
Timber Supply Analysis Report

*San Juan Woodlot Licence
South Island – Port Renfrew*

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Ministry of Forests and Range

Coast Forest Region

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San Juan Woodlot Licence – Port Renfrew

INTRODUCTION

The Ministry of Forests and Range (MFR)¹ has initiated the evaluation of harvest opportunities for proposed Community Forest Agreements (CFA) and Woodlot Licences (WL) in the Coast Forest Region previous to the advertisement and award of such tenures.

This report describes the data, methodology and results of the timber supply analysis for the proposed San Juan Woodlot Licence in the vicinity of Chemainus on Vancouver Island. The inventory data and the timber supply analysis information for this portion of the Tree Farm Licence (TFL 46) were provided by Mark Carter from the Teal – Jones Group, licensee of the TFL. It was intended to parallel the timber supply review for the TSA and, in discussion with the staff from the Forest Districts, derivate from the assumptions of the timber supply reviews where they were not applicable to the specific area or the management of woodlot licences.

The timber supply projection for this woodlot looks into the future for 250 years and due to inherent uncertainties of the data, process and assumptions, it should not be viewed as valid for that length of time. Further, it remains relevant only as long as the information upon it is based remains relevant.

Forest management objectives and practices are known to change over time and those changes will have an impact on the timber supply in both directions – increase or decrease. The management assumptions used in this report are based on general practices as they are commonly found in woodlot licences. Any future woodlot licensee of this woodlot licence needs to compare the information used in this timber supply analysis report with the actual landbase, inventory and management in order to determine if this analysis is still applicable to the San Juan Woodlot Licence.

¹ Previously the Ministry of Forests

WOODLOT DESCRIPTION

The San Juan Woodlot Licence is located within the South Island Forest District on the westcoast of Vancouver Island, northeast of Port Renfrew. The licence area consists of 1 contiguous parcel with a total area of 596.7 ha.

Almost all of the woodlot licence is located within the CWHvm1 biogeoclimatic subzone while only the most southern portion is located in the CWHvh1. The woodlot licence boundaries are adjoining in the south the Juan River and in the southeast Fairy Lake. The boundaries are mostly defined by administrative lines that run in cardinal directions.

The woodlot licence area is traversed by two major access roads to Port Renfrew and several other roads that lead to historic cut blocks. The woodlot licence includes 2 draft old growth management areas (OGMAs), which are # 252 and # 314. These OGMAs are placed completely over areas of potentially unstable terrain that had been identified and that occupies also a large portion outside of the OGMAs. Other restricted areas are non-productive (NP) areas such as rock, gravel pit, water and swamps. Further, there is a landscape polygon with a visual quality objective (VQO) of partial retention located in the southern portions (Travel Corridor #26).

50% of the woodlot area is occupied with Hw leading stands, 35% with Fd, 10% with Cw, 4% with Dr and 1% with Ba. The age class distribution based on the leading stand species is represented in Figure 1 below. 38% of the area is age class 61-80 years or older, most of it being Hw leading stands. Site indices range from 12 to 45 with a weighted average site index of 29.7.

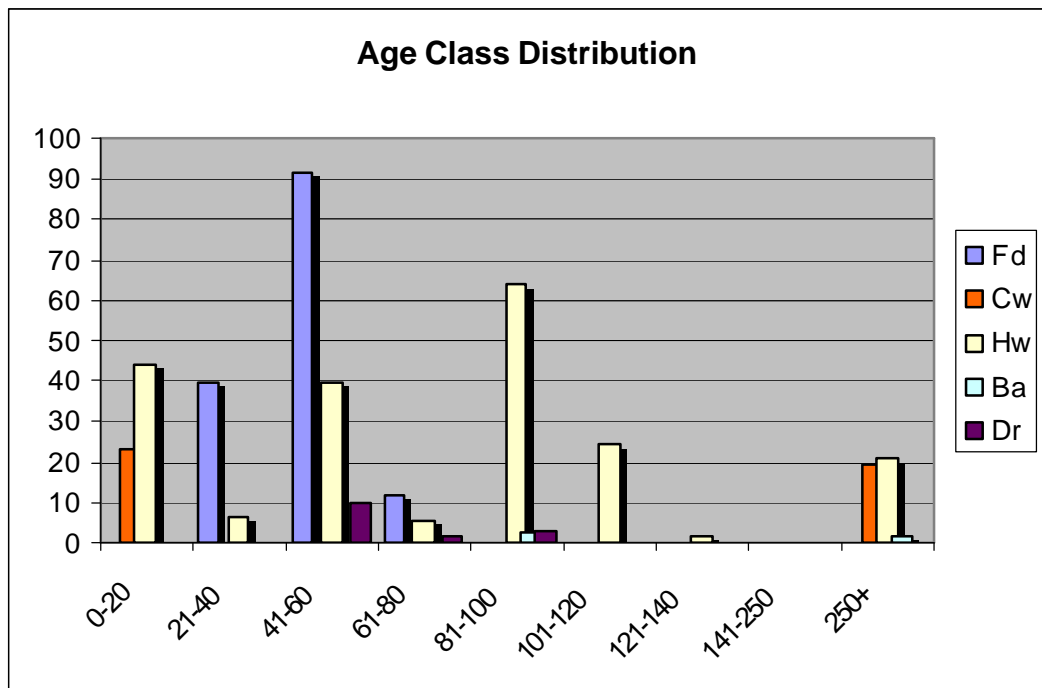


Figure 1: Current Age Class Distribution by Leading Species

A woodlot licence overview map is included Appendix 1.

SOURCE INFORMATION

The data and information for this analysis were provided by the licensee of TFL 46, the Teal – Jones Group in form of the 2001 inventory spatial dataset for the area of TFL 46. Further, the licensee provided the GIS layers for creeks, water, roads and information for recent harvest activities. The Ministry of Forests and Range made available pictures of OGMA and terrain hazard mapping, as well as stocking information for a recent cut block. Ministry staff further assisted with feed back on inventory and management assumptions.

Inventory

The data set was already projected to the year 2003 so that the stand ages had to be projected by 3 more years to the year 2006. Volume and stand heights did not need to be projected as those values were generated during the 'Woodlot for Windows' run from the inherent yield tables.

In the San Juan Woodlot Licence there is one harvest area (setting 2011), which had to be updated with stand ages and species composition according to the most likely stocking in this area.

Other modifications to the inventory database include the adjustment of crown closure of young stands and the replacement of species codes with surrogate species. The adjustment of the crown closure value is required for stands that are juvenile (less than 30 years old) and have not achieved a crown closure of 50% due to its age. The default crown closure values for the leading species were entered in those cases. Where the stand was 50 years or older and had not achieved a crown closure of 50% no adjustment was applied and other reasons for the low crown closure were assumed such as dispersed non-productive areas or extreme wet or dry site conditions.

The portion of the inventory database that was used for the timber yield calculation of managed stands in the future (2.+ rotation) was modified by replacing Ba with Hw (model limitation). Dr leading stands were kept as such as it is likely that Dr will be present in the future, even if hardwood conversion is a goal. Minor components of hardwoods were replaced with Cw to enable the individual stands to participate in the managed stand model.

Timber Harvesting Land Base

The netdown process for unproductive or restricted areas involved the overlaying of GIS layers. The supplied creek layer contained stream classification, so that the appropriate buffers for riparian reserve zones (RRZs) and riparian management zones (RMZs) could be created. Similarly, the road data contained the classification of major, regular and planned roads. The right of way (RoW) layer was created with a buffer of 15 m overall for major roads and 10 m for all others. The pictures of the terrain hazard and OGMA's were rectified and digitized. The data for NP polygons were already contained in the inventory file.

After overlaying the various restricted layers with the original inventory polygons an area reduction polygon by polygon could be calculated. In order to avoid double accounting, the following hierarchy was established: 1. RoW, 2. OGMA, 3. Terrain, 4. NP, 5. RRZ, 6. RMZ. Areas that were accounted for in a higher-ranking layer could not be included again in a lower-ranking

layer. Except for the RMZ layer, all other layers of restricted polygons were netted out 100%. Limited harvesting is feasible in the RMZs and therefore 25% of the RMZ area was netted out acknowledging that varying components of the RMZ also need to be retained over the rotations.

From 153.0 ha of netted out area 32.9 ha were contributed by right of way area (RoW), 17.4 ha by draft old growth management areas (OGMA), 38.7 ha by potentially unstable terrain, 41.0 ha non-productive land (NP), such as rock, gravel pit area, water, river and swamp land. The amount of area netted out for riparian reserve zones (RRZ) is 10.4 ha and for 25% of the riparian management areas (RMZ) it is 12.5 ha.

Sites with low timber growing potential were not specifically netted out in the process of defining the harvestable land base. These areas were rather considered via minimum settings in the woodlot program calculation (min. 300m³).

The loss of productive forest land due to future roads, trails and landings (RTL) was considered by applying a general netdown of 1% across all polygons. The calculated RoW area amounts to 5.5% of the woodlot licence area and a total of 6.5% RTL is considered sufficient.

No reduction to the timber harvesting land base was made for the protection of cultural heritage resources. The visual constrain of a VQO of partial retention was not considered productivity limiting over the rotation as woodlot licence forest management practices usually allow partial cut regimes that can maintain such VQO.

The retention of wildlife trees has been legislated in the *Woodlot Planning and Practices Regulation* (WLPPR). There, it is specified that a maximum of 8% of the woodlot licence area is to be retained for wildlife trees. Woodlot licences are also immune towards higher level plan biodiversity objectives, which could require a higher retention percent. As 13.3% of productive forest was tallied in reserved areas no further netdown was applied to provide for wildlife tree retention area.

Timber Growth and Yield

The yield was calculated with Ministry of Forests software, the 'Woodlot Program', version 3.2. This program applies the growth and volume data of the MoF models "Variable Density Yield Program" (VDYP) and "Table Interpolation Program for Stand Yield" (TIPSY) to the particular polygons.

VDYP is designed to predict average yields and forest inventory updates over large areas. It is intended for use in unmanaged natural stands of pure or mixed compositions including hardwoods.

TIPSY is used to generate yield projections for managed conifer stands based on interpolating yield tables of a model (TASS) that simulates the growth of individual trees. Managed stands include those that were harvested in the past but managed to current standards (stand age is 20 years or less).

Management Assumptions

Silviculture: The silviculture system used in the calculation is clear-cut as the majority of the licensees are expected to use this system or a variation thereof, such as variable retention or patch cut. Currently, it is unclear what impact the application of true partial cut systems, such as selection systems, would have on the growth and yield. It was concluded that, with the clear-cut setting a sufficient approximation of current and future management regimes could be achieved.

Recent plantations and future stands will be grown as managed stands and except for hardwood stands they were modeled using TIPSY. As confirmed by District staff, the general silviculture settings for TIPSY were: regen delay – 2 years, OAF1 - 15, OAF2 - 5, regen method - planting, initial density – 1200 spha, no spacing or thinning.

Forest Health and Unsalvaged Losses: No epidemic insect and disease losses are expected, while fire and wind throw are more likely to occur. However, it is expected that the management structure of a woodlot licence with good permanent access allows to recover such losses. No unsalvaged losses were modeled.

Utilization Levels: The net volume calculation of 'Woodlot for Windows' assumes a minimum top diameter inside bark of 10 cm and a maximum stump height of 30 cm. The stands calculated as unmanaged (VDYP) were set at a utilization of 17.5 cm minimum dbh. The stands calculated as managed (TIPSY) were set at a utilization of 12.5 cm minimum dbh.

Minimum Stand Attributes: The minimum harvest age was set to 50 years to ensure that the timber is merchantable at harvest age. The minimum volume at rotation age is 300 m³. Stands that did not meet these minimum values did not participate in the timber supply calculation.

Green-up and Adjacency: No green-up constraints were modeled as a timber supply impact of adjacency limitations are very unusual in woodlot licences.

Scenic Values: The woodlot licence is in a known scenic area with assigned VQOs. The highest restriction is the VQO of partial retention along travel corridor #26. As explained above, no reduction for the impact of management for scenic values was made.

