Landbase Determination, January 2005



### Age class distribution

As shown in **Figure 11.1**, very little forest is under 40 years of age. That which is accounts for less than 3 percent of the total forest area. More than 10 percent is greater than 100 years while the largest share is between 60 and 80 years of age (slightly more than 40 percent). Very little difference exists when comparing the deciduous and mixed deciduous forest with the coniferous and mixed coniferous forest.

**Figure 11.1: Age class distribution of total forested land**



**Source:** GPRC and SRD, Forest Management Unit G13 – Landbase Determination, January 2005

However, as shown in **Map 11.3** and **Map C.4** in **Appendix C**, the mature and over mature component is not evenly distributed throughout the forest. The mature and overmature forest, which in effect guides the harvest activity, is concentrated in three distinct parts. One large component (of the mature and overmature forest) is located west of Economy Creek while another is located east of the Forestry Trunk Road along the Simonette River. The Simonette River component forms the north boundary of the training forest. The third concentration is located along the eastern boundary formed by the Simonette River. It is these concentrations which have guided the 20 year timber supply analysis discussed further on.

