MATER LTD.

Geos Institute Second Growth Analysis Update
October 2013

Submitted by Catherine M. Mater (Mater Ltd. – Principal and Lead)
with K. Kajsa Johnson (Mater Ltd. research analyst)

In 2012, Mater Ltd. finalized a baseline analysis (work started in 2011) for the Geos Institute analyzing young growth strategy development opportunities that might be considered in SE Alaska. The purpose of the analysis was to determine whether sufficient young growth volume exists on the Tongass in selected Sealaska regions (principally the Prince of Wales region) to establish and maintain a second growth wood processing operation, allowing ease of market access for second growth volume that could be supplied by Sealaska at time of harvest (when stands reach between 45-55 years of age). The baseline analysis assumed a harvest regime of 55 year old young growth stands within targeted Tongass National Forest ranger districts in close proximity to Sealaska timber holdings (the rationale for 55 year old harvest regime is discussed below). Since the release of the 2012 study, the USFS has announced a major second growth initiative for the Tongass, with new forestry data becoming available. This document updates our initial 2012 analysis using the new available data, and includes additional conservative assumptions that make our conclusions more robust to uncertainty.

Key Findings in this 2013 Update:

- ✓ Per the 2009 Beck Report, a baseline volume of 15 mmbf (log scale) per year is needed to establish and sustain processing second growth logs in an existing, but upgraded, medium-sized sawmill in the Prince of Wales (POW) region.
- ✓ After a five-year transition period, the 15 mmbf/year log volume is achievable and will come from five Tongass NF Ranger Districts that have historically provided logs to sawmill operations in the POW region.
- ✓ After a five year transition period and within the five targeted ranger districts, sufficient volume (15 mmbf/yr) of second growth logs will be available for harvest at 55 years of age to continually sustain an upgraded small log processing mill in the POW region over six decades before re-harvest occurs.
- ✓ The 55-year harvest regime will require lifting current cumulative mean annual increment (CMAI) restrictions now practiced by the USFS. These CMAI restrictions typically preclude re-entry of stands until an approximate age of 90 years is achieved.
- ✓ Within the five targeted ranger districts, the 15 mmbf/year volume can be achieved from logging only in existing pre-commercially thinned (PCT) acres that are within 800' of functioning road networks.
- ✓ Additional log volume can be secured from PCT stands in the targeted ranger districts where serviceable roads are beyond the 800' limitation referenced above, and from existing PCT stands where roads would need to be refurbished to access log supply.
- ✓ Additional volume can be secured from second growth acres where natural disturbance has occurred (natural disturbance acres were excluded from this 2013 analysis).
- ✓ New information to be released by the USFS at the end of this year is expected to show added second growth volume from the Tongass in the POW targeted regions above and beyond volume used in this 2013 analysis. This new information is also expected to increase second growth volume by distinguishing second growth natural disturbance acres from old growth acres, and updating information on second growth acres owned by the State of Alaska and private forestland holdings in SE.

Detail of data changes and refinements used in the 2013 analysis:

- New Tongass NF forestry data for acres of young growth stands by age class distribution per ranger district was obtained from the Sitka Wood Utilization Center (Allen Brackley, Senior Researcher). These data were provided in 5 year age class increments per ranger district that further aided our efforts to achieve a more refined analysis. All modeling completed for this 2013 analysis used Brackley age class distribution data as the baseline. All assumptions applied to the Brackley baseline data were selected by Mater (with researched sources as footnoted in this analysis).

- New log volume and lumber grade recovery information for 55 year old pre-commercially thinned (PCT) young growth stands in the Prince of Wales (POW) region was published in the Western Journal of Applied Forestry in 2012 that presents additional data for consideration in the development of a young growth economic development strategy for SE Alaska. This new published information was included in this 2013 analysis.

- Alaska Native Corporation (ANC) young growth acreage information not included in the 2012 analysis is included in the 2013 analysis.

- More conservative factors were used in the 2013 analysis to determine amount of total young growth acres that are pre-commercially thinned (from 52% of suitable acres[1] used in 2012 analysis to 45% of suitable acres[2] used in 2013 analysis).

- Missing in the 2012 analysis, estimates of site class and adjusted log volumes per site class were factored into the 2013 analysis. Log volume that could be generated off of 55 year old pre-commercially thinned young growth stands per site class were adjusted downward (from 25 mbf/acre for all acres in 2012 analysis, to 21 mbf/acre for Site Class 4 acreage and 17 mbf/acre for Site Class 3 acreage[3] in 2013 analysis).

