
**Yield Tables for
Natural and Managed Stands:
Management Plan 9
on TFL 38**

Prepared for

*Jeff Fisher, RPF
International Forest Products Ltd.
Empire Logging Division
Squamish, BC*

Project: IFV-014

April 15, 2002

This report contains confidential information that may not be used for any purpose other than the project addressed herein. This report may not be disclosed to any other person, organization, or representative without the express consent of J.S. Thrower & Associates Ltd.



J.S. Thrower & Associates Ltd. Consulting Foresters
Vancouver – Kamloops BC

Executive Summary

International Forest Products Ltd. contracted J.S. Thrower & Associates Ltd. to develop yield tables for natural and managed stands on Tree Farm Licence (TFL) 38 to incorporate in the timber supply analysis for Management Plan 9. These tables provide the most important growth and yield input in the analysis and were delivered to Timberline Forest Inventory Consultants Ltd. in February 2002. This report documents the models, model inputs, and analytical procedures used to derive the yield tables. It also provides a summary of yield statistics for the resulting tables.

Yield tables for old natural stands (>140 years) were computed from TFL 38 inventory cruise compilation data. Yield tables for young natural stands (36 - 140 years) were predicted with *BatchVDYP version 6.6d* using forest cover inventory data. Managed stand yield tables were developed for existing post-harvest regenerated (PHR) stands using silviculture regimes developed by Interfor staff that reflect the average stand conditions on each site series for the different management eras (1967 - 1992 and 1993 - 2001). The silviculture regimes developed for the 1993 - 2001 management era also applied to future PHR stands. Volume predictions were made for each eco-polygon defined by the union of the forest cover and Terrestrial Ecosystem Mapping inventories. *BatchTIPSY version 3.0a* was used to predict yields for PHR stands. Yield tables for PHR stands included:

- 1) New estimates of potential site index for existing and future PHR stands based on the results of the 2001 Site Index Adjustment project.
- 2) Ecologically-based silviculture regimes developed by Interfor staff.
- 3) Yield gains attributed to genetically improved planting stock.

The resulting tables showed that the predicted mean annual increment (MAI) at culmination age in young natural stands (36 - 140 years) averaged $4.7 \text{ m}^3/\text{ha}/\text{yr}$ at 93 years with a mean culmination volume of $400 \text{ m}^3/\text{ha}$. PHR stands regenerated between 1967 and 1992 had a predicted average MAI of $10.2 \text{ m}^3/\text{ha}/\text{yr}$ at 84 years with a mean culmination volume of $811 \text{ m}^3/\text{ha}$. PHR stands regenerated between 1993 and 2001 had a predicted average MAI of $10.9 \text{ m}^3/\text{ha}/\text{yr}$ at 85 years with a mean culmination volume of $901 \text{ m}^3/\text{ha}$. Future PHR stands had a predicted average MAI of $8.5 \text{ m}^3/\text{ha}/\text{yr}$ at 107 years with a mean culmination volume of $759 \text{ m}^3/\text{ha}$.

Acknowledgements

We thank Jeff Fisher, *RPF*, Gerry Sommers, *RPF*, and Dave Southam, *RPF* of International Forest Products Ltd. for their contributions to the project. We also thank Albert Nussbaum, *RPF* (Ministry of Forests, Timber Supply Branch) for his comments on the proposed methodology.

Table of Contents

1. INTRODUCTION.....	1
1.1 <i>BACKGROUND.....</i>	1
1.2 <i>TERMS OF REFERENCE</i>	1
1.3 <i>REPORT OBJECTIVES.....</i>	1
2. PROJECT OVERVIEW	2
2.1 <i>NATURAL STAND YIELD TABLE DEFINITION.....</i>	2
2.2 <i>MANAGED STAND YIELD TABLE DEFINITION.....</i>	2
3. NATURAL STAND YIELD TABLES.....	3
3.1 <i>OLD NATURAL STANDS</i>	3
3.2 <i>YOUNG NATURAL STANDS.....</i>	4
4. MANAGED STAND YIELD TABLES	6
4.1 <i>OVERVIEW.....</i>	6
4.2 <i>CHARACTERISTICS COMMON TO ALL PHR ERAS.....</i>	6
4.3 <i>EXISTING PHR YIELD TABLE INPUTS: 1967 - 1992</i>	7
4.4 <i>EXISTING PHR YIELD TABLE INPUTS: 1993 - 2001</i>	8
4.5 <i>FUTURE PHR YIELD TABLE INPUTS</i>	9
5. RESULTS.....	10
5.1 <i>PRE-AGGREGATION PROCESS.....</i>	10
5.2 <i>AGGREGATION PROCESS</i>	10
5.3 <i>YIELD TABLE SUMMARY FOR EXISTING STANDS.....</i>	11
5.4 <i>YIELD TABLE SUMMARY FOR FUTURE STANDS</i>	11
APPENDIX I – TFL 38 LANDBASE	15
APPENDIX II – ANALYSIS GROUP DEFINITIONS FOR OLD NATURAL STANDS.....	16
APPENDIX III – TFL 38 SILVICULTURE REGIMES	17
APPENDIX IV – SUMMARY STATISTICS FOR AGGREGATED YIELD TABLES	25
APPENDIX V – SUBZONE SUMMARIES FOR FUTURE PHR STANDS	26

List of Tables

Table 1. Summary of yield table inputs, data sources, and models.....	2
Table 2. Height class groups in old natural stands.	3
Table 3. Average volume by analysis group for old natural stands.	3
Table 4. TEM-based NP adjustment by subzone.....	7
Table 5. Site index statistics for existing PHR stands: 1967 - 1992.....	7
Table 6. Tree improvement in existing PHR stands: 1993 - 2001.	8
Table 7. Site index statistics for existing PHR stands: 1993 - 2001.....	8
Table 8. Tree improvement in future PHR stands.....	9
Table 9. Site index statistics for future PHR stands.	9
Table 10. Summary of MAI and culmination age for existing and future stands.....	10
Table 11. Area-weighted yield estimates at culmination age for existing PHR and young natural stands.	11
Table 12. Area-weighted yield estimates at culmination age for future PHR stands.	11
Table 13. Area distribution (ha) of the THLB by leading species and age class.....	15
Table 14. Area distribution (ha) of THLB by subzone and age class.....	15
Table 15. Average volume by analysis unit for old natural stands.....	16
Table 16. Silviculture regimes for existing PHR stands: 1967 - 1992.....	17
Table 17. Silviculture regimes for existing PHR stands (1993 - 2001) and future PHR stands.....	21
Table 18. Summary statistics for the 50 largest aggregated yield tables.....	25
Table 19. Future PHR yield table summary statistics by subzone.....	26
Table 20. Future PHR average <i>BatchTIPSY</i> input values in CWHms1m (12.5+ cm).....	27
Table 21. Future PHR average culmination statistics by site series in CWHms1m (12.5+ cm).	27
Table 22. Future PHR average <i>BatchTIPSY</i> input values in CWHms1s (12.5+ cm).....	28
Table 23. Future PHR average culmination statistics by site series in CWHms1s (12.5+ cm).	28
Table 24. Future PHR average <i>BatchTIPSY</i> input values in CWHds1 (12.5+ cm).....	29
Table 25. Future PHR average culmination statistics by site series in CWHds1 (12.5+ cm).	29
Table 26. Future PHR average <i>BatchTIPSY</i> input values in CWHdm (12.5+ cm).	30
Table 27. Future PHR average culmination statistics by site series in CWHdm (12.5+ cm).	30
Table 28. Future PHR average <i>BatchTIPSY</i> input values in CWHvm1 (12.5+ cm).....	31
Table 29. Future PHR average culmination statistics by site series in CWHvm1 (12.5+ cm).	31
Table 30. Future PHR average <i>BatchTIPSY</i> input values in CWHvm2 (12.5+ cm).....	32
Table 31. Future PHR average culmination statistics by site series in CWHvm2 (12.5+ cm).	32
Table 32. Future PHR average <i>BatchTIPSY</i> input values in MHmm2 (12.5+ cm).	33
Table 33. Future PHR average culmination statistics by site series in MHmm2 (12.5+ cm).	33
Table 34. Future PHR average <i>BatchTIPSY</i> input values in MHmm1 (12.5+ cm).	34
Table 35. Future PHR average culmination statistics by site series in MHmm1 (12.5+ cm).	34

List of Figures

Figure 1. Distribution of polygon size for young natural stands.	4
Figure 2. Area distribution for young natural stands by site index, leading species, stocking class, and crown closure.	5
Figure 3. Area distribution for existing PHR stands 1967 - 1992 by site index class.....	7
Figure 4. Area distribution for existing PHR stands 1967 - 1992 by density class.	7
Figure 5. Area distribution for existing PHR stands 1993 - 2001 by site index class.....	8
Figure 6. Area distribution for existing PHR stands 1993 - 2001 by density class.	8
Figure 7. Area distribution for future PHR stands by site index class.....	9
Figure 8. Area distribution for future PHR stands by density class.....	9
Figure 9. Area-weighted average yield tables for existing and future stands.	10
Figure 10. Area distribution by maximum MAI and culmination age for existing PHR stands (12.5+ cm utilization).....	12
Figure 11. Area distribution by maximum MAI and culmination age for young natural stands (17.5+ cm utilization).....	12
Figure 12. Area-weighted average yield tables for existing PHR stands (12.5+ cm utilization).	13
Figure 13. Area-weighted average yield tables for young natural stands (17.5+ cm utilization).	13
Figure 14. Area distribution by maximum MAI and culmination age for future PHR stands (12.5+ cm utilization).....	14
Figure 15. Area-weighted average yield tables for future PHR stands (12.5+ cm utilization).....	14
Figure 16. Future PHR volume and MAI over age curves for the CWHms1m (12.5+ cm).	27
Figure 17. Future PHR DBH and height over age curves for the CWHms1m (12.5+ cm).....	27
Figure 18. Future PHR volume and MAI over age curves for the CWHms1s (12.5+ cm).	28
Figure 19. Future PHR DBH and height over age curves for the CWHms1s (12.5+ cm).....	28
Figure 20. Future PHR volume and MAI over age curves for the CWHds1 (12.5+ cm).	29
Figure 21. Future PHR DBH and height over age curves for the CWHds1 (12.5+ cm).....	29
Figure 22. Future PHR volume and MAI over age curves for the CWHdm (12.5+ cm).....	30
Figure 23. Future PHR DBH and height over age curves for the CWHdm (12.5+ cm).....	30
Figure 24. Future PHR volume and MAI over age curves for the CWHvm1 (12.5+ cm).....	31
Figure 25. Future PHR DBH and height over age curves for the CWHvm1 (12.5+ cm).....	31
Figure 26. Future PHR volume and MAI over age curves for the CWHvm2 (12.5+ cm).	32
Figure 27. Future PHR DBH and height over age curves for the CWHvm2 (12.5+ cm).....	32
Figure 28. Future PHR volume and MAI over age curves for the MHmm2 (12.5+ cm).....	33
Figure 29. Future PHR DBH and height over age curves for the MHmm2 (12.5+ cm).....	33
Figure 30. Future PHR volume and MAI over age curves for the MHmm1 (12.5+ cm).....	34
Figure 31. Future PHR DBH and height over age curves for the MHmm1 (12.5+ cm).....	34

1. INTRODUCTION

1.1 BACKGROUND

The timber supply analysis for International Forest Products Ltd.'s (Interfor) Management Plan (MP) 9 for Tree Farm Licence (TFL) 38 was completed in March 2002. J.S. Thrower & Associates Ltd. (JST) developed yield tables for natural and managed stands and delivered them to Timberline Forest Inventory Consultants Ltd. (TFIC) to incorporate into the timber supply analysis. These yield tables predict the volume of natural and post-harvest regenerated (PHR) stands and provide important links to product objectives, silviculture investments, habitat modeling, and ecologically-based forest management.

1.2 TERMS OF REFERENCE

This report was prepared for Jeff Fisher, *RPF* and Gerry Sommers, *RPF* of Interfor. The JST project team included Hamish Robertson, *RPF* (project manager), Craig Mistal, *MPM RPF* (data analyst), Ian Cameron, *MF RPF* (analysis support), and Guillaume Thérien, *PhD* (biometrist). This report will be submitted to Albert Nussbaum, *RPF* of the Ministry of Forests (MOF), Timber Supply Branch for approval.

1.3 REPORT OBJECTIVES

This report documents the models, model inputs, and analytical procedures used to derive the yield tables for the TFL 38 timber supply analysis. The report also provides a summary of yield statistics for the resulting tables. The intent is to provide MOF staff with the information necessary to review and approve the yield tables and associated analysis assumptions.

2. PROJECT OVERVIEW

2.1 NATURAL STAND YIELD TABLE DEFINITION

Natural stand yield tables (NSYTs) were developed for all natural stands in the timber harvesting landbase (THLB) (Appendix I). Two categories of natural stands were identified from the forest cover (FC) database: old natural stands (inventory ages > 140) and young natural stands (inventory ages 36-140). Yields for old natural stands were average volume lines derived from inventory ground plots (section 3.1).¹ Young NSYTs were developed using the FC inventory and Batch Variable Density Yield Projection (VDYP) (version 6.6d) (Table 1).

2.2 MANAGED STAND YIELD TABLE DEFINITION

Managed stand yield tables (MSYTs) were developed for existing (≤ 35 years) and future PHR stands. Volume predictions were developed for each eco-polygon defined by the union of the FC and Terrestrial Ecosystem Mapping (TEM) databases. MSYTs incorporated improved estimates of potential site index (PSI) developed from the Site Index Adjustment (SIA) project.² Yield for the PHR stands was derived using Batch Table Interpolation Program for Stand Yields (TIPSY) (version 3.0a).

Existing PHR stands were divided into two eras that reflect different silviculture practices: stands harvested between 1967 and 1992, and stands harvested between 1993 and 2001. Future PHR stands are created in the timber supply analysis following harvest of existing natural or existing PHR stands (Table 1).

Table 1. Summary of yield table inputs, data sources, and models.

Variable	Natural		PHR		
	Old Stands	Young Stands	Existing 1967 - 1992	Existing 1993 - 2001	Future
Modeling Unit	FC Polygon	FC Polygon	Eco-polygon	Eco-polygon	Eco-polygon
Model	Avg.Vol. Line	BatchVDYP	BatchTIPSY	BatchTIPSY	BatchTIPSY
Inv.Age (yrs)	>140	36-140	10-35	<10	N/A
Area (ha)	20,222	3,356	6,448	2,478	30,453 ³
THLB (%)	62	10	20	8	100
Stand Description	FC Inventory	FC Inventory	Silviculture Regimes	Silviculture Regimes	Silviculture Regimes
Site Index	N/A	FC Inventory	<ul style="list-style-type: none"> ▪ PSI from SIA ▪ Inventory SI in CWHvm2 and MH 	<ul style="list-style-type: none"> ▪ PSI from SIA ▪ Inventory SI in CWHvm2 and MH 	<ul style="list-style-type: none"> ▪ PSI from SIA ▪ Inventory SI in CWHvm2 and MH
OAFS 1 & 2	N/A	N/A	Section 4.2.4	Section 4.2.4	Section 4.2.4
Genetic Gain (ha)	N/A	N/A	N/A	979	9,518

¹ Inventory ground plot data were received from Interfor January 15, 2002.

² J.S. Thrower & Associates Ltd. 2001. Site index adjustment of the major commercial tree species in the Coastal Western Hemlock biogeoclimatic zone on Tree Farm Licence 38. Contract report for International Forest Products Ltd., 14 pp.

³ The difference between the existing (natural and PHR) and future areas reflects stands that receive a NSYT but occur in non-productive site series according to the future silviculture regimes.

3. NATURAL STAND YIELD TABLES

3.1 OLD NATURAL STANDS

3.1.1 Description

Old natural stands (>140 years) were assigned to analysis units based on the definition used by Interfor in assigning the inventory volume.

The analysis unit definition included: major species (greater than 20% composition), age class, and height class (Table 2). Age class 8 and 9 stands were combined in this classification. The following example illustrates the classification scheme used to assign the analysis unit for each stand:

Analysis unit = HB 95+

Where HB = first 2 major species from inventory (>20% composition)

9 = age class

5+ = Height class group

Table 2. Height class groups in old natural stands.

Height Class Group	Description
3-	≤ height class 3
4	height class 4
5+	≥ height class 5

3.1.2 Yield Projection

In timber supply analysis, older stands (>140 years) are assumed to maintain their current volume. The yield table for these stands is therefore a constant line until the stand is regenerated.

For the 1997 MP 8 timber supply analysis, Interfor assigned an analysis unit volume to each mature polygon. The volumes of 15 analysis units were computed from 742 inventory ground plots collected by TFL 38's predecessor company, Weldwood of Canada. In 1998 a MOF inventory audit⁴ showed that the analysis unit volumes were not statistically different from the audit ground volumes. The inventory plots were therefore assumed to be representative of the population. We used these plots to assign current standing volumes to 58 analysis units in the current THLB.⁵ We combined similar analysis units to create eight analysis groups to increase the number of plots in each analysis unit (Appendix II). Analysis units containing only broadleaf species (AD analysis group) had no conifer volume. The coefficient of variation (CV) for volume within each analysis group was generally 10-20% (Table 3).

The average volume of an analysis group was attached to each FC polygon within the analysis group. Deciduous volume was removed from each FC polygon according to the percentage indicated by the FC label. Projected yield tables for each FC polygon were a line of the average volume (average volume line).

Table 3. Average volume by analysis group for old natural stands.

