Table 3.13 Preliminary LRSYA estimates for the FMA area - fully stocked regeneration transition.

		Area (ha) by Yield Curve						Preliminary LRSYA (m^3/yr)				
Yield Curve	Description	Berland (E6)	Foothills (E7)	Little Smoky (W1)	Pine (W8)	FMA area	MAI (m^3/ha/yr) @ 90 Years	Berland (E6)	Foothills (E7)	Little Smoky (W1)	Pine (W8)	FMA area
1	AB-S-10-G	118	826	1,456	231	2,630	3.17	372	2,614	4,611	730	8,327
2	AB-S-10-M	120	5,881	8,946	454	15,401	2.02	243	11,893	18,090	918	31,144
3	AB-S-10-F	83	2,435	2,155	216	4,888	1.14	95	2,786	2,466	247	5,594
4	CD-S-10-G	172	4,059	9,399	1,862	15,492	3.17	545	12,853	29,763	5,896	49,057
5	CD-S-10-M	713	31,344	43,756	2,356	78,169	2.02	1,441	63,384	88,485	4,765	158,076
6	CD-S-10-F	85	13,428	5,386	529	19,427	1.14	97	15,367	6,164	606	22,234
7	AB-S-11-G	499	218	2,619	655	3,990	3.02	1,508	658	7,915	1,978	12,060
8	AB-S-11-M	1,355	802	8,658	1,504	12,319	2.33	3,162	1,872	20,201	3,508	28,744
9	AB-S-11-F	124	49	1,619	714	2,506	1.44	180	70	2,338	1,031	3,620
10	CD-S-11-G	1,463	667	8,455	5,640	16,225	3.02	4,421	2,016	25,554	17,046	49,037
11	CD-S-11-M	6,422	3,421	38,654	9,194	57,690	2.33	14,984	7,981	90,193	21,452	134,610
12	CD-S-11-F	729	544	4,090	1,407	6,769	1.44	1,052	785	5,908	2,032	9,777
13	AB-MX-A-A	1,106	162	3,537	976	5,781	1.73	1,918	280	6,131	1,692	10,021
14	CD-MX-A-A	4,567	437	8,493	4,378	17,875	1.73	7,916	757	14,722	7,588	30,983
15	AB-H-A-A	337	22	4,637	480	5,477	0.82	277	18	3,813	395	4,504
16	CD-H-A-A	1,469	649	14,786	1,140	18,043	0.82	1,208	533	12,157	937	14,836
Totals		19,361	64,941	166,647	31,734	282,683		39,419	123,870	338,513	70,821	572,622

Table 3.14 Preliminary LRSYA estimates for the FMA area - status quo regeneration transition.

		Area (ha) By Yield Curve						Preliminary LRSYA (m^3/yr)				
Yield Curve	Description	Berland (E6)	Foothills (E7)	Little Smoky (W1)	Pine (W8)	FMA area	MAI (m^3/ha/yr) @ 90 Years	Berland (E6)	Foothills (E7)	Little Smoky (W1)	Pine (W8)	FMA area
1	AB-S-10-G	118	826	1,456	231	2,630	1.81	213	1,495	2,637	418	4,763
2	AB-S-10-M	120	5,881	8,946	454	15,401	1.08	130	6,339	9,642	489	16,599
3	AB-S-10-F	83	2,435	2,155	216	4,888	0.70	58	1,704	1,508	151	3,421
4	CD-S-10-G	172	4,059	9,399	1,862	15,492	3.17	545	12,853	29,763	5,896	49,057
5	CD-S-10-M	713	31,344	43,756	2,356	78,169	2.02	1,441	63,384	88,485	4,765	158,076
6	CD-S-10-F	85	13,428	5,386	529	19,427	1.14	97	15,367	6,164	606	22,234
7	AB-S-11-G	499	218	2,619	655	3,990	1.87	931	406	4,889	1,222	7,449
8	AB-S-11-M	1,355	802	8,658	1,504	12,319	1.41	1,912	1,132	12,217	2,122	17,383
9	AB-S-11-F	124	49	1,619	714	2,506	0.34	43	17	558	246	863
10	CD-S-11-G	1,463	667	8,455	5,640	16,225	3.02	4,421	2,016	25,554	17,046	49,037
11	CD-S-11-M	6,422	3,421	38,654	9,194	57,690	2.33	14,984	7,981	90,193	21,452	134,610
12	CD-S-11-F	729	544	4,090	1,407	6,769	1.44	1,052	785	5,908	2,032	9,777
13	AB-MX-A-A	1,106	162	3,537	976	5,781	1.40	1,549	226	4,952	1,367	8,094
14	CD-MX-A-A	4,567	437	8,493	4,378	17,875	1.73	7,916	757	14,722	7,588	30,983
15	AB-H-A-A	337	22	4,637	480	5,477	0.74	251	17	3,452	357	4,078
16	CD-H-A-A	1,469	649	14,786	1,140	18,043	0.82	1,208	533	12,157	937	14,836
Totals		19,361	64,941	166,647	31,734	282,683		36,751	115,013	312,801	66,692	531,259