- The 2012 analysis did not account for 'natural disturbance' and 'harvested' second growth acres. Lack of data exists with regard to determining what natural disturbance acres come from second growth vs old growth stands. The distinction is important to determine volume that could be processed in a mill designed for small diameter logs. To be conservative, the 2013 analysis eliminates all calculated 'natural disturbance' acres from log volume consideration.

- More conservative factors were applied in the 2013 analysis to determine 'suitable' acres for harvest within total young growth stands (from 50% of all young growth stands used in the 2012 analysis [based on Grundy[4]] to 46% suitable [based on Brackley[5] baseline and Alexander[6] suitable acres by age class determination]. Net downs to determine 'suitable' acres for harvest were crosschecked with multiple technical sources to ensure appropriate consideration for wilderness areas, riparian management areas, karst and beach areas, roadless areas, etc. [7]

- Proper accounting for merchandizing of logs harvested for more efficient mill processing (as is the common practice in SE Alaska) was not accounted for in the 2012 analysis. The 2013 analysis adjusts for that practice.

- Omitted from the 2012 analysis, the 2013 analysis accounts for conversion of long logs to short logs (log merchandizing), making log lengths more suitable for efficient mill processing, a common practice in SE Alaska.

- The scope of the 2013 analysis was expanded to evaluate whether young growth log volume from a 55-year harvest regime would be sufficient to support an existing mill in the Prince of Wales (POW) region upgraded to efficiently

[1] *Tongass Futures Roundtable*
[2] *Tongass Futures Roundtable*
[3] *Wolfe et al*
[4] *Grundy*
[5] *Brackley*
[6] *Alexander*
[7] *Wolfe et al*

process small diameter logs, looking only at volume to be generated from ranger districts within that mill's existing sourcing area (Craig, Thorne Bay, Petersburg, Wrangell, and Sitka). Although no volume has been offered off the Sitka ranger district in the past decade, this district is in the POW service region and has second growth acres that should be included in the second growth transition strategy for SE Alaska.

Detailed Results of the 2013 Analysis:

- The updated USFS young growth age class distribution data[8] shows that there are an additional 24,700 acres of young growth stands aged 55 years or older in the Tongass NF. Acres in this age class increased from 35,645 acres[9] noted in the 2012 analysis to 60,346 acres (see **Table 1**). However ....

Table 1:	All Tongass Young Growth by Age Class (acres)	
Current Age Class (yrs)	USFS, Grundy (2007 data) (harvest only)	USFS, Brackley (2010 data) (harvest only)
0-9	11,280	6,828
10-19	78,566	49,278
20-29	84,483	83,864
30-39	115,211	102,880
40-49	105,291	109,129
50-59	20,735	46,300
60	3,178	11,117
70+	1,732	2,929
Total acres	**420,474**	**412,315**
55 + yrs	***35,645***	***60,346***

Table 2	All Suitable Young Growth by Ranger District (harvest only acres)	
Report year	*2012*	*2013*
Thorne Bay	83,139	76,527
Sitka	26,422	21,756
Petersburg	32,521	31,326
Ketchikan	17,703	17,540
Wrangell	19,518	19,359
Craig	16,682	15,740
Juneau	9,238	4,571
Hoonah	2,633	2,635
Yakutat	2,380	2,178
Total acres	***210,236***[10]	***191,632***[11]
Change	***- 18,604 acres***	

... the overall volume of young growth acres 'suitable' for harvest (after calculating net downs and subtracting natural disturbance acres) decreased by over 18,000 acres; from 210,000 acres identified in 2012 analysis to 191,600 acres noted in the 2013 analysis (see **Table 2**).

- Looking at the number of acres suitable for harvest at 55 years by decade (after net down and minus natural disturbance acres), the picture is more revealing. Since the Brackley data was provided in 5 year increments, we are able to see a clearer picture of anticipated volume per year within the first decade. Especially important (see discussion below) is a ~16,000 acre increase in suitable acres available for harvest at age 55 in the first decade (see **Table 3**). The bulk of this increase falls in years 2020 through 2024 of the first decade, with almost 60% of this increase coming from two ranger districts that service the POW region: Thorne Bay and Sitka (see **Table 4**, attached).