Potentially Unstable Terrain: There are areas of potentially unstable terrain within the woodlot licence which are identified on TimberWest's forest development plan. All potentially unstable terrain was 100% netted out.

Environmentally Sensitive Areas: Environmentally sensitive area (ESA) polygons were not identified in the inventory in this woodlot licence and therefore no reductions were made.

Wildlife Habitat Areas: No wildlife habitat areas (WHA) are present in this woodlot licence and no WHA reduction was applied.

Ungulate Winter Range: No ungulate winter ranges (UWR) are present in this woodlot licence and no UWR reductions were applied.

Old Growth Management Areas: 2 draft old growth management areas (OGMAs) are present in this woodlot licence (#252 and #314). Both areas were netted out 100%.

Wildlife Tree Patches: As described under *Timber Harvesting Landbase*, there will be no impact through the establishment of future wildlife tree patches (8%). The wildlife tree requirement can be satisfied in already constrained areas.

Community Watersheds: The woodlot licence is not in a licenced community watershed and therefore no reductions were made.

ANALYSIS METHOD

After establishing a cutting order, the 'Woodlot for Windows' program simulates the harvest and growth of the stands. A yield will be calculated that maximizes a sustainable cut over a period of 250 years. The program automatically sets the harvest age of each stand to equal the culmination age, which is the earliest possible time for harvesting. However, depending on the harvest sequencing developed by the program, the calculated time of harvest can take place later than the targeted culmination point.

This fact can have an impact on the mean annual increment (MAI) depending on the age class structure of the woodlot. The more the age classes are balanced the closer the actual MAI will be towards the MAI at rotation age (the highest).

A number of minimum parameters can be set manually for all or individual polygons (see above). The program repeats cycles of cutting and re-growing of the stands with a variation of cut rates until the maximum rate is found that allows a continuous annual harvest.

The starting cutting order was set to harvest those stands first that are closest to harvest age. Since the Woodlot for Windows program operates on the "bottleneck" principle, it will find through iterations the highest sustainable harvest rate without hitting a year without available harvest volume. The variation of the minimum harvest age will increase or decrease therefore the effect of a "bottleneck".

RESULTS

Sustainable Harvest Rate

The sustainable harvest rate calculated by 'Woodlot for Windows' is **4,641 m³/year**.

Volume over Time

The graph below (Figure 2) shows the projected development of immature and mature timber volume of the San Juan Woodlot Licence. The over one third of the stands in this woodlot licence are 60 years or older (38%) and therefore there will be no timber supply bottleneck in the near future.

A portion of the cut volume will function to reduce the surplus of mature timber so that the calculated AAC is higher than the annual growth. From the year 2124 to 2134 there will be a shortage of harvestable timber until thrifty second growth stands become merchantable. From then on the rate of cut will provide a balanced and even growth and yield.

For the near future there should be no challenge to find merchantable timber volume. .

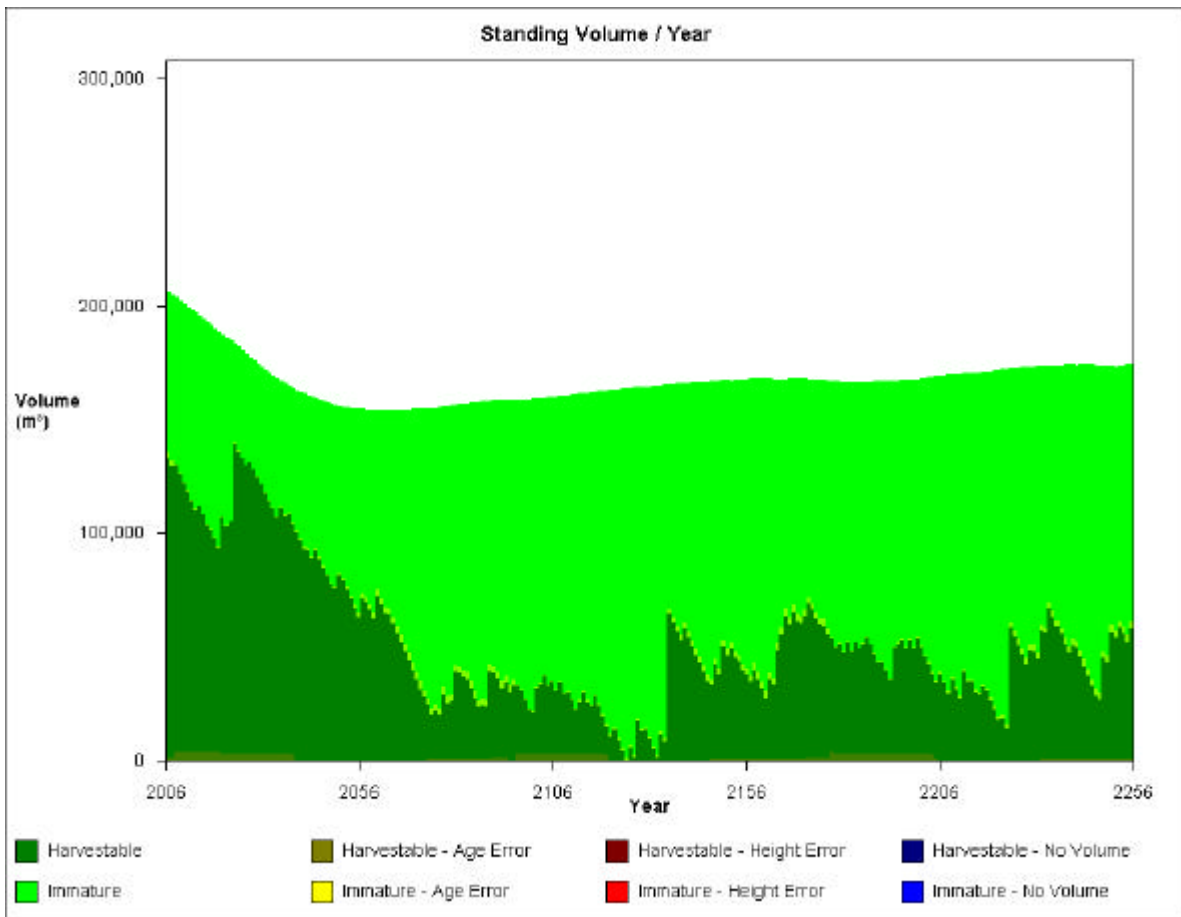


Figure 2: Projected development of immature (light colour) and mature (dark colour) timber volume of the San Juan Woodlot Licence

Age Class over Time

The age class distribution as shown in Figure 3 is already quite balanced with forest stands in every age class. There are considerable large areas that are covered with stands that are either old-growth or mature second-growth. This surplus of older age classes will be reduced over the time horizon of this analysis.

Whereas the old-growth is scheduled to be liquidated within the next 20 years, it will take up to 60 years to reduce the areas that are between 101 and 120 years old. From then on the stands will be harvested at their rotation age between 61 and 100 years of age. Due to the large spread of stand productivity with its related culmination/rotation age, the distribution of the age classes seem not to become more balanced over time. Although the age class from 81 – 100 years seems to disappear in 2086, slower growing stands populate this age class again in 2106.

With the current scenario approximately 90 - 120 ha of regeneration area will be created within a 20 year term.

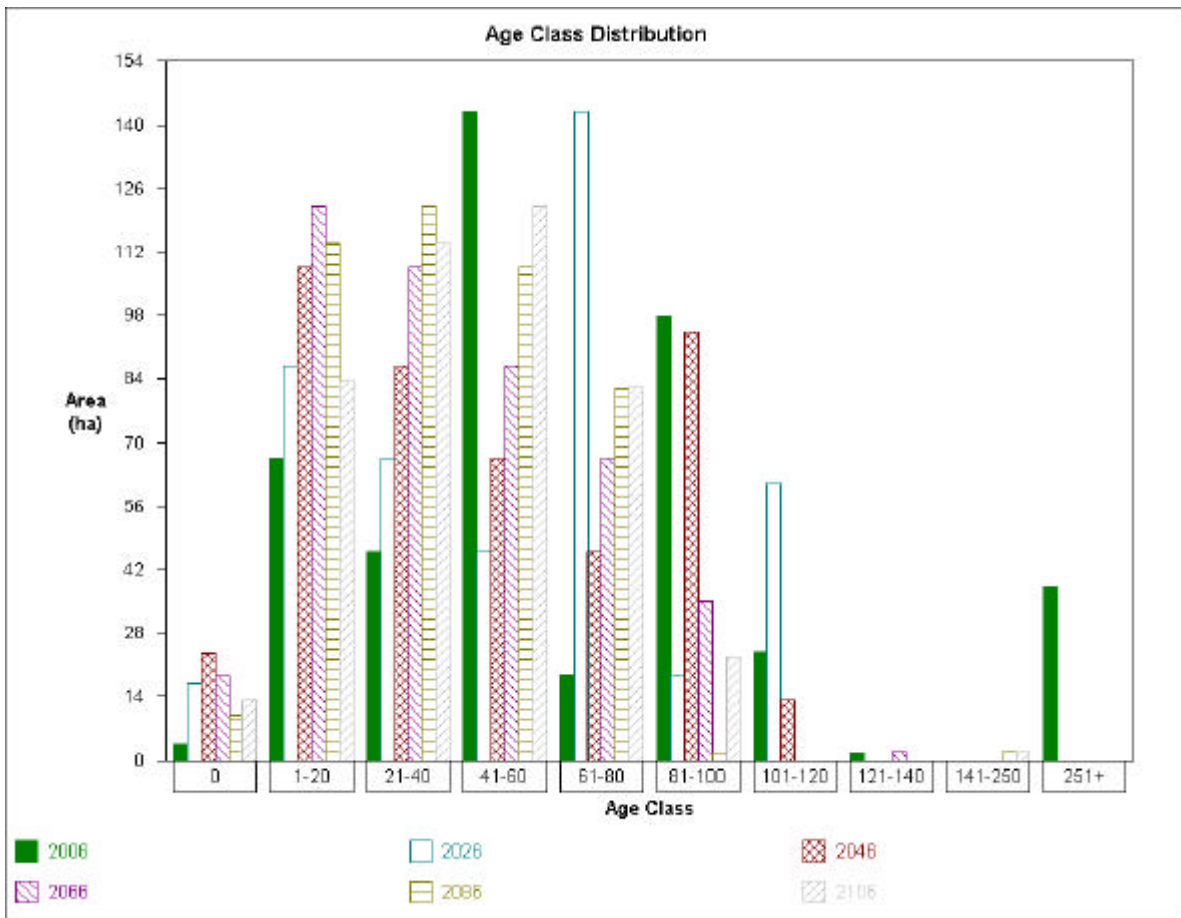


Figure 3: Age Class Distribution in 20 year increments

Harvest Area over Time

The graph below (Figure 4) represents the development of the annual harvest area over time. The average annual harvest area is approximately 5 ha in the next 20 years, and with some dramatic increases this indicator is oscillating around the same value over the planning horizon. Any upward spikes relate to the harvest of low volume stands, such as hardwoods or conifer stands on poor sites. Vice versa, average harvest areas below 4 ha annually indicate the harvesting of stands with high volume (over-mature stands and/or good sites).

The volume harvested per hectare will fluctuate in a similar way, only reversed, around a value of 900 m³/ha over the long term.