Analysis Group	Area (ha)	Analysis Unit (#)	Plots (#)	Avg. Vol. (m ³ /ha)	CV (%)
H	7,415	15	312	471	12
B	6,881	7	210	575	13
F5	2,500	3	20	709	26
F4	1,002	3	14	576	11
F3	211	5	10	331	21
C	1,886	12	43	603	17
Y	313	9	13	465	20
AD	14	4		0	
<i>Total</i>	<i>20,222</i>		<i>58</i>	<i>622</i>	

⁴ Details of the MOF audit for TFL 38 can be found at: www.for.gov.bc.ca/resinv/audits/TFL%2038/TFL38.htm.

⁵ The difference in the number of analysis units reflects updates to the inventory file since the 1998 audit. Only 622 of the 742 plots were in the THLB and our definition of the old natural era (>140 years).

3.2 YOUNG NATURAL STANDS

3.2.1 Description

Young natural stands were all stands between 36 and 140 years in the FC inventory. The basic modeling unit was the FC polygon (mapstand) and subzone. Young natural stands included 521 polygons covering 3,356 ha. Most polygons (81%) were less than 10 ha, and the largest was 65 ha (Figure 1).

3.2.2 BatchVDYP Inputs

Site index, species composition, stocking class, and crown closure values from the FC database were input into *BatchVDYP*. The weighted average site index of all species for young natural stands was 22.0 m (Figure 2). Most of the area was in the 25 m site index class. Douglas-fir (Fd) was the leading species in 75% of polygons. Amabilis fir (Ba), western hemlock (Hw), western redcedar (Cw), yellow-cedar (Yc), and other species⁶ were leading in the remaining area. Mean crown closure was 38%, and 94% of the area was in stocking class 0.

3.2.3 Merchantability Limits

The minimum DBH limit was 17.5 cm for all species. Maximum stump height was 30 cm, and minimum top diameter was 10 cm.

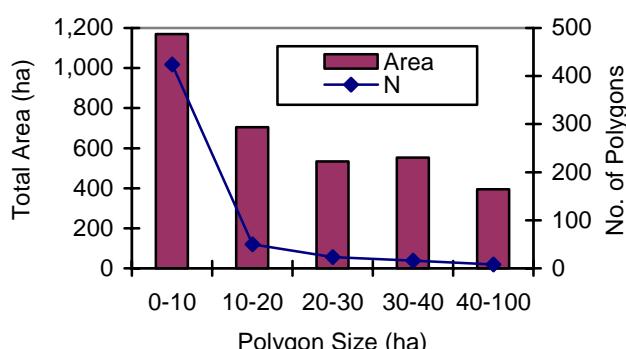


Figure 1. Distribution of polygon size for young natural stands.

⁶ Other species included: cottonwood (Ac), red alder (Dr), birch (Ep), broad-leaved maple (Mb), and lodgepole pine (Pl).

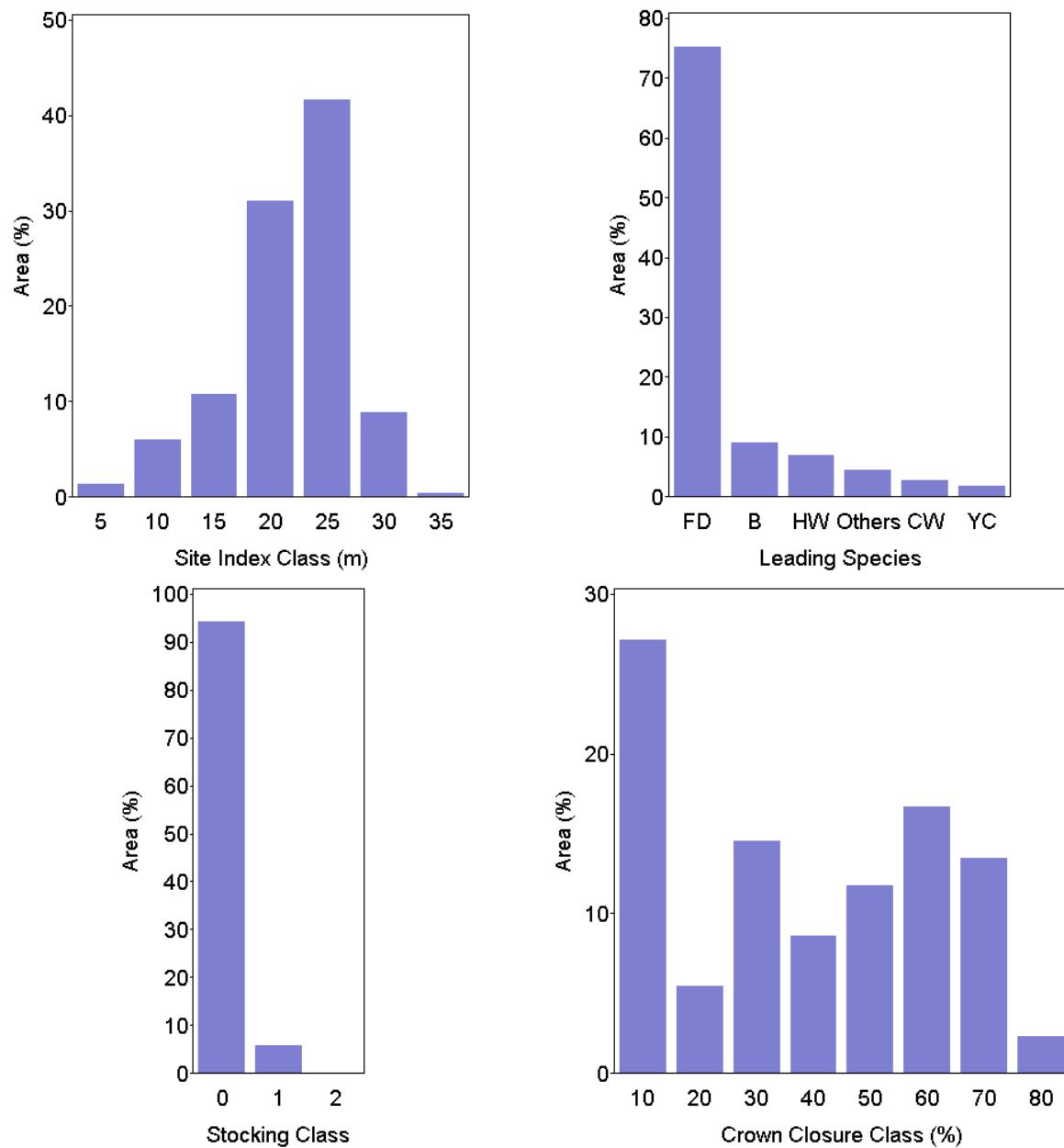


Figure 2. Area distribution for young natural stands by site index, leading species, stocking class, and crown closure.

4. MANAGED STAND YIELD TABLES

4.1 OVERVIEW

Three management eras were recognized in the development of MSYTs. Existing PHR stands were divided into an early management era of stands initiated between 1967 and 1992, and a later era of stands initiated between 1993 and 2001. Future PHR stands are those stands regenerated in the timber supply analysis following harvest of existing natural or PHR stands.

4.2 CHARACTERISTICS COMMON TO ALL PHR ERAS

4.2.1 Modeling Unit and Yield Model

The modeling unit for MSYTs was the eco-polygon formed by the union of the FC and TEM polygons. *BatchTIPSY* (3.0a) was used to predict the yields of each eco-polygon.

4.2.2 Site Index

PSI estimates derived from the SIA project² were applied to all existing and future PHR eco-polygons in all CWH subzones except the CWHvm2. Site index estimates from the FC inventory were applied to the CWHvm2 and to the MH subzones.

4.2.3 Silviculture Regimes

Silviculture regimes were developed for all site series in the THLB using silviculture survey data and the personal experience of Interfor's silviculture foresters (Appendix III).⁷ Separate regimes were developed for each management era to reflect the different management practices. Stands in the 1967 - 1992 PHR era were typically logged, burned, and then planted. The 1993 - 2001 stands were typically logged and then planted with genetically improved Fd and Cw stock. Future stands reflect current practice, and therefore the silviculture regimes are identical to the 1993 - 2001 regimes.

Regenerating stands usually contain a component of natural regeneration that contributes to the stand yield. *BatchTIPSY* does not model this regeneration, so JST developed a proprietary procedure using simulations from Tree And Stand Simulator (TASS) to produce adjustment coefficients, M1 and M2. These coefficients modify *BatchTIPSY* yield table outputs to reflect the subsequent natural regeneration found in these stands.⁸

4.2.4 Operational Adjustment Factors

Operational adjustment factors (OAFs) reduce the potential yields predicted by *BatchTIPSY* to levels expected in PHR stands. The MOF OAF1 (0.85) and OAF2 (0.95) estimates were used in this project.

4.2.5 TEM Non-Productive Adjustment

Our yield table methods generate a yield table for the productive portion of each FC polygon using the OAF1 reduction. This process over-estimates the polygon yield if applied to an entire FC polygon containing additional non-productive (NP) area identified by the TEM. This over-estimate was corrected by further reducing the yield to reflect total yield from the polygon, including the NP portion.

⁷ The silviculture regimes were approved for use in the yield tables by Albert Nussbaum on February 11, 2002.

⁸ J.S. Thrower & Associates Ltd. 2002. A method for predicting the yields of Douglas-fir plantations with natural regeneration. Internal report, 27 pp. Reviewed and approved by MOF February 11, 2002.

The non-spatial NP cover within TEM polygons is not removed during the netdown process. Removing the entire TEM-based NP according to the TEM attributes would be an over-estimate of the NP area for each polygon inside the THLB. We assumed that a proportion of the non-spatial TEM-based NP was accounted for in the netdown of overlapping FC NP polygons. Hence, the remaining TEM-based NP (after correction for the overlap of FC NP) represents TEM-based NP truly inside the THLB. The adjustment required by subzone is summarized in Table 4. Yields for each polygon were reduced by the corresponding subzone percentage.¹⁰

4.2.6 Merchantability Limits

The minimum utilization limit was 12.5 cm DBH for all species. Maximum stump height was 30 cm, and minimum top diameter was 10 cm.

4.3 EXISTING PHR YIELD TABLE INPUTS: 1967 - 1992

Interfor's silviculture staff developed silviculture regimes for each site series in this era using the results of silviculture surveys and historical forest management practices on the TFL. The polygons in the CWHms1s and CWHds1, harvested in this era, were typically burned prior to planting (Appendix III). All sites were planted, and genetically improved stock was not used in this era. Juvenile spacing was modelled on 608 ha of the mesic and richer sites series in this era. The average site index across all species was 31.1 m (Table 5, Figure 3). The average establishment density was modeled at 1,886 stems/ha (Figure 4).

Table 4. TEM-based NP adjustment by subzone.

Subzone ⁹	NP Adjustment (%)
CWHms1m	1.7
CWHms1s	2.0
CWHds1	3.3
CWHdm	3.3
CWHvm1	2.2
CWHvm2	2.7
MHmm2	10.0
MHmm1	15.7
Average	4.3

Table 5. Site index statistics for existing PHR stands: 1967 - 1992.

Ldg. Spp.	Area (ha)	Site Index (m)			
		Avg.	Min.	Max.	SD.
Fd	5,190	32.6	19.9	45.6	4.3
Cw	647	28.5	12.1	30.4	3.9
Ba	438	22.9	12.0	35.0	4.0
Ac	95	10.2	10.0	12.0	0.6
Hm	78	23.7	12.0	35.0	6.1
Total	6,448	31.1	10.0	45.6	5.7

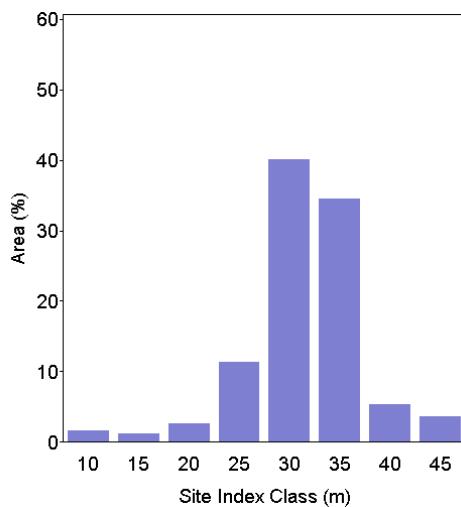


Figure 3. Area distribution for existing PHR stands 1967 - 1992 by site index class.

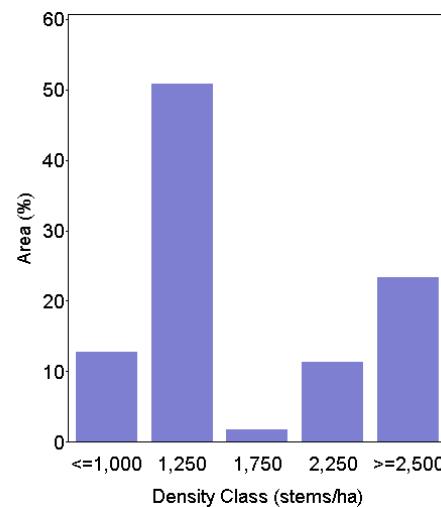


Figure 4. Area distribution for existing PHR stands 1967 - 1992 by density class.

⁹ Two phases of CWHms1 were defined through the TEM project: CWHms1s represents the submontane phase, and CWHms1m is the montane phase.

¹⁰ Methods were described in a memo sent to the MOF February 28, 2002 and approved March 1, 2002.

4.4 EXISTING PHR YIELD TABLE INPUTS: 1993 - 2001

Silviculture regimes were developed by Interfor silviculture staff to reflect the most common management regimes on each site series in the 1993 - 2001 era. The major difference in this era from the previous era is that burning did not occur following harvest. Genetically improved Fd and Cw were planted in all maritime subzones (CWHdm, CWHvm1, CWHvm2, MHmm1, and MHmm2), and improved Fd was planted in submaritime subzones (CWHms1m, CWHms1s, and CWHds1). Genetic gain, based on current orchards, was modelled on 979 ha of the existing THLB (Table 6) (Appendix III). Juvenile spacing was modelled on 180 ha of the mesic and richer sites series in this era.

The average site index across all species was 31.2 m (Figure 5, Table 7). The average establishment density was modeled at 2,186 stems/ha (Figure 6).

Table 6. Tree improvement in existing PHR stands: 1993 - 2001.

Subzone	Area with Improvement		Area without Improvement	
	(ha)	(%)	(ha)	(%)
CWHms1m	300	12	589	24
CWHms1s	513	21	636	26
CWHds1	127	5	110	4
CWHdm	16	1	12	0
CWHvm1	20	1	24	1
CWHvm2	3	0	4	0
MHmm2	0	0	123	5
<i>Total</i>	979	40	1,499	60

Table 7. Site index statistics for existing PHR stands: 1993 - 2001.

Ldg. Spp.	Area (ha)	Site Index (m)			
		Avg.	Min.	Max.	SD.
Fd	1,994	32.0	10.1	45.6	4.1
Cw	361	29.2	12.1	32.8	3.1
Ba	111	22.7	14.0	30.0	2.3
Hm	12	23.3	14.0	27.0	1.7
<i>Total</i>	2,478	31.2	10.1	45.6	4.5

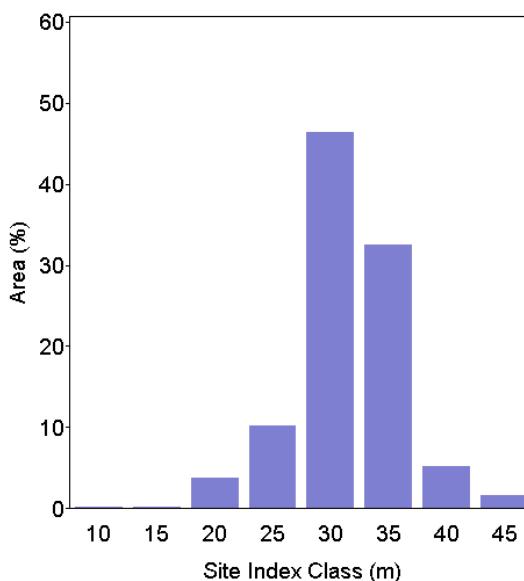


Figure 5. Area distribution for existing PHR stands 1993 - 2001 by site index class.

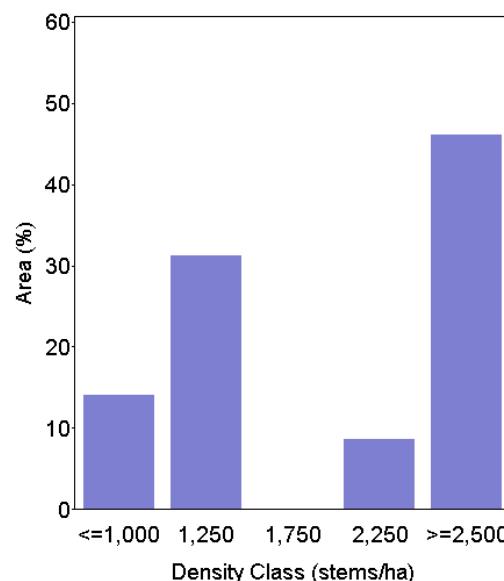


Figure 6. Area distribution for existing PHR stands 1993 - 2001 by density class.

4.5 FUTURE PHR YIELD TABLE INPUTS

The silviculture regimes applied to future PHR stands reflect current practice and are therefore identical to the regimes of the existing PHR 1993 - 2001 era (Appendix III). The genetic gain was modeled the same as for the 1993 - 2001 era (Table 8); genetically improved Fd and Cw were planted in the maritime subzones, and improved Fd was planted in the submaritime subzones. Following harvest, all sites will be planted and portions of the mesic and richer sites series will be juvenile spaced. Juvenile spacing was modelled on 1,258 ha in this era.

