Coastal Small Tenures
Timber Supply Analysis

Woodlot #2 – Shawnigan Lake
Arrowsmith TSA

Timber Supply Analysis Report

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Introduction

As a result of timber volume reallocations under Bill 28, new woodlots are being created across the province of BC. This report describes one of these new woodlots and the results of a timber supply analysis completed to help determine its initial annual allowable cut (AAC).

Woodlot Attribute Summary:

Woodlot # 2 Shawnigan Lake (#2) Total Area: 320.1 ha

Timber Supply Area:	*Forest District:*	*Location:*	*Landscape Unit:*	*BEC:*
Arrowsmith	South Island	Shawnigan Lake	Shawnigan	CWH xm1 (100%)

Note: A location map can be found in Appendix A.

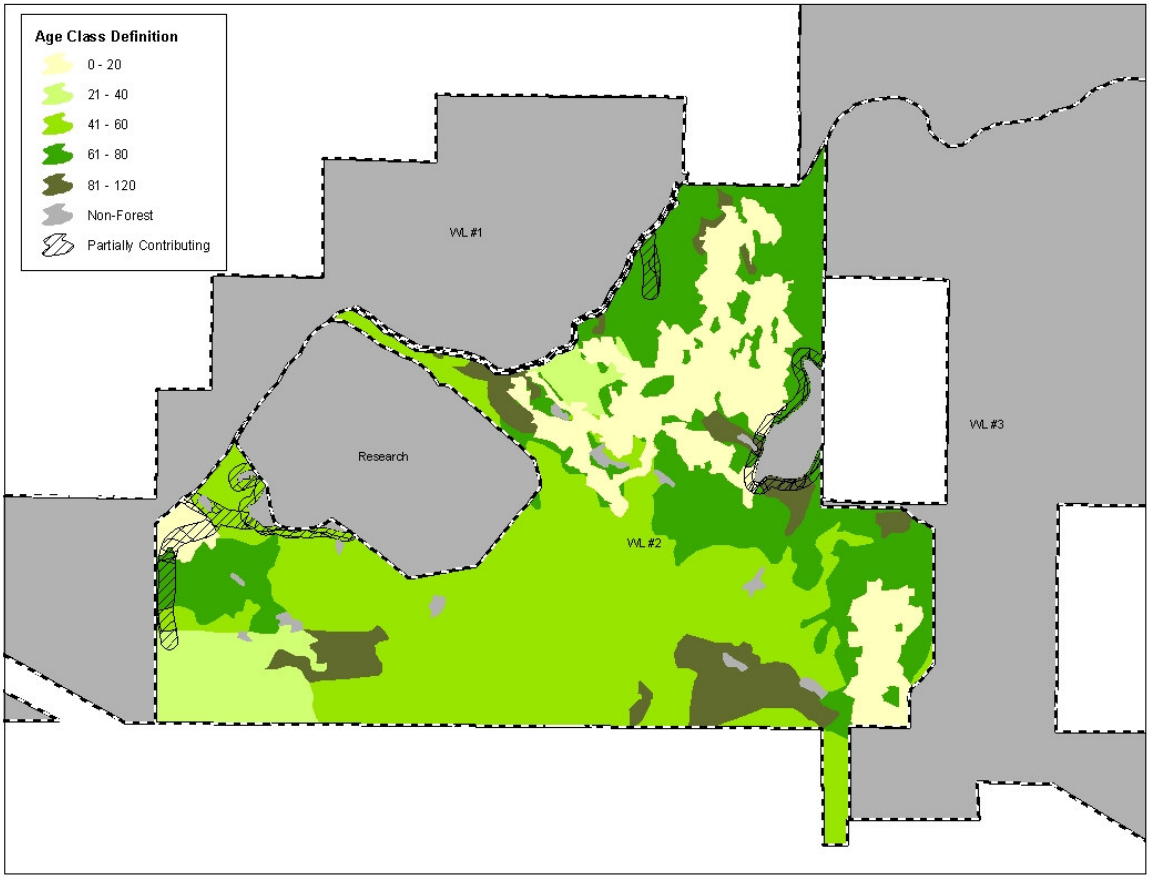

Figure 1. Age Class and THLB theme map.

The dominant leading tree species in this woodlot is Douglas fir (91.8%). Western Hemlock (4.5%), Red alder (7.5%) and cedar (2.8%) make up the remaining area (see Table 1). The age class distribution in this woodlot is shown in Figure 2 and indicates that the woodlot is dominated by stands in the 40-80 year old age classes plus some recently regenerated cutblocks.

The inventory data used in this project is from Teal Cedar spatial data set current and projected to 2004 and the approved cutting permit blocks in the woodlot have had their age set to zero.

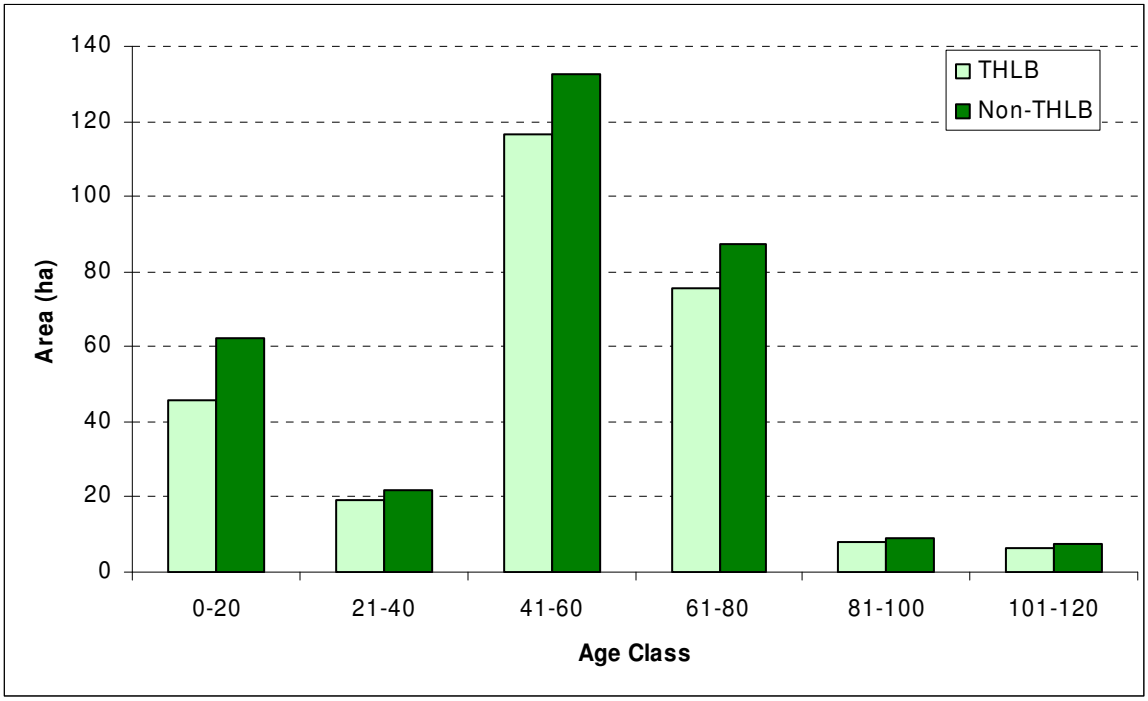

Figure 2. Current age class distribution by land base type.

Table 1. Site index and leading species summary by THLB area.

Site Index Class	Red Cedar (ha)	Red Alder (ha)	Douglas Fir (ha)	Western Hemlock (ha)	Total SI Class (ha)	% THLB
15	-	-	17.8	10.9	28.7	11%
20	-	-	39.6	-	39.6	15%
25	-	5.7	26.1	1.5	33.4	12%
30	2.6	-	111.3	-	113.9	42%
35	-	-	46.0	-	46.0	17%
40	-	-	9.4	-	9.4	3%
41	-	1.6	-	-	1.6	11%
Totals	2.6	7.3	250.2	12.4	272.6	100%
% THLB	1.0%	2.7%	91.8%	4.5%	100.0%	

Site index ranges from 15 to 41 m, with 85% of the area having a site index greater than or equal to 25m. The THLB weighted average SI is 27.7.

Land Base Assumptions

Table 2. Timber harvesting land base definition

Total Woodlot Area	**320.1**	**100%**
Non Forest / Existing Roads	11.3	3.5%
Riparian*	28.8	9.0%
Low Sites	1.1	0.3%
Future Wildlife Tree Area	6.4	2.0%
Total Netdowns	47.6	14.9%
Timber Harvesting Land Base	**272.6**	**85.2%**

* Most of this area is a generic netdown applied to all polygons and is not present on Figure 1.

The TSR2 spatial dataset provided the data for this project and included numerous netdowns using partial reduction factors. Modeling used the THLB or net area of each polygon, which ensured accurate THLB areas.

Roads, Trails and Landings

Existing roads are removed from the spatial data associated with the woodlot area.

Future roads, trails and landings will be addressed by adjusting future yields to reflect the loss of productive land base. Consistent with TSR2, the OAF1 values applied to future regenerating stands will be increased by 4.0% for any stand greater than 80 years old.

Non Productive Areas

All land classified as non-forested, such as lakes, swamp, rock and alpine, were excluded from the crown forested land base.

Sites with low timber growing potential

Red alder stands with less then 200 m^3/ha and conifer stands with less then 300 m^3/ha are excluded from the THLB as per TSR2.