3.5.3 Area Volume Check

Area volume check analysis was used to determine theoretical, unconstrained harvest levels. Calculations were done for an amalgamated (single) landbase and for split (conifer vs. deciduous) landbases across the FMA area and within each FMU. Separate conifer and deciduous yield curves were developed for each landbase.

Area volume check uses a binary search algorithm to calculate a harvest level which a given forest area can sustain for a selected planning horizon. The solution assumes that all forest stands are cut over the rotation to provide an even-flow harvest. The model computes first and second rotation cut levels for five-planning horizon choices in a single pass. It also incorporates regenerated yield strategies and tracks secondary species volumes.

Tables 3.15-3.19 list the volume check results for each of the sustained yield units by rotation length and tree species and under two regeneration scenarios.

Table 3.15 FMA Area volume check results

A. Total Net Landbase Conifer AAC. Total Net Landbase area = 282,683 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	892,498	592,287	892,498	615,935
80	794,140	603,119	794,140	632,991
90	716,415	597,012	716,415	632,037
100	653,852	583,735	653,852	625,430
110	599,007	564,309	599,007	608,199

B. Net Conifer Landbase Conifer AAC. Total Net Conifer Landbase area = 259,162 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	850,876	591,299	850,876	613,538
80	755,004	600,919	755,004	624,644
90	679,895	588,516	679,895	623,042
100	616,529	570,201	616,529	611,905
110	560,481	543,667	560,481	590,483

C. Net Deciduous Landbase Conifer AAC. Total Net Deciduous Landbase area = 23,520 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	28,277	20,898	28,277	21,164
80	25,729	20,514	25,729	21,122
90	23,600	20,828	23,600	20,850
100	21,820	19,976	21,820	20,069
110	20,182	19,781	20,182	19,745

Table 3.15 Continued

D. Total Net Landbase Deciduous AAC. Total Net Landbase area = 282,683 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	164,694	182,126	164,694	182,033
80	143,226	169,459	143,226	168,846
90	126,544	158,431	126,544	158,519
100	113,683	143,531	113,683	142,757
110	102,484	128,864	102,484	127,748

E. Net Conifer Landbase Deciduous AAC. Total Net Conifer Landbase area = 259,162 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	118,150	114,028	118,150	112,266
80	103,535	105,038	103,535	108,680
90	92,258	101,371	92,258	101,500
100	82,920	93,551	82,920	93,173
110	74,696	85,274	74,696	85,498

F. Net Deciduous Landbase Deciduous AAC. Total Net Deciduous Landbase area = 23,520 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	70,162	45,638	70,162	51,435
80	63,386	47,104	63,386	52,361
90	57,739	47,275	57,739	52,134
100	53,184	46,920	53,184	51,174
110	49,097	45,677	49,097	49,097

Table 3.16 W1 – Little Smoky area volume check results

A. Total Net Landbase Conifer AAC. Total Net Landbase area = 166,647 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	511,228	347,516	511,228	361,169
80	457,648	353,851	457,648	371,544
90	416,162	352,279	416,162	374,545
100	380,377	344,910	380,337	368,927
110	351,027	332,835	351,027	357,521

B. Net Conifer Landbase Conifer AAC. Total Net Conifer Landbase area = 147,224 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	473,300	336,579	473,300	346,988
80	423,216	339,938	423,216	354,217
90	381,965	335,850	381,965	354,401
100	349,045	323,856	349,045	346,366
110	319,748	310,155	319,748	334,657

Table 3.16 Continued

C. Net Deciduous Landbase Conifer AAC. Total Net Deciduous Landbase area = 194,23 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	22,716	14,832	22,716	14,821
80	20,656	17,471	20,656	17,413
90	19,033	17,221	19,033	16,776
100	17,610	16,821	17,610	16,814
110	16,021	15,239	16,021	15,113