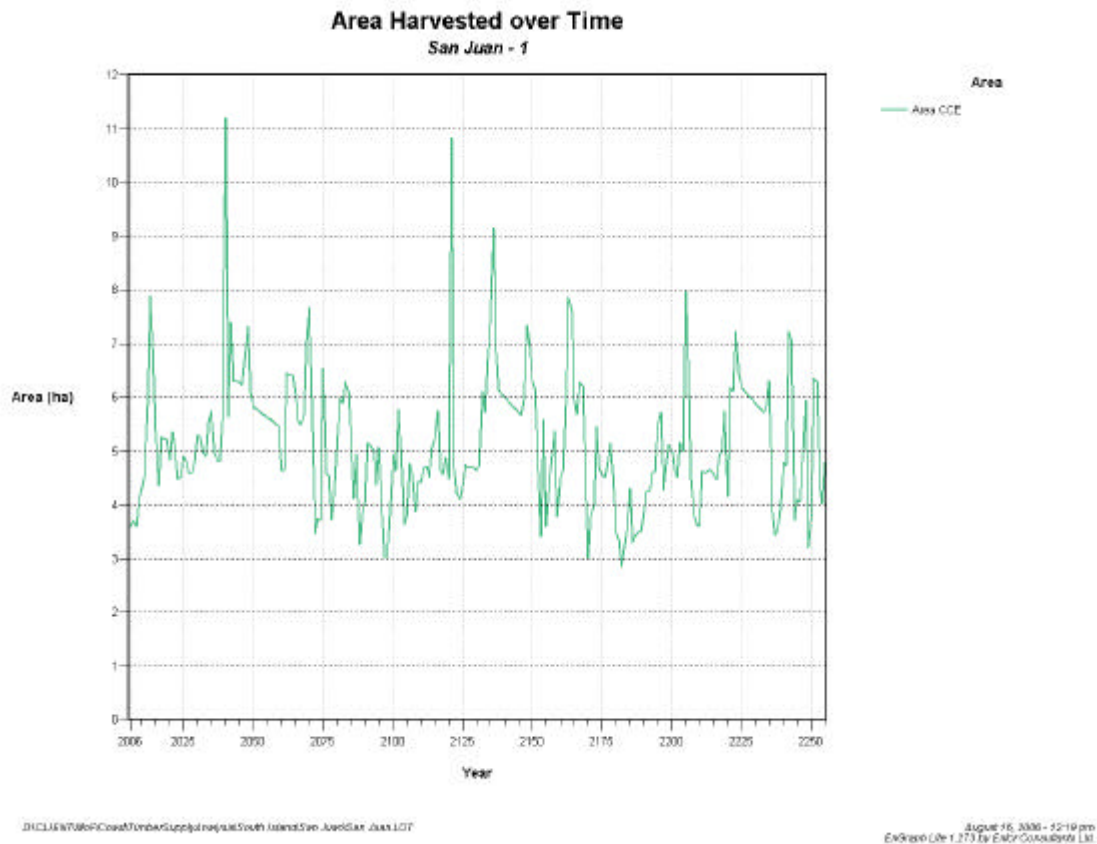


Figure 4: Annual Harvest Area over Time

Present Harvest Opportunities

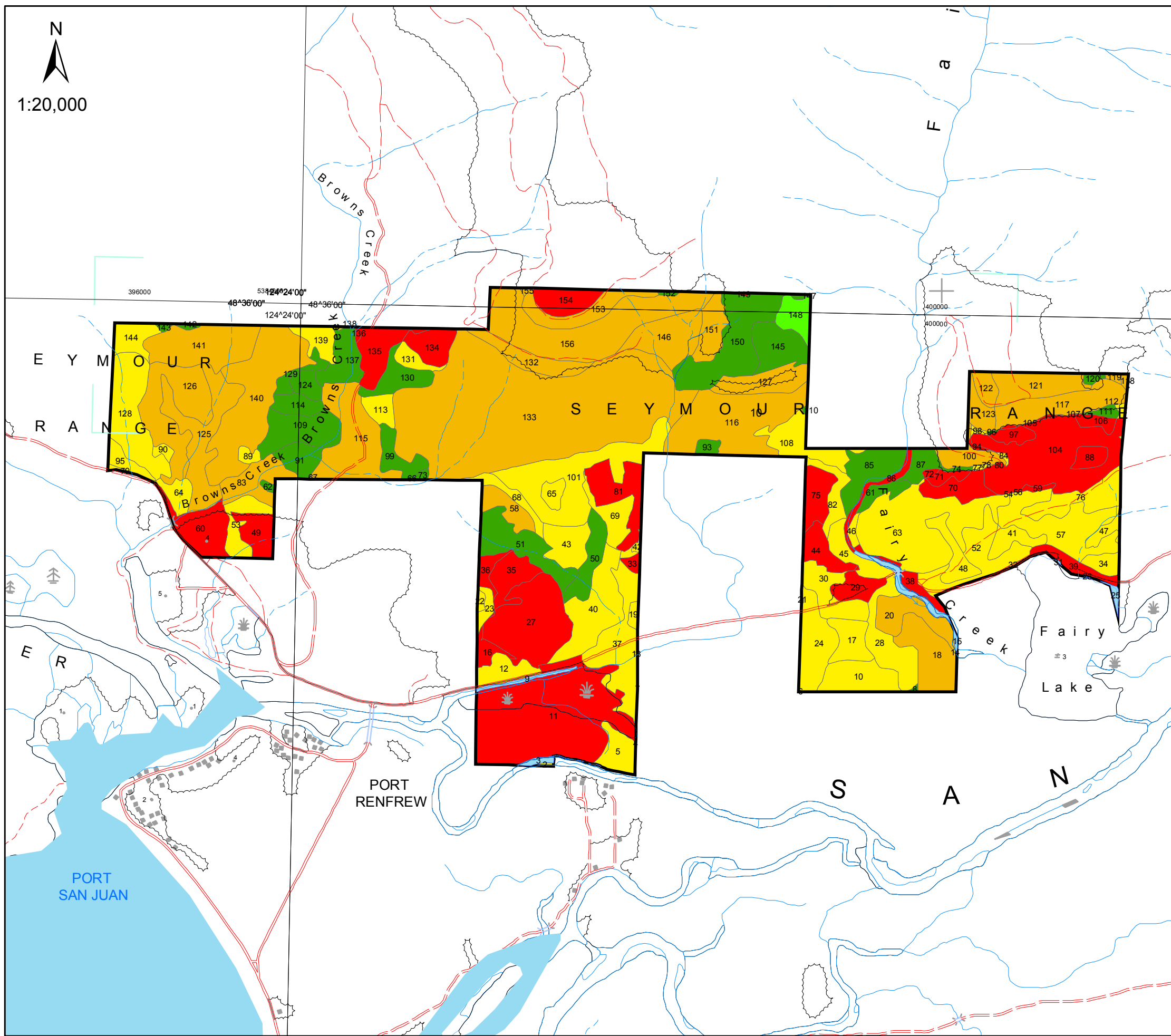
The program scheduled for the next 5 years the following polygons for harvesting (in this order): 8, 50, 110, 124, 96, 150, 152, 85, 87, 74, 93, 111, 120, 143, 145, and 51. All of these stands are old-growth stands with ages over 250 years. Except for polygon 85 and 87, which are Douglas-fir leading stands, the listed stands are all hemlock leading.

APPENDICES

Appendix 1: Woodlot Licence Overview Map



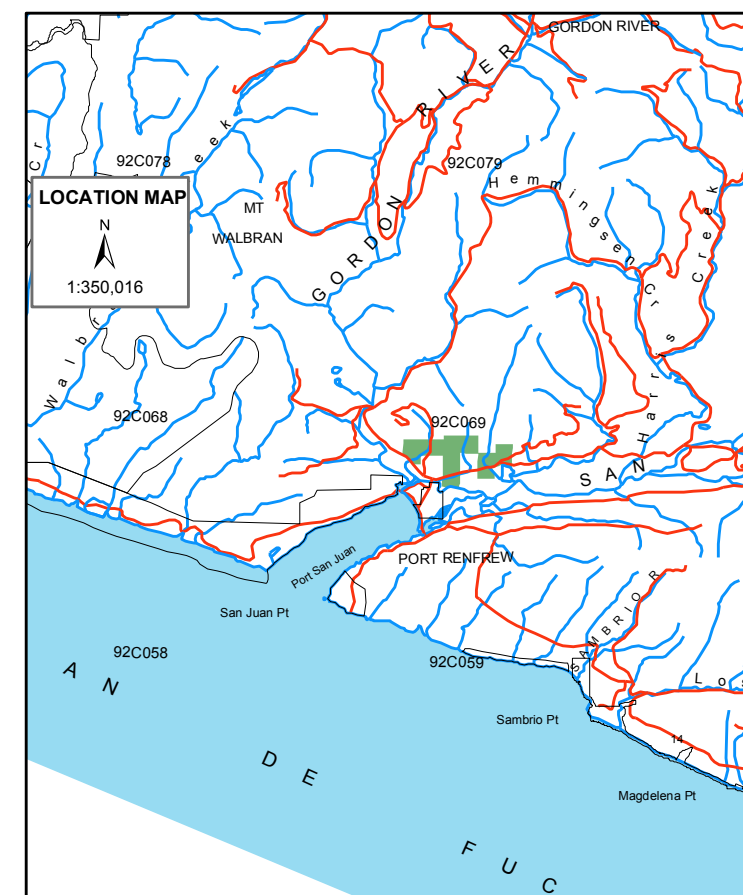
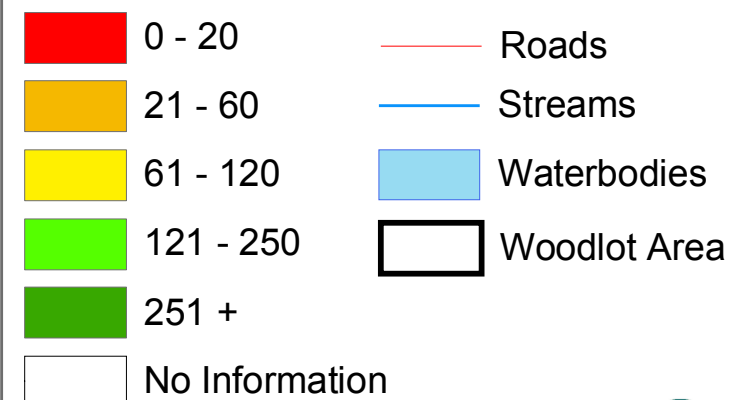
1:20,000



Woodlot Licence San Juan

Reference Map: 92C58-59, C68-69
 Datum: NAD 83
 UTM Zone: 10
 Date: August 11, 2006

Forest Cover Age



Appendix 2: Harvest Planning Report

Woodlot Licence Harvest Planning Report

Date : 15 August, 2006

Woodlot Licence# : San Juan
 Forest District : South Island
 Company : Econ Consulting
 User : Wolfram Wollenheit
 Woodlot File : D:\CLIENT\MoF\Coast\TimberSupplyAnalysis\South Island\San Juan\San Juan.LOT
 Scenario : 1

Model Information:

Woodlot File : Release3.200 - May 5, 2005
 Woodlot Version : Release3.200 - May 5, 2005 - WIN95/98/ME/NT4/2000/XP
 VDYP Version : Prod 6.6d4
 TIPSYP Version : 3.2d

Summary:

Total Net Area : 443.7 ha
 Netdown Area : 439.3 ha
 MAI Existing : 8.00 m³/ha/year
 MAI Future : 11.13 m³/ha/year
 Harvest Rate : 4,641 m³/year

1.0 Introduction

This section summarises information used to calculate a long term harvest rate on Woodlot Licence No. San Juan. 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 5.0" for definition of column headers.