Riparian Reserve and Management Zones

To account for riparian reserve and management zones, the THLB area of each polygon was reduced by 9.0%. This represents a 4.8% reduction for reserve zones and a 4.2% reduction for management zones. This reduction is consistent with Arrowsmith TSR2 methodology.

Growth & Yield Assumptions

Yield Model Assignment

- The variable density yield prediction (VDYP) model developed by the B.C. Ministry of Forests, Resources Inventory Branch, was used for estimating timber volumes for all existing coniferous and deciduous stands over 50 years if age.
- The table interpolation program for stand yields (TIPSY), developed by the B.C. Ministry of Forests, Research Branch was used to estimate timber volumes for existing and future managed stands. Existing managed stands are currently less than 51 years old.

Utilization Levels / Decay Waste and Breakage

- Net stand volumes were calculated assuming a minimum top diameter inside bark (DIB) of 10cm and a maximum stump height of 30cm.
- All VDYP stands will use 17.5 minimum dbh utilization. This differs from the TSR2 definition as there are no VDYP 12.5 utilization levels available for the area.
- All TIPSY stands will use a 12.5 minimum dbh utilization.

Tree Improvement / Class A Seed

As per TSR2, future regenerated stands have been assigned gains associated with the planting of Class A seed. Gains were applied by species in TIPSY modeling (as per TIPSY regen assumptions in TSR2 data package):

- Cedar 1.3%
- Hemlock 1.9%
- Fir 2.7%

Management Assumptions

Minimum Harvest Age

To be eligible for harvest, stands must reach culmination age (maximum MAI) and red alder stands must have a minimum of 200 m3/ha and conifer stands must have a minimum of 300 m3/ha. This is consistent with TSR2 except that TSR2 used 95% of maximum MAI. Woodlot for Windows is only able to use full culmination age.

Unsalvaged Losses

Unsalvaged losses will be not be modeled.

Silviculture Systems

The silviculture system will be modeled as clearcutting (as per TSR2) and no thinning of stands will be modeled.

Silviculture Assumptions

Assumptions for regeneration method, regeneration delay, initial density and species composition can be found below. These assumptions represent a simplified version of TSR2 assumptions.

Table 3. Regeneration Assumptions

			OAFs		Method		Species %							Density
Analysis unit	Site Index	Regen delay	1	2[1]	Type	%	Gain[2]	Fd	Cw	P w	Ba Bg	Hw	Dr	
Fd - G	>32	2	15	5	Plant	100	2.7	75	10	5	10			1200
Fd - M	26-32	2	15	5	Plant	100	2.7	70	10	10	10			1200
Fd - P	<26	3	15	5	Plant	100	2.7	70	10	10		10		1200
Cw – G/M	≥17	2	15	5	Plant	100	1.3		58		12	30		1000
Cw - P	>17	3	15	5	Plant	100	1.3		30			70		1000
HB - G	>25	2	15	5	Plant	100	1.9		20		10	70		1000
HB - M	22-25	2	15	5	Plant	100	1.9		20		10	70		1000
HB - P	<22	3	15	5	Plant	100	1.9		20			80		1000
Deciduous	All	2	15	5	Plant	100	2.7	70	10	10		10		1000

Standard OAF1 (15%) and OAF2 (5%) values were used for all existing managed and future managed stands with the following exceptions:

- Future road netdowns for polygons older then 80 years have a 4% OAF1 added.
- Root diseases[3]:
  - An additional OAF2 of 7.5% was applied to existing managed stands ≥10 years old if they were Douglas-fir leading and on good and medium sites, in the CWHxm1 and CWHxm2 sub zones.
  - An additional 5% was applied to future managed and existing managed stands <10yrs old if they were Douglas-fir leading on good and medium sites, in the CWHxm1 and CWHxm2 sub zones.

[1] Additional OAF2 values were applied for root disease as described immediately below this table.
[2] Using the figures determined in TSR 2, the gains noted will be included in the volume tables for future regenerated stands – figure represents % volume gain at age 80.
[3] Provided by Stephan Zelgan, Ministry of Forests pathologist.

Integrated Resource Management

Green Up Constraints

A forest cover green-up constraint of max 25% < 3m will be applied to all areas of the woodlot as was the case in TSR2.

Visual Quality - Scenic Areas

For this woodlot there are no Visual quality objectives occurring on the landbase.

Ungulate Winter Range

There are no Ungulate winter range identified in this woodlot (March 8th 2004 UWR coverage).

Seral Stage Targets

No attempt will be made to meet the old seral targets in the Old Growth Order as they do not apply to woodlots.

Old Growth Management Areas (OGMAs)

The woodlot does not have any OGMAs within it.

Wildlife Tree Retention

Wildlife tree retention was modeled using a 2% area netdown applied to both existing and future stands in the contributing land base. The rationale for applying 2% is that 75% of the gross WTR target[4] will be met by forested areas already outside the timber harvesting land base.

Community Watersheds (CWS)

Woodlot 2 intersects BC community watershed TCWSA_BC_ID 420 (11,089 ha) and 450 (6,982 ha). Due to the proportional size of the woodlot in relation to the size of the watershed an incremental constraint was not applied. It is not expected that the rate of cut (averaging 2.5 ha annually) in a small woodlot (272 ha of harvest area) justifies the application of a large scale management constraint.

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[4] Correspondence with Emma Neill citing woodlot regulation requirement of 8%.

Harvest Calculation Results

Even Flow Harvest Rate (250 yrs): **1,859** **m³/yr** (Maximum MAI Harvest Rule)

Deciduous:	7	m^3/yr
Coniferous:	1,851	m^3/yr

If an Oldest First harvest rule is used, the even flow rate is 1,883 m^3/yr.
If a Random harvest rule is used, the even flow rate is 1,857 m^3/yr.

Woodlot for Windows is only capable of determining an even flow harvest level so it finds the highest harvest level that can be maintained for the entire planning horizon. There is potential for the harvest rate to increase in the long term because the growing stock is climbing in the later periods of this projection. Deciduous volumes comprise <0.5% of the annual harvest over the 250 year planning horizon.

Growing Stock

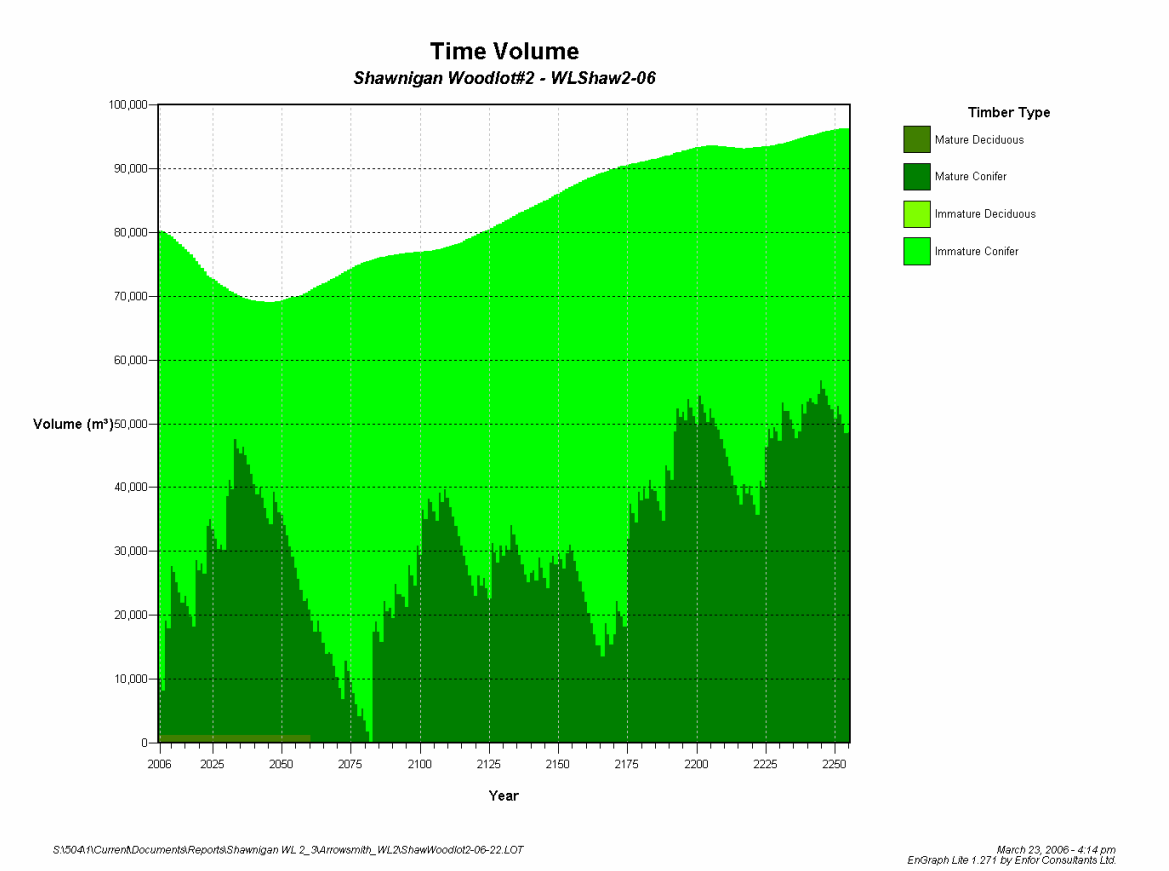


Figure 3. Growing stock over time

There is little standing mature volume at the start of the planning horizon, corresponding with the lack of stands over 80 yrs of age. Mature volume builds over the next 50 years as the large area of 60-80 year old stands become merchantable. The points where the least mature timber occurs (years 2080 and 2165) define the harvest level for the entire planning horizon as a higher harvest levels in earlier years would not leave enough volume in these years.