D. Total Net Landbase Deciduous AAC. Total Net Landbase area = 166,647 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	95,938	108,548	95,938	108,491
80	84,204	101,680	84,204	101,777
90	75,199	93,485	75,199	91,390
100	67,587	84,808	67,587	83,685
110	61,566	76,005	61,566	75,859

E. Net Conifer Landbase Deciduous AAC. Total Net Conifer Landbase area = 147,224 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	66,222	64,907	66,222	64,853
80	58,575	61,487	58,575	61,629
90	52,311	56,608	52,311	57,520
100	47,407	53,134	47,407	53,096
110	43,095	48,241	43,095	48,456

F. Net Deciduous Landbase Deciduous AAC. Total Net Deciduous Landbase area = 19,423 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	56,679	37,563	56,679	42,509
80	51,128	38,700	51,128	43,166
90	46,878	38,954	46,878	43,283
100	43,166	38,662	43,166	42,190
110	40,208	37,775	40,208	40,713

Table 3.17 W8 – Pine area volume check results

A. Total Net Landbase Conifer AAC. Total Net Landbase area = 31,734 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	100,762	66,370	100,762	68,751
80	89,559	67,753	89,559	70,848
90	80,829	67,358	80,829	71,039
100	73,305	65,656	73,305	69,997
110	66,640	63,145	66,640	68,178

Table 3.17 Continued

B. Net Conifer Landbase Conifer AAC. Total Net Conifer Landbase area = 30,114 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	99,361	68,953	99,361	71,086
80	87,738	69,446	87,738	72,684
90	78,621	68,589	78,621	72,451
100	71,306	66,346	71,306	71,276
110	64,824	63,230	64,824	68,367

C. Net Deciduous Landbase Conifer AAC. Total Net Deciduous Landbase area = 1,620 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	2,075	1,461	2,075	1,455
80	1,837	1,277	1,837	1,278
90	1,663	1,280	1,663	1,254
100	1,537	1,286	1,537	1,285
110	1,416	1,264	1,416	1,273

D. Total Net Landbase Deciduous AAC. Total Net Landbase area = 31,734 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	20,064	20,669	20,064	20,652
80	16,680	18,928	16,680	19,359
90	13,903	17,511	13,903	17,817
100	12,384	16,144	12,384	16,128
110	11,145	14,420	11,145	14,466

E. Net Conifer Landbase Deciduous AAC. Total Net Conifer Landbase area = 30,114 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	14,427	13,209	14,427	13,276
80	12,311	12,621	12,311	12,510
90	10,606	11,728	10,606	11,803
100	9,501	10,885	9,501	10,586
110	8,613	9,918	8,613	9,899

F. Net Deciduous Landbase Deciduous AAC. Total Net Deciduous Landbase area = 1,620 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	5,107	3,135	5,107	3,537
80	4,572	3,225	4,572	3,612
90	4,126	3,260	4,126	3,613
100	3,748	3,227	3,748	3,521
110	3,423	3,153	3,423	3,376

Table 3.18 E6 – Berland area volume check results

A. Total Net Landbase Conifer AAC. Total Net Landbase area = 19,361 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	62,634	40,680	62,634	41,938
80	55,652	41,103	55,652	43,030
90	49,845	41,103	49,845	43,358
100	44,861	40,179	44,861	42,702
110	41,091	38,522	41,091	41,726

B. Net Conifer Landbase Conifer AAC. Total Net Conifer Landbase area = 17,555 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	58,819	40,290	58,819	41,245
80	51,861	40,710	51,861	42,357
90	46,099	40,099	46,099	42,357
100	41,489	38,896	41,489	41,339
110	37,717	37,009	37,717	40,087

C. Net Deciduous Landbase Conifer AAC. Total Net Deciduous Landbase area = 1,806 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	2,226	1,621	2,226	1,629
80	1,929	1,424	1,929	1,425
90	1,720	1,405	1,720	1,440
100	1,548	1,430	1,548	1,394
110	1,405	1,365	1,405	1,393

D. Total Net Landbase Deciduous AAC. Total Net Landbase area = 19,361 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	11,935	12,269	11,935	12,598
80	9,846	11,811	9,846	11,787
90	8,375	10,676	8,375	10,874
100	7,306	9,702	7,306	9,839
110	6,653	8,797	6,653	8,610