The average site index over all species was 26.2 m (Table 9, Figure 7). The inclusion of more MH and CWHvm2 area, where FC inventory site index estimates were used, accounts for the lower mean site index compared to the existing PHR stands. The average establishment density was modeled at 2,441 stems/ha (Figure 8), and the regeneration delay on all future silviculture regimes was one year.¹¹

Table 8. Tree improvement in future PHR stands.

Subzone	Area with improvement		Area without improvement	
	(ha)	(%)	(ha)	(%)
CWHms1m	4,103	13	7,356	24
CWHms1s	3,602	12	4,007	13
CWHds1	1,383	5	1,303	4
CWHdm	226	1	149	0
CWHvm1	142	0	171	1
CWHvm2	62	0	49	0
MHmm2	0	0	7,873	26
MHmm1	0	0	26	0
<i>Total</i>	<i>9,518</i>	<i>31</i>	<i>20,935</i>	<i>69</i>

Table 9. Site index statistics for future PHR stands.

Ldg. Spp.	Area (ha)	Site Index (m)			
		Avg.	Min.	Max.	SD.
Fd	19,530	31.2	9.1	45.6	4.6
Ba	7,102	13.0	5.0	35.0	4.1
Cw	3,015	28.6	5.1	32.8	4.3
Hm	795	12.1	5.1	35.0	3.6
Others ^a	10	18.2	6.4	20.6	3.7
<i>Total</i>	<i>30,453</i>	<i>26.2</i>	<i>5.0</i>	<i>45.6</i>	<i>9.1</i>

^aIncludes cottonwood (Ac) and yellow-cedar (Yc)

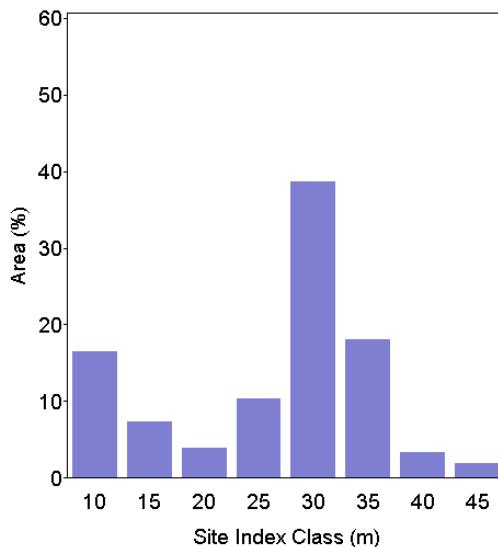


Figure 7. Area distribution for future PHR stands by site index class.

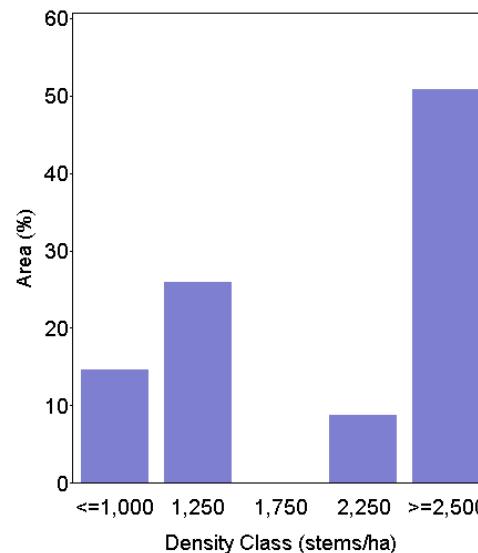


Figure 8. Area distribution for future PHR stands by density class.

¹¹ Regeneration delay is not applied in the yield tables; instead a weighted average regeneration delay for each subzone was forwarded to TFIC to incorporate into the timber supply analysis.

5. RESULTS

5.1 PRE-AGGREGATION PROCESS

In the pre-aggregation process, NSYTs were generated by FC polygon and subzone combination. Deciduous volume was removed from each FC polygon according to the percentage indicated by the FC label. Existing and future PHR stands were generated for each site series within each eco-polygon. Next, a single yield table was produced for each FC polygon as an area-weighted average of the component site series tables. Deciduous volume was removed from MSYTs according to the percentage indicated by the associated silviculture regime.

The yield table generation process created 3,705 old NSYTs, 521 young NSYTs, 202 existing MSYTs from the 1967 - 1992 era, 122 existing MSYTs from the 1993 - 2001 era, and 991 future MSYTs. The maximum mean annual increment (MAI) and corresponding culmination ages are summarized in Table 10.

5.2 AGGREGATION PROCESS

Timber supply models are generally unable to accommodate more than 500 yield tables. Thus, yield tables were aggregated into groups of similar tables based on analysis group (section 3.1), leading species, 5 m site index class, treatment (i.e., with or without genetic gain), proportion of conifer volume (rounded to the nearest 20%), and model (*BatchTIPSY* or *BatchVDYP*). This aggregation produced 224

clusters. Polygons less than 1 ha were combined into one additional cluster, bringing the total to 225 clusters. Five of the clusters were not satisfactorily restocked (NSR) and did not have existing yield tables. An existing and future yield table was calculated for each cluster as the area-weighted average of all yield tables within the cluster. Area-weighted tables for the entire THLB are shown in Figure 9. There were 5,216 combinations of FC polygons and subzone in the THLB. Of these, 28 polygons were NSR and were not assigned an existing yield table. However, these NSR polygons were assigned a

Table 10. Summary of MAI and culmination age for existing and future stands.

Variable	Natural		PHR		
	Old Stands	Young Stands	Existing 1967 - 1992	Existing 1993 - 2001	Future
MAI (m ³ /ha/yr)	N/A	4.7	10.2	10.9	8.5
Culm. Age (yrs)	N/A	93	84	85	107

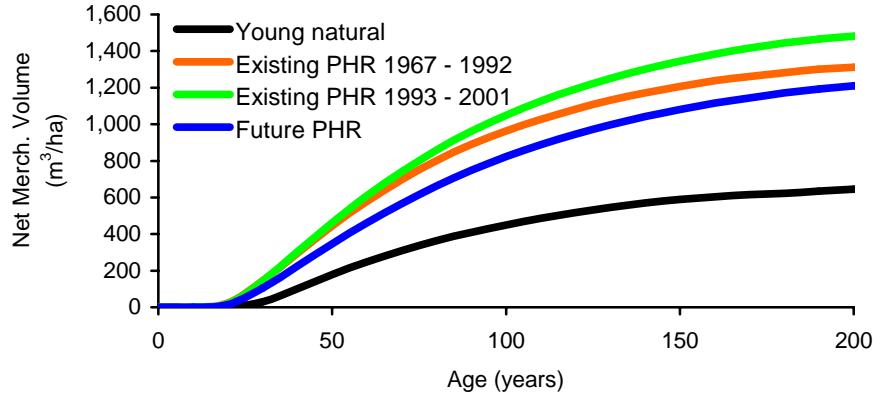


Figure 9. Area-weighted average yield tables for existing and future stands.

future PHR yield table because they will be planted within the time frame of the timber supply analysis. Summary statistics for the 50 largest aggregated yield tables are in Appendix IV.

5.3 YIELD TABLE SUMMARY FOR EXISTING STANDS

The existing yield tables were composed of 62% old NSYTs, 10% young NSYTs, 20% 1967 - 1992 PHR stands, and 8% 1993 - 2001 PHR stands by area. The existing tables apply to all polygons in the THLB except those classified as NSR. The overall average culmination MAI for existing stands (excluding old natural stands) was 8.8 m³/ha/yr at 85 years (Table 11). Culmination statistics were not calculated for old NSYTs because they have constant volumes. The area distributions by maximum MAI and culmination age for PHR (12.5 cm utilization) and young natural stand yield tables (17.5 cm utilization) are shown in Figure 10 and Figure 11.

The area-weighted average yield tables by subzone for existing PHR stands and young natural stands are illustrated in Figure 12 and Figure 13.

5.4 YIELD TABLE SUMMARY FOR FUTURE STANDS

Yield tables for future PHR stands were applied to all areas of the THLB. The average culmination MAI for future stands was 8.5 m³/ha/yr at 107 years (Table 12). The area distributions by maximum MAI and culmination age for future yield tables are shown in Figure 14. The area-weighted average yield tables by subzone for future PHR stands are illustrated in Table 19 and Figure 15.

Table 11. Area-weighted yield estimates at culmination age for existing PHR and young natural stands.

Subzone	Area (ha)	Culm. MAI (m ³ /ha/yr)	Culm. Age (yrs)	Volume (m ³ /ha)
CWHms1s	5,232	9.0	83	733
CWHms1m	3,794	9.5	83	776
CWHds1	1,740	8.1	83	655
MHmm2	742	6.3	110	689
CWHvm1	247	7.4	87	609
CWHdm	236	6.4	92	528
CWHvm2	33	8.0	89	693
MHmm1	1	1.1	191	221
<i>Total</i>	<i>12,025^a</i>	<i>8.8</i>	<i>85</i>	<i>726</i>

^a20,222 ha of old natural stands are not included in this table.

Table 12. Area-weighted yield estimates at culmination age for future PHR stands.

Subzone	Area (ha)	Culm. MAI (m ³ /ha/yr)	Culm. Age (yrs)	Volume (m ³ /ha)
CWHms1m	11,459	10.5	87	908
CWHms1s	7,609	10.8	81	874
CWHds1	2,686	10.9	80	877
CWHdm	375	10.8	78	834
CWHvm1	312	10.7	81	866
CWHvm2	112	5.0	122	517
MHmm2	7,873	2.5	174	388
MHmm1	26	1.8	193	333
<i>Total</i>	<i>30,453</i>	<i>8.5</i>	<i>107</i>	<i>759</i>

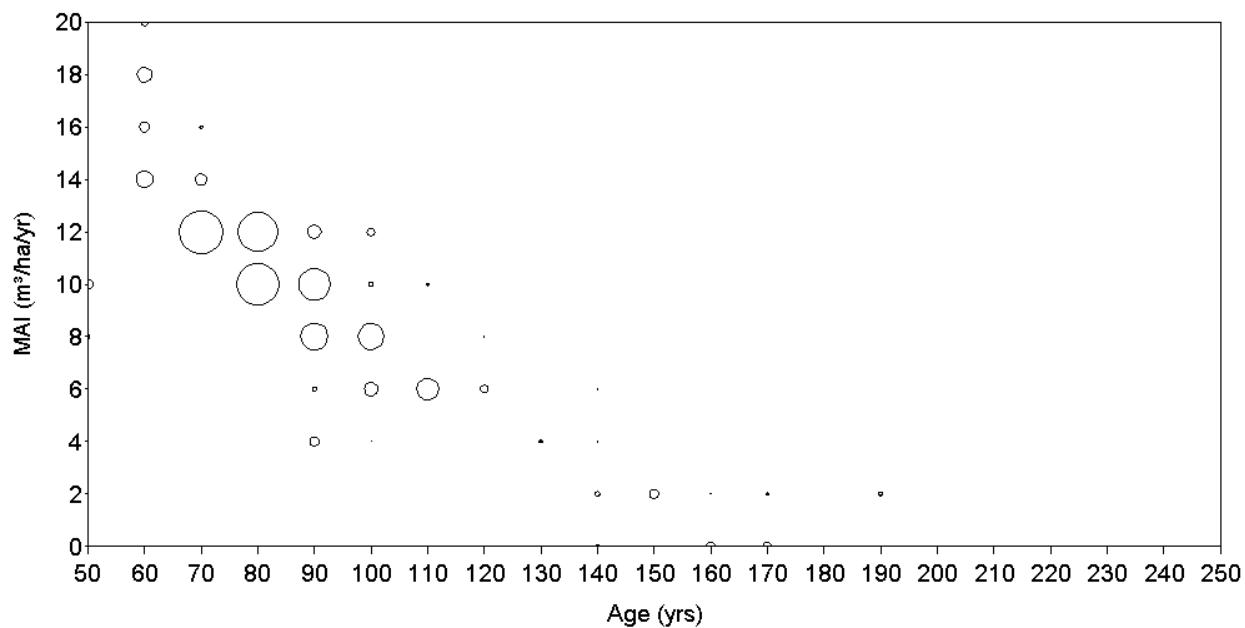


Figure 10. Area distribution by maximum MAI and culmination age for existing PHR stands (12.5+ cm utilization). Bubble size is proportional to the area represented at each point.

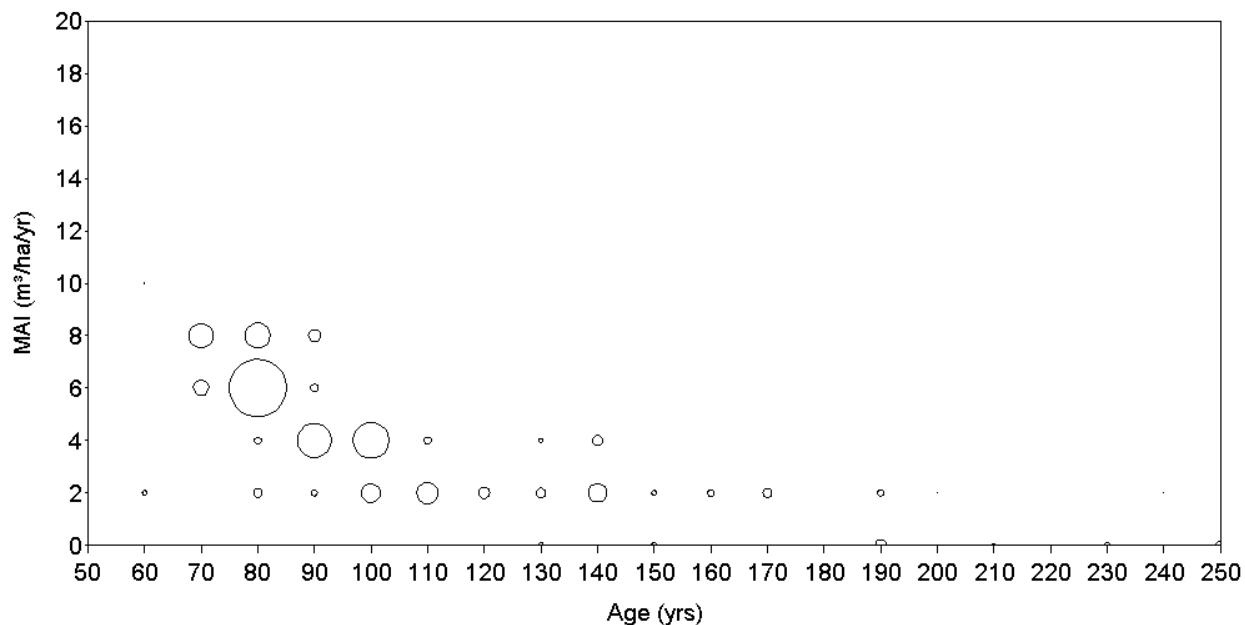


Figure 11. Area distribution by maximum MAI and culmination age for young natural stands (17.5+ cm utilization). Bubble size is proportional to the area represented at each point.

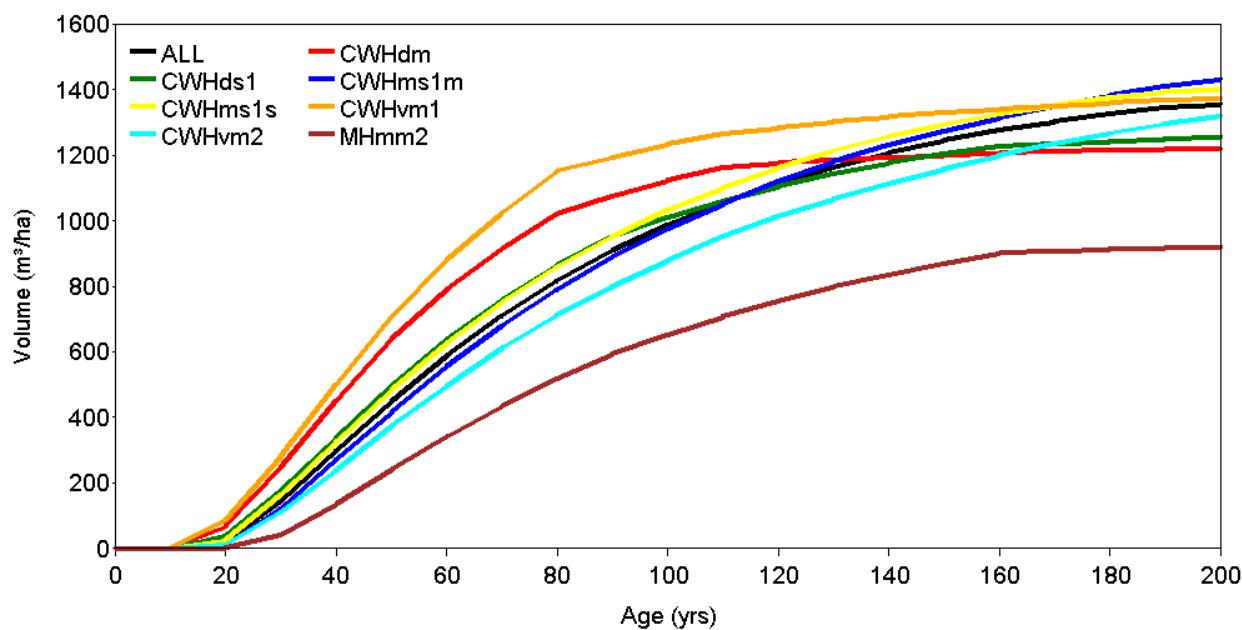


Figure 12. Area-weighted average yield tables for existing PHR stands (12.5+ cm utilization).