Age Class Distributions Through Time

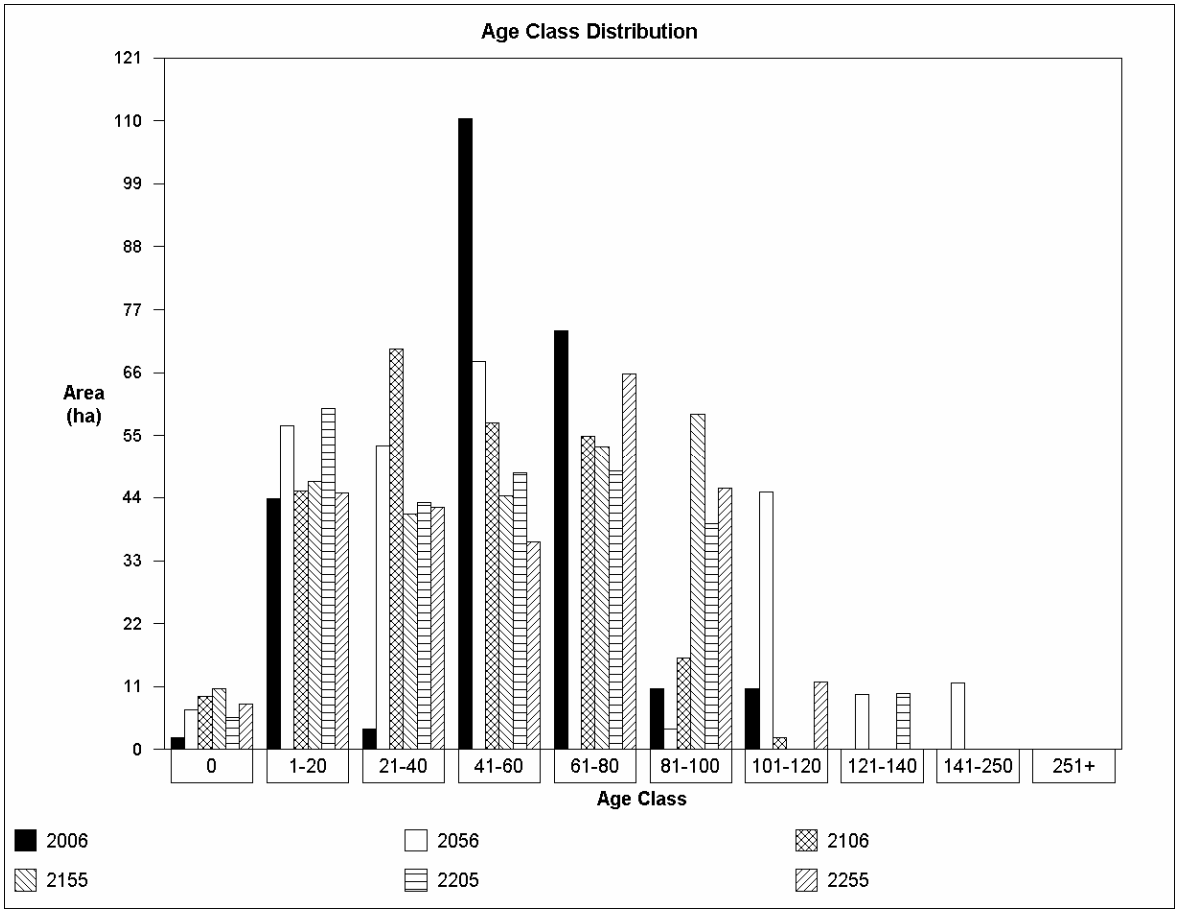


Figure 4. Age class distribution on the THLB over time.

The current age class distribution in this woodlot is dominated by stands in the 40-80 year old age classes plus some recently regenerated cutblocks. As harvest occurs over the 250 year planning horizon, most of the woodlot area becomes relatively evenly distributed in the age classes under 100 years of age.

Harvest Area per Year Over Time

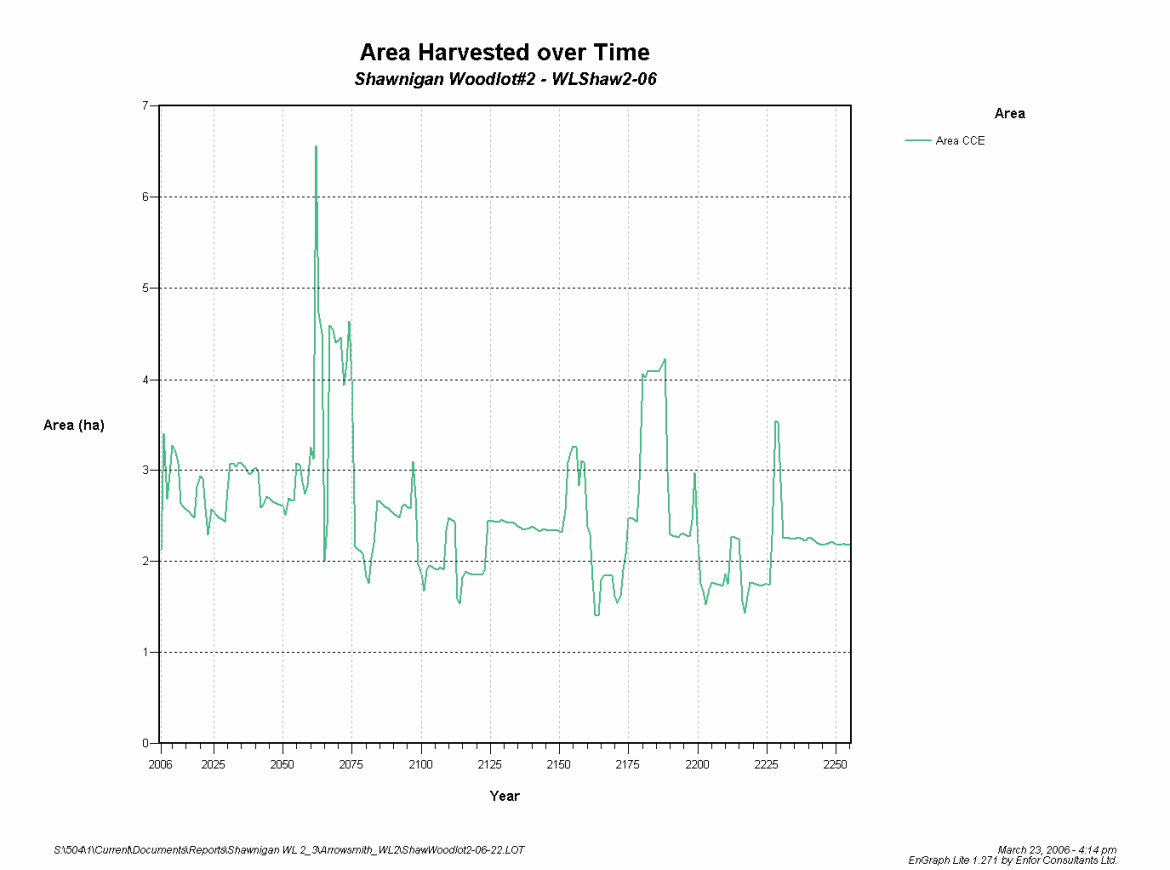


Figure 5. Area (ha) harvested per year

The average annual harvest area is approximately 2.5-3.0 ha at the front end of the planning horizon and decreases to an average of 2.0-2.5 ha in the long term. This decrease in harvest area is correlated with the conversion to more productive managed stands. The trend can also be seen in harvest volume. The average volume per ha harvested increases from 600m3/ha to approximately 800 m^3/ha over time (Figure 6).