2.0 Polygon Data

a) General Information and Current Volumes

Polygon	Own	Area (ha)	Current Age	VAF	PSYU	FIZ	Mgmt Type	Silv Sys	Vol/ha (m ³ /ha)	Volume (m ³)
S. Juan 5	C	2.6	82	1.00	0322	B	V/T	CC	898	2,316
S. Juan 8	C	0.1	286	1.00	0322	B	V/T	CC	1,017	122
S. Juan 10	C	5.5	92	1.00	0322	B	V/T	CC	1,042	5,700
S. Juan 12	C	2.2	82	1.00	0322	B	V/T	CC	898	1,975
S. Juan 16	C	1.3	15	---	----	B	T/T	CC	106	133
S. Juan 17	C	3.5	92	1.00	0322	B	V/T	CC	962	3,407
S. Juan 18	C	7.0	41	1.00	0322	B	V/T	CC	440	3,059
S. Juan 19	C	0.6	82	1.00	0322	B	V/T	CC	943	537
S. Juan 20	C	3.4	42	1.00	0322	B	V/T	CC	400	1,341
S. Juan 22	C	0.4	72	1.00	0322	B	V/T	CC	808	291
S. Juan 23	C	1.1	72	1.00	0322	B	V/T	CC	808	856
S. Juan 24	C	6.4	82	1.00	0322	B	V/T	CC	743	4,735
S. Juan 27	C	11.8	15	---	----	B	T/T	CC	24	283
S. Juan 28	C	5.6	82	1.00	0322	B	V/T	CC	883	4,954
S. Juan 30	C	4.7	82	1.00	0322	B	V/T	CC	983	4,581
S. Juan 33	C	0.5	9	---	----	B	T/T	CC	1	0
S. Juan 34	C	1.4	82	1.00	0322	B	V/T	CC	771	1,110
S. Juan 35	C	3.5	15	---	----	B	T/T	CC	52	179
S. Juan 36	C	1.2	15	---	----	B	T/T	CC	6	6
S. Juan 37	C	6.4	82	1.00	0322	B	V/T	CC	743	4,720
S. Juan 40	C	7.7	82	1.00	0322	B	V/T	CC	771	5,928
S. Juan 41	C	2.4	82	1.00	0322	B	V/T	CC	884	2,077
S. Juan 42	C	0.2	82	1.00	0322	B	V/T	CC	884	141

S. Juan 43	C	4.1	72	1.00	0322	B	V/T	CC	333	1,350
S. Juan 44	C	2.8	9	---	----	B	T/T	CC	3	8
S. Juan 45	C	1.5	87	1.00	0322	B	V/V	CC	624	905
S. Juan 47	C	1.0	82	1.00	0322	B	V/T	CC	771	755
S. Juan 48	C	2.5	82	1.00	0322	B	V/T	CC	884	2,227
S. Juan 49	C	3.1	19	---	----	B	T/T	CC	13	39
S. Juan 50	C	3.6	286	1.00	0322	B	V/T	CC	1,297	4,683
S. Juan 51	C	3.6	286	1.00	0322	B	V/T	CC	1,016	3,608
S. Juan 52	C	4.7	82	1.00	0322	B	V/T	CC	883	4,150
S. Juan 53	C	2.0	92	1.00	0322	B	V/T	CC	946	1,853
S. Juan 54	C	0.0	82	1.00	0322	B	V/T	CC	771	15
S. Juan 57	C	9.1	82	1.00	0322	B	V/T	CC	653	5,912
S. Juan 58	C	3.0	52	1.00	0322	B	V/T	CC	614	1,834
S. Juan 59	C	0.4	5	---	----	B	T/T	CC	0	0
S. Juan 62	C	0.0	286	1.00	0322	B	V/T	CC	388	12
S. Juan 63	C	16.9	102	1.00	0322	B	V/T	CC	836	14,103
S. Juan 64	C	1.3	82	1.00	0322	B	V/T	CC	904	1,157
S. Juan 65	C	1.1	82	1.00	0322	B	V/T	CC	771	879
S. Juan 66	C	0.0	286	1.00	0322	B	V/T	CC	388	16
S. Juan 68	C	1.7	72	1.00	0322	B	V/V	CC	250	432
S. Juan 69	C	2.9	82	1.00	0322	B	V/T	CC	884	2,537
S. Juan 70	C	3.0	5	---	----	B	T/T	CC	0	0
S. Juan 71	C	0.8	5	---	----	B	T/T	CC	0	0
S. Juan 72	C	0.2	5	---	----	B	T/T	CC	0	0
S. Juan 73	C	0.2	286	1.00	0322	B	V/T	CC	790	174
S. Juan 74	C	0.3	286	1.00	0322	B	V/T	CC	1,124	315
S. Juan 75	C	3.5	9	---	----	B	T/T	CC	1	3
S. Juan 76	C	3.7	82	1.00	0322	B	V/T	CC	771	2,860
S. Juan 77	C	0.1	102	1.00	0322	B	V/T	CC	836	92
S. Juan 78	C	0.1	82	1.00	0322	B	V/T	CC	771	62
S. Juan 79	C	0.1	87	1.00	0322	B	V/V	CC	551	33
S. Juan 80	C	0.0	5	---	----	B	T/T	CC	0	0
S. Juan 81	C	5.3	9	---	----	B	T/T	CC	1	5
S. Juan 82	C	1.4	82	1.00	0322	B	V/T	CC	884	1,193
S. Juan 83	C	0.9	52	1.00	0322	B	V/V	CC	358	325
S. Juan 84	C	0.1	82	1.00	0322	B	V/T	CC	771	108
S. Juan 85	C	0.2	286	1.00	0322	B	V/T	CC	1,118	201
S. Juan 87	C	0.1	286	1.00	0322	B	V/T	CC	1,118	67
S. Juan 88	C	1.5	5	---	----	B	T/T	CC	0	0
S. Juan 89	C	0.8	92	1.00	0322	B	V/T	CC	787	590
S. Juan 90	C	0.5	82	1.00	0322	B	V/T	CC	620	279
S. Juan 91	C	0.1	286	1.00	0322	B	V/T	CC	388	35
S. Juan 93	C	0.9	286	1.00	0322	B	V/T	CC	1,089	948
S. Juan 94	C	0.2	5	---	----	B	T/T	CC	0	0
S. Juan 95	C	1.3	87	1.00	0322	B	V/V	CC	551	728
S. Juan 96	C	0.1	286	1.00	0322	B	V/T	CC	1,285	103
S. Juan 97	C	1.3	5	---	----	B	T/T	CC	0	0
S. Juan 98	C	0.2	82	1.00	0322	B	V/T	CC	771	185
S. Juan 99	C	2.9	286	1.00	0322	B	V/T	CC	586	1,704
S. Juan 100	C	1.7	34	1.00	0322	B	V/T	CC	178	297
S. Juan 101	C	11.7	62	1.00	0322	B	V/T	CC	378	4,417
S. Juan 104	C	14.7	5	---	----	B	T/T	CC	0	0
S. Juan 105	C	0.3	5	---	----	B	T/T	CC	0	0
S. Juan 106	C	0.8	5	---	----	B	T/T	CC	0	0
S. Juan 107	C	0.0	5	---	----	B	T/T	CC	0	0
S. Juan 108	C	5.2	112	1.00	0322	B	V/T	CC	733	3,774
S. Juan 109	C	5.0	286	1.00	0322	B	V/T	CC	586	2,905
S. Juan 110	C	0.1	286	1.00	0322	B	V/T	CC	1,280	102
S. Juan 111	C	0.7	286	1.00	0322	B	V/T	CC	1,089	730
S. Juan 112	C	0.3	82	1.00	0322	B	V/T	CC	771	231
S. Juan 113	C	2.0	102	1.00	0322	B	V/T	CC	836	1,689
S. Juan 114	C	2.3	286	1.00	0322	B	V/T	CC	1,051	2,439
S. Juan 115	C	7.5	46	1.00	0322	B	V/T	CC	277	2,080
S. Juan 116	C	13.3	46	1.00	0322	B	V/T	CC	287	3,810
S. Juan 117	C	6.8	31	1.00	0322	B	V/T	CC	172	1,176
S. Juan 118	C	0.2	46	1.00	0322	B	V/T	CC	470	108

	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 23	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 24	VDYP	60	569	9.49	[60]	569	9.49		
	TIPSY	70	963	13.76	[70]	963	13.76		
S. Juan 27	TIPSY	70	854	12.20	[70]	1,590	4.54		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 28	VDYP	50	597	11.95	[50]	597	11.95		
	TIPSY	70	1,184	16.91	[70]	1,184	16.91		
S. Juan 30	VDYP	47	643	13.67	[50]	683	13.65		
	TIPSY	50	1,272	25.44	[50]	1,272	25.44		
S. Juan 33	TIPSY	60	946	15.77	[60]	1,573	4.49		
	TIPSY	60	946	15.77	[60]	946	15.77		
S. Juan 34	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 35	TIPSY	70	1,120	16.00	[70]	2,079	5.94		
	TIPSY	70	1,120	16.00	[70]	1,120	16.00		
S. Juan 36	TIPSY	90	804	8.93	[90]	1,556	4.45		
	TIPSY	90	804	8.93	[90]	804	8.93		
S. Juan 37	VDYP	60	569	9.49	[60]	569	9.49		
	TIPSY	70	963	13.76	[70]	963	13.76		
S. Juan 40	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 41	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 42	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	50	1,276	25.52	[50]	1,276	25.52		
S. Juan 43	VDYP	84	399	4.75	[84]	399	4.75		
	TIPSY	110	646	5.87	[110]	646	5.87		
S. Juan 44	TIPSY	60	1,190	19.83	[60]	1,485	4.24		
	TIPSY	60	1,190	19.83	[60]	1,190	19.83		
S. Juan 45	VDYP	25	312	12.48	[50]	512	10.23		
	VDYP	25	312	12.48	[50]	852	2.84		
S. Juan 47	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 48	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 49	TIPSY	90	848	9.42	[90]	1,584	4.53		
	TIPSY	90	848	9.42	[90]	848	9.42		
S. Juan 50	VDYP	59	600	10.16	[59]	600	10.16		
	TIPSY	70	1,120	16.00	[70]	1,120	16.00		
S. Juan 51	VDYP	78	514	6.59	[78]	514	6.59		
	TIPSY	90	804	8.93	[90]	804	8.93		
S. Juan 52	VDYP	50	597	11.95	[50]	597	11.95		
	TIPSY	70	1,184	16.91	[70]	1,184	16.91		
S. Juan 53	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	1,247	20.78	[60]	1,247	20.78		
S. Juan 54	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 57	VDYP	66	536	8.12	[66]	536	8.12		
	TIPSY	80	1,005	12.56	[80]	1,005	12.56		
S. Juan 58	VDYP	55	650	11.82	[55]	650	11.82		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 59	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 62	VDYP	110	200	1.81	[178]	300	1.69		
	TIPSY	140	325	2.32	[140]	325	2.32		
S. Juan 63	VDYP	61	563	9.23	[61]	563	9.23		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 64	VDYP	55	650	11.82	[55]	650	11.82		
	TIPSY	60	1,247	20.78	[60]	1,247	20.78		
S. Juan 65	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 66	VDYP	110	200	1.81	[178]	300	1.69		
	TIPSY	140	325	2.32	[140]	325	2.32		
S. Juan 68	VDYP	36	171	4.76	[999]	250	0.83		

	VDYP	36	171	4.76	[999]	250	0.83		
S. Juan 69	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 70	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 71	TIPSY	100	650	6.50	[100]	1,218	3.48		
	TIPSY	100	650	6.50	[100]	650	6.50		
S. Juan 72	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 73	VDYP	86	372	4.32	[86]	372	4.32		
	TIPSY	100	662	6.62	[100]	662	6.62		
S. Juan 74	VDYP	72	550	7.64	[72]	550	7.64		
	TIPSY	90	848	9.42	[90]	848	9.42		
S. Juan 75	TIPSY	60	980	16.33	[60]	2,038	5.82		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 76	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 77	VDYP	61	563	9.23	[61]	563	9.23		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 78	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 79	VDYP	37	326	8.82	[50]	423	8.46		
	VDYP	37	326	8.82	[50]	739	2.46		
S. Juan 80	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 81	TIPSY	60	980	16.33	[60]	2,038	5.82		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 82	VDYP	54	631	11.69	[54]	631	11.69		
	TIPSY	60	980	16.33	[60]	980	16.33		
S. Juan 83	VDYP	20	221	11.03	[50]	357	7.13		
	VDYP	20	221	11.03	[50]	352	1.17		
S. Juan 84	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 85	VDYP	71	608	8.57	[71]	608	8.57		
	TIPSY	80	741	9.26	[80]	741	9.26		
S. Juan 87	VDYP	71	608	8.57	[71]	608	8.57		
	TIPSY	80	741	9.26	[80]	741	9.26		
S. Juan 88	TIPSY	80	951	11.89	[80]	1,923	5.49		
	TIPSY	80	951	11.89	[80]	951	11.89		
S. Juan 89	VDYP	61	563	9.23	[61]	563	9.23		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 90	VDYP	72	550	7.64	[72]	550	7.64		
	TIPSY	90	848	9.42	[90]	848	9.42		
S. Juan 91	VDYP	110	200	1.81	[178]	300	1.69		
	TIPSY	140	325	2.32	[140]	325	2.32		
S. Juan 93	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 94	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 95	VDYP	37	326	8.82	[50]	423	8.46		
	VDYP	37	326	8.82	[50]	739	2.46		
S. Juan 96	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 97	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 98	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 99	VDYP	96	288	3.00	[100]	300	3.00		
	TIPSY	120	506	4.22	[120]	506	4.22		
S. Juan 100	VDYP	71	608	8.57	[71]	608	8.57		
	TIPSY	80	741	9.26	[80]	741	9.26		
S. Juan 101	VDYP	79	498	6.31	[79]	498	6.31		
	TIPSY	90	584	6.49	[90]	584	6.49		
S. Juan 104	TIPSY	80	721	9.01	[80]	1,579	4.51		
	TIPSY	80	721	9.01	[80]	721	9.01		
S. Juan 105	TIPSY	80	951	11.89	[80]	1,923	5.49		