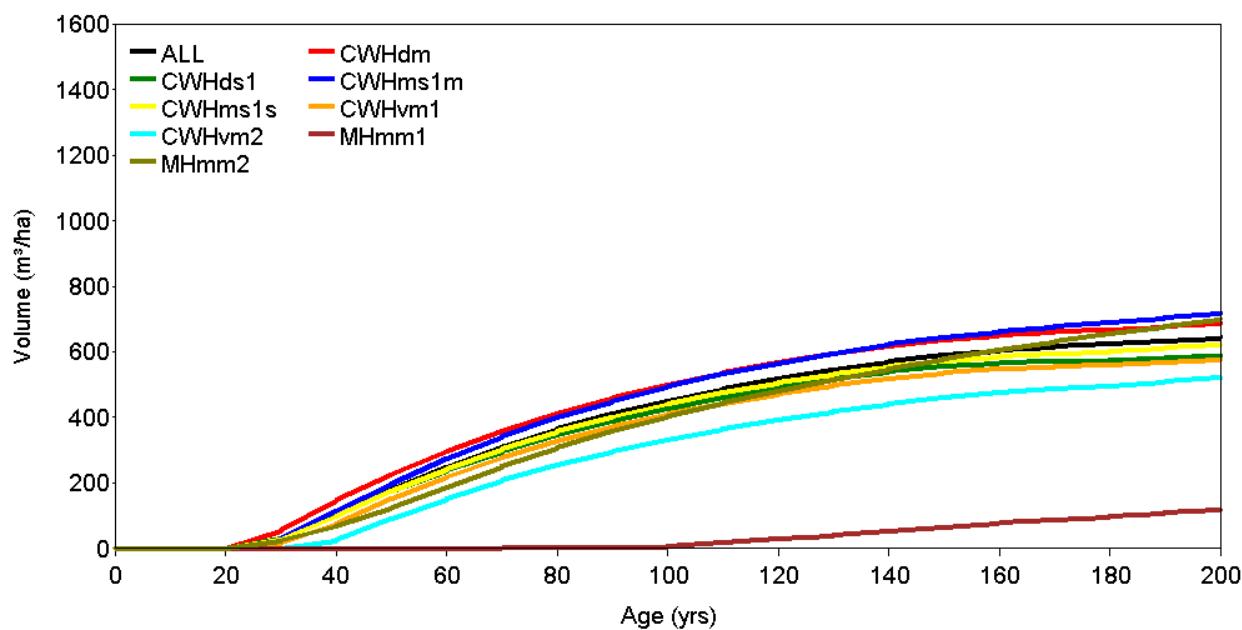


Figure 13. Area-weighted average yield tables for young natural stands (17.5+ cm utilization).

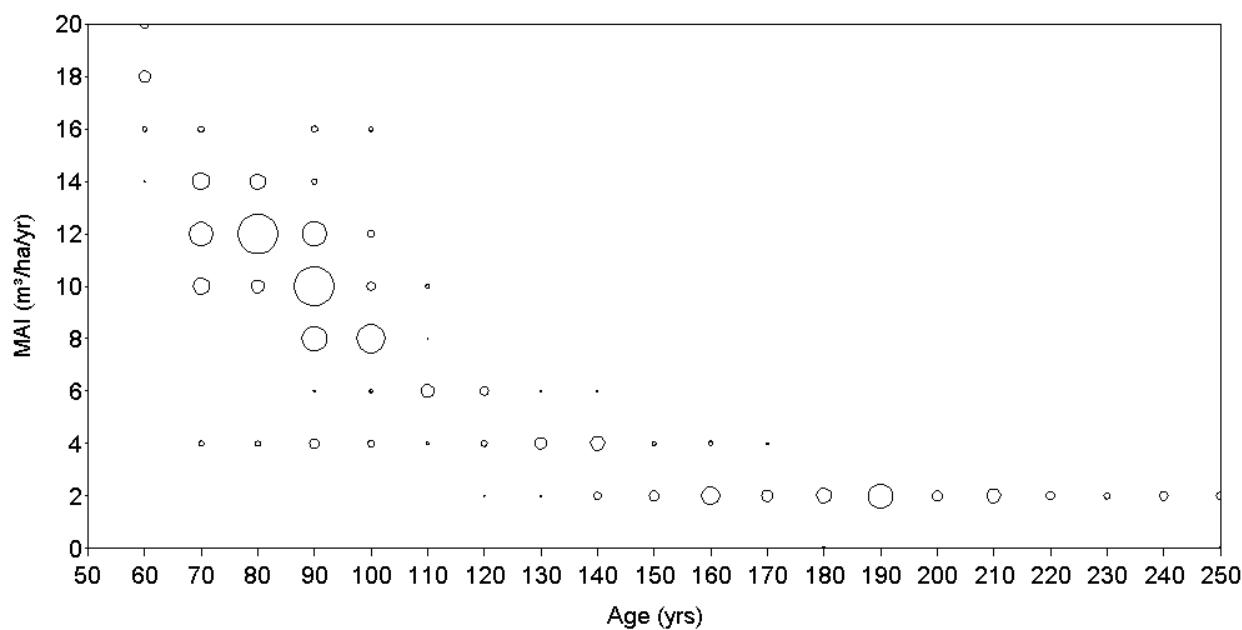


Figure 14. Area distribution by maximum MAI and culmination age for future PHR stands (12.5+ cm utilization). Bubble size is proportional to the area represented by each point.

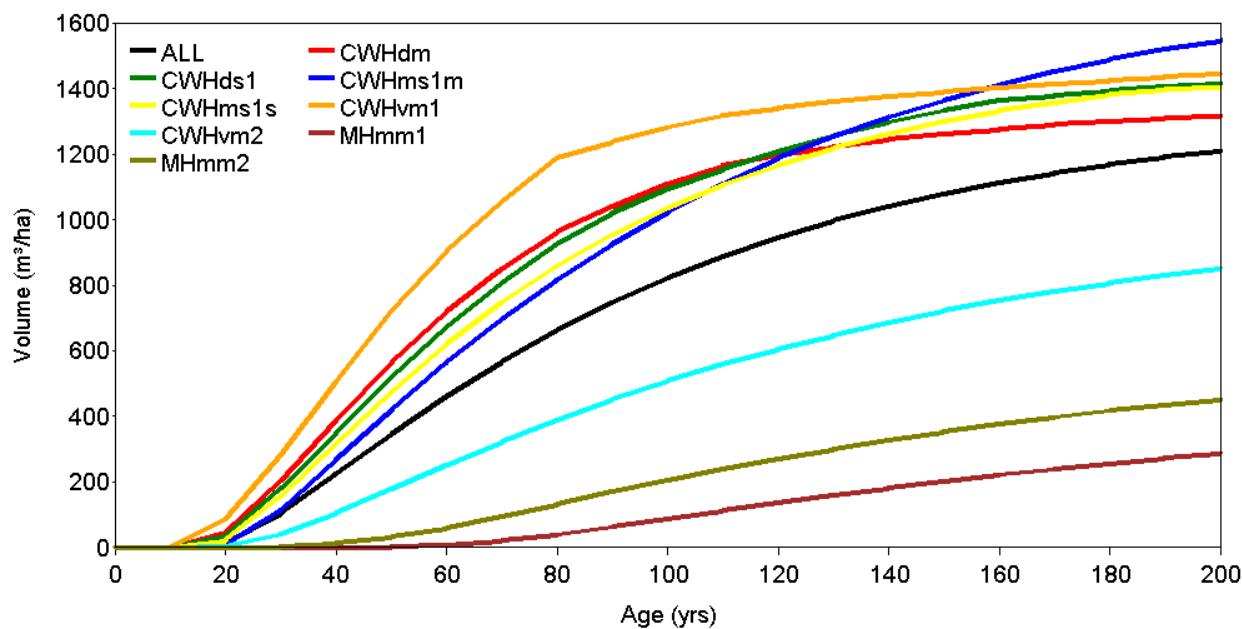


Figure 15. Area-weighted average yield tables for future PHR stands (12.5+ cm utilization).

APPENDIX I – TFL 38 LANDBASE

Table 13. Area distribution (ha) of the THLB by leading species and age class.

Ldg. Spp.	Age Class									Area (ha)	%
	0	1	2	3	4	5	6	7	8		
Fd	3,239	2,466	1,629	11	74	35	88	357	3,356	11,256	34
Ba	1,967	650	8	73	33	41	59	282	6,599	9,712	30
Hw	531	109	56	89	29	17	3	190	7,225	8,249	25
Cw	841	33	13	73		4	3	67	1,818	2,854	9
Yc	35	22	55						313	425	1
Others ^a	47	48	127	61	31	2	15	24	13	1	369
Area (ha)	47	6,662	3,407	1,821	278	138	112	177	909	19,313	32,864
%	0	20	10	6	1	0	0	1	3	59	

^aIncludes Ac, Dr, Ep, Mb, Pl, and NSR.

Table 14. Area distribution (ha) of THLB by subzone and age class.

Subzone	Age Class									Area (ha)	(%)
	0	1	2	3	4	5	6	7	8		
CWHms1m	6	2,308	962	503	59	16	28	60	357	7,751	12,051
CWHms1s	26	3,037	1,387	762	127	46	25	36	162	2,325	7,933
CWHds1	2	709	759	284	31	32	26	10	121	909	2,883
CWHdm		53	42	105	3	18	2	26	22	123	395
CWHvm1		93	33	110	2	1	3	21	22	48	334
CWHvm2	1	16	15				0	5	5	84	126
MHmm2	12	444	210	57	55	20	25	20	220	8,027	9,091
MHmm1					0	4	2	0		31	37
MHmmp2										15	15
Area (ha)	47	6,662	3,407	1,821	278	138	112	177	909	19,313	32,864
%	0	20	10	6	1	0	0	1	3	59	100

APPENDIX II – ANALYSIS GROUP DEFINITIONS FOR OLD NATURAL STANDS

Table 15. Average volume by analysis unit for old natural stands.

Analysis Unit	Area (ha)	Area (%)	No. of Plots	Plots (%)	Avg. Vol. (m³/ha)	Analysis Group
A 95+	11	0.1		0.0	0	AD
AD 95+	0	0.0		0.0	0	AD
AM 95+	2	0.0		0.0	0	AD
B 93-	359	1.8	19	3.1	519	B
B 94	1,102	5.4	40	6.4	642	B
B 95+	940	4.6	9	1.4	720	B
BH 93-	930	4.6	38	6.1	573	B
BH 94	2,365	11.7	74	11.9	520	B
BH 95+	1,099	5.4	23	3.7	530	B
BY 95+	87	0.4	7	1.1	499	B
C 93-	0.01	0.0		0.0		C
C 94	50	0.2	2	0.3	548	C
C 95+	452	2.2	13	2.1	749	C
CA 95+	1	0.0		0.0		C
CB 94	9	0.0	2	0.3	486	C
CF 93-	7	0.0		0.0		C
CF 94	49	0.2		0.0		C
CF 95+	350	1.7	4	0.6	664	C
CH 93-	18	0.1		0.0		C
CH 94	140	0.7	2	0.3	595	C
CH 95+	796	3.9	18	2.9	504	C
CY 95+	14	0.1	2	0.3	384	C
DA 94	1	0.0		0.0	0	AD
F 93-	107	0.5	3	0.5	372	F3
F 94	591	2.9	8	1.3	521	F4
F 95+	1,373	6.8	6	1.0	873	F5
FB 93-	0	0.0	1	0.2	937	F3
FC 93-	30	0.1		0.0		F3
FC 94	242	1.2	2	0.3	666	F4
FC 95+	911	4.5	7	1.1	502	F5
FH 93-	34	0.2	5	0.8	349	F3
FH 94	169	0.8	4	0.6	637	F4
FH 95+	216	1.1	7	1.1	537	F5
FP 93-	40	0.2	1	0.2	205	F3
H 93-	448	2.2	24	3.9	432	H
H 94	396	2.0	22	3.5	558	H
H 95+	198	1.0	5	0.8	581	H
HB 93-	1,555	7.7	75	12.1	418	H
HB 94	2,069	10.2	97	15.6	452	H
HB 95+	1,328	6.6	38	6.1	529	H
HC 93-	57	0.3		0.0		H
HC 94	191	0.9	5	0.8	483	H
HC 95+	460	2.3	9	1.4	450	H
HF 93-	31	0.2		0.0		H
HF 94	182	0.9	7	1.1	572	H
HF 95+	52	0.3	1	0.2	380	H
HY 93-	108	0.5	3	0.5	336	H
HY 94	319	1.6	25	4.0	494	H
HY 95+	23	0.1	1	0.2	820	H
Y 93-	8	0.0	1	0.2	465	Y
Y 94	65	0.3	5	0.8	598	Y
Y 95+	2	0.0		0.0		Y
YB 93-	14	0.1		0.0		Y
YB 94	14	0.1	2	0.3	658	Y
YC 95+	17	0.1	1	0.2	347	Y
YH 93-	35	0.2	1	0.2	365	Y
YH 94	142	0.7	3	0.5	424	Y
YH 95+	16	0.1		0.0		Y
Total	20,222	100	622	100		

APPENDIX III – TFL 38 SILVICULTURE REGIMES

Table 16 summarizes the silviculture regimes developed by Interfor's silviculture staff for existing PHR stands from 1967 - 1992. Table 17 shows the silviculture regimes for existing PHR stands 1993 - 2001 and future PHR stands. Shaded rows indicate inputs for juvenile spacing regimes.

Table 16. Silviculture regimes for existing PHR stands: 1967 - 1992.

Subzone	Site Series	Reg. No.	Reg. Delay Pct.	Regen Type	TIPSY Density	Spp 1	Pct 1 (%)	Gain1 (%)	Spp2	Pct2 (%)	Gain2 (%)	Spp3	Pct3 (%)	Gain3 (%)	Spp4	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1 ^a	M2 ^b	
CWHDm	01	1	56	2	P	1386	FD	80	0	CW	10	0	HW	10	0	0	0	0.85	0.95	1.04	1.00	
CWHDm	01	2	24	2	N	2200	FD	80	0	CW	10	0	HW	10	0	0	0	0.85	0.95	1.04	1.00	
CWHDm	01	3	20	2	P	660	FD	85	0	CW	10	0	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	02	1	75	2	P	528	FD	60	0	PL	40	0		0	0	0	0	0.85	0.95	1.19	0.91	
CWHDm	02	2	25	2	N	880	FD	60	0	PL	40	0		0	0	0	0	0.85	0.95	1.19	0.91	
CWHDm	03	1	93	2	P	1309	FD	70	0	CW	15	0	HW	10	0	PL	5	0	0.85	0.95	1.00	1.00
CWHDm	03	2	7	2	N	1650	FD	70	0	CW	15	0	HW	10	0	PL	5	0	0.85	0.95	1.00	1.00
CWHDm	04	1	93	2	P	1309	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHDm	04	2	7	2	N	1650	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHDm	05	1	53	2	P	1386	FD	70	0	HW	20	0	CW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	05	2	27	2	N	2310	FD	70	0	HW	20	0	CW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	05	3	20	2	P	660	FD	80	0	HW	10	0	CW	10	0		0	0	0.85	0.95	1.00	1.00
CWHDm	07	1	70	2	P	1386	FD	60	0	CW	30	0	HW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	07	2	30	2	N	2200	FD	60	0	CW	30	0	HW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	08	1	70	2	P	1386	CW	70	0	FD	20	0	HW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	08	2	30	2	N	2200	CW	70	0	FD	20	0	HW	10	0		0	0	0.85	0.95	1.04	1.00
CWHDm	09	1	78	2	P	1386	CW	90	0	FD	5	0	HW	5	0		0	0	0.85	0.95	1.00	1.00
CWHDm	09	2	22	2	N	1980	CW	90	0	FD	5	0	HW	5	0		0	0	0.85	0.95	1.00	1.00
CWHDm	10	1	47	2	P	1386	AC	75	0	DR	15	0	MB	5	0	CW	5	0	0.85	0.95	1.00	1.00
CWHDm	10	2	53	2	N	3300	AC	75	0	DR	15	0	MB	5	0	CW	5	0	0.85	0.95	1.00	1.00
CWHDm	12	1	75	2	P	594	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHDm	12	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHDm	20	1	75	2	P	528	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHDm	20	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	01	1	42	2	P	1386	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	01	2	18	2	N	2200	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	01	3	40	2	P	660	FD	90	0	CW	5	0	HW	5	0		0	0	0.85	0.95	1.00	1.00
CWHds1	02	1	75	2	P	528	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	02	2	25	2	N	880	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	03	1	70	2	P	1309	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	03	2	30	2	N	2200	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	04	1	70	2	P	1386	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	04	2	30	2	N	2200	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	05	1	42	2	P	1386	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	05	2	18	2	N	2200	FD	85	0	CW	10	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	05	3	40	2	P	660	FD	90	0	CW	5	0	HW	5	0		0	0	0.85	0.95	1.00	1.00