Volume/ha Harvested Over Time

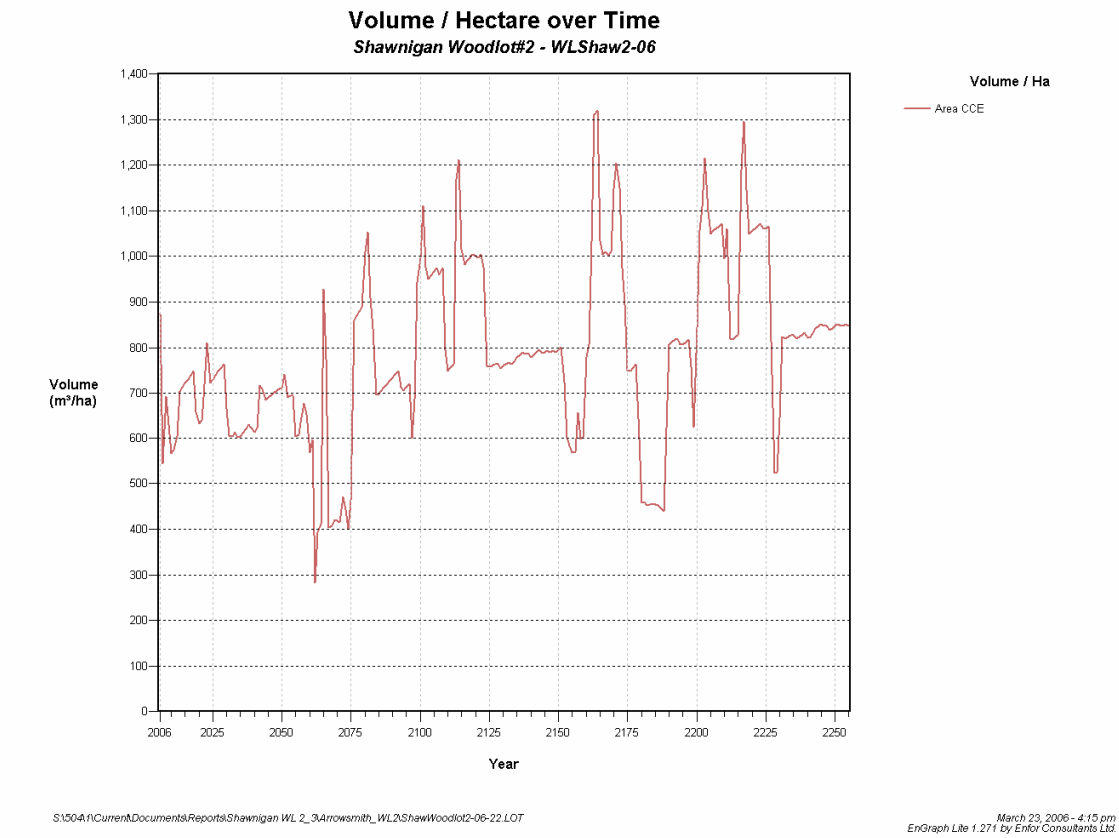


Figure 6. Average m^3/ha harvested per year

Short Term Harvest Opportunities

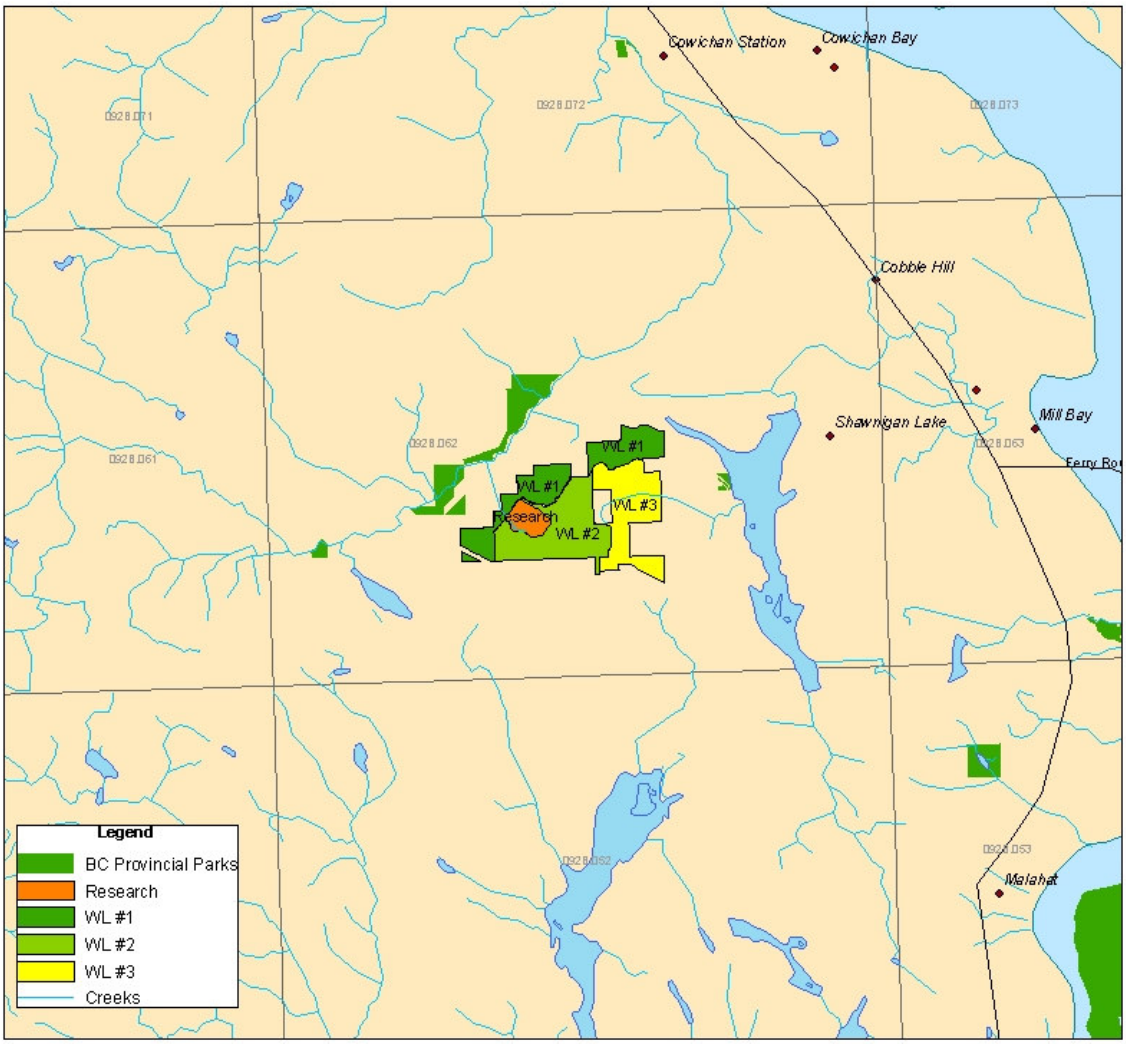
The short term harvest opportunity is very limited, with 9.6% of THLB currently old enough to harvest (26 ha or 15,008m^3). There are another 40.9 ha that are within 5 years of reaching minimum harvest age. The stands currently eligible for harvest are typically Douglas-fir leading (62%) with alder (26%) hemlock (10%), and cedar (10%) making most of the remainder of the volume. The short term harvest opportunities contains a higher proportion of deciduous stands than what is expected in the longer term.

Harvest in the first 10 years as selected by the model (max MAI harvest priority) results in 8 polygons being harvested (Table 4.). These polygons are typically Douglas-fir leading and between the ages of 75 and 87 yrs old and contain 650 m^3/ha on average.

Table 4. Polygons harvested by model in first 10 years

Polygon	Area Harvested (ha)	Harvest Age	Leading Species
B062_174b	2.3	76	Fd
B062_206	1.6	84	Dr
B062_184b	3.6	75	Fd
B062_256	2.6	87	Cw
B062_132b	10	78	Fd
B062_186	4	75	Fd
B062_186c	10	77	Fd
Total	34.1		

Appendix A – Shawnigan Lake Woodlots Key Map



Appendix B – Model Output

Woodlot Licence Harvest Planning report

Date : 23 March, 2006

Woodlot Licence# : Shawnigan Woodlot#2
Forest District : South Island
Company : Forsite
User :
Woodlot File : S:\504\1\Current\Documents\Reports\Shawnigan WL 2_3\Arrowsmith_WL2\ShawWoodlot2-06-22.LOT
Scenario : WLShaw2-06

Model Information:
Woodlot File : Release3.107 - April 2003
Woodlot Version : Release3.107 - April 2003 - WIN95/98/ME/NT4/2000/XP
VDYP Version : Prod 6.6d4
TIPSY Version : 3.0a

Summary:
Total Net Area : 254.7 ha
Netdown Area : 254.7 ha
MAI Existing : 5.49 m³/ha/year
MAI Future : 8.31 m³/ha/year
Harvest Rate : 1,859 m³/year

1.0 Introduction

This section summarises information used to calculate a long term harvest rate on Woodlot Licence No. Shawnigan Woodlot#2. The calculated harvest rate can be used to assist in determining the allowable annual cut (AAC). It should be assessed in light of the assumptions used, social and economic considerations in determining the AAC.

Refer to "Section 6.0" for definition of column headers.

2.0 Polygon Data

a) General Information and Current Volumes

Polygon	Own	Area	Current	VAF	PSYU	FIZ	Mgmt	Silv	Vol/ha	Volume
		(ha)	Age				Type	Sys	(m³/ha)	(m³)
B062_102	C	2.6	74	1.00	0179	B	V/T	CC	244	635
B062_113	C	0.2	83	1.00	0179	B	V/T	CC	250	50
B062_127	C	1.1	80	1.00	0179	B	V/T	CC	418	460
B062_128	C	0.1	2	---	----	B	T/T	CC	0	0
B062_128b	C	1.1	72	1.00	0179	B	V/T	CC	515	566
B062_129	C	1.1	2	---	----	B	T/T	CC	0	0
B062_129b	C	1.0	94	1.00	0179	B	V/T	CC	296	296
B062_132	C	21.3	2	---	----	B	T/T	CC	0	0
B062_132b	C	19.3	75	1.00	0179	B	V/T	CC	537	10,372
B062_137	C	0.1	61	1.00	0179	B	V/T	CC	424	42
B062_138	C	1.7	2	---	----	B	T/T	CC	0	0
B062_138b	C	0.4	71	1.00	0179	B	V/T	CC	364	146
B062_158	C	1.0	54	1.00	0179	B	V/T	CC	245	245
B062_160	C	0.3	2	---	----	B	T/T	CC	0	0
B062_160b	C	2.6	83	1.00	0179	B	V/T	CC	250	649
B062_162	C	1.3	54	1.00	0179	B	V/T	CC	359	467
B062_166	C	0.7	2	---	----	B	T/T	CC	0	0