	TIPSY	80	951	11.89	[80]	951	11.89		
S. Juan 106	TIPSY	100	650	6.50	[100]	1,218	3.48		
	TIPSY	100	650	6.50	[100]	650	6.50		
S. Juan 107	TIPSY	80	951	11.89	[80]	1,923	5.49		
	TIPSY	80	951	11.89	[80]	951	11.89		
S. Juan 108	VDYP	68	496	7.29	[68]	496	7.29		
	TIPSY	90	906	10.07	[90]	906	10.07		
S. Juan 109	VDYP	96	288	3.00	[100]	300	3.00		
	TIPSY	120	506	4.22	[120]	506	4.22		
S. Juan 110	VDYP	60	569	9.49	[60]	569	9.49		
	TIPSY	70	963	13.76	[70]	963	13.76		
S. Juan 111	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 112	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 113	VDYP	61	563	9.23	[61]	563	9.23		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 114	VDYP	81	497	6.13	[81]	497	6.13		
	TIPSY	100	991	9.91	[100]	991	9.91		
S. Juan 115	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	70	618	8.83	[70]	618	8.83		
S. Juan 116	VDYP	76	555	7.30	[76]	555	7.30		
	TIPSY	70	627	8.96	[70]	627	8.96		
S. Juan 117	VDYP	70	660	9.42	[70]	660	9.42		
	TIPSY	60	713	11.88	[60]	713	11.88		
S. Juan 118	VDYP	66	725	10.99	[66]	725	10.99		
	TIPSY	70	853	12.19	[70]	853	12.19		
S. Juan 119	VDYP	55	631	11.47	[55]	631	11.47		
	TIPSY	60	969	16.15	[60]	969	16.15		
S. Juan 120	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 121	VDYP	70	660	9.42	[70]	660	9.42		
	TIPSY	60	713	11.88	[60]	713	11.88		
S. Juan 122	VDYP	84	449	5.34	[84]	449	5.34		
	TIPSY	80	502	6.28	[80]	502	6.28		
S. Juan 123	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 124	VDYP	66	550	8.34	[66]	550	8.34		
	TIPSY	80	927	11.59	[80]	927	11.59		
S. Juan 125	VDYP	26	190	7.30	[55]	302	5.48		
	VDYP	26	190	7.30	[55]	307	1.02		
S. Juan 126	VDYP	67	573	8.56	[67]	573	8.56		
	TIPSY	80	976	12.20	[80]	976	12.20		
S. Juan 127	VDYP	76	555	7.30	[76]	555	7.30		
	TIPSY	70	627	8.96	[70]	627	8.96		
S. Juan 128	VDYP	61	612	10.03	[61]	612	10.03		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 129	VDYP	99	305	3.08	[99]	305	3.08		
	TIPSY	130	584	4.49	[130]	584	4.49		
S. Juan 130	VDYP	96	288	3.00	[100]	300	3.00		
	TIPSY	120	506	4.22	[120]	506	4.22		
S. Juan 131	VDYP	61	612	10.03	[61]	612	10.03		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 132	VDYP	78	559	7.17	[78]	559	7.17		
	TIPSY	70	618	8.83	[70]	618	8.83		
S. Juan 133	VDYP	71	608	8.57	[71]	608	8.57		
	TIPSY	80	741	9.26	[80]	741	9.26		
S. Juan 134	TIPSY	70	890	12.71	[70]	1,962	5.61		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 135	TIPSY	90	804	8.93	[90]	1,556	4.45		
	TIPSY	90	804	8.93	[90]	804	8.93		
S. Juan 136	TIPSY	70	618	8.83	[70]	1,179	3.37		
	TIPSY	70	618	8.83	[70]	618	8.83		
S. Juan 137	VDYP	86	372	4.32	[86]	372	4.32		
	TIPSY	100	662	6.62	[100]	662	6.62		
S. Juan 138	VDYP	37	326	8.82	[50]	423	8.46		

	VDYP	37	326	8.82	[50]	739	2.46		
S. Juan 139	VDYP	61	563	9.23	[61]	563	9.23		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 140	VDYP	67	573	8.56	[67]	573	8.56		
	TIPSY	80	976	12.20	[80]	976	12.20		
S. Juan 141	VDYP	61	612	10.03	[61]	612	10.03		
	TIPSY	70	890	12.71	[70]	890	12.71		
S. Juan 143	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 144	VDYP	64	559	8.73	[64]	559	8.73		
	TIPSY	80	908	11.35	[80]	908	11.35		
S. Juan 145	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 146	VDYP	71	608	8.57	[71]	608	8.57		
	TIPSY	80	741	9.26	[80]	741	9.26		
S. Juan 148	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 149	TIPSY	70	854	12.20	[70]	1,590	4.54		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 150	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 151	VDYP	79	498	6.31	[79]	498	6.31		
	TIPSY	90	584	6.49	[90]	584	6.49		
S. Juan 152	VDYP	67	643	9.59	[67]	643	9.59		
	TIPSY	70	854	12.20	[70]	854	12.20		
S. Juan 153	VDYP	77	563	7.31	[77]	563	7.31		
	TIPSY	90	800	8.89	[90]	800	8.89		
S. Juan 154	TIPSY	90	848	9.42	[90]	1,584	4.53		
	TIPSY	90	848	9.42	[90]	848	9.42		
S. Juan 155	VDYP	84	449	5.34	[84]	449	5.34		
	TIPSY	80	502	6.28	[80]	502	6.28		
S. Juan 156	VDYP	79	498	6.31	[79]	498	6.31		
	TIPSY	90	584	6.49	[90]	584	6.49		
Average Existing			605	9.13		735	8.		
Average Future			820	11.35		826	11.13		

3.0 Harvest Calculation Assumptions

a) Initial Cut Order (Closest to Harvest)

Polygon	Current Age	Target Age	Available for (yrs)	Regen Delay (yrs)
S. Juan 8	286	[52]	234	[2]
S. Juan 50	286	[59]	227	[2]
S. Juan 110	286	[60]	226	[2]
S. Juan 124	286	[66]	220	[2]
S. Juan 96	286	[67]	219	[2]
S. Juan 150	286	[67]	219	[2]
S. Juan 152	286	[67]	219	[2]
S. Juan 85	286	[71]	215	[2]
S. Juan 87	286	[71]	215	[2]
S. Juan 74	286	[72]	214	[2]
S. Juan 93	286	[77]	209	[2]
S. Juan 111	286	[77]	209	[2]
S. Juan 120	286	[77]	209	[2]
S. Juan 143	286	[77]	209	[2]
S. Juan 145	286	[77]	209	[2]
S. Juan 51	286	[78]	208	[2]
S. Juan 114	286	[81]	205	[2]
S. Juan 73	286	[86]	200	[2]
S. Juan 137	286	[86]	200	[2]
S. Juan 129	286	[99]	187	[2]
S. Juan 99	286	[100]	186	[2]

S. Juan 109	286	[100]	186	[2]
S. Juan 130	286	[100]	186	[2]
S. Juan 62	286	[178]	108	[2]
S. Juan 66	286	[178]	108	[2]
S. Juan 91	286	[178]	108	[2]
S. Juan 148	122	[77]	45	[2]
S. Juan 108	112	[68]	44	[2]
S. Juan 10	92	[50]	42	[2]
S. Juan 63	102	[61]	41	[2]
S. Juan 77	102	[61]	41	[2]
S. Juan 113	102	[61]	41	[2]
S. Juan 17	92	[52]	40	[2]
S. Juan 53	92	[54]	38	[2]
S. Juan 45	87	[50]	37	[2]
S. Juan 79	87	[50]	37	[2]
S. Juan 95	87	[50]	37	[2]
S. Juan 138	87	[50]	37	[2]
S. Juan 19	82	[50]	32	[2]
S. Juan 28	82	[50]	32	[2]
S. Juan 30	82	[50]	32	[2]
S. Juan 52	82	[50]	32	[2]
S. Juan 89	92	[61]	31	[2]
S. Juan 131	92	[61]	31	[2]
S. Juan 139	92	[61]	31	[2]
S. Juan 5	82	[52]	30	[2]
S. Juan 12	82	[52]	30	[2]
S. Juan 41	82	[54]	28	[2]
S. Juan 42	82	[54]	28	[2]
S. Juan 48	82	[54]	28	[2]
S. Juan 69	82	[54]	28	[2]
S. Juan 82	82	[54]	28	[2]
S. Juan 64	82	[55]	27	[2]
S. Juan 24	82	[60]	22	[2]
S. Juan 37	82	[60]	22	[2]
S. Juan 128	82	[61]	21	[2]
S. Juan 22	72	[54]	18	[2]
S. Juan 23	72	[54]	18	[2]
S. Juan 144	82	[64]	18	[2]
S. Juan 57	82	[66]	16	[2]
S. Juan 34	82	[67]	15	[2]
S. Juan 40	82	[67]	15	[2]
S. Juan 47	82	[67]	15	[2]
S. Juan 54	82	[67]	15	[2]
S. Juan 65	82	[67]	15	[2]
S. Juan 76	82	[67]	15	[2]
S. Juan 78	82	[67]	15	[2]
S. Juan 84	82	[67]	15	[2]
S. Juan 98	82	[67]	15	[2]
S. Juan 112	82	[67]	15	[2]
S. Juan 90	82	[72]	10	[2]
S. Juan 83	52	[50]	2	[2]
S. Juan 58	52	[55]	-3	[2]
S. Juan 125	52	[55]	-3	[2]
S. Juan 141	52	[61]	-9	[2]
S. Juan 43	72	[84]	-12	[2]
S. Juan 20	42	[57]	-15	[2]
S. Juan 126	52	[67]	-15	[2]
S. Juan 140	52	[67]	-15	[2]
S. Juan 101	62	[79]	-17	[2]
S. Juan 133	53	[71]	-18	[2]
S. Juan 118	46	[66]	-20	[2]
S. Juan 18	41	[63]	-22	[2]
S. Juan 119	31	[55]	-24	[2]
S. Juan 116	46	[76]	-30	[2]
S. Juan 127	46	[76]	-30	[2]
S. Juan 115	46	[78]	-32	[2]