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp 1	Pct 1 (%)	Gain1 (%)	Spp2	Pct2 (%)	Gain2 (%)	Spp3	Pct3 (%)	Gain3 (%)	Spp4	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1 ^a	M2 ^b
CWHds1	06	1	70	2	P	1386	FD	60	0	CW	35	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	06	2	30	2	N	2200	FD	60	0	CW	35	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	07	1	70	2	P	1386	FD	60	0	CW	35	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	07	2	30	2	N	2200	FD	60	0	CW	35	0	HW	5	0		0	0	0.85	0.95	1.04	1.00
CWHds1	08	1	47	2	P	1386	AC	70	0	DR	15	0	CW	10	0	FD	5	0	0.85	0.95	1.00	1.00
CWHds1	08	2	53	2	N	3300	AC	70	0	DR	15	0	CW	10	0	FD	5	0	0.85	0.95	1.00	1.00
CWHds1	09	1	47	2	P	1386	AC	70	0	DR	20	0	CW	5	0	HW	5	0	0.85	0.95	1.00	1.00
CWHds1	09	2	53	2	N	3300	AC	70	0	DR	20	0	CW	5	0	HW	5	0	0.85	0.95	1.00	1.00
CWHds1	11	1	75	2	P	561	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	11	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	12	1	75	2	P	561	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	12	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	20	1	75	2	P	528	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHds1	20	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	01	1	45	2	P	1463	FD	70	0	CW	10	0	HW	10	0	BA	10	0	0.85	0.95	1.06	0.98
CWHms1m	01	2	35	2	N	2750	FD	70	0	CW	10	0	HW	10	0	BA	10	0	0.85	0.95	1.06	0.98
CWHms1m	01	3	8	2	P	1463	FD	40	0	BA	25	0	CW	20	0	HW	15	0	0.85	0.95	1.05	1.00
CWHms1m	01	4	12	2	N	3850	FD	40	0	BA	25	0	CW	20	0	HW	15	0	0.85	0.95	1.05	1.00
CWHms1m	02	1	75	2	P	528	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	02	2	25	2	N	880	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	03	1	70	2	P	1386	FD	60	0	CW	20	0	HW	10	0	BA	10	0	0.85	0.95	1.04	1.00
CWHms1m	03	2	30	2	N	2200	FD	60	0	CW	20	0	HW	10	0	BA	10	0	0.85	0.95	1.04	1.00
CWHms1m	04	1	45	2	P	1463	FD	70	0	CW	10	0	HW	10	0	BA	10	0	0.85	0.95	1.06	0.98
CWHms1m	04	2	35	2	N	2750	FD	70	0	CW	10	0	HW	10	0	BA	10	0	0.85	0.95	1.06	0.98
CWHms1m	04	3	8	2	P	1463	FD	40	0	BA	25	0	CW	20	0	HW	15	0	0.85	0.95	1.05	1.00
CWHms1m	04	4	12	2	N	3850	FD	40	0	BA	25	0	CW	20	0	HW	15	0	0.85	0.95	1.05	1.00
CWHms1m	05	1	56	2	P	1463	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.06	0.98
CWHms1m	05	2	44	2	N	2750	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.06	0.98
CWHms1m	06	1	56	2	P	1463	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.06	0.98
CWHms1m	06	2	44	2	N	2750	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.06	0.98
CWHms1m	07	1	56	2	P	1463	CW	75	0	AC	10	0	BA	10	0	FD	5	0	0.85	0.95	1.06	0.98
CWHms1m	07	2	44	2	N	2750	CW	75	0	AC	10	0	BA	10	0	FD	5	0	0.85	0.95	1.06	0.98
CWHms1m	08	1	56	2	P	1463	CW	60	0	AC	20	0	BA	10	0	HW	10	0	0.85	0.95	1.06	0.98
CWHms1m	08	2	44	2	N	2750	CW	60	0	AC	20	0	BA	10	0	HW	10	0	0.85	0.95	1.06	0.98
CWHms1m	09	1	47	2	P	1463	CW	60	0	AC	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	09	2	53	2	N	3300	CW	60	0	AC	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	10	1	75	2	P	594	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	10	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	11	1	75	2	P	594	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	11	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	20	1	75	2	P	528	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	20	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	01	1	49	2	P	1463	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.04	1.00
CWHms1s	01	2	21	2	N	2200	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.04	1.00
CWHms1s	01	3	5	2	P	1463	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	01	4	5	2	N	2970	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp 1	Pct 1 (%)	Gain1 (%)	Spp2	Pct2 (%)	Gain2 (%)	Spp3	Pct3 (%)	Gain3 (%)	Spp4	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1 ^a	M2 ^b
CWHms1s	01	5	20	2	P	660	FD	85	0	CW	5	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	02	1	75	2	P	528	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	02	2	25	2	N	880	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	03	1	78	2	P	1386	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	03	2	22	2	N	1980	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	04	1	49	2	P	1463	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.04	1.00
CWHms1s	04	2	21	2	N	2200	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.04	1.00
CWHms1s	04	3	5	2	P	1463	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	04	4	5	2	N	2970	FD	70	0	CW	20	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	04	5	20	2	P	660	FD	85	0	CW	5	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	05	1	70	2	P	1463	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.04	1.00
CWHms1s	05	2	30	2	N	2200	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.04	1.00
CWHms1s	06	1	70	2	P	1463	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.04	1.00
CWHms1s	06	2	30	2	N	2200	CW	50	0	HW	20	0	BA	20	0	FD	10	0	0.85	0.95	1.04	1.00
CWHms1s	07	1	47	2	P	1463	CW	75	0	AC	10	0	BA	10	0	FD	5	0	0.85	0.95	1.00	1.00
CWHms1s	07	2	53	2	N	3300	CW	75	0	AC	10	0	BA	10	0	FD	5	0	0.85	0.95	1.00	1.00
CWHms1s	08	1	47	2	P	1463	CW	60	0	AC	20	0	BA	10	0	HW	10	0	0.85	0.95	1.00	1.00
CWHms1s	08	2	53	2	N	3300	CW	60	0	AC	20	0	BA	10	0	HW	10	0	0.85	0.95	1.00	1.00
CWHms1s	09	1	47	2	P	1463	CW	60	0	AC	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1s	09	2	53	2	N	3300	CW	60	0	AC	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1s	10	1	75	2	P	594	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	10	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	11	1	75	2	P	594	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	11	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	20	1	75	2	P	528	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHms1s	20	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	01	1	45	2	P	1386	FD	80	0	CW	10	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	01	2	55	2	N	3410	FD	80	0	CW	10	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	02	1	75	2	P	528	FD	60	0	PL	30	0	HW	10	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	02	2	25	2	N	880	FD	60	0	PL	30	0	HW	10	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	03	1	56	2	P	1309	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.06	0.98
CWHvm1	03	2	44	2	N	2750	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.06	0.98
CWHvm1	04	1	93	2	P	1309	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	04	2	7	2	N	1650	FD	70	0	CW	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	05	1	47	2	P	1386	FD	80	0	CW	10	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	05	2	53	2	N	3300	FD	80	0	CW	10	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	06	1	47	2	P	1386	FD	60	0	CW	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	06	2	53	2	N	3300	FD	60	0	CW	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	07	1	47	2	P	1386	CW	60	0	FD	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	07	2	53	2	N	3300	CW	60	0	FD	30	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHvm1	14	1	75	2	P	594	CW	85	0	HW	10	0	PL	5	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	14	2	25	2	N	880	CW	85	0	HW	10	0	PL	5	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	20	1	75	2	P	528	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHvm1	20	2	25	2	N	880	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.19	0.91
CWHvm2	01	1	47	2	P	1386	FD	55	0	HW	20	0	BA	15	0	CW	10	0	0.85	0.95	1.00	1.00
CWHvm2	01	2	53	2	N	3300	FD	55	0	HW	20	0	BA	15	0	CW	10	0	0.85	0.95	1.00	1.00

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp 1	Pct 1 (%)	Gain1 (%)	Spp2	Pct2 (%)	Gain2 (%)	Spp3	Pct3 (%)	Gain3 (%)	Spp4	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1 ^a	M2 ^b
CWHvm2	02	1	75	2	P	528	FD	60	0	PL	30	0	HW	5	0	YC	5	0	0.85	0.95	1.19	0.91
CWHvm2	02	2	25	2	N	880	FD	60	0	PL	30	0	HW	5	0	YC	5	0	0.85	0.95	1.19	0.91
CWHvm2	03	1	56	2	P	1309	FD	55	0	HW	20	0	BA	15	0	CW	10	0	0.85	0.95	1.06	0.98
CWHvm2	03	2	44	2	N	2750	FD	55	0	HW	20	0	BA	15	0	CW	10	0	0.85	0.95	1.06	0.98
CWHvm2	07	1	47	2	P	1386	FD	40	0	CW	20	0	HW	20	0	BA	20	0	0.85	0.95	1.00	1.00
CWHvm2	07	2	53	2	N	3300	FD	40	0	CW	20	0	HW	20	0	BA	20	0	0.85	0.95	1.00	1.00
CWHvm2	20	1	75	2	P	528	CW	90	0	HW	10	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91
CWHvm2	20	2	25	2	N	880	CW	90	0	HW	10	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm1	01	1	40	2	P	1386	BA	70	0	HM	20	0	YC	10	0	0	0	0	0.85	0.95	1.05	1.00
MHmm1	01	2	60	2	N	3850	BA	70	0	HM	20	0	YC	10	0	0	0	0	0.85	0.95	1.05	1.00
MHmm1	02	1	60	2	P	561	YC	60	0	HM	30	0	BA	10	0	0	0	0	0.85	0.95	1.19	0.91
MHmm1	02	2	40	2	N	1100	YC	60	0	HM	30	0	BA	10	0	0	0	0	0.85	0.95	1.19	0.91
MHmm1	05	1	47	2	P	1386	BA	60	0	HM	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm1	05	2	53	2	N	3300	BA	60	0	HM	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm1	07	1	47	2	P	1386	BA	50	0	YC	30	0	HM	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm1	07	2	53	2	N	3300	BA	50	0	YC	30	0	HM	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm1	08	1	75	2	P	561	YC	70	0	BA	15	0	HM	15	0	0	0	0	0.85	0.95	1.19	0.91
MHmm1	08	2	25	2	N	880	YC	70	0	BA	15	0	HM	15	0	0	0	0	0.85	0.95	1.19	0.91
MHmm1			10																			
MHmm1	09	1	0	2	P	660	YC	70	0	BA	15	0	HM	15	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	01	1	14	2	P	836	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	01	2	56	2	N	4400	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	01	3	30	4	N	4400	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	02	1	19	2	P	836	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	02	2	51	2	N	3300	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	02	3	30	4	N	3300	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	03	1	14	2	P	836	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	03	2	56	2	N	4400	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	03	3	30	4	N	4400	BA	70	0	HM	15	0	YC	10	0	CW	5	0	0.85	0.95	1.00	1.00
MHmm2	04	1	14	2	P	836	BA	60	0	HM	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	04	2	56	2	N	4400	BA	60	0	HM	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	04	3	30	4	N	4400	BA	60	0	HM	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	05	1	14	2	P	836	BA	60	0	HM	30	0	YC	10	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	05	2	56	2	N	4400	BA	60	0	HM	30	0	YC	10	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	05	3	30	4	N	4400	BA	60	0	HM	30	0	YC	10	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	06	1	19	2	P	836	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	06	2	51	2	N	3300	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	06	3	30	4	N	3300	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	07	1	19	2	P	836	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	07	2	51	2	N	3300	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	07	3	30	4	N	3300	HM	60	0	BA	20	0	YC	20	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	08	1	42	2	P	594	HM	50	0	YC	50	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	08	2	28	2	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	08	3	30	4	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0	0.85	0.95	1.00	1.00
MHmm2	09	1	42	2	P	594	HM	50	0	YC	50	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	09	2	28	2	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0	0.85	0.95	1.19	0.91

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp 1 (%)	Pct 1 (%)	Gain1	Spp2 (%)	Pct2 (%)	Gain2 (%)	Spp3 (%)	Pct3 (%)	Gain3 (%)	Spp4 (%)	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1 ^a	M2 ^b
MHmm2	09	3	30	4	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0.85	0.95	1.00	1.00	

^{a,b} Definitions of M1 and M2 are found in section 4.2.3.

Table 17. Silviculture regimes for existing PHR stands (1993 - 2001) and future PHR stands.

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp1 (%)	Pct1 (%)	Gain1	Spp2 (%)	Pct2 (%)	Gain2 (%)	Spp3 (%)	Pct3 (%)	Gain3 (%)	Spp4 (%)	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1	M2
CWHDm	01	1	50	1	P	1089	FD	80	2	CW	15	2	HW	5	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	01	2	40	1	N	2200	FD	80	0	CW	15	0	HW	5	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	01	3	10	1	P	880	FD	85	2	CW	10	2	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	02	1	100	1	P	660	FD	65	2	PL	30	0	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	03	1	50	1	P	935	FD	80	2	CW	10	2	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	03	2	50	1	N	2200	FD	80	0	CW	10	0	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	04	1	50	1	P	935	FD	80	2	CW	10	2	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	04	2	50	1	N	2200	FD	80	0	CW	10	0	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	05	1	50	1	P	1089	FD	80	2	CW	15	2	HW	5	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	05	2	40	1	N	2200	FD	80	0	CW	15	0	HW	5	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	05	3	10	1	P	880	FD	85	2	CW	10	2	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	07	1	55	1	P	1089	CW	80	2	FD	10	2	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	07	2	45	1	N	2200	CW	80	0	FD	10	0	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHDm	08	1	50	1	P	990	CW	70	2	FD	15	2	HW	10	0	SS	5	0	0.85	0.95	1.09	0.97
CWHDm	08	2	50	1	N	2200	CW	70	0	FD	15	0	HW	10	0	SS	5	0	0.85	0.95	1.09	0.97
CWHDm	09	1	100	1	P	1100	CW	90	2	BG	10	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	10	1	100	1	P	1100	CW	90	2	BG	10	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	12	1	100	1	P	660	CW	80	2	HW	20	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
CWHDm	20	1	75	1	P	528	CW	90	2	HW	10	0	0	0	0	0	0	0.85	0.95	1.19	0.91	
CWHDm	20	2	25	1	N	880	CW	90	0	HW	10	0	0	0	0	0	0	0.85	0.95	1.19	0.91	
CWHds1	01	1	35	1	P	1089	FD	70	2	CW	20	0	HW	10	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	01	2	45	1	N	2750	FD	70	0	CW	20	0	HW	10	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	01	3	20	1	P	880	FD	80	2	CW	15	0	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	02	1	100	1	P	660	FD	50	2	PL	50	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	03	1	50	1	P	935	FD	70	2	HW	20	0	CW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	03	2	50	1	N	2200	FD	70	0	HW	20	0	CW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	04	1	50	1	P	935	FD	70	2	HW	20	0	CW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	04	2	50	1	N	2200	FD	70	0	HW	20	0	CW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	05	1	35	1	P	1089	FD	70	2	CW	20	0	HW	10	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	05	2	45	1	N	2750	FD	70	0	CW	20	0	HW	10	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	05	3	20	1	P	880	FD	80	2	CW	15	0	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	06	1	55	1	P	1089	CW	60	0	FD	30	2	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	06	2	45	1	N	2200	CW	60	0	FD	30	0	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	07	1	55	1	P	1089	CW	60	0	FD	30	2	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	07	2	45	1	N	2200	CW	60	0	FD	30	0	HW	10	0	0	0	0.85	0.95	1.09	0.97	
CWHds1	08	1	33	1	P	990	CW	90	0	BG	10	0	0	0	0	0	0	0.85	0.95	1.05	1.00	
CWHds1	08	2	67	1	N	3300	CW	90	0	BG	10	0	0	0	0	0	0	0.85	0.95	1.05	1.00	
CWHds1	09	1	33	1	P	990	CW	90	0	BG	10	0	0	0	0	0	0	0.85	0.95	1.05	1.00	