B062_166b	C	3.6	36	---	----	B	T/T	CC	118	424
B062_167	C	0.1	83	1.00	0179	B	V/T	CC	250	25
B062_173	C	7.5	62	1.00	0179	B	V/T	CC	184	1,376
B062_174	C	3.8	2	---	----	B	T/T	CC	0	0
B062_174b	C	2.3	76	1.00	0179	B	V/T	CC	874	2,011
B062_182	C	2.4	2	---	----	B	T/T	CC	0	0
B062_182b	C	16.2	60	1.00	0179	B	V/T	CC	547	8,855
B062_183b	C	1.2	83	1.00	0179	B	V/T	CC	250	300
B062_184	C	3.1	2	---	----	B	T/T	CC	0	0
B062_184b	C	3.6	74	1.00	0179	B	V/T	CC	686	2,470
B062_185	C	0.1	86	1.00	0179	B	V/T	CC	613	61
B062_186	C	4.0	69	1.00	0179	B	V/T	CC	639	2,556
B062_186b	C	3.9	2	---	----	B	T/T	CC	0	0
B062_186c	C	12.7	69	1.00	0179	B	V/T	CC	639	8,114
B062_188	C	0.1	1	---	----	B	T/T	CC	0	0
B062_188b	C	7.0	52	1.00	0179	B	V/T	CC	339	2,376
B062_197	C	2.0	1	---	----	B	T/T	CC	0	0
B062_197b	C	0.1	57	1.00	0179	B	V/T	CC	268	27
B062_206	C	1.6	83	1.00	0179	B	V/T	CC	352	563
B062_208b	C	2.0	2	---	----	B	T/T	CC	0	0
B062_208c	C	2.8	75	1.00	0179	B	V/T	CC	537	1,505
B062_209	C	0.1	2	---	----	B	T/T	CC	0	0
B062_209b	C	2.1	70	1.00	0179	B	V/T	CC	358	752
B062_210b	C	6.3	74	1.00	0179	B	V/T	CC	383	2,412
B062_213	C	0.9	1	---	----	B	T/T	CC	0	0
B062_213b	C	0.6	76	1.00	0179	B	V/T	CC	533	320
B062_220	C	0.7	83	1.00	0179	B	V/T	CC	250	175
B062_221	C	16.1	60	1.00	0179	B	V/T	CC	415	6,682
B062_228b	C	8.8	66	1.00	0179	B	V/T	CC	177	1,558
B062_229	C	3.7	47	---	----	B	T/T	CC	340	1,259
B062_231	C	0.2	61	1.00	0179	B	V/T	CC	298	60
B062_232	C	3.7	54	1.00	0179	B	V/T	CC	138	509
B062_234	C	8.0	45	---	----	B	T/T	CC	315	2,516
B062_237	C	7.9	53	1.00	0179	B	V/T	CC	349	2,759
B062_241	C	19.4	57	1.00	0179	B	V/T	CC	155	3,013
B062_244	C	2.0	58	1.00	0179	B	V/T	CC	161	322
B062_252	C	4.4	103	1.00	0179	B	V/T	CC	358	1,574
B062_253	C	15.8	42	---	----	B	T/T	CC	276	4,358
B062_255	C	3.3	54	1.00	0179	B	V/T	CC	606	1,999
B062_256	C	2.6	85	1.00	0179	B	V/T	CC	648	1,684
B062_257	C	0.3	2	---	----	B	T/T	CC	0	0
B062_257b	C	0.3	56	1.00	0179	B	V/T	CC	261	78
B062_261	C	6.3	118	1.00	0179	B	V/T	CC	588	3,703
B062_266	C	0.6	83	1.00	0179	B	V/T	CC	250	150
B062_282	C	4.6	59	1.00	0179	B	V/T	CC	406	1,868
Crown (C)		**254.7**								**82,338**
Private (P)		**0.0**								**0**
Top-Up (T)		**0.0**								**0**
Other (O)		**0.0**								**0**
TOTAL		**254.7**								**82,338**

b) VDYP (unmanaged) Specific

Polygon	Sl	CC	Stk	S1	%	S2	%	S3	%	S4	%	S5	%	S6	%
	(m)	(%)	Cls												
B062_102	20.0	61	1	FD	100										
B062_113	25.0	72	1	DR	100										
B062_127	25.0	61	1	FD	100										
B062_128															
B062_128b	30.0	61	1	FD	100										
B062_129															
B062_129b	15.0	61	1	HW	100										
B062_132															
B062_132b	30.0	61	1	FD	100										
B062_137	30.0	61	1	FD	100										
B062_138															

B062_138b	25.0	61	1	FD	100										
B062_158	25.0	61	1	FD	100										
B062_160															
B062_160b	25.0	72	1	DR	100										
B062_162	30.0	61	1	FD	100										
B062_166															
B062_166b															
B062_167	25.0	72	1	DR	100										
B062_173	20.0	61	1	FD	100										
B062_174															
B062_174b	40.0	61	1	FD	100										
B062_182															
B062_182b	35.0	61	1	FD	100										
B062_183b	25.0	72	1	DR	100										
B062_184															
B062_184b	35.0	61	1	FD	100										
B062_185	30.0	61	1	FD	100										
B062_186	35.0	61	1	FD	100										
B062_186b															
B062_186c	35.0	61	1	FD	100										
B062_188															
B062_188b	30.0	61	1	FD	100										
B062_197															
B062_197b	25.0	61	1	FD	100										
B062_206	41.0	72	1	DR	100										
B062_208b															
B062_208c	30.0	61	1	FD	100										
B062_209															
B062_209b	25.0	61	1	FD	100										
B062_210b	25.0	61	1	FD	100										
B062_213															
B062_213b	25.0	61	1	HW	100										
B062_220	25.0	72	1	DR	100										
B062_221	30.0	61	1	FD	100										
B062_228b	15.0	61	1	HW	100										
B062_229															
B062_231	25.0	61	1	FD	100										
B062_232	20.0	61	1	FD	100										
B062_234															
B062_237	30.0	61	1	FD	100										
B062_241	20.0	61	1	FD	100										
B062_244	20.0	61	1	FD	100										
B062_252	20.0	61	1	FD	100										
B062_253															
B062_255	40.0	61	1	FD	100										
B062_256	30.0	60	1	CW	100										
B062_257															
B062_257b	25.0	61	1	FD	100										
B062_261	25.0	61	1	FD	100										
B062_266	25.0	72	1	DR	100										
B062_282	30.0	61	1	FD	100										

c) TIPSY (Managed) Specific

Polygon	SI	Dens	Thin	Regen	S1	%	S2	%	S3	%	S4	%	S5	%
	(m)	(s/ha)	(s/ha)											
B062_102	20.0	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_113	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_127	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_128	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_128b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_129	15.2	1,000	n/a	Planted	HW	80	CW	20						
B062_129b	15.2	1,000	n/a	Planted	HW	80	CW	20						
B062_132	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_132b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		

B062_137	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_138	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_138b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_158	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_160	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_160b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_162	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_166	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_166b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_167	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_173	20.3	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_174	40.6	1,200	n/a	Planted	FD	75	CW	20	PW	5				
B062_174b	40.6	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_182	35.5	1,200	n/a	Planted	FD	75	CW	20	PW	5				
B062_182b	35.5	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_183b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_184	35.5	1,200	n/a	Planted	FD	75	CW	20	PW	5				
B062_184b	35.5	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_185	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_186	35.5	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_186b	35.5	1,200	n/a	Planted	FD	75	CW	20	PW	5				
B062_186c	35.5	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_188	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_188b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_197	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_197b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_206	41.6	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_208b	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_208c	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_209	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_209b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_210b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_213	25.3	1,000	n/a	Planted	HW	80	CW	20						
B062_213b	25.3	1,000	n/a	Planted	HW	80	CW	20						
B062_220	30.5	1,400	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_221	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_228b	15.2	1,000	n/a	Planted	HW	80	CW	20						
B062_229	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_231	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_232	20.3	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_234	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_237	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_241	20.3	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_244	20.3	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_252	20.3	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_253	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_255	40.6	1,200	n/a	Planted	FD	75	CW	10	PW	5	HW	10		
B062_256	30.2	1,000	n/a	Planted	CW	58	HW	42						
B062_257	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_257b	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_261	25.4	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_266	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		
B062_282	30.5	1,200	n/a	Planted	FD	70	CW	10	PW	10	HW	10		

d) TIPSY Enhanced Management Variables

Polygon	CT@	CT To	Fert	Fert	S1	GW	S2	GW	S3	GW	S4	GW	S5	GW
	(m)	(s/ha)	Year	Vol		(%)		(%)		(%)		(%)		(%)
B062_102														
B062_113					FD	3	CW	1			HW	2		
B062_127					FD	3	CW	1			HW	2		
B062_128					FD	3	CW	1			HW	2		
B062_128b					FD	3	CW	1			HW	2		
B062_129					HW	2	CW	1						
B062_129b					HW	2	CW	1				2		