S. Juan 100	34	[71]	-37	[2]
S. Juan 146	34	[71]	-37	[2]
S. Juan 117	31	[70]	-39	[2]
S. Juan 121	31	[70]	-39	[2]
S. Juan 132	34	[78]	-44	[2]
S. Juan 16	15	[60]	-45	[2]
S. Juan 151	34	[79]	-45	[2]
S. Juan 156	34	[79]	-45	[2]
S. Juan 123	31	[77]	-46	[2]
S. Juan 33	9	[60]	-51	[2]
S. Juan 44	9	[60]	-51	[2]
S. Juan 75	9	[60]	-51	[2]
S. Juan 81	9	[60]	-51	[2]
S. Juan 153	25	[77]	-52	[2]
S. Juan 122	31	[84]	-53	[2]
S. Juan 27	15	[70]	-55	[2]
S. Juan 35	15	[70]	-55	[2]
S. Juan 155	29	[84]	-55	[2]
S. Juan 149	13	[70]	-57	[2]
S. Juan 134	12	[70]	-58	[2]
S. Juan 136	12	[70]	-58	[2]
S. Juan 49	19	[90]	-71	[2]
S. Juan 154	18	[90]	-72	[2]
S. Juan 36	15	[90]	-75	[2]
S. Juan 59	5	[80]	-75	[2]
S. Juan 70	5	[80]	-75	[2]
S. Juan 72	5	[80]	-75	[2]
S. Juan 80	5	[80]	-75	[2]
S. Juan 88	5	[80]	-75	[2]
S. Juan 94	5	[80]	-75	[2]
S. Juan 97	5	[80]	-75	[2]
S. Juan 104	5	[80]	-75	[2]
S. Juan 105	5	[80]	-75	[2]
S. Juan 107	5	[80]	-75	[2]
S. Juan 135	12	[90]	-78	[2]
S. Juan 71	5	[100]	-95	[2]
S. Juan 106	5	[100]	-95	[2]
S. Juan 68	72	[999]	-927	[2]

b) Harvest Constraints

Area Netdown : 1
Height Constraint : NONE
Age Constraint : NONE

c) Harvest Parameters (Global)

Minimum Harvest Age : 50 Years
Minimum Harvest Diameter : 15 cm
Minimum Harvest Vol/ha : 300 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 : 4641 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 (m ³ /ha)	Total Harvest (m ³)
S. Juan 8	C	CC	1	0.12	2006	0.03	[52]	286	1,017	121
S. Juan 50	C	CC	1	3.57	2006	1.00	[59]	286	1,297	4,636
S. Juan 110	C	CC	1	0.08	2007	0.02	[60]	287	1,280	101
S. Juan 124	C	CC	1	1.61	2007	0.42	[66]	287	1,205	1,944
S. Juan 96	C	CC	1	0.08	2007	0.02	[67]	287	1,285	102
S. Juan 150	C	CC	1	6.02	2007	1.67	[67]	287	1,285	7,735
S. Juan 152	C	CC	1	0.19	2009	0.05	[67]	289	1,285	242
S. Juan 85	C	CC	1	0.18	2009	0.04	[71]	289	1,118	199
S. Juan 87	C	CC	1	0.06	2009	0.01	[71]	289	1,118	66
S. Juan 74	C	CC	1	0.28	2009	0.07	[72]	289	1,126	312
S. Juan 93	C	CC	1	0.86	2009	0.20	[77]	289	1,090	939
S. Juan 111	C	CC	1	0.66	2009	0.16	[77]	289	1,090	723
S. Juan 120	C	CC	1	0.48	2009	0.11	[77]	289	1,090	518
S. Juan 143	C	CC	1	0.49	2009	0.11	[77]	289	1,090	529
S. Juan 145	C	CC	1	4.17	2009	0.98	[77]	289	1,090	4,546
S. Juan 51	C	CC	1	3.51	2010	0.77	[78]	290	1,017	3,576
S. Juan 114	C	CC	1	2.30	2011	0.52	[81]	291	1,052	2,416
S. Juan 73	C	CC	1	0.22	2012	0.04	[86]	292	791	172
S. Juan 137	C	CC	1	3.73	2012	0.64	[86]	292	791	2,952
S. Juan 129	C	CC	1	1.49	2012	0.19	[99]	292	607	901
S. Juan 99	C	CC	1	2.88	2013	0.36	[100]	293	587	1,690
S. Juan 109	C	CC	1	4.91	2013	0.62	[100]	293	587	2,881
S. Juan 130	C	CC	1	3.64	2014	0.46	[100]	294	587	2,138
S. Juan 62	C	CC	1	0.03	2014	0.00	[178]	294	390	12
S. Juan 66	C	CC	1	0.04	2014	0.00	[178]	294	390	15
S. Juan 91	C	CC	1	0.09	2014	0.01	[178]	294	390	35
S. Juan 148	C	CC	1	1.53	2014	0.28	[77]	130	844	1,295
S. Juan 108	C	CC	1	5.10	2014	0.84	[68]	120	762	3,899
S. Juan 10	C	CC	1	5.42	2015	1.27	[50]	101	1,086	5,898
S. Juan 63	C	CC	1	16.70	2016	3.19	[61]	112	878	14,783
S. Juan 77	C	CC	1	0.11	2020	0.02	[61]	116	892	97
S. Juan 113	C	CC	1	2.00	2020	0.38	[61]	116	892	1,785
S. Juan 17	C	CC	1	3.50	2020	0.78	[52]	106	1,037	3,640
S. Juan 53	C	CC	1	1.94	2021	0.43	[54]	107	1,019	1,977
S. Juan 45	C	CC	1	1.44	2021	0.20	[50]	102	657	942
S. Juan 79	C	CC	1	0.06	2021	0.01	[50]	102	582	35
S. Juan 95	C	CC	1	1.31	2021	0.16	[50]	102	582	762
S. Juan 138	C	CC	1	0.08	2022	0.01	[50]	103	584	46
S. Juan 19	C	CC	1	0.56	2022	0.13	[50]	98	1,043	589
S. Juan 28	C	CC	1	5.55	2022	1.16	[50]	98	970	5,396
S. Juan 30	C	CC	1	4.61	2023	1.07	[50]	99	1,077	4,977
S. Juan 52	C	CC	1	4.65	2024	0.98	[50]	100	979	4,565
S. Juan 89	C	CC	1	0.74	2025	0.14	[61]	111	874	649
S. Juan 131	C	CC	1	1.52	2025	0.31	[61]	111	950	1,448
S. Juan 139	C	CC	1	2.38	2025	0.45	[61]	111	874	2,083
S. Juan 5	C	CC	1	2.55	2026	0.56	[52]	102	1,017	2,598
S. Juan 12	C	CC	1	2.18	2026	0.48	[52]	102	1,017	2,224
S. Juan 41	C	CC	1	2.33	2027	0.50	[54]	103	1,002	2,330
S. Juan 42	C	CC	1	0.16	2027	0.03	[54]	103	1,002	159
S. Juan 48	C	CC	1	2.49	2027	0.54	[54]	103	1,002	2,508
S. Juan 69	C	CC	1	2.84	2028	0.62	[54]	104	1,006	2,860
S. Juan 82	C	CC	1	1.34	2029	0.29	[54]	105	1,011	1,351
S. Juan 64	C	CC	1	1.27	2029	0.28	[55]	105	1,041	1,319
S. Juan 24	C	CC	1	6.31	2029	1.19	[60]	105	870	5,507
S. Juan 37	C	CC	1	6.29	2030	1.19	[60]	106	875	5,523

S. Juan 128	C	CC	1	8.85	2032	1.79	[61]	108	936	8,304
S. Juan 22	C	CC	1	0.36	2033	0.08	[54]	99	983	350
S. Juan 23	C	CC	1	1.05	2033	0.22	[54]	99	983	1,033
S. Juan 144	C	CC	1	2.54	2034	0.46	[64]	110	845	2,149
S. Juan 57	C	CC	1	8.97	2034	1.56	[66]	110	803	7,236
S. Juan 34	C	CC	1	1.43	2036	0.29	[67]	112	956	1,363
S. Juan 40	C	CC	1	7.61	2036	1.57	[67]	112	956	7,302
S. Juan 47	C	CC	1	0.97	2037	0.20	[67]	113	961	937
S. Juan 54	C	CC	1	0.02	2038	0.00	[67]	114	966	19
S. Juan 65	C	CC	1	1.13	2038	0.23	[67]	114	966	1,090
S. Juan 76	C	CC	1	3.67	2038	0.77	[67]	114	966	3,553
S. Juan 78	C	CC	1	0.08	2039	0.02	[67]	115	971	77
S. Juan 84	C	CC	1	0.14	2039	0.03	[67]	115	971	135
S. Juan 98	C	CC	1	0.24	2039	0.05	[67]	115	971	231
S. Juan 112	C	CC	1	0.30	2039	0.06	[67]	115	971	288
S. Juan 90	C	CC	1	0.45	2039	0.08	[72]	115	785	350
S. Juan 83	C	CC	1	0.90	2039	0.07	[50]	85	352	317
S. Juan 58	C	CC	1	2.96	2039	0.59	[55]	85	925	2,742
S. Juan 125	C	CC	1	8.94	2040	0.59	[55]	86	307	2,745
S. Juan 141	C	CC	1	8.95	2040	1.59	[61]	86	817	7,363
S. Juan 43	C	CC	1	4.02	2042	0.43	[84]	108	494	1,987
S. Juan 20	C	CC	1	3.32	2042	0.54	[57]	78	753	2,507
S. Juan 126	C	CC	1	10.66	2043	1.68	[67]	89	730	7,812
S. Juan 140	C	CC	1	16.50	2044	2.65	[67]	90	735	12,286
S. Juan 101	C	CC	1	11.58	2047	1.58	[79]	103	628	7,317
S. Juan 133	C	CC	1	62.72	2049	11.08	[71]	96	789	51,407
S. Juan 118	C	CC	1	0.23	2060	0.05	[66]	100	1,024	233
S. Juan 18	C	CC	1	6.88	2060	1.56	[63]	95	1,051	7,259
S. Juan 119	C	CC	1	0.28	2061	0.05	[55]	86	903	250
S. Juan 116	C	CC	1	13.14	2061	2.04	[76]	101	713	9,473
S. Juan 127	C	CC	1	0.45	2063	0.07	[76]	103	724	323
S. Juan 115	C	CC	1	7.43	2064	1.16	[78]	104	725	5,392
S. Juan 100	C	CC	1	1.65	2065	0.27	[71]	93	771	1,274
S. Juan 146	C	CC	1	3.86	2065	0.64	[71]	93	771	2,978
S. Juan 117	C	CC	1	6.75	2066	1.22	[70]	91	837	5,664
S. Juan 121	C	CC	1	4.59	2067	0.84	[70]	92	845	3,885
S. Juan 132	C	CC	1	4.13	2068	0.60	[78]	96	678	2,799
S. Juan 16	C	CC	1	1.24	2068	0.41	[60]	77	1,519	1,887
S. Juan 151	C	CC	1	0.11	2069	0.01	[79]	97	599	65
S. Juan 156	C	CC	1	16.86	2069	2.19	[79]	97	599	10,162
S. Juan 123	C	CC	1	2.15	2071	0.32	[77]	96	686	1,474
S. Juan 33	C	CC	1	0.53	2071	0.13	[60]	74	1,152	616
S. Juan 44	C	CC	1	2.80	2071	0.85	[60]	74	1,401	3,955
S. Juan 75	C	CC	1	3.48	2072	0.93	[60]	75	1,223	4,295
S. Juan 81	C	CC	1	5.27	2073	1.42	[60]	76	1,238	6,581
S. Juan 153	C	CC	1	4.13	2074	0.60	[77]	93	669	2,785
S. Juan 122	C	CC	1	1.23	2075	0.14	[84]	100	527	647
S. Juan 27	C	CC	1	11.67	2075	2.56	[70]	84	1,001	11,868
S. Juan 35	C	CC	1	3.44	2078	1.01	[70]	87	1,359	4,680
S. Juan 155	C	CC	1	0.15	2079	0.02	[84]	102	536	80
S. Juan 149	C	CC	1	0.06	2079	0.01	[70]	86	1,022	61
S. Juan 134	C	CC	1	3.20	2079	0.73	[70]	85	1,062	3,398
S. Juan 136	C	CC	1	0.20	2080	0.03	[70]	86	744	147
S. Juan 49	C	CC	1	3.10	2080	0.58	[90]	93	872	2,702
S. Juan 154	C	CC	1	3.21	2080	0.60	[90]	92	864	2,783
S. Juan 36	C	CC	1	1.16	2081	0.20	[90]	90	804	931
S. Juan 59	C	CC	1	0.37	2081	0.06	[80]	80	721	264
S. Juan 70	C	CC	1	3.00	2081	0.47	[80]	80	721	2,163
S. Juan 72	C	CC	1	0.23	2082	0.04	[80]	81	730	166
S. Juan 80	C	CC	1	0.01	2082	0.00	[80]	81	730	7
S. Juan 88	C	CC	1	1.47	2082	0.30	[80]	81	962	1,410
S. Juan 94	C	CC	1	0.18	2082	0.03	[80]	81	730	130
S. Juan 97	C	CC	1	1.26	2082	0.20	[80]	81	730	917
S. Juan 104	C	CC	1	14.58	2082	2.33	[80]	81	730	10,792
S. Juan 105	C	CC	1	0.29	2084	0.06	[80]	83	985	283
S. Juan 107	C	CC	1	0.02	2084	0.00	[80]	83	985	19