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp1 (%)	Gain1 (%)	Spp2 (%)	Pct2 (%)	Gain2 (%)	Spp3 (%)	Pct3 (%)	Gain3 (%)	Spp4 (%)	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1	M2	
CWHds1	09	2	67	1	N	3300	CW	90	0	BG	10	0		0	0	0	0.85	0.95	1.05	1.00		
CWHds1	10	1	20	1	P	935	AC	80	0	DR	15	0	CW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	10	2	80	1	N	5500	AC	80	0	DR	15	0	CW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	11	1	100	1	P	880	CW	80	0	PL	15	0	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	12	1	100	1	P	660	CW	95	0	HW	5	0		0	0	0	0	0.85	0.95	1.00	1.00	
CWHds1	20	1	100	1	P	660	CW	90	0	HW	10	0		0	0	0	0	0.85	0.95	1.00	1.00	
CWHms1m	01	1	37	1	P	1089	FD	40	2	CW	30	0	BA	20	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	01	2	63	1	N	3300	FD	40	0	CW	30	0	BA	20	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	02	1	50	1	P	935	FD	40	2	PL	35	0	YC	20	0	PW	5	0	0.85	0.95	1.09	0.97
CWHms1m	02	2	50	1	N	2200	FD	40	0	PL	35	0	YC	20	0	PW	5	0	0.85	0.95	1.09	0.97
CWHms1m	03	1	55	1	P	1029	FD	50	2	CW	30	0	YC	15	0	PW	5	0	0.85	0.95	1.09	0.97
CWHms1m	03	2	45	1	N	2200	FD	50	0	CW	30	0	YC	15	0	PW	5	0	0.85	0.95	1.09	0.97
CWHms1m	04	1	37	1	P	1089	FD	30	2	CW	30	0	BA	30	0	HW	10	0	0.85	0.95	1.05	1.00
CWHms1m	04	2	63	1	N	3300	FD	30	0	CW	30	0	BA	30	0	HW	10	0	0.85	0.95	1.05	1.00
CWHms1m	05	1	37	1	P	1089	CW	40	0	BA	35	0	FD	15	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	05	2	63	1	N	3300	CW	40	0	BA	35	0	FD	15	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	06	1	37	1	P	1089	CW	40	0	BA	35	0	FD	15	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	06	2	63	1	N	3300	CW	40	0	BA	35	0	FD	15	0	YC	10	0	0.85	0.95	1.05	1.00
CWHms1m	07	1	40	1	P	990	CW	70	0	BA	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	07	2	60	1	N	2750	CW	70	0	BA	20	0	HW	10	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	08	1	32	1	P	792	CW	70	0	BA	25	0	HW	5	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	08	2	68	1	N	2750	CW	70	0	BA	25	0	HW	5	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	09	1	25	1	P	935	AC	80	0	DR	15	0	CW	5	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	09	2	75	1	N	4400	AC	80	0	DR	15	0	CW	5	0		0	0	0.85	0.95	1.00	1.00
CWHms1m	10	1	75	1	P	561	CW	70	0	HW	15	0	YC	15	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	10	2	25	1	N	880	CW	70	0	HW	15	0	YC	15	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	11	1	75	1	P	561	CW	80	0	YC	15	0	HW	5	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	11	2	25	1	N	880	CW	80	0	YC	15	0	HW	5	0		0	0	0.85	0.95	1.19	0.91
CWHms1m	20	1	100	1	P	660	CW	90	0	HW	10	0		0	0		0	0	0.85	0.95	1.00	1.00
CWHms1s	01	1	29	1	P	1089	FD	80	2	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.05	1.00
CWHms1s	01	2	51	1	N	3300	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.05	1.00
CWHms1s	01	3	20	1	P	990	FD	85	2	CW	5	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	02	1	50	1	P	935	FD	60	2	PL	40	0		0	0		0	0	0.85	0.95	1.09	0.97
CWHms1s	02	2	50	1	N	2200	FD	60	0	PL	40	0		0	0		0	0	0.85	0.95	1.09	0.97
CWHms1s	03	1	55	1	P	1029	FD	75	2	CW	20	0	HW	5	0		0	0	0.85	0.95	1.09	0.97
CWHms1s	03	2	45	1	N	2200	FD	75	0	CW	20	0	HW	5	0		0	0	0.85	0.95	1.09	0.97
CWHms1s	04	1	29	1	P	1089	FD	80	2	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.05	1.00
CWHms1s	04	2	51	1	N	3300	FD	80	0	CW	10	0	HW	5	0	BA	5	0	0.85	0.95	1.05	1.00
CWHms1s	04	3	20	1	P	990	FD	85	2	CW	5	0	HW	5	0	BA	5	0	0.85	0.95	1.00	1.00
CWHms1s	05	1	37	1	P	1089	CW	50	0	FD	30	2	HW	10	0	BA	10	0	0.85	0.95	1.05	1.00
CWHms1s	05	2	63	1	N	3300	CW	50	0	FD	30	0	HW	10	0	BA	10	0	0.85	0.95	1.05	1.00
CWHms1s	06	1	37	1	P	1089	CW	50	0	FD	30	2	HW	10	0	BA	10	0	0.85	0.95	1.05	1.00
CWHms1s	06	2	63	1	N	3300	CW	50	0	FD	30	0	HW	10	0	BA	10	0	0.85	0.95	1.05	1.00
CWHms1s	07	1	40	1	P	990	CW	90	0	BA	10	0		0	0		0	0	0.85	0.95	1.00	1.00
CWHms1s	07	2	60	1	N	2750	CW	90	0	BA	10	0		0	0		0	0	0.85	0.95	1.00	1.00
CWHms1s	08	1	27	1	P	792	CW	90	0	BA	10	0		0	0		0	0	0.85	0.95	1.00	1.00

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp1 (%)	Gain1 (%)	Spp2 (%)	Pct2 (%)	Gain2 (%)	Spp3 (%)	Pct3 (%)	Gain3 (%)	Spp4 (%)	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1	M2	
CWHms1s	08	2	73	1	N	3300	CW	90	0	BA	10	0	0	0	0	0	0.85	0.95	1.00	1.00		
CWHms1s	10	1	75	1	P	561	CW	80	0	YC	10	0	HW	10	0	0	0	0.85	0.95	1.19	0.91	
CWHms1s	10	2	25	1	N	880	CW	80	0	YC	10	0	HW	10	0	0	0	0.85	0.95	1.19	0.91	
CWHms1s	11	1	75	1	P	561	CW	80	0	HW	15	0	YC	5	0	0	0	0.85	0.95	1.19	0.91	
CWHms1s	11	2	25	1	N	880	CW	80	0	HW	15	0	YC	5	0	0	0	0.85	0.95	1.19	0.91	
CWHms1s	20	1	100	1	P	660	CW	90	0	HW	10	0	0	0	0	0	0.85	0.95	1.00	1.00		
CWHvm1	01	1	33	1	P	1089	FD	70	2	CW	20	2	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	01	2	57	1	N	3300	FD	70	0	CW	20	0	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	01	3	10	1	P	880	FD	80	2	CW	15	2	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHvm1	02	1	100	1	P	660	FD	50	2	PL	40	0	HW	10	0	0	0	0.85	0.95	1.00	1.00	
CWHvm1	03	1	33	1	P	935	FD	70	2	HW	20	0	CW	10	2	0	0	0.85	0.95	1.05	1.00	
CWHvm1	03	2	67	1	N	3300	FD	70	0	HW	20	0	CW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	04	1	33	1	P	935	FD	70	2	HW	20	0	CW	10	2	0	0	0.85	0.95	1.05	1.00	
CWHvm1	04	2	67	1	N	3300	FD	70	0	HW	20	0	CW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	05	1	33	1	P	1089	FD	70	2	CW	20	2	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	05	2	57	1	N	3300	FD	70	0	CW	20	0	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	05	3	10	1	P	880	FD	80	2	CW	15	2	HW	5	0	0	0	0.85	0.95	1.00	1.00	
CWHvm1	06	1	37	1	P	1089	CW	80	2	FD	10	2	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	06	2	63	1	N	3300	CW	80	0	FD	10	0	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	07	1	37	1	P	1089	CW	80	2	FD	10	2	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	07	2	63	1	N	3300	CW	80	0	FD	10	0	HW	10	0	0	0	0.85	0.95	1.05	1.00	
CWHvm1	14	1	100	1	P	660	CW	90	2	HW	5	0	PL	5	0	0	0	0.85	0.95	1.00	1.00	
CWHvm1	20	1	100	1	P	660	CW	90	2	HW	10	0	0	0	0	0	0.85	0.95	1.00	1.00		
CWHvm2	01	1	37	1	P	1089	FD	55	2	CW	20	2	BA	15	0	HW	10	0	0.85	0.95	1.05	1.00
CWHvm2	01	2	63	1	N	3300	FD	55	0	CW	20	0	BA	15	0	HW	10	0	0.85	0.95	1.05	1.00
CWHvm2	02	1	75	1	P	561	FD	45	2	PL	40	0	HW	10	0	YC	5	0	0.85	0.95	1.19	0.91
CWHvm2	02	2	25	1	N	880	FD	45	0	PL	40	0	HW	10	0	YC	5	0	0.85	0.95	1.19	0.91
CWHvm2	03	1	100	1	P	880	FD	45	2	CW	30	2	HW	20	0	YC	5	0	0.85	0.95	1.00	1.00
CWHvm2	07	1	37	1	P	1089	CW	70	2	BA	15	0	HW	10	0	YC	5	0	0.85	0.95	1.05	1.00
CWHvm2	07	2	63	1	N	3300	CW	70	0	BA	15	0	HW	10	0	YC	5	0	0.85	0.95	1.05	1.00
CWHvm2	20	1	100	1	P	660	CW	90	2	HW	10	0	0	0	0	0	0.85	0.95	1.00	1.00		
MHm1	01	1	17	1	P	594	BA	70	0	HM	20	0	YC	10	0	0	0	0.85	0.95	1.00	1.00	
MHm1	01	2	83	1	N	3850	BA	70	0	HM	20	0	YC	10	0	0	0	0.85	0.95	1.00	1.00	
MHm1	02	1	40	1	P	594	YC	60	0	HM	30	0	BA	10	0	0	0	0.85	0.95	1.15	0.93	
MHm1	02	2	60	1	N	1650	YC	60	0	HM	30	0	BA	10	0	0	0	0.85	0.95	1.15	0.93	
MHm1	05	1	17	1	P	594	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00	
MHm1	05	2	83	1	N	3850	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00	
MHm1	07	1	17	1	P	594	BA	50	0	YC	30	0	HM	20	0	0	0	0.85	0.95	1.00	1.00	
MHm1	07	2	83	1	N	3850	BA	50	0	YC	30	0	HM	20	0	0	0	0.85	0.95	1.00	1.00	
MHm1	08	1	30	1	P	594	YC	80	0	HM	20	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
MHm1	08	2	70	1	N	2200	YC	80	0	HM	20	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
MHm1	09	1	30	1	P	594	YC	80	0	HM	20	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
MHm1	09	2	70	1	N	2200	YC	80	0	HM	20	0	0	0	0	0	0	0.85	0.95	1.00	1.00	
MHm2	01	1	20	1	P	792	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00	

Subzone	Site Series	Reg. No.	Reg. Pct.	Delay	Regen Type	TIPSY Density	Spp1 (%)	Gain1 (%)	Spp2 (%)	Pct2 (%)	Gain2 (%)	Spp3 (%)	Pct3 (%)	Gain3 (%)	Spp4 (%)	Pct4 (%)	Gain4 (%)	OAF1	OAF2	M1	M2
MHmm2	01	2	80	1	N	4400	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	02	1	27	1	P	748	HM	50	0	BA	30	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	02	2	73	1	N	3300	HM	50	0	BA	30	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	03	1	20	1	P	792	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	03	2	80	1	N	4400	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	04	1	20	1	P	792	BA	40	0	HM	35	0	YC	25	0	0	0	0.85	0.95	1.00	1.00
MHmm2	04	2	80	1	N	4400	BA	40	0	HM	35	0	YC	25	0	0	0	0.85	0.95	1.00	1.00
MHmm2	05	1	20	1	P	792	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	05	2	80	1	N	4400	BA	60	0	HM	20	0	YC	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	06	1	27	1	P	792	HM	60	0	YC	20	0	BA	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	06	2	73	1	N	3300	HM	60	0	YC	20	0	BA	20	0	0	0	0.85	0.95	1.00	1.00
MHmm2	07	1	27	1	P	792	BA	50	0	YC	25	0	HM	25	0	0	0	0.85	0.95	1.00	1.00
MHmm2	07	2	73	1	N	3300	BA	50	0	YC	25	0	HM	25	0	0	0	0.85	0.95	1.00	1.00
MHmm2	08	1	60	1	P	561	HM	50	0	YC	50	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	08	2	40	1	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	09	1	60	1	P	561	HM	50	0	YC	50	0	0	0	0	0	0	0.85	0.95	1.19	0.91
MHmm2	09	2	40	1	N	1100	HM	50	0	YC	50	0	0	0	0	0	0	0.85	0.95	1.19	0.91

APPENDIX IV – SUMMARY STATISTICS FOR AGGREGATED YIELD TABLES

Table 18. Summary statistics for the 50 largest aggregated yield tables.

Table ID	Area (ha)	Existing Conditions			Future Conditions			Existing Tables			Future Tables		
		Ldg. Spp.	SI Class ^a	Treated ^b	Ldg. Spp.	SI Class	Treated	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs)	Culm. Vol. (m ³ /ha)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs)	Culm. Vol. (m ³ /ha)
43	5,122	FD	28	0	FD	28	1	10.6	80	849	11.1	80	888
216	2,872	HW	N/A	0	FD	28	1	0.0	0		10.3	90	929
205	2,765	HW	N/A	0	BA	12	0	0.0	0		1.9	180	340
145	2,386	B	N/A	0	BA	12	0	0.0	0		1.9	180	344
201	2,127	FD	N/A	0	FD	28	1	0.0	0		10.4	80	829
16	1,955	FD	28	1	FD	28	1	10.9	80	875	10.9	80	875
159	1,417	B	N/A	0	FD	28	1	0.0	0		10.6	90	951
176	1,380	CW	N/A	0	FD	28	1	0.0	0		10.9	80	871
146	1,121	B	N/A	0	BA	16	0	0.0	0		3.1	140	438
118	1,090	FD	28	0	FD	28	1	6.6	80	530	12.2	70	852
144	998	B	N/A	0	BA	8	0	0.0	0		1.2	240	287
188	775	FD	N/A	0	FD	28	1	0.0	0		9.8	80	780
211	761	HW	N/A	0	CW	28	1	0.0	0		10.7	90	964
153	583	B	N/A	0	CW	28	1	0.0	0		11.2	90	1,007
104	539	FD	16	0	FD	28	1	3.1	100	308	11.2	80	898
42	438	FD	28	0	CW	28	1	10.6	80	846	11.6	90	1,046
173	391	CW	N/A	0	CW	28	1	0.0	0		11.3	90	1,013
206	300	HW	N/A	0	BA	16	0	0.0	0		3.4	140	479
28	299	BA	24	0	BA	24	0	6.8	110	746	6.8	110	746
12	281	CW	28	1	CW	28	1	11.1	90	1002	11.1	90	1,002
111	276	FD	20	0	FD	28	1	3.7	100	370	10.3	80	823
215	254	HW	N/A	0	FD	24	1	0.0	0		7.3	100	734
114	251	FD	24	0	FD	28	1	5.9	80	470	10.9	80	871
204	216	HW	N/A	0	BA	8	0	0.0	0		1.2	220	274
200	216	FD	N/A	0	FD	24	1	0.0	0		7.0	90	634
224	177	YC	N/A	0	FD	28	1	0.0	0		10.6	90	958
187	176	FD	N/A	0	FD	24	1	0.0	0		7.1	90	635
35	147	CW	28	0	CW	28	1	8.7	50	436	12.0	90	1,078
178	129	FD	N/A	0	FD	24	1	0.0	0		6.7	90	602
218	111	HW	N/A	0	HM	12	0	0.0	0		1.5	190	283
115	109	FD	28	0	CW	28	1	6.5	80	520	12.1	80	966
11	95	CW	28	0	CW	28	0	12.7	100	1272	12.7	100	1,272
30	88	BA	28	0	BA	28	0	9.8	90	878	9.8	90	884
8	85	BA	24	0	BA	24	0	6.6	110	721	6.6	110	721
160	82	B	N/A	0	HM	8	0	0.0	0		1.2	220	261
179	78	FD	N/A	0	FD	28	1	0.0	0		9.2	80	733
157	75	B	N/A	0	FD	24	1	0.0	0		7.5	100	751
95	75	FD	N/A	0	FD	28	1	0.2	230	56	11.3	80	905
123	73	HW	12	0	FD	28	1	2.2	140	313	10.4	80	833
25	71	BA	16	0	BA	16	0	2.8	150	420	2.8	150	414
175	64	CW	N/A	0	FD	24	1	0.0	0		7.7	100	765
198	58	FD	N/A	0	CW	28	1	0.0	0		11.5	90	1,036
75	58	BL	24	0	FD	28	1	5.8	80	467	9.2	90	826
130	58	HW	20	0	FD	28	1	5.3	80	420	10.4	90	932
59	57	BL	12	0	BA	12	0	2.5	150	379	2.3	170	384
161	56	B	N/A	0	HM	12	0	0.0	0		1.8	170	305
219	54	YC	N/A	0	BA	12	0	0.0	0		2.2	170	366
78	54	CW	16	0	FD	28	1	3.1	100	313	10.0	80	799
151	47	B	N/A	0	CW	24	1	0.0	0		8.5	100	854
100	45	FD	16	0	FD	28	1	1.6	90	140	10.2	70	717

^a Flat line yield tables for old natural stands were not assigned a site index.

^b Units to which genetic gain were applied are identified as "1", and no genetic gain are identified as "0".

APPENDIX V – SUBZONE SUMMARIES FOR FUTURE PHR STANDS

The summary statistics and average curves for each subzone are computed as the area-weighted average of all curves in the subzone.

Table 19. Future PHR yield table summary statistics by subzone.

Subzone	Area (ha)	THLB (%)	Average of Inputs			Average of Outputs		
			Avg. SI (m)	Est. Density	Species Composition	MAI (m ³ /ha/yr)	Culm. Age (yrs)	Culm. Vol. (m ³ /ha)
CWHms1m	11,459	38	29.1	2,241	Fd ₃₈ Cw ₃₂ Ba ₁₇ Yc ₁₁ Pw ₁	10.3	90	918
CWHms1s	7,609	25	32.2	2,025	Fd ₇₂ Cw ₁₈ Hw ₅ Ba ₄ Pl ₁	10.8	81	858
CWHds1	2,686	9	33.5	1,674	Fd ₆₁ Cw ₂₄ Hw ₁₁ Pl ₄ Bg ₁	11.7	80	903
CWHdm	375	1	34.4	1,447	Fd ₇₃ Cw ₁₇ Hw ₇ Pl ₃ Bg ₀	12.3	77	884
CWHvm1	312	1	37.2	2,238	Fd ₅₃ Cw ₃₃ Hw ₁₁ Pl ₂	15.5	82	1,070
CWHvm2	112	0	19.4	1,993	Cw ₃₉ Fd ₃₅ Hw ₁₂ Ba ₁₁ Yc ₂	5.2	127	545
MHmm2	7,873	26	12.9	3,457	Ba ₅₅ Hm ₂₄ Yc ₂₁	2.5	174	387
MHmm1	26	0	10.3	3,188	Ba ₆₄ Hm ₂₀ Yc ₁₆	1.5	207	294
All	30,453	100	26.2	2,441		8.6	109	764



TFL 38 – CWHms1m 12.5+ cm utilization

Table 20. Future PHR average *BatchTIPSY* input values in CWHms1m (12.5+ cm).