B062_132					FD	3	CW	1			HW	2		
B062_132b					FD	3	CW	1			HW	2		
B062_137					FD	3	CW	1						
B062_138					FD	3	CW	1			HW	2		
B062_138b					FD	3	CW	1			HW	2		
B062_158					FD	3	CW	1			HW	2		
B062_160					FD	3	CW	1			HW	2		
B062_160b					FD	3	CW	1			HW	2		
B062_162					FD	3	CW	1			HW	2		
B062_166					FD	3	CW	1			HW	2		
B062_166b					FD	3	CW	1			HW	2		
B062_167					FD	3	CW	1			HW	2		
B062_173					FD	3	CW	1			HW	2		
B062_174					FD	3	CW	1				2		
B062_174b					FD	3	CW	1			HW	2		
B062_182					FD	3	CW	1				2		
B062_182b					FD	3	CW	1			HW	2		
B062_183b					FD	3	CW	1			HW	2		
B062_184					FD	3	CW	1				2		
B062_184b					FD	3	CW	1			HW	2		
B062_185					FD	3	CW	1			HW	2		
B062_186					FD	3	CW	1			HW	2		
B062_186b					FD	3	CW	1				2		
B062_186c					FD	3	CW	1			HW	2		
B062_188					FD	3	CW	1			HW	2		
B062_188b					FD	3	CW	1			HW	2		
B062_197					FD	3	CW	1			HW	2		
B062_197b					FD	3	CW	1			HW	2		
B062_206					FD	3	CW	1			HW	2		
B062_208b					FD	3	CW	1			HW	2		
B062_208c					FD	3	CW	1			HW	2		
B062_209					FD	3	CW	1			HW	2		
B062_209b					FD	3	CW	1			HW	2		
B062_210b					FD	3	CW	1			HW	2		
B062_213					HW	2	CW	1				2		
B062_213b					HW	2	CW	1				2		
B062_220					FD	3	CW	1			HW	2		
B062_221					FD	3	CW	1			HW	2		
B062_228b					HW	2	CW	1				2		
B062_229					FD	3	CW	1			HW	2		
B062_231					FD	3	CW	1			HW	2		
B062_232					FD	3	CW	1			HW	2		
B062_234					FD	3	CW	1			HW	2		
B062_237					FD	3	CW	1			HW	2		
B062_241					FD	3	CW	1			HW	2		
B062_244					FD	3	CW	1			HW	2		
B062_252					FD	3	CW	1			HW	2		
B062_253					FD	3	CW	1			HW	2		
B062_255					FD	3	CW	1			HW	2		
B062_256					CW	1	HW	2						
B062_257					FD	3	CW	1			HW	2		
B062_257b					FD	3	CW	1			HW	2		
B062_261					FD	3	CW	1						
B062_266					FD	3	CW	1			HW	2		
B062_282					FD	3	CW	1			HW	2		

e) Polygon Yields

Polygon	Yield	Cul.	C Vol	C MAI	Target	T Vol	T MAI	PC %	Reentry
	Ex/Fut	Age	(m^3/ha)	(m^3/ha/yr)	Age	(m^3/ha)	(m^3/ha/yr)		Year
B062_102	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	437	3.97	[110]	437	3.97		
B062_113	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	690	8.63	[80]	690	8.63		
B062_127	VDYP	84	440	5.23	[84]	440	5.23		

	TIPSY	80	484	6.05	[80]	484	6.05		
B062_128	TIPSY	80	692	8.65	[80]	1,086	3.10		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_128b	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_129	TIPSY	150	517	3.45	[150]	804	2.30		
	TIPSY	150	517	3.45	[150]	517	3.45		
B062_129b	VDYP	97	306	3.15	[97]	306	3.15		
	TIPSY	150	492	3.28	[150]	492	3.28		
B062_132	TIPSY	80	692	8.65	[80]	1,086	3.10		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_132b	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_137	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_138	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_138b	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_158	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_160	TIPSY	80	723	9.04	[80]	1,262	3.61		
	TIPSY	80	723	9.04	[80]	723	9.04		
B062_160b	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	690	8.63	[80]	690	8.63		
B062_162	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_166	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_166b	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_167	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	690	8.63	[80]	690	8.63		
B062_173	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	443	4.03	[110]	443	4.03		
B062_174	TIPSY	60	914	15.23	[60]	1,408	4.02		
	TIPSY	60	914	15.23	[60]	914	15.23		
B062_174b	VDYP	70	807	11.53	[70]	807	11.53		
	TIPSY	60	885	14.75	[60]	885	14.75		
B062_182	TIPSY	70	839	11.99	[70]	1,363	3.89		
	TIPSY	70	839	11.99	[70]	839	11.99		
B062_182b	VDYP	74	686	9.27	[74]	686	9.27		
	TIPSY	70	814	11.63	[70]	814	11.63		
B062_183b	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	690	8.63	[80]	690	8.63		
B062_184	TIPSY	70	839	11.99	[70]	1,363	3.89		
	TIPSY	70	839	11.99	[70]	839	11.99		
B062_184b	VDYP	74	686	9.27	[74]	686	9.27		
	TIPSY	70	814	11.63	[70]	814	11.63		
B062_185	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	70	579	8.27	[70]	579	8.27		
B062_186	VDYP	74	686	9.27	[74]	686	9.27		
	TIPSY	70	814	11.63	[70]	814	11.63		
B062_186b	TIPSY	70	839	11.99	[70]	1,363	3.89		
	TIPSY	70	839	11.99	[70]	839	11.99		
B062_186c	VDYP	74	686	9.27	[74]	686	9.27		
	TIPSY	70	814	11.63	[70]	814	11.63		
B062_188	TIPSY	80	692	8.65	[80]	1,086	3.10		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_188b	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_197	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_197b	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_206	VDYP	20	221	11.03	[40]	338	8.45		
	TIPSY	60	902	15.03	[60]	902	15.03		

B062_208b	TIPSY	80	692	8.65	[80]	1,086	3.10		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_208c	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_209	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_209b	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_210b	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_213	TIPSY	100	921	9.21	[100]	1,674	4.78		
	TIPSY	100	921	9.21	[100]	921	9.21		
B062_213b	VDYP	71	499	7.02	[71]	499	7.02		
	TIPSY	100	921	9.21	[100]	921	9.21		
B062_220	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	695	8.69	[80]	695	8.69		
B062_221	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_228b	VDYP	97	306	3.15	[97]	306	3.15		
	TIPSY	150	517	3.45	[150]	517	3.45		
B062_229	TIPSY	70	595	8.50	[70]	1,016	2.91		
	TIPSY	70	595	8.50	[70]	595	8.50		
B062_231	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_232	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	443	4.03	[110]	443	4.03		
B062_234	TIPSY	70	595	8.50	[70]	1,016	2.91		
	TIPSY	70	595	8.50	[70]	595	8.50		
B062_237	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
B062_241	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	443	4.03	[110]	443	4.03		
B062_244	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	443	4.03	[110]	443	4.03		
B062_252	VDYP	99	344	3.48	[99]	344	3.48		
	TIPSY	110	423	3.85	[110]	423	3.85		
B062_253	TIPSY	70	595	8.50	[70]	1,016	2.91		
	TIPSY	70	595	8.50	[70]	595	8.50		
B062_255	VDYP	70	807	11.53	[70]	807	11.53		
	TIPSY	60	885	14.75	[60]	885	14.75		
B062_256	VDYP	81	619	7.64	[81]	619	7.64		
	TIPSY	90	1,099	12.21	[90]	1,099	12.21		
B062_257	TIPSY	90	573	6.37	[90]	1,020	2.91		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_257b	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	90	573	6.37	[90]	573	6.37		
B062_261	VDYP	84	440	5.23	[84]	440	5.23		
	TIPSY	80	482	6.03	[80]	482	6.03		
B062_266	VDYP	36	171	4.76	[43]	201	4.66		
	TIPSY	80	690	8.63	[80]	690	8.63		
B062_282	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	80	692	8.65	[80]	692	8.65		
Average Existing			**555**	**7.23**		**684**	**5.49**		
Average Future			**657**	**8.31**		**657**	**8.31**		

3.0 Harvest Calculation Assumptions

a) Initial Cut Order (MAI Max)

Polygon	Current	Target	Available	Regen
	Age	Age	for (yrs)	Delay (yrs)
B062_174	2	[60]	-58	2
B062_182	2	[70]	-68	2

B062_184	2	[70]	-68	2
B062_186b	2	[70]	-68	2
B062_174b	76	[70]	6	2
B062_255	54	[70]	-16	2
B062_206	83	[40]	43	2
B062_184b	74	[74]	0	2
B062_186	69	[74]	-5	2
B062_186c	69	[74]	-5	2
B062_182b	60	[74]	-14	2
B062_213	1	[100]	-99	2
B062_160	2	[80]	-78	2
B062_132	2	[80]	-78	2
B062_208b	2	[80]	-78	2
B062_128	2	[80]	-78	2
B062_188	1	[80]	-79	2
B062_229	47	[70]	-23	2
B062_234	45	[70]	-25	2
B062_253	42	[70]	-28	2
B062_256	85	[81]	4	2
B062_185	86	[78]	8	2
B062_132b	75	[78]	-3	2
B062_208c	75	[78]	-3	2
B062_128b	72	[78]	-6	2
B062_137	61	[78]	-17	2
B062_221	60	[78]	-18	2
B062_282	59	[78]	-19	2
B062_162	54	[78]	-24	2
B062_237	53	[78]	-25	2
B062_188b	52	[78]	-26	2
B062_213b	76	[71]	5	2
B062_166b	36	[90]	-54	3
B062_138	2	[90]	-88	3
B062_166	2	[90]	-88	3
B062_209	2	[90]	-88	3
B062_257	2	[90]	-88	3
B062_197	1	[90]	-89	3
B062_261	118	[84]	34	3
B062_127	80	[84]	-4	3
B062_210b	74	[84]	-10	3
B062_138b	71	[84]	-13	3
B062_209b	70	[84]	-14	3
B062_231	61	[84]	-23	3
B062_197b	57	[84]	-27	3
B062_257b	56	[84]	-28	3
B062_158	54	[84]	-30	3
B062_183b	83	[43]	40	2
B062_160b	83	[43]	40	2
B062_266	83	[43]	40	2
B062_113	83	[43]	40	2
B062_220	83	[43]	40	2
B062_167	83	[43]	40	2
B062_252	103	[99]	4	3
B062_102	74	[99]	-25	3
B062_173	62	[99]	-37	3
B062_244	58	[99]	-41	3
B062_241	57	[99]	-42	3
B062_232	54	[99]	-45	3
B062_129	2	[150]	-148	2
B062_129b	94	[97]	-3	2
B062_228b	66	[97]	-31	2

b) Harvest Constraints

c) Harvest Parameters (Global)