E. Net Conifer Landbase Deciduous AAC. Total Net Conifer Landbase area = 17,555 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	8,394	7,598	8,394	7,709
80	7,158	7,115	7,158	7,317
90	6,214	6,685	6,214	6,738
100	5,488	6,070	5,488	6,337
110	4,948	5,719	4,948	5,724

F. Net Deciduous Landbase Deciduous AAC. Total Net Deciduous Landbase area = 1,806 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	5,483	3,479	5,483	3,958
80	4,834	3,598	4,834	4,028
90	4,297	3,641	4,297	3,998
100	3,867	3,598	3,867	3,937
110	3,516	3,525	3,516	3,789

Table 3.19 E7 – Foothills area volume check results

A. Total Net Landbase Conifer AAC. Total Net Landbase area = 64,941 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	21,1866	135,575	211,866	140,848
80	18,6784	137,987	186,784	144,886
90	16,7566	137,987	167,566	145,356
100	15,1295	133,847	151,295	143,857
110	13,7541	129,791	137,541	139,426

B. Net Conifer Landbase Conifer AAC. Total Net Conifer Landbase area = 64,270 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	217,276	146,662	217,276	151,197
80	190,117	148,357	190,117	155,599
90	168,993	146,998	168,993	154,866
100	152,093	141,518	152,093	152,093
110	137,230	135,156	137,230	146,303

C. Net Deciduous Landbase Conifer AAC. Total Net Deciduous Landbase area = 671 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	768	513	768	510
80	672	603	672	604
90	597	597	597	588
100	537	537	537	537
110	488	488	488	484

D. Total Net Landbase Deciduous AAC. Total Net Landbase area = 64,941 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	34,301	42,347	34,301	42,309
80	29,635	39,651	29,635	39,688
90	26,203	35,529	26,203	36,456
100	23,324	32,911	23,324	32,428
110	20,982	29,422	20,982	29,583

Table 3.19 Continued

E. Net Conifer Landbase Deciduous AAC. Total Net Conifer Landbase area = 64,270 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	28,404	28,283	28,404	28,259
80	24,584	26,898	24,584	26,124
90	21,690	24,187	21,690	24,913
100	19,384	23,218	19,384	22,632
110	17,394	21,199	17,394	21,184

F. Net Deciduous Landbase Deciduous AAC. Total Net Deciduous Landbase area = 671 ha.

Rotation Length (Years)	Conifer AAC (Regen: SQ)		Conifer AAC (Regen: Full Stock)	
	1st R (m^3/yr)	2nd R (m^3/yr)	1st R (m^3/yr)	2nd R (m^3/yr)
70	1,911	1,300	1,911	1,478
80	1,672	1,337	1,672	1,497
90	1,486	1,352	1,486	1,498
100	1,338	1,337	1,338	1,460
110	1,216	1,306	1,216	1,410

3.5.4 Harvest Simulation

3.5.4.1 Simulation Control

The modeling approach used for harvest planning simulates the effect of management strategies on sustainable harvest levels over a specified planning horizon. The model maintains a full spatial link to the net landbase GIS coverage and attribute file over the entire planning horizon. Compartment sequencing can also be introduced to reflect "real-world" limitations such as accessibility and multi-pass harvesting rules. Adjacency constraints can also be applied on a stand-by-stand basis to:

- Control the distribution (or concentration) of the harvest and
- Mimic operational planning strategies.

A number of sorting rules are available which define the harvest priorities assigned to each stand (e.g., cut oldest first). The simulation model uses binary search methods to assess harvest levels. Average harvest age and post-harvest forest conditions are evaluated at the end of each simulation to determine whether the even-flow harvest levels are too low or too high. Reports and GIS map products can be produced for each scenario to evaluate the condition of the forest throughout and at the end of the planning horizon.