Attribute	Value
Subzone	CWHms1m
Util. (cm)	12.5
Area (ha)	11,459
Site Index (m)	29.1
Est. Density (sph)	2,241
Prop. of Cw	42
Prop. of Fd	39
Prop. of Hw	18
Prop. of PI	1
OAF1	0.85
OAF2	0.95

Table 21. Future PHR average culmination statistics by site series in CWHms1m (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	6,668	58	11.0	90	988
02	177	2	4.4	90	392
03	2,416	21	7.6	100	761
04	592	5	13.4	80	1,068
05	210	2	9.8	90	884
06	1,191	10	12.5	90	1,124
07	8	0	12.8	90	1,150
08	1	0	5.8	110	634
09	1	0	0.2	100	16
10	4	0	1.6	150	238
11	174	2	5.3	120	633
20	18	0	3.9	150	583
Avg.			10.3	90	918
Min.			0.2	80	16
Max.			13.4	150	1,278
SD.			2.0	8	137

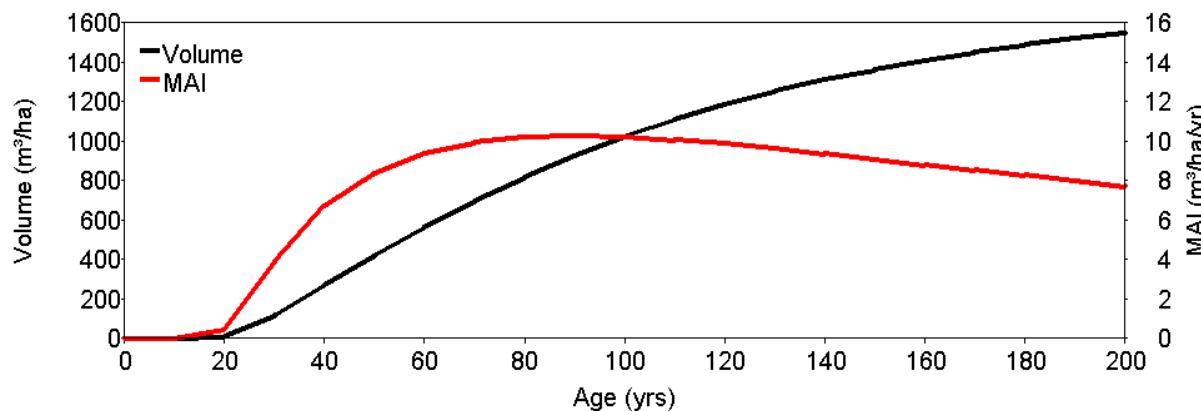


Figure 16. Future PHR volume and MAI over age curves for the CWHms1m (12.5+ cm).

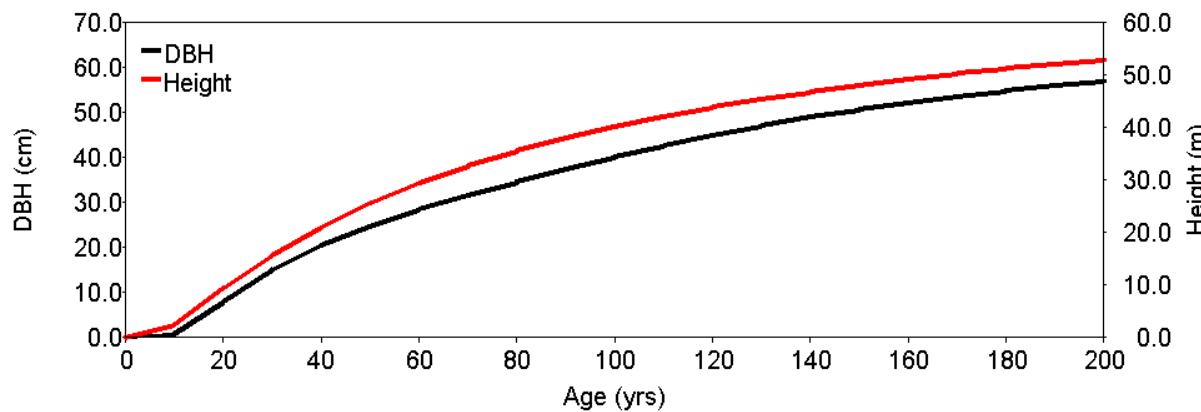


Figure 17. Future PHR DBH and height over age curves for the CWHms1m (12.5+ cm).



TFL 38 – CWHms1s 12.5+ cm utilization

Table 22. Future PHR average *BatchTIPSY* input values in CWHms1s (12.5+ cm).

Attribute	Value
Subzone	CWHms1s
Util. (cm)	12.5
Area (ha)	7,609
Site Index (m)	32.2
Est. Density (sph)	2,025
Prop. of Cw	18
Prop. of Fd	72
Prop. of Hw	9
Prop. of PI	1
OAF1	0.85
OAF2	0.95

Table 23. Future PHR average culmination statistics by site series in CWHms1s (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	3,964	52	11.5	80	922
02	165	2	3.8	80	307
03	1,784	23	8.2	90	735
04	837	11	14.0	70	982
05	39	1	9.4	90	845
06	461	6	12.0	90	1,081
07	237	3	12.9	100	1,286
08	11	0	6.3	100	635
10	1	0	1.6	150	233
11	68	1	5.2	120	627
20	41	1	3.8	140	537
Avg.			10.8	81	858
Min.			1.5	70	225
Max.			14.4	150	1,291
SD.			2.2	11	154

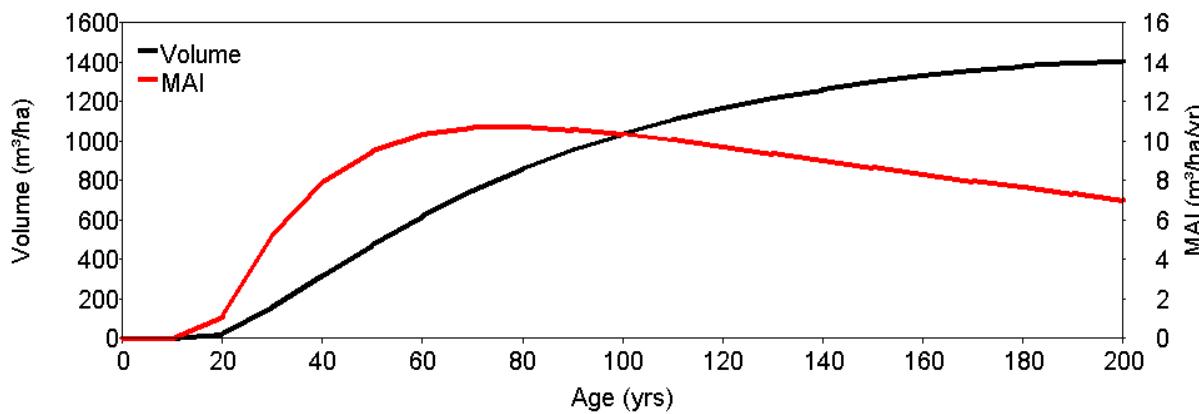


Figure 18. Future PHR volume and MAI over age curves for the CWHms1s (12.5+ cm).

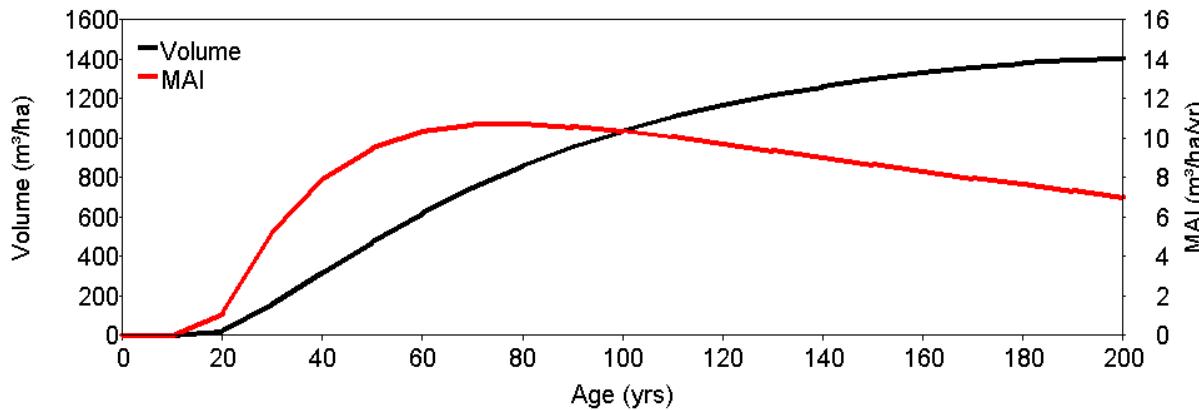


Figure 19. Future PHR DBH and height over age curves for the CWHms1s (12.5+ cm)

TFL 38 – CWHds1 12.5+ cm utilization

Table 24. Future PHR average *BatchTIPSY* input values in CWHds1 (12.5+ cm).

Attribute	Value
Subzone	CWHds1
Util. (cm)	12.5
Area (ha)	2,686
Site Index (m)	33.5
Est. Density (sph)	1,674
Prop. of Cw	24
Prop. of Fd	61
Prop. of Hw	12
Prop. of PI	4
OAF1	0.85
OAF2	0.95

Table 25. Future PHR average culmination statistics by site series in CWHds1 (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	947	35	12.2	70	852
02	188	7	4.4	90	393
03	704	26	9.3	80	745
04	58	2	9.3	80	745
05	376	14	18.1	60	1,087
06	14	1	10.9	90	985
07	142	5	13.7	80	1,098
08	176	7	15.5	90	1,396
09	13	0	6.7	100	670
10	8	0	0.2	70	17
11	3	0	1.7	150	256
12	27	1	5.1	120	606
20	29	1	4.4	130	576
Avg.			11.7	80	903
Min.			0.2	60	17
Max.			18.3	150	1542
SD.			3.7	13	238

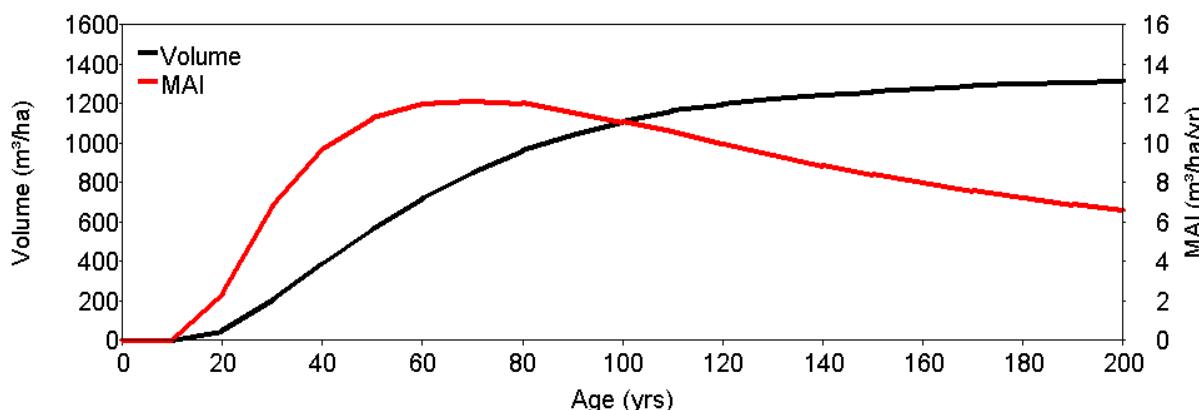


Figure 20. Future PHR volume and MAI over age curves for the CWHds1 (12.5+ cm).

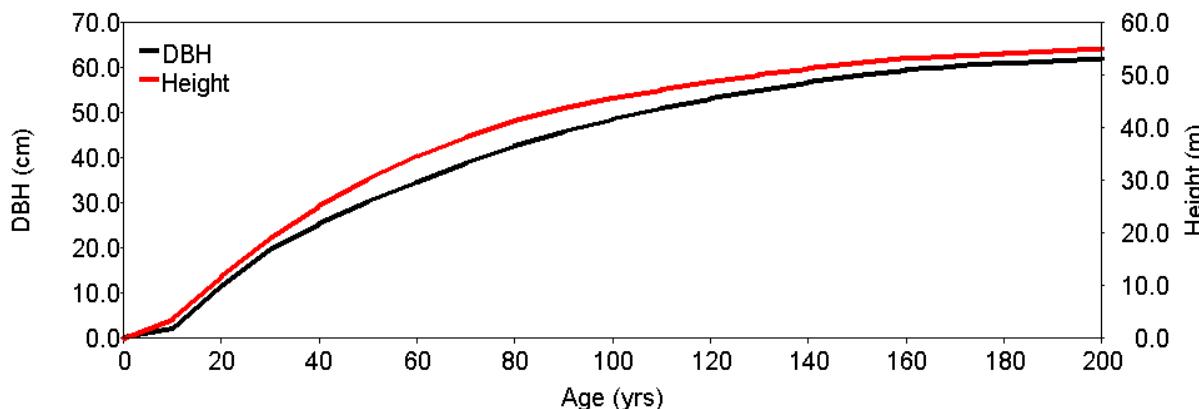


Figure 21. Future PHR DBH and height over age curves for the CWHds1 (12.5+ cm).



TFL 38 - CWHdm 12.5+ cm utilization

Table 26. Future PHR average *BatchTIPSY* input values in CWHdm (12.5+ cm).

Attribute	Value
Subzone	CWHdm
Util. (cm)	12.5
Area (ha)	375
Site Index (m)	34.4
Est. Density (sph)	1,447
Prop. of Cw	17
Prop. of Fd	73
Prop. of Hw	7
Prop. of PI	3
OAF1	0.85
OAF2	0.95

Table 27. Future PHR average culmination statistics by site series in CWHdm (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	113	30	15.4	70	1,080
02	38	10	3.1	100	314
03	129	34	8.9	90	798
04	8	2	11.9	70	834
05	58	16	19.0	60	1,140
07	22	6	14.9	80	1,188
08	4	1	14.6	90	1,313
09	2	0	11.0	90	994
10	1	0	3.5	130	456
20	1	0	8.6	110	942
Avg.			12.3	77	884
Min.			3.1	60	314
Max.			19.3	130	1,336
SD.			4.8	14	255

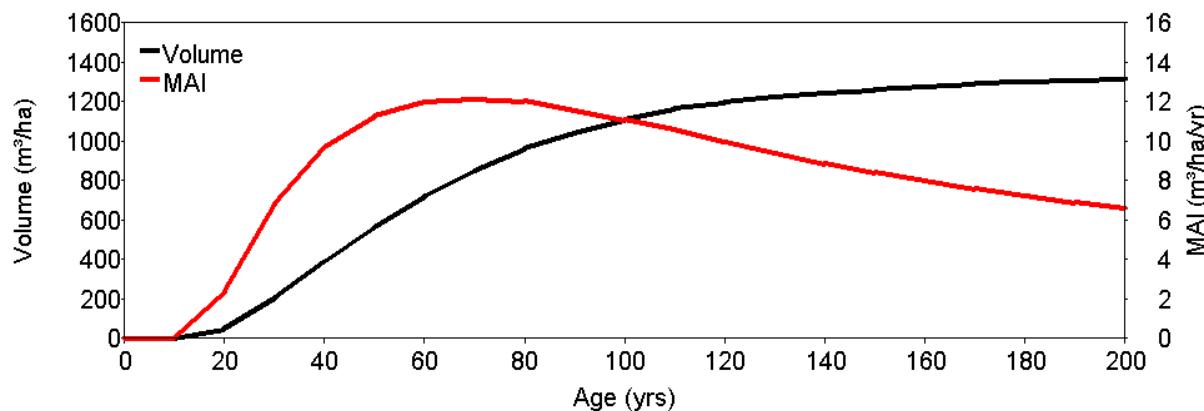


Figure 22. Future PHR volume and MAI over age curves for the CWHdm (12.5+ cm).

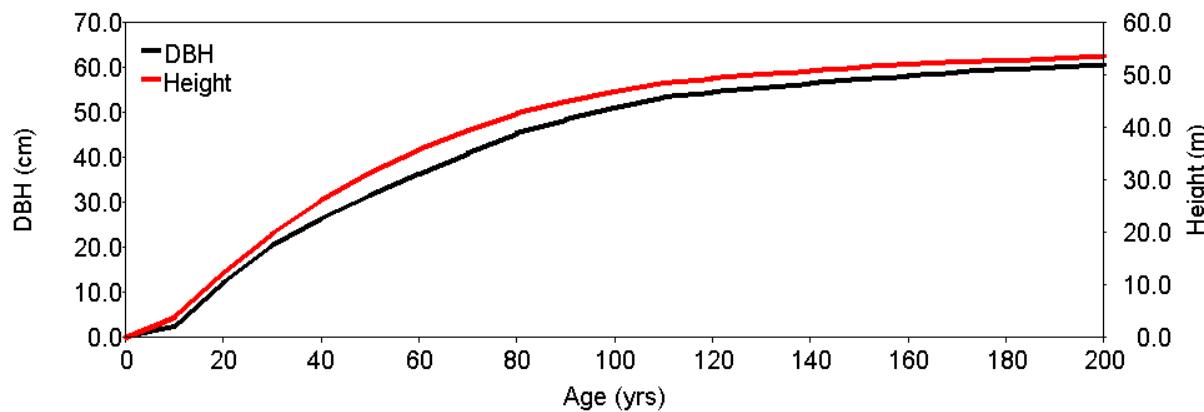


Figure 23. Future PHR DBH and height over age curves for the CWHdm (12.5+ cm).