Minimum Harvest Age : 40 Years
Minimum Harvest Diameter : 13 cm
Minimum Harvest Vol/ha : 200 m³/ha
TIPSY OAF1 : 15%
TIPSY OAF2 : 5%
P.C. Adjustment Factor : 0.80
P.C. Harvest Ages : Manual - Set by user
Planning Horizon : 250 years

4.0 Harvest Calculation Results

a) Harvest Rate : 1859 m³/year

b) Harvest by Polygon: **

Polygon	Own	Queue	Rot	Harvest Area (ha)	Start Year	Harvest Length (yr)	Target Harvest Age	Actual Harvest Age	Actual Harvest (m³/ha)	Total Harvest (m³)
B062_174b	C	CC	1	2.30	2006	1.08	[70]	76	874	2,013
B062_206	C	CC	1	1.60	2007	0.30	[40]	84	352	563
B062_184b	C	CC	1	3.60	2007	1.36	[74]	75	695	2,521
B062_256	C	CC	1	2.60	2008	0.93	[81]	87	661	1,732
B062_185	C	CC	1	0.10	2009	0.03	[78]	89	632	63
B062_132b	C	CC	1	10.00	2009	3.07	[78]	78	559	5,716
B062_186	C	CC	1	4.00	2012	1.52	[74]	75	695	2,819
B062_186c	C	CC	1	10.00	2014	3.92	[74]	77	713	7,285
B062_186c	C	CC	1	2.70	2018	1.09	[74]	81	748	2,026
B062_132b	C	CC	1	9.30	2019	3.17	[78]	88	626	5,900
B062_255	C	CC	1	3.30	2022	1.45	[70]	70	807	2,688
B062_182b	C	CC	1	10.00	2023	3.95	[74]	77	713	7,342
B062_182b	C	CC	1	6.20	2027	2.54	[74]	81	748	4,722
B062_229	C	CC	1	3.70	2030	1.21	[70]	71	604	2,249
B062_234	C	CC	1	8.00	2031	2.61	[70]	70	595	4,856
B062_253	C	CC	1	10.00	2034	3.26	[70]	70	595	6,066
B062_253	C	CC	1	5.80	2037	1.96	[70]	73	621	3,647
B062_208c	C	CC	1	2.80	2039	1.11	[78]	108	738	2,072
B062_128b	C	CC	1	1.10	2040	0.43	[78]	106	727	800
B062_137	C	CC	1	0.10	2041	0.04	[78]	96	674	67
B062_221	C	CC	1	10.00	2041	3.63	[78]	95	668	6,756
B062_221	C	CC	1	6.10	2044	2.27	[78]	98	685	4,219
B062_282	C	CC	1	4.60	2046	1.73	[78]	99	690	3,209
B062_162	C	CC	1	1.30	2048	0.47	[78]	96	674	878
B062_237	C	CC	1	7.90	2049	2.89	[78]	96	674	5,368
B062_188b	C	CC	1	7.00	2052	2.60	[78]	98	685	4,826
B062_213b	C	CC	1	0.60	2054	0.23	[71]	124	721	433
B062_261	C	CC	1	6.30	2054	2.30	[84]	166	678	4,272
B062_127	C	CC	1	1.10	2057	0.37	[84]	131	626	688
B062_210b	C	CC	1	6.30	2057	2.08	[84]	125	610	3,859
B062_138b	C	CC	1	0.40	2059	0.13	[84]	124	607	243
B062_209b	C	CC	1	2.10	2059	0.68	[84]	123	604	1,272
B062_166b	C	CC	1	3.60	2060	1.11	[90]	90	573	2,073
B062_231	C	CC	1	0.20	2061	0.06	[84]	116	580	116
B062_197b	C	CC	1	0.10	2061	0.03	[84]	112	565	57
B062_257b	C	CC	1	0.30	2061	0.09	[84]	111	561	168
B062_158	C	CC	1	1.00	2061	0.30	[84]	109	554	554
B062_183b	C	CC	1	1.20	2062	0.16	[43]	139	250	300
B062_160b	C	CC	1	2.60	2062	0.35	[43]	139	250	649
B062_266	C	CC	1	0.60	2062	0.08	[43]	139	250	150
B062_113	C	CC	1	0.20	2062	0.03	[43]	139	250	50

B062_220	C	CC	1	0.70	2062	0.09	[43]	139	250	175
B062_167	C	CC	1	0.10	2062	0.01	[43]	139	250	25
B062_252	C	CC	1	4.40	2062	1.11	[99]	159	468	2,062
B062_102	C	CC	1	2.60	2063	0.61	[99]	131	433	1,130
B062_174	C	CC	1	3.80	2064	1.89	[60]	60	914	3,520
B062_173	C	CC	1	7.50	2066	1.68	[99]	122	414	3,114
B062_244	C	CC	1	2.00	2068	0.44	[99]	120	409	819
B062_241	C	CC	1	10.00	2068	2.20	[99]	119	407	4,093
B062_241	C	CC	1	9.40	2070	2.09	[99]	121	411	3,894
B062_232	C	CC	1	3.70	2072	0.82	[99]	120	409	1,520
B062_129b	C	CC	1	1.00	2073	0.25	[97]	161	457	457
B062_228b	C	CC	1	8.80	2073	1.90	[97]	133	398	3,526
B062_182	C	CC	1	2.40	2075	1.11	[70]	71	849	2,056
B062_184	C	CC	1	3.10	2076	1.45	[70]	72	859	2,697
B062_186b	C	CC	1	3.90	2078	1.86	[70]	74	879	3,457
B062_174b	C	CC	2	2.30	2080	1.29	[60]	72	1,038	2,396
B062_206	C	CC	2	1.60	2081	0.91	[60]	72	1,056	1,697
B062_184b	C	CC	2	3.60	2082	1.63	[70]	72	833	3,021
B062_185	C	CC	2	0.10	2083	0.03	[70]	72	595	60
B062_160	C	CC	1	0.30	2084	0.12	[80]	80	723	217
B062_132	C	CC	1	10.00	2084	3.78	[80]	80	692	7,026
B062_132	C	CC	1	10.00	2087	3.93	[80]	83	713	7,300
B062_132	C	CC	1	1.30	2091	0.52	[80]	87	742	970
B062_208b	C	CC	1	2.00	2092	0.81	[80]	88	749	1,500
B062_128	C	CC	1	0.10	2093	0.04	[80]	89	756	76
B062_188	C	CC	1	0.10	2093	0.04	[80]	88	749	75
B062_132b	C	CC	2	10.00	2093	3.82	[80]	81	699	7,106
B062_138	C	CC	1	1.70	2097	0.54	[90]	93	590	1,003
B062_166	C	CC	1	0.70	2097	0.22	[90]	93	590	413
B062_209	C	CC	1	0.10	2097	0.03	[90]	93	590	59
B062_257	C	CC	1	0.30	2097	0.10	[90]	93	590	177
B062_197	C	CC	1	2.00	2097	0.63	[90]	92	584	1,179
B062_186	C	CC	2	4.00	2098	2.03	[70]	83	935	3,775
B062_256	C	CC	2	2.60	2100	1.55	[90]	90	1,099	2,883
B062_186c	C	CC	2	10.00	2102	5.17	[70]	84	943	9,609
B062_213	C	CC	1	0.90	2107	0.45	[100]	102	937	843
B062_186c	C	CC	2	2.70	2107	1.42	[70]	87	967	2,632
B062_132b	C	CC	2	9.30	2109	3.77	[80]	87	742	7,000
B062_255	C	CC	2	3.30	2112	2.14	[60]	88	1,193	3,983
B062_182b	C	CC	2	10.00	2115	5.34	[70]	88	975	9,920
B062_182b	C	CC	2	6.20	2120	3.34	[70]	90	991	6,209
B062_229	C	CC	2	3.70	2123	1.51	[70]	91	754	2,811
B062_234	C	CC	2	8.00	2125	3.28	[70]	91	754	6,093
B062_253	C	CC	2	10.00	2128	4.09	[70]	90	749	7,599
B062_253	C	CC	2	5.80	2132	2.39	[70]	92	759	4,444
B062_208c	C	CC	2	2.80	2135	1.18	[80]	93	780	2,186
B062_128b	C	CC	2	1.10	2136	0.46	[80]	94	785	864
B062_137	C	CC	2	0.10	2136	0.04	[80]	93	780	78
B062_221	C	CC	2	10.00	2136	4.23	[80]	92	774	7,868
B062_221	C	CC	2	6.10	2140	2.59	[80]	93	780	4,815
B062_282	C	CC	2	4.60	2143	1.96	[80]	94	785	3,637
B062_162	C	CC	2	1.30	2145	0.55	[80]	95	791	1,029
B062_237	C	CC	2	7.90	2146	3.37	[80]	94	785	6,257
B062_188b	C	CC	2	7.00	2149	2.99	[80]	94	785	5,550
B062_261	C	CC	2	6.30	2152	1.93	[80]	94	563	3,580
B062_129	C	CC	1	1.10	2154	0.31	[150]	150	517	569
B062_127	C	CC	2	1.10	2154	0.33	[80]	94	565	621
B062_210b	C	CC	2	6.30	2154	2.03	[90]	93	590	3,771
B062_213b	C	CC	2	0.60	2157	0.30	[100]	101	929	557
B062_138b	C	CC	2	0.40	2157	0.13	[90]	95	602	241
B062_209b	C	CC	2	2.10	2157	0.68	[90]	95	602	1,265
B062_166b	C	CC	2	3.60	2158	1.16	[90]	94	596	2,150
B062_231	C	CC	2	0.20	2159	0.06	[90]	95	602	120
B062_197b	C	CC	2	0.10	2159	0.03	[90]	95	602	60
B062_257b	C	CC	2	0.30	2159	0.10	[90]	95	602	180
B062_158	C	CC	2	1.00	2159	0.32	[90]	95	602	602
B062_183b	C	CC	2	1.20	2159	0.52	[80]	95	795	958