S. Juan 135	C	CC	1	4.30	2084	0.75	[90]	90	804	3,486
S. Juan 8	C	CC	2	0.12	2085	0.03	[70]	77	1,231	146
S. Juan 50	C	CC	2	3.57	2085	0.96	[70]	77	1,231	4,442
S. Juan 110	C	CC	2	0.08	2086	0.02	[70]	77	1,050	83
S. Juan 96	C	CC	2	0.08	2086	0.02	[70]	77	928	74
S. Juan 150	C	CC	2	6.02	2086	1.20	[70]	76	918	5,573
S. Juan 152	C	CC	2	0.19	2087	0.04	[70]	76	918	173
S. Juan 10	C	CC	2	5.42	2087	1.66	[60]	69	1,402	7,702
S. Juan 124	C	CC	2	1.61	2089	0.32	[80]	80	927	1,496
S. Juan 17	C	CC	2	3.50	2089	0.91	[60]	67	1,188	4,217
S. Juan 63	C	CC	2	16.70	2090	3.28	[70]	70	890	15,243
S. Juan 85	C	CC	2	0.18	2094	0.03	[80]	83	764	136
S. Juan 87	C	CC	2	0.06	2094	0.01	[80]	83	764	45
S. Juan 77	C	CC	2	0.11	2094	0.02	[70]	72	913	99
S. Juan 113	C	CC	2	2.00	2094	0.39	[70]	72	913	1,825
S. Juan 53	C	CC	2	1.94	2094	0.60	[60]	71	1,427	2,779
S. Juan 45	C	CC	2	1.44	2095	0.18	[50]	72	584	839
S. Juan 79	C	CC	2	0.06	2095	0.01	[50]	72	513	30
S. Juan 95	C	CC	2	1.31	2095	0.14	[50]	71	510	666
S. Juan 138	C	CC	2	0.08	2095	0.01	[50]	71	510	40
S. Juan 19	C	CC	2	0.56	2095	0.20	[50]	71	1,682	949
S. Juan 28	C	CC	2	5.55	2095	1.45	[70]	71	1,198	6,724
S. Juan 30	C	CC	2	4.61	2097	1.62	[50]	71	1,629	7,515
S. Juan 52	C	CC	2	4.65	2098	1.23	[70]	72	1,211	5,692
S. Juan 89	C	CC	2	0.74	2100	0.15	[70]	73	924	686
S. Juan 131	C	CC	2	1.52	2100	0.30	[70]	73	924	1,409
S. Juan 139	C	CC	2	2.38	2100	0.47	[70]	72	913	2,169
S. Juan 5	C	CC	2	2.55	2100	0.70	[60]	72	1,266	3,268
S. Juan 71	C	CC	1	0.76	2101	0.11	[100]	100	650	495
S. Juan 106	C	CC	1	0.77	2101	0.11	[100]	100	650	502
S. Juan 74	C	CC	2	0.28	2101	0.05	[90]	90	848	235
S. Juan 93	C	CC	2	0.86	2101	0.15	[90]	90	800	692
S. Juan 111	C	CC	2	0.66	2102	0.12	[90]	91	807	535
S. Juan 120	C	CC	2	0.48	2102	0.08	[90]	91	807	384
S. Juan 143	C	CC	2	0.49	2102	0.08	[90]	91	807	392
S. Juan 145	C	CC	2	4.17	2102	0.72	[90]	90	800	3,337
S. Juan 51	C	CC	2	3.51	2103	0.61	[90]	91	812	2,853
S. Juan 12	C	CC	2	2.18	2103	0.62	[60]	75	1,310	2,868
S. Juan 41	C	CC	2	2.33	2104	0.61	[60]	75	1,223	2,844
S. Juan 42	C	CC	2	0.16	2104	0.06	[50]	75	1,746	276
S. Juan 48	C	CC	2	2.49	2104	0.66	[60]	74	1,207	3,049
S. Juan 69	C	CC	2	2.84	2105	0.75	[60]	75	1,223	3,497
S. Juan 148	C	CC	2	1.53	2106	0.26	[90]	90	800	1,228
S. Juan 108	C	CC	2	5.10	2106	1.00	[90]	90	906	4,648
S. Juan 82	C	CC	2	1.34	2107	0.36	[60]	76	1,238	1,656
S. Juan 64	C	CC	2	1.27	2108	0.41	[60]	77	1,519	1,925
S. Juan 24	C	CC	2	6.31	2108	1.42	[70]	76	1,037	6,589
S. Juan 37	C	CC	2	6.29	2109	1.42	[70]	76	1,037	6,606
S. Juan 128	C	CC	2	8.85	2111	1.86	[70]	77	970	8,652
S. Juan 22	C	CC	2	0.36	2113	0.10	[60]	78	1,270	453
S. Juan 23	C	CC	2	1.05	2113	0.28	[60]	77	1,254	1,316
S. Juan 34	C	CC	2	1.43	2113	0.28	[70]	75	907	1,293
S. Juan 40	C	CC	2	7.61	2113	1.51	[70]	75	907	6,991
S. Juan 114	C	CC	2	2.30	2115	0.49	[100]	101	999	2,295
S. Juan 73	C	CC	2	0.22	2115	0.03	[100]	101	668	146
S. Juan 137	C	CC	2	3.73	2115	0.54	[100]	101	668	2,510
S. Juan 144	C	CC	2	2.54	2116	0.50	[80]	80	908	2,310
S. Juan 47	C	CC	2	0.97	2116	0.19	[70]	76	918	893
S. Juan 57	C	CC	2	8.97	2117	1.95	[80]	80	1,005	9,064
S. Juan 54	C	CC	2	0.02	2119	0.00	[70]	79	949	19
S. Juan 65	C	CC	2	1.13	2119	0.23	[70]	79	949	1,071
S. Juan 76	C	CC	2	3.67	2119	0.75	[70]	79	949	3,487
S. Juan 78	C	CC	2	0.08	2119	0.02	[70]	78	939	75
S. Juan 84	C	CC	2	0.14	2120	0.03	[70]	79	949	132
S. Juan 98	C	CC	2	0.24	2120	0.05	[70]	79	949	226
S. Juan 112	C	CC	2	0.30	2120	0.06	[70]	79	949	282

S. Juan 83	C	CC	2	0.90	2120	0.07	[50]	79	352	317
S. Juan 58	C	CC	2	2.96	2120	0.81	[60]	78	1,270	3,762
S. Juan 125	C	CC	2	8.94	2121	0.59	[55]	79	307	2,745
S. Juan 141	C	CC	2	8.95	2121	1.92	[70]	78	981	8,891
S. Juan 20	C	CC	2	3.32	2123	0.89	[70]	79	1,246	4,151
S. Juan 18	C	CC	2	6.88	2124	1.57	[60]	62	1,053	7,301
S. Juan 126	C	CC	2	10.66	2126	2.26	[80]	80	976	10,489
S. Juan 140	C	CC	2	16.50	2128	3.53	[80]	80	976	16,397
S. Juan 90	C	CC	2	0.45	2131	0.08	[90]	90	848	378
S. Juan 119	C	CC	2	0.28	2131	0.07	[60]	68	1,096	304
S. Juan 117	C	CC	2	6.75	2131	1.10	[60]	63	748	5,127
S. Juan 118	C	CC	2	0.23	2133	0.04	[70]	71	863	197
S. Juan 121	C	CC	2	4.59	2133	0.74	[60]	63	748	3,435
S. Juan 16	C	CC	2	1.24	2133	0.35	[60]	63	1,297	1,615
S. Juan 116	C	CC	2	13.14	2134	1.79	[70]	70	627	8,299
S. Juan 99	C	CC	2	2.88	2135	0.32	[120]	120	506	1,469
S. Juan 109	C	CC	2	4.91	2136	0.54	[120]	120	506	2,485
S. Juan 130	C	CC	2	3.64	2136	0.40	[120]	120	506	1,852
S. Juan 133	C	CC	2	62.72	2137	10.64	[80]	81	749	49,374
S. Juan 129	C	CC	2	1.49	2147	0.19	[130]	133	596	887
S. Juan 101	C	CC	2	11.58	2148	1.59	[90]	98	633	7,358
S. Juan 127	C	CC	2	0.45	2149	0.07	[70]	83	737	328
S. Juan 115	C	CC	2	7.43	2149	1.17	[70]	83	723	5,414
S. Juan 100	C	CC	2	1.65	2150	0.27	[80]	83	764	1,271
S. Juan 146	C	CC	2	3.86	2151	0.64	[80]	83	764	2,951
S. Juan 132	C	CC	2	4.13	2151	0.63	[70]	81	709	2,946
S. Juan 33	C	CC	2	0.53	2152	0.14	[60]	79	1,221	653
S. Juan 44	C	CC	2	2.80	2152	0.88	[60]	78	1,457	4,102
S. Juan 75	C	CC	2	3.48	2153	0.97	[60]	79	1,286	4,505
S. Juan 43	C	CC	2	4.02	2154	0.56	[110]	110	646	2,597
S. Juan 81	C	CC	2	5.27	2154	1.46	[60]	78	1,270	6,797
S. Juan 62	C	CC	2	0.03	2156	0.00	[140]	140	325	10
S. Juan 66	C	CC	2	0.04	2156	0.00	[140]	140	325	13
S. Juan 91	C	CC	2	0.09	2156	0.01	[140]	140	325	29
S. Juan 27	C	CC	2	11.67	2156	2.39	[70]	78	939	11,095
S. Juan 122	C	CC	2	1.23	2158	0.13	[80]	81	508	623
S. Juan 35	C	CC	2	3.44	2158	0.93	[70]	78	1,247	4,337
S. Juan 149	C	CC	2	0.06	2159	0.01	[70]	78	939	56
S. Juan 134	C	CC	2	3.20	2159	0.68	[70]	77	970	3,133
S. Juan 136	C	CC	2	0.20	2160	0.03	[70]	78	685	136
S. Juan 8	C	CC	3	0.12	2160	0.03	[70]	73	1,168	139
S. Juan 50	C	CC	3	3.57	2160	0.89	[70]	72	1,152	4,151
S. Juan 151	C	CC	2	0.11	2161	0.01	[90]	90	584	64
S. Juan 155	C	CC	2	0.15	2161	0.02	[80]	80	502	75
S. Juan 110	C	CC	3	0.08	2161	0.02	[70]	73	1,000	79
S. Juan 96	C	CC	3	0.08	2161	0.02	[70]	73	886	70
S. Juan 150	C	CC	3	6.02	2161	1.16	[70]	73	886	5,374
S. Juan 156	C	CC	2	16.86	2162	2.15	[90]	90	584	9,981
S. Juan 123	C	CC	2	2.15	2164	0.38	[90]	91	807	1,747
S. Juan 59	C	CC	2	0.37	2165	0.06	[80]	82	738	270
S. Juan 70	C	CC	2	3.00	2165	0.47	[80]	81	730	2,189
S. Juan 72	C	CC	2	0.23	2165	0.04	[80]	81	730	166
S. Juan 80	C	CC	2	0.01	2165	0.00	[80]	81	730	7
S. Juan 88	C	CC	2	1.47	2165	0.31	[80]	81	962	1,419
S. Juan 153	C	CC	2	4.13	2166	0.71	[90]	90	800	3,303
S. Juan 94	C	CC	2	0.18	2166	0.03	[80]	82	738	132
S. Juan 97	C	CC	2	1.26	2166	0.20	[80]	82	738	934
S. Juan 104	C	CC	2	14.58	2167	2.34	[80]	82	738	10,870
S. Juan 105	C	CC	2	0.29	2169	0.06	[80]	83	985	283
S. Juan 107	C	CC	2	0.02	2169	0.00	[80]	83	985	19
S. Juan 152	C	CC	3	0.19	2169	0.04	[70]	80	960	181
S. Juan 10	C	CC	3	5.42	2169	1.79	[60]	79	1,526	8,323
S. Juan 124	C	CC	3	1.61	2171	0.32	[80]	80	927	1,496
S. Juan 17	C	CC	3	3.50	2171	1.04	[60]	79	1,368	4,827
S. Juan 49	C	CC	2	3.10	2172	0.57	[90]	90	848	2,640
S. Juan 154	C	CC	2	3.21	2173	0.59	[90]	91	856	2,746