TFL 38 – CWHvm1 12.5+ cm utilization

Table 28. Future PHR average *BatchTIPSY* input values in CWHvm1 (12.5+ cm).

Attribute	Value
Subzone	CWHvm1
Util. (cm)	12.5
Area (ha)	312
Site Index (m)	37.2
Est. Density (sph)	2,238
Prop. of Cw	33
Prop. of Fd	53
Prop. of Hw	11
Prop. of PI	2
OAF1	0.85
OAF2	0.95

Table 29. Future PHR average culmination statistics by site series in CWHvm1 (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	108	35	20.3	60	1,220
02	17	5	0.6	180	107
03	53	17	16.1	70	1,127
04	2	1	16.1	70	1,127
05	51	16	20.3	60	1,220
06	1	0	9.4	100	937
07	68	22	9.4	100	937
14	5	2	6.0	130	786
20	8	2	3.8	140	535
Avg.			15.5	82	1,070
Min.			0.6	60	107
Max.			20.8	180	1,246
SD.			6.1	32	269

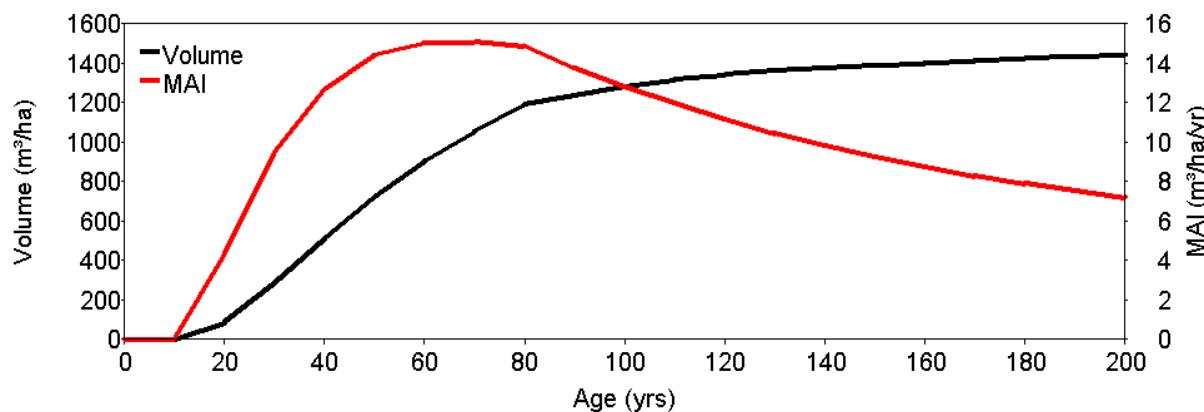


Figure 24. Future PHR volume and MAI over age curves for the CWHvm1 (12.5+ cm).

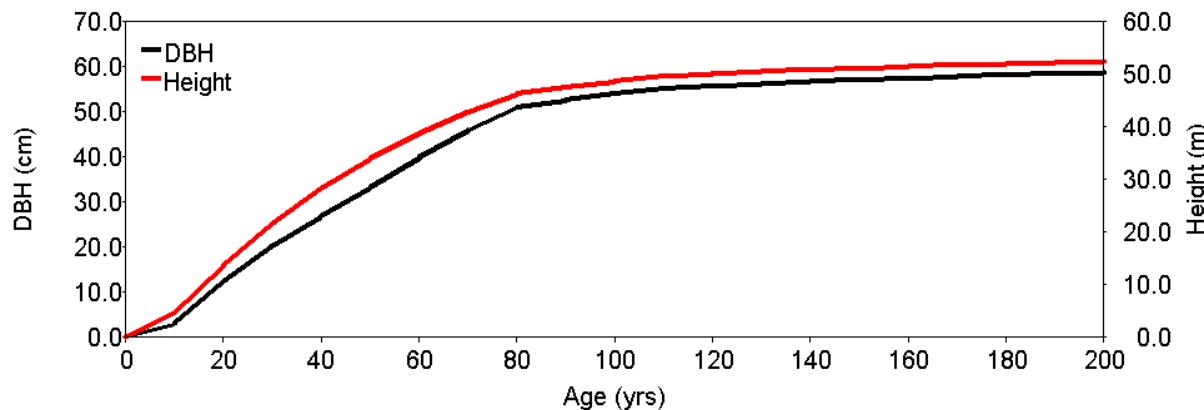


Figure 25. Future PHR DBH and height over age curves for the CWHvm1 (12.5+ cm).

TFL 38 – CWHvm2 12.5+ cm utilization

Table 30. Future PHR average *BatchTIPSY* input values in CWHvm2 (12.5+ cm).

Attribute	Value
Subzone	CWHvm2
Util. (cm)	12.5
Area (ha)	112
Site Index (m)	19.4
Est. Density (sph)	1,993
Prop. of Cw	42
Prop. of Fd	35
Prop. of Hw	23
OAF1	0.85
OAF2	0.95

Table 31. Future PHR average culmination statistics by site series in CWHvm2 (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI (m ³ /ha/yr)	Culm. Age (yrs.)	Culm. Vol. (m ³ /ha)
01	50	45	4.0	110	439
03	26	24	3.2	120	385
07	28	25	9.1	100	911
20	7	6	4.2	120	503
Avg.			5.2	127	545
Min.			0.1	80	15
Max.			14.7	290	1,325
SD.			4.4	36	361

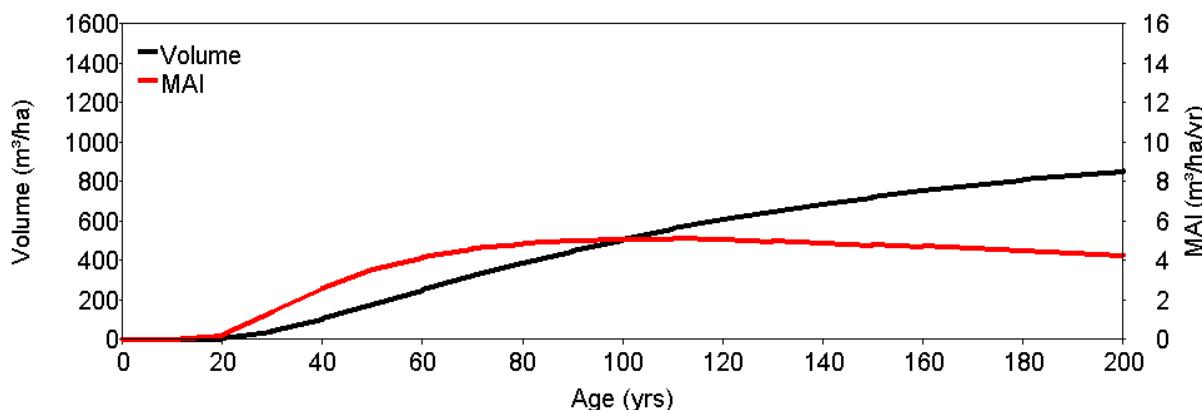


Figure 26. Future PHR volume and MAI over age curves for the CWHvm2 (12.5+ cm).

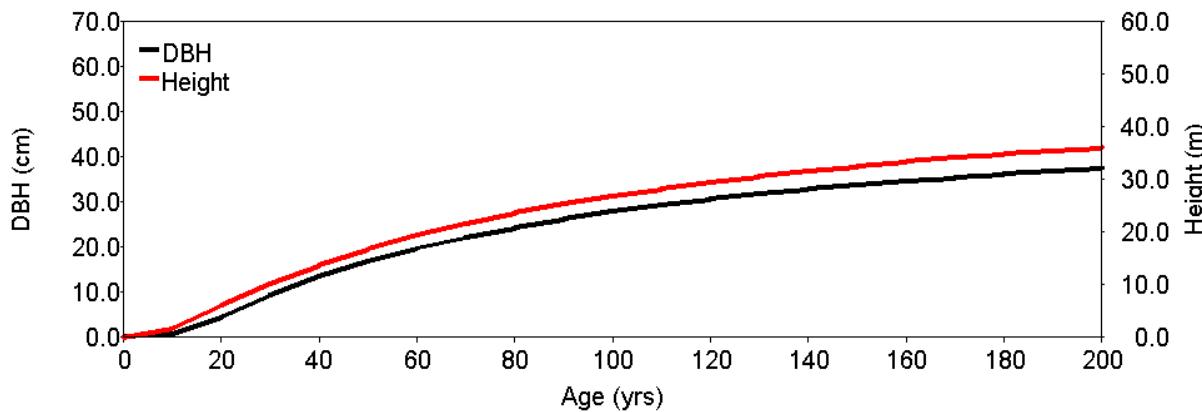


Figure 27. Future PHR DBH and height over age curves for the CWHvm2 (12.5+ cm).



TFL 38 – MHmm2 12.5+ cm utilization

Table 32. Future PHR average *BatchTIPSY* input values in MHmm2 (12.5+ cm).

Attribute	Value
Subzone	MHmm2
Util. (cm)	12.5
Area (ha)	7,873
Site Index (m)	12.9
Est. Density (sph)	3,457
Prop. of Cw	21
Prop. of Hw	79
OAF1	0.85
OAF2	0.95

Table 33. Future PHR average culmination statistics by site series in MHmm2 (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI ($m^3/ha/yr$)	Culm. Age (yrs.)	Culm. Vol. (m^3/ha)
01	5,957	76	2.4	160	379
02	659	8	2.1	160	332
03	8	0	1.6	190	310
04	140	2	2.8	140	396
05	289	4	2.7	140	380
06	41	1	1.9	170	321
07	683	9	2.4	140	341
08	5	0	1.1	170	191
09	91	1	1.9	140	261
Avg.			2.5	174	387
Min.			0.2	60	65
Max.			15.0	300	1,026
SD.			1.7	37	130

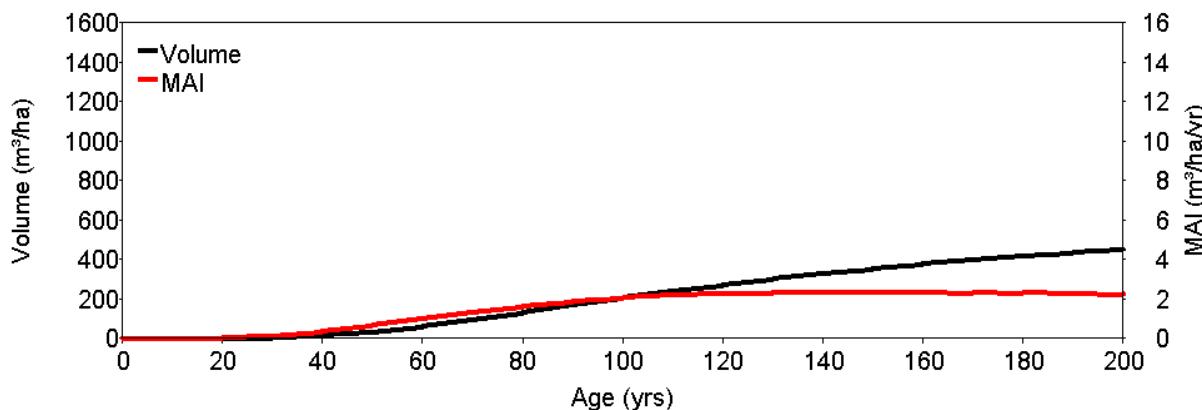


Figure 28. Future PHR volume and MAI over age curves for the MHmm2 (12.5+ cm).

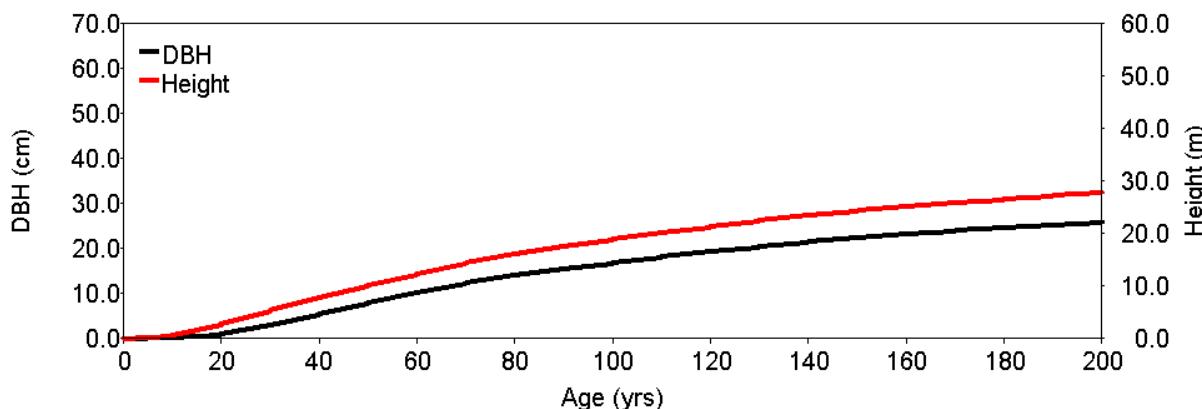


Figure 29. Future PHR DBH and height over age curves for the MHmm2 (12.5+ cm).



TFL 38 – MHmm1 12.5+ cm utilization

Table 34. Future PHR average *BatchTIPSY* input values in MHmm1 (12.5+ cm).

Attribute	Value
Subzone	MHmm1
Util. (cm)	12.5
Area (ha)	26
Site Index (m)	10.3
Est. Density (sph)	3,188
Prop. of Cw	16
Prop. of Hw	84
OAF1	0.85
OAF2	0.95

Table 35. Future PHR average culmination statistics by site series in MHmm1 (12.5+ cm).

Site Series	Area (ha)	Area (%)	Max. MAI ($m^3/ha/yr$)	Culm. Age (yrs.)	Culm. Vol. (m^3/ha)
01	19	73	1.4	210	302
02	1	3	1.3	170	226
05	6	22	1.5	200	309
09	1	2	0.8	230	184
Avg.			1.5	207	294
Min.			0.2	100	56
Max.			5.2	300	659
SD			0.4	28	50

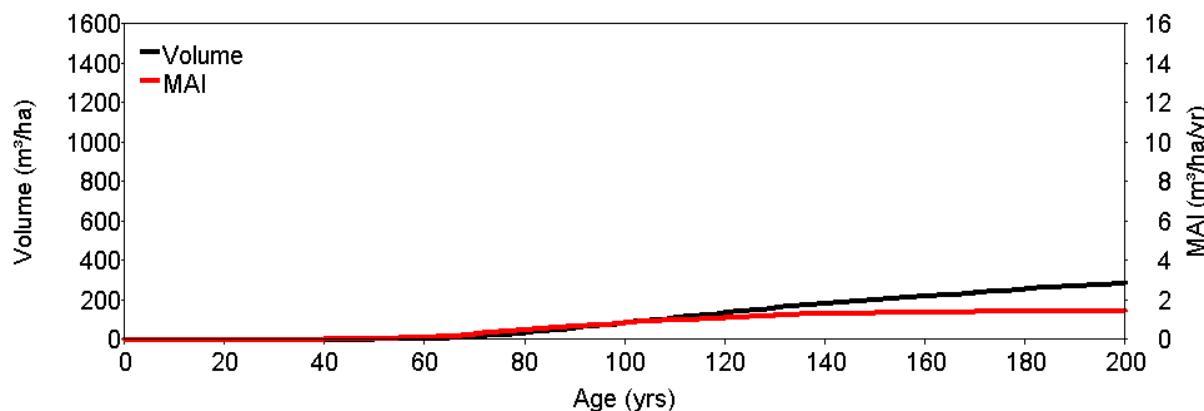


Figure 30. Future PHR volume and MAI over age curves for the MHmm1 (12.5+ cm).

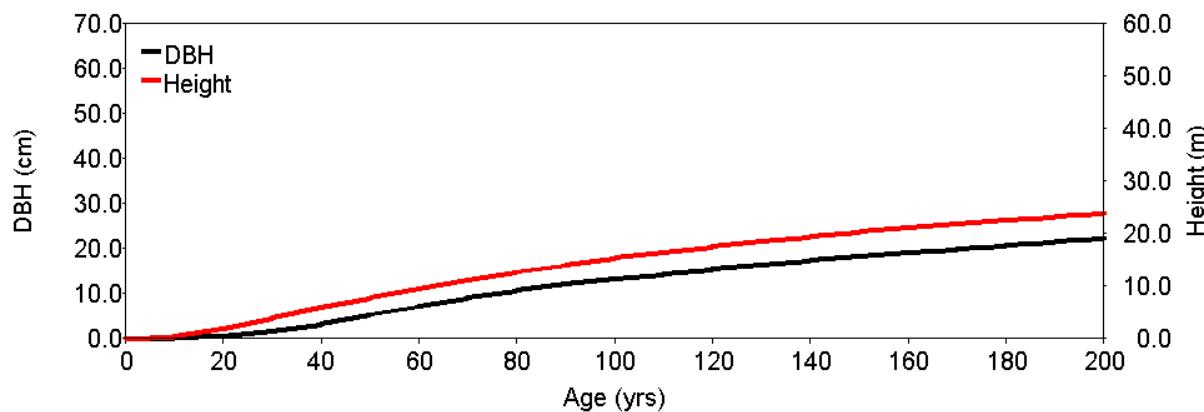


Figure 31. Future PHR DBH and height over age curves for the MHmm1 (12.5+ cm).