Table 3	Total Suitable Young Growth Acres that could be Harvested per Decade at age 55		
Report year	*2012*	*2013*	Change from 2012
First decade	12,823	28,986	+ 16,163
Second decade	52,564	50,120	(2,440)
Third decade	58,073	36,001	(22,072)
Fourth decade	38,600	53,221	+ 14,621
Fifth decade	39,283	23,305	(15,978)
Sixth decade	5,640	9,326 (re-harvest)	+ 3,686

[8] *Brackley*
[9] *Grundy*
[10] *Grundy*
[11] *Brackley*

- The resulting increase in suitable young growth acres available for harvest at 55 years in the targeted ranger districts – specifically during the first decade – turns a young growth economic development challenge noted in the 2012 analysis into a substantially improved scenario. A 2009 report prepared for The Nature Conservancy (the Beck Report[12]) stated the need for a minimum of 15 million log board feet per year to service an existing medium sized mill in the POW region, upgraded for small log processing. The size of logs preferred for processing in the upgraded small log mill would be logs with 8" - 9" small end diameters (accounting for log taper, this conservatively translates to 11" diameter at breast height, 55 year old young growth logs in SE Alaska[13]). This log characteristic is important – essentially becoming the new "mature" designation for second growth stands (see CMAI next steps discussion below). As in the 2012 analysis, the 2013 analysis assumes the most cost effective scenario for implementing a young growth economic development strategy in SE Alaska based on harvest of 55 year old stands would focus on:

    a) Acres located in Tongass NF ranger districts where the existing medium-sized mill already has well-established purchasing history (Craig, Thorne Bay, Petersburg, Wrangell, and Sitka).

    b) Acres located within 800' of existing serviceable roads already pre-commercially thinned (PCT). Only 45% of all suitable young growth on the Tongass is pre-commercially thinned; less than half of those PCT acres (or 22% of total acres) are within 800' of a serviceable road[14]. This focus on roaded PCT in the analysis is important in order to reduce upfront forest and logging infrastructure costs to implement a second growth strategy in SE Alaska.

- Assuming a 55 year old harvest regime in roaded PCT acres in the five targeted ranger districts, the 2012 analysis showed that an annual log volume of ~5.5 mmbf would be achieved each year during the first decade. This volume would be substantially insufficient to meet the annual 15 mmbf baseline requirement for the mill (basically a 'no go' business venture). Within the POW service region (5 ranger districts), the updated 2013 analysis shows that following a five year transitional phase-in period, at least 15 mmbf of young growth can be supplied each year in perpetuity, based on the conservative assumptions discussed above and from the restrictively defined suitable acres factor used in the analysis (see **Table 5**). **Table 5** summarizes the following key conclusions:

    a) The log volume of ~7.2 mmbf generated each year during the first five years of young growth harvests starting in 2015 would not be sufficient to meet the baseline mill operational needs of 15 mmbf/yr. These five years would need to be considered transition years in implementing a young growth strategy in SE Alaska, with volume supplied by old growth.

    b) Beginning in the second five year period of the first decade (2020-2024), the annual baseline requirement of 15 mmbf/yr. would begin to be exceeded solely from young growth. In the second half of the third decade, and fifth and sixth decades, the newly available second growth volume would not by itself meet the 15 mmbf requirement. However ….

    c) Because volume beginning year 6 (2020) and continuing through the fourth decade notably exceeds the 15 mmbf annual baseline for most years, a cumulative surplus exists allowing an adjustment of acres to be harvested each year to achieve a sustained baseline yield of 15 mmbf/yr.

[12] *Beck*
[13] *Tongass Futures Roundtable*
[14] *Tongass Futures Roundtable*

Table 4 **Suitable Young Growth for Harvest at age 55 Years (acres)**

		Thorne Bay		Sitka		Petersburg		Ketchikan		Wrangell		Craig		Juneau		Hoonah		Yakutat	
Decade		*2012*[15] *	*2013*[16]	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*	*2012*	*2013*
First	2015-2019	**4,670**	**2,177**	**951**	**1,641**	1,514	997	2,275	1,525	754	838	2,558	1,533	42	424	59	89	0	100
	2020-2024		**9,468**		**3,632**		2,404		809		1,235		1,433		567		87		23
Second	2025-2029	22,055	10,068	11,325	3,942	6,840	2,946	2,984	821	2,627	2,090	5,216	974	566	669	951	28	0	193
	2030-2034		12,759		5,429		3,573		1,938		2,981		898		667		60		84
Third	2035-2039	23,973	7,921	10,066	1,459	10,113	7,034	4,066	965	6,795	3,142	1,106	171	1,090	433	587	357	277	146
	2040-2044		7,229		568		2,092		1,083		808		693		133		720		1,045
Fourth	2045-2049	18,547	10,164	973	1,106	7,814	4,213	2,577	1,388	5,016	2,132	1,675	2,015	587	803	274	616	1,137	96
	2050-2054		10,333		3,015		4,404		4,637		3,947		3,509		287		498		59
Fifth	2055-2059	13,005	4,184	3,107	706	4,891	2,669	4,922	3,328	3,987	1,835	4,714	3,293	3,698	287	763	116	196	59
	2060-2064		2,224		258		992		1,046		352		1,220		300		64		373
Sixth	2065-2069	889	0	0	0	1,348	0	880	0	340	0	1,413	0	0	0	0	0	770	0
(Re-harvest)	2070-2074		2,177		1,641		997		1,525		838		1,533		424		89		100