Standard run control parameters are defined in Table 3.20

Table 3.20 Run control parameter definitions

CONSTRAINT	DEFINITION
FMA/FMU	Description of the administrative area under analysis.
Planning horizon:	Total time period for the analysis scenario (years).
Targeted average harvest age at the end of the planning horizon:	Average age (years) of stands scheduled for harvest in the last twenty years of the planning horizon, typically with the specified tolerance.
Minimum harvest age:	Minimum age of stands that are eligible for harvest scheduling may vary by yield stratum (years).
Landbase:	Landbase available for analysis (discrete, single…).
Sorting rules:	Factors used to prioritize stands for harvest sequencing (e.g., oldest first).
Harvest flow constraint:	Scheduled harvest level of the primary species between harvest periods (may have tolerances applied).
Yield curve sets:	Predicted yields for individual strata (15/10 utilization standard).
Cull deductions:	Percent reduction of predicted yields, to account for losses due to defect.
Regeneration transition:	Assumptions applied for the regeneration of stands scheduled for harvest.
Regeneration lag:	Assumed time period required for the establishment of regeneration after harvest.
Introduce harvest plans:	Incorporation of existing harvest plans into the harvest sequence.
Adjacency: Time horizon:	Total time period that stand adjacency is incorporated into the analysis (years).
Adjacency: Accumulate adjacent stands:	Maximum total area of adjacent stands scheduled for harvest in the same harvest period.
Age normalization:	The process that addresses the biological differences in species maturity (conifer vs. deciduous).
Compartment sequencing:	Prioritization of administrative planning units for harvest scheduling.
Number of compartments open simultaneously:	Number of compartments available for harvest scheduling at any given time.

3.5.4.2 Stand Sequencing

Consistency between long term, strategic planning and short term operational planning is important to ensure sustainability of fibre flows from the FMA area. Rigor will be applied to how operational plans are matched to strategic assumptions. The following process will be followed in the development of operational harvest designs.

First, all FMA and Quota holder operational harvest designs that existed at the time the simulation was run were “forced” into the Timber Supply Simulation. All stands scheduled for harvest based on completed operational harvest designs were sequenced in the analysis for selection within the first 10-year period.

Operational level sequencing will follow the Compartment sequence used in the simulation. Figure 3.8 shows the distribution of compartments throughout the FMA area.

Compartments scheduled for harvest by the simulation that do not have operational plans will be handled by following a process during the development of the operational plans. This will apply to both ANC and Quota holders. Operational plans will use the simulation output to assist in stand selection. The most important consideration will be maintaining a balance between what was simulated for harvest and what is operationally planned at a yield strata level. By doing this, adherence to simulation assumptions will be much more precise.

There are many factors that influence what would be considered an acceptable operational plan design. For that reason, a certain level of variation will be allowed for the stands selected by the

simulation, compared to the stands selected in the operational plan. When developing an operational harvest design for a new compartment, a list of all stands selected for harvest by the simulation will be generated. This list will summarize area selected in the simulation by yield strata and age class. The operational plan will be summarized the same way. The two summaries will be compared and any deviations greater than 20% between the simulation and the operational plan must be justified. It is anticipated that acceptable operational plans will be possible without the 20% variation. Figure 3.9 summarizes the planning process.

Figure 3.10 shows the planned 20-year stand sequence for W1, Figure 3.11 shows the planned 20-year stand sequence for E7, Figure 3.12 shows the 20-year stand sequence for W8, and Figure 3.13 shows the 20-year stand sequence for E6.

3.5.4.3 Annual Allowable Cut Synopsis

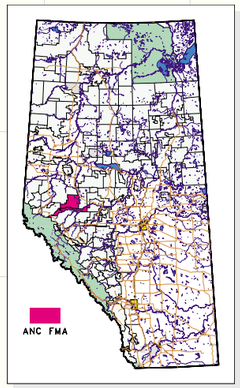
The Timber Supply Model used seeks an acceptable outcome based on a suite of assumptions and controls. Table 3.21 lists the results of several scenarios. By “bracketing” the preferred solution within a range of assumptions, an appropriate approach can be selected that falls comfortably within the range of feasible solutions.

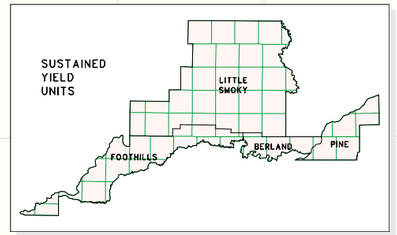
Alberta Newsprint Company

Figure 3.8

ALBERTA NEWSPRINT COMPANY
FOREST MANAGEMENT AREA

COMPARTMENTS





MAP SCALE 1:400 000

- W1-4 COMPARTMENT IDENTIFIER
- COMPARTMENT BOUNDARY
- PERENNIAL LAKES RIVERS & STREAMS
- INTERMITTENT AND INDEFINITE CREEKS
- ROAD CLASS 1
- ROAD CLASS 2
- ROAD CLASS 3
- ROAD CLASS 4
- ROAD CLASS 5

Map Production: Silvacom Ltd
Map Date: June 7, 1999
Map Scale: 1:400000
Silvacom Ref.: G-049
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