S. Juan 36	C	CC	2	1.16	2173	0.20	[90]	90	804	934
S. Juan 63	C	CC	3	16.70	2174	3.67	[70]	80	1,004	17,039
S. Juan 135	C	CC	2	4.30	2177	0.76	[90]	91	812	3,510
S. Juan 85	C	CC	3	0.18	2178	0.03	[80]	82	757	135
S. Juan 87	C	CC	3	0.06	2178	0.01	[80]	82	757	45
S. Juan 77	C	CC	3	0.11	2178	0.02	[70]	82	1,027	112
S. Juan 113	C	CC	3	2.00	2178	0.44	[70]	82	1,027	2,054
S. Juan 53	C	CC	3	1.94	2179	0.67	[60]	83	1,600	3,105
S. Juan 45	C	CC	3	1.44	2179	0.19	[50]	82	612	878
S. Juan 79	C	CC	3	0.06	2179	0.01	[50]	82	540	32
S. Juan 95	C	CC	3	1.31	2179	0.15	[50]	82	540	706
S. Juan 138	C	CC	3	0.08	2180	0.01	[50]	83	542	43
S. Juan 19	C	CC	3	0.56	2180	0.20	[50]	83	1,682	949
S. Juan 28	C	CC	3	5.55	2180	1.61	[70]	82	1,343	7,488
S. Juan 30	C	CC	3	4.61	2181	1.62	[50]	81	1,629	7,515
S. Juan 52	C	CC	3	4.65	2183	1.35	[70]	82	1,343	6,278
S. Juan 89	C	CC	3	0.74	2184	0.16	[70]	82	1,027	763
S. Juan 131	C	CC	3	1.52	2184	0.34	[70]	82	1,027	1,583
S. Juan 139	C	CC	3	2.38	2185	0.53	[70]	83	1,039	2,467
S. Juan 5	C	CC	3	2.55	2185	0.78	[60]	83	1,412	3,628
S. Juan 12	C	CC	3	2.18	2186	0.65	[60]	80	1,382	3,020
S. Juan 41	C	CC	3	2.33	2187	0.66	[60]	81	1,312	3,053
S. Juan 42	C	CC	3	0.16	2187	0.06	[50]	81	1,840	292
S. Juan 48	C	CC	3	2.49	2188	0.71	[60]	82	1,323	3,300
S. Juan 69	C	CC	3	2.84	2188	0.80	[60]	80	1,302	3,718
S. Juan 82	C	CC	3	1.34	2189	0.37	[60]	79	1,286	1,719
S. Juan 64	C	CC	3	1.27	2189	0.43	[60]	79	1,550	1,978
S. Juan 24	C	CC	3	6.31	2190	1.49	[70]	80	1,087	6,894
S. Juan 37	C	CC	3	6.29	2191	1.47	[70]	79	1,075	6,837
S. Juan 74	C	CC	3	0.28	2193	0.05	[90]	90	848	235
S. Juan 128	C	CC	3	8.85	2193	1.91	[70]	79	993	8,863
S. Juan 93	C	CC	3	0.86	2195	0.15	[90]	91	807	695
S. Juan 111	C	CC	3	0.66	2195	0.12	[90]	91	807	535
S. Juan 120	C	CC	3	0.48	2195	0.08	[90]	91	807	384
S. Juan 143	C	CC	3	0.49	2195	0.08	[90]	91	807	392
S. Juan 145	C	CC	3	4.17	2195	0.73	[90]	91	807	3,381
S. Juan 51	C	CC	3	3.51	2196	0.61	[90]	91	812	2,854
S. Juan 22	C	CC	3	0.36	2197	0.10	[60]	82	1,323	471
S. Juan 23	C	CC	3	1.05	2197	0.30	[60]	82	1,323	1,388
S. Juan 34	C	CC	3	1.43	2197	0.30	[70]	82	981	1,398
S. Juan 40	C	CC	3	7.61	2197	1.61	[70]	81	970	7,467
S. Juan 148	C	CC	3	1.53	2199	0.27	[90]	91	807	1,239
S. Juan 108	C	CC	3	5.10	2199	1.01	[90]	91	915	4,690
S. Juan 144	C	CC	3	2.54	2200	0.51	[80]	82	927	2,364
S. Juan 47	C	CC	3	0.97	2201	0.21	[70]	83	991	961
S. Juan 57	C	CC	3	8.97	2201	1.98	[80]	81	1,016	9,186
S. Juan 71	C	CC	2	0.76	2203	0.11	[100]	100	650	495
S. Juan 106	C	CC	2	0.77	2203	0.11	[100]	100	650	502
S. Juan 54	C	CC	3	0.02	2203	0.00	[70]	82	981	19
S. Juan 65	C	CC	3	1.13	2203	0.24	[70]	82	981	1,107
S. Juan 76	C	CC	3	3.67	2203	0.78	[70]	82	981	3,628
S. Juan 78	C	CC	3	0.08	2204	0.02	[70]	82	981	78
S. Juan 84	C	CC	3	0.14	2204	0.03	[70]	82	981	136
S. Juan 98	C	CC	3	0.24	2204	0.05	[70]	82	981	233
S. Juan 112	C	CC	3	0.30	2204	0.06	[70]	82	981	291
S. Juan 83	C	CC	3	0.90	2204	0.07	[50]	82	352	317
S. Juan 58	C	CC	3	2.96	2204	0.85	[60]	82	1,323	3,937
S. Juan 125	C	CC	3	8.94	2205	0.59	[55]	82	307	2,745
S. Juan 141	C	CC	3	8.95	2206	2.00	[70]	82	1,027	9,263
S. Juan 20	C	CC	3	3.32	2208	0.91	[70]	82	1,276	4,236
S. Juan 18	C	CC	3	6.88	2209	1.90	[60]	82	1,278	8,825
S. Juan 126	C	CC	3	10.66	2211	2.31	[80]	82	999	10,742
S. Juan 140	C	CC	3	16.50	2213	3.58	[80]	81	988	16,602
S. Juan 119	C	CC	3	0.28	2216	0.08	[60]	83	1,310	363
S. Juan 117	C	CC	3	6.75	2216	1.38	[60]	82	942	6,428
S. Juan 114	C	CC	3	2.30	2218	0.49	[100]	101	999	2,295

S. Juan 73	C	CC	3	0.22	2218	0.03	[100]	101	668	146
S. Juan 137	C	CC	3	3.73	2218	0.54	[100]	100	662	2,489
S. Juan 118	C	CC	3	0.23	2219	0.05	[70]	84	992	226
S. Juan 121	C	CC	3	4.59	2219	0.95	[60]	84	958	4,417
S. Juan 16	C	CC	3	1.24	2220	0.43	[60]	84	1,612	1,995
S. Juan 116	C	CC	3	13.14	2220	2.14	[70]	84	744	9,911
S. Juan 127	C	CC	3	0.45	2222	0.06	[70]	71	636	287
S. Juan 90	C	CC	3	0.45	2223	0.08	[90]	90	848	378
S. Juan 115	C	CC	3	7.43	2223	1.01	[70]	71	626	4,666
S. Juan 133	C	CC	3	62.72	2224	10.52	[80]	80	741	48,831
S. Juan 100	C	CC	3	1.65	2234	0.27	[80]	82	757	1,251
S. Juan 146	C	CC	3	3.86	2234	0.63	[80]	81	749	2,918
S. Juan 132	C	CC	3	4.13	2235	0.63	[70]	81	709	2,936
S. Juan 33	C	CC	3	0.53	2236	0.14	[60]	82	1,254	671
S. Juan 44	C	CC	3	2.80	2236	0.90	[60]	82	1,485	4,161
S. Juan 75	C	CC	3	3.48	2237	0.99	[60]	81	1,312	4,581
S. Juan 81	C	CC	3	5.27	2238	1.49	[60]	81	1,312	6,938
S. Juan 27	C	CC	3	11.67	2239	2.45	[70]	80	960	11,377
S. Juan 101	C	CC	3	11.58	2242	1.49	[90]	92	596	6,937
S. Juan 122	C	CC	3	1.23	2243	0.14	[80]	83	520	638
S. Juan 35	C	CC	3	3.44	2243	0.98	[70]	83	1,313	4,543
S. Juan 149	C	CC	3	0.06	2244	0.01	[70]	83	991	59
S. Juan 134	C	CC	3	3.20	2244	0.71	[70]	82	1,027	3,310
S. Juan 136	C	CC	3	0.20	2245	0.03	[70]	83	723	143
S. Juan 8	C	CC	4	0.12	2245	0.03	[70]	83	1,313	156
S. Juan 50	C	CC	4	3.57	2245	1.02	[70]	83	1,313	4,717
S. Juan 155	C	CC	3	0.15	2246	0.02	[80]	83	520	77
S. Juan 110	C	CC	4	0.08	2246	0.02	[70]	83	1,121	89
S. Juan 96	C	CC	4	0.08	2246	0.02	[70]	83	991	78
S. Juan 150	C	CC	4	6.02	2246	1.28	[70]	82	981	5,947
S. Juan 59	C	CC	3	0.37	2247	0.06	[80]	80	721	264
S. Juan 70	C	CC	3	3.00	2247	0.47	[80]	80	721	2,188
S. Juan 72	C	CC	3	0.23	2248	0.04	[80]	81	730	166
S. Juan 80	C	CC	3	0.01	2248	0.00	[80]	81	730	7
S. Juan 88	C	CC	3	1.47	2248	0.30	[80]	80	951	1,393
S. Juan 94	C	CC	3	0.18	2248	0.03	[80]	80	721	128
S. Juan 97	C	CC	3	1.26	2248	0.20	[80]	80	721	907
S. Juan 152	C	CC	4	0.19	2249	0.04	[70]	78	939	177
S. Juan 10	C	CC	4	5.42	2249	1.76	[60]	77	1,502	8,164
S. Juan 104	C	CC	3	14.58	2250	2.30	[80]	80	721	10,698
S. Juan 151	C	CC	3	0.11	2253	0.01	[90]	90	584	64
S. Juan 105	C	CC	3	0.29	2253	0.06	[80]	82	973	279
S. Juan 107	C	CC	3	0.02	2253	0.00	[80]	82	973	19
S. Juan 124	C	CC	4	1.61	2253	0.32	[80]	80	927	1,496
S. Juan 17	C	CC	4	3.50	2253	1.04	[60]	79	1,368	4,820
S. Juan 63	C	CC	4	11.66	2254	2.44	[70]	76	958	11,339

c) Polygons not harvested

Polygon	Own	Harvest Area (ha)	Reason
S. Juan 68	C	1.7	Minimum parameters never met
Total		1.7	

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	437.6	1,152,189	12,703	1,164,892	4,641
Private	0.0	0	0	0	0
Top-Up	0.0	0	0	0	0
Other	0.0	0	0	0	0
Total	437.6	1,152,189	12,703	1,164,892	4,641
Average		4,590	50	4,641	

Hanzlik Rate : 3,793 m³/year

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

5.0 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 / TIPSYS / NC / NSR)
NC	Non Commercial
NSR	Non Satisfactory 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)
TIPSYS	Table Interpolation Program for Stand Yields
VAF	Volume Adjustment Factor
VDYP	Variable Density Yield Projection

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