**Grundy data given per decade only.*

[15] *Grundy baseline (2012 data on chart)*
[16] *Brackley baseline (2013 data on chart)*

Table 5 ***5 RDs: Roaded PCT Harvest at 55 yrs (log mbf/yr)***

Decade		Thorne Bay	Sitka	Petersburg	Wrangell	Craig	*Analysis 2012*[17*, 18] Total mbf/yr.	*2013 Updated*[19, 20] Total mbf/yr.	Vol. over baseline/yr (15,000 mbf/yr.)	Total 5-yr. mbf over baseline	Cum. 5-yr. mbf over baseline	**ANC mbf/yr. (@50%)**	**5 RDs & ANC mbf/yr.**
First	*(Grundy base)*	2,460	501	798	397	1,347	**5,502**						
(Brackley base)	2015-2019	2,191	1,652	1,004	844	1,543		**7,233**	(7,767)	transition yrs.	transition yrs.	470	7,703
	2020-2024	9,528	3,655	2,419	1243	1,442		**18,288**	3,288	16,440	16,440	470	
Second	*(Grundy base)*	11,616	5,965	3,603	1,384	2,747	25,314						
(Brackley base)	2025-2029	10,132	3,967	2,965	2,103	980		20,147	5,147	23,753	42,175	1,551	21,698
	2030-2034	12,839	5,463	3,596	3,000	904		25,802	10,802	54,010	96,185	1,551	27,353
Third	*(Grundy base)*	12,626	5,301	5,326	3,579	583	27,415						
(Brackley base)	2035-2039	7,972	1,468	7,078	3,162	172		19,852	4,852	24,260	120,445	13,467	33,319
	2040-2044	7,275	571	2,106	813	697		11,462	(3,538)	(17,690)	102,755	13,467	24,929
Fourth	*(Grundy base)*	9,768	512	4,115	2,642	882	17,920						
(Brackley base)	2045-2049	10,228	1,113	4,240	2,145	2,028		19,753	4,753	23,765	126,520	8,394	28,147
	2050-2054	10,398	3,034	4,432	3,972	3,532		25,368	10,368	51,840	178,360	8,394	33,762
Fifth	*(Grundy base)*	6,849	1,636	2,576	2,100	2,483	15,645						
(Brackley base)	2055-2059	4,210	711	2,686	1,846	3,314		12,767	(2,233)	(11,165)	167,195	7,641	20,408
	2060-2064	2,238	259	998	354	1,228		5,077	(9,923)	(49,615)	117,580	7,641	12,718
Sixth	**(***Grundy base)*	468	0	710	179	744	2,101						
(Brackley base)	2065-2069	0	0	0	0	0		0	(15,000)	(75,000)	42,580		
(Re-harvest)	2070-2074	2,191	1,652	1,004	844	1,543		7,233	(7,767)	(38,835)	3,745		

***Grundy data given per decade only..**

Note: See Appendices document for the following:

- Appendix 1: Assumptions and factors used
- Appendix 2: Original young growth data by source, ranger district (RD), and age class
- Appendix 3: Suitable acres for harvest calculations by source, period , and RD
- Appendix 4: Summary of conclusions for suitable (all, PCT roaded, PCT unroaded)
- Appendix 5: Detailed calculations for all RDs in Tongass
- Appendix 6: Detailed calculations for POW region RDs (Craig, Wrangell, Petersburg, Thorne Bay, Sitka)
- Appendix 7: Detailed calculations for biomass from POW region RDs (55 yr harvest; roaded PCT)

[17] *Grundy*
[18] *Tongass Futures Roundtable*
[19] *Brackley*
[20] *Tongass Futures Roundtable*

- The 2013 log volumes shown in **Table 5** assume that proper log merchandizing from initial long log (~32') to mill-ready log (16'-20') occurs. This log merchandizing is a common practice in SE Alaska and is estimated to increase mill-ready log volume recovery by an additional 20% over long log volumes[21]. In addition to supporting the retooled medium-sized mill, the estimated young growth volume provided from the 5 ranger districts in the POW region would open access to market for similar young growth log volumes that could be supplied annually from Alaska Native Corporations (ANC) starting in the third decade of operation[22] as shown in Table 5. (Note: to be conservative, only 50% of ANC volume was assumed to