B062_160b	C	CC	2	2.60	2160	1.12	[80]	96	801	2,089
B062_266	C	CC	2	0.60	2161	0.26	[80]	97	807	484
B062_113	C	CC	2	0.20	2161	0.09	[80]	97	807	161
B062_220	C	CC	2	0.70	2161	0.31	[80]	97	809	568
B062_167	C	CC	2	0.10	2162	0.04	[80]	98	814	81
B062_174	C	CC	2	3.80	2162	2.68	[60]	95	1,303	4,982
B062_182	C	CC	2	2.40	2164	1.29	[70]	86	992	2,401
B062_184	C	CC	2	3.10	2166	1.68	[70]	87	1,001	3,115
B062_186b	C	CC	2	3.90	2167	2.11	[70]	86	992	3,914
B062_174b	C	CC	3	2.30	2169	1.48	[60]	87	1,185	2,748
B062_206	C	CC	3	1.60	2171	1.05	[60]	87	1,212	1,945
B062_184b	C	CC	3	3.60	2172	1.90	[70]	88	975	3,534
B062_185	C	CC	3	0.10	2174	0.04	[70]	88	714	71
B062_160	C	CC	2	0.30	2174	0.13	[80]	88	786	236
B062_132	C	CC	2	10.00	2174	4.03	[80]	86	735	7,486
B062_252	C	CC	2	4.40	2178	1.02	[110]	112	430	1,899
B062_102	C	CC	2	2.60	2179	0.63	[110]	113	448	1,167
B062_173	C	CC	2	7.50	2180	1.79	[110]	110	443	3,336
B062_244	C	CC	2	2.00	2181	0.48	[110]	110	443	892
B062_241	C	CC	2	10.00	2182	2.40	[110]	110	443	4,469
B062_241	C	CC	2	9.40	2184	2.27	[110]	110	443	4,212
B062_232	C	CC	2	3.70	2187	0.89	[110]	111	447	1,652
B062_132	C	CC	2	10.00	2187	4.36	[80]	96	796	8,107
B062_132	C	CC	2	1.30	2192	0.56	[80]	98	807	1,049
B062_208b	C	CC	2	2.00	2192	0.87	[80]	98	807	1,624
B062_128	C	CC	2	0.10	2193	0.04	[80]	98	807	81
B062_188	C	CC	2	0.10	2193	0.04	[80]	98	807	81
B062_132b	C	CC	3	10.00	2193	4.36	[80]	96	796	8,100
B062_138	C	CC	2	1.70	2198	0.57	[90]	98	619	1,052
B062_166	C	CC	2	0.70	2198	0.23	[90]	98	619	433
B062_209	C	CC	2	0.10	2199	0.03	[90]	99	624	62
B062_257	C	CC	2	0.30	2199	0.10	[90]	99	624	187
B062_197	C	CC	2	2.00	2199	0.67	[90]	99	624	1,249
B062_186	C	CC	3	4.00	2199	2.26	[70]	98	1,043	4,209
B062_256	C	CC	3	2.60	2202	1.69	[90]	99	1,204	3,145
B062_186c	C	CC	3	10.00	2203	5.68	[70]	97	1,037	10,559
B062_213	C	CC	2	0.90	2209	0.45	[100]	100	921	829
B062_186c	C	CC	3	2.70	2209	1.54	[70]	99	1,050	2,854
B062_132b	C	CC	3	9.30	2211	4.12	[80]	99	813	7,652
B062_255	C	CC	3	3.30	2215	2.29	[60]	99	1,282	4,258
B062_182b	C	CC	3	10.00	2217	5.68	[70]	97	1,037	10,564
B062_182b	C	CC	3	6.20	2223	3.54	[70]	99	1,050	6,572
B062_129b	C	CC	2	1.00	2227	0.27	[150]	152	498	498
B062_228b	C	CC	2	8.80	2227	2.47	[150]	151	520	4,600
B062_229	C	CC	3	3.70	2229	1.63	[70]	103	815	3,033
B062_234	C	CC	3	8.00	2231	3.54	[70]	103	815	6,576
B062_253	C	CC	3	10.00	2234	4.42	[70]	102	810	8,222
B062_253	C	CC	3	5.80	2239	2.56	[70]	103	815	4,754
B062_208c	C	CC	3	2.80	2241	1.26	[80]	103	833	2,347
B062_128b	C	CC	3	1.10	2243	0.50	[80]	105	843	927
B062_137	C	CC	3	0.10	2243	0.05	[80]	105	843	84
B062_221	C	CC	3	10.00	2243	4.55	[80]	103	833	8,451
B062_221	C	CC	3	6.10	2248	2.77	[80]	104	838	5,144
B062_282	C	CC	3	4.60	2251	2.09	[80]	105	843	3,890
B062_162	C	CC	3	1.30	2253	0.59	[80]	105	843	1,095
B062_237	C	CC	3	7.14	2253	3.23	[80]	103	833	6,013

c) Polygons not harvested

Polygon	Own	Harvest Area (ha)	Reason
Total		**0.0**	

d) Actual average Harvest with constraints and non harvest years over 250 year planning horizon:

Ownership	Harvest Area (ha)	Conifer (m^3)	Deciduous (m^3)	Total (m^3)	Average (m^3/yr)
Crown	254.7	464,703	1,911	466,614	1,859
Private	0.0	0	0	0	0
Top-Up	0.0	0	0	0	0
Other	0.0	0	0	0	0
Total	**254.7**	**464,703**	**1,911**	**466,614**	**1,859**
Average		**1,851**	**7**	**1,859**	

Hanzlik Rate : 1,226 m^3/year

** Net of decay, waste, breakage, VAF and OAFs

e) Age Constraints Not Met During the following Period(s)

Age constraints are disabled

f) Height Constraints Not Met During the following Period(s)

5.0 Conclusions

Enter your conclusions to the user of this section on your observations about the upward or downward bias of the assumptions used to calculate the results. Open this report.txt file in the 'Note Pad' program or into Word for Windows to edit.

6.0 Report Abbreviations

Term	Definition
%	Species Composition Percent
[]	Default Variable
(s/ha)	Stems/ha
Available for	Number of years the polygon has been ready to harvest
C Age	Culmination Age
C Vol	Volume at Culmination Age
CC	Clearcut
CT	Commercial Thin
Cul	Culmination
Dens	Initial Density (stems/ha)
FIZ	Forest Inventory Zone
Harvest Area (ha)	Area reduced by the area netdown.
MAI	Mean Annual Increment (m^3/ha/yr)
Mgmt Type	Management Type (VDYP / TIPSY / NC / NSR)
NC	Non Commercial
NSR	Non Satisfiactory Regeneration
PC	Partial Cut
PC%	Partial Cut percent to harvest
PC1	First Partial Cut
PSYU	Public Sustained Yield Unit
Queue	Reason for harvest (CC, PC1, Sub PC, CT, Road, NSR, NC)
Reentry	Number of years to wait before reentering a partial cut
Regen	Regeneration Type (Natural / Planted)
Road	Road net down
S1-S6	Species Codes 1 to 6

SI	Site Index
Silv Sys	Silviculture System (CC, PC)
Stk Cls	Stocking Class (0 to 4 or R)
Sub PC	Subsequent Partial Cut
T Age	Target Age
T Vol	Volume at Target Age
Target Age	Target harvest age. The actual harvest age will depend on the time the simulation harvests the polygon. See section 4(b) for actual harvest ages.
Thin	Pre-commercial thin to density (stems/ha)
TIPSY	Table Interpolation Program for Stand Yields
VAF	Volume Adjustment Factor
VDYP	Variable Density Yield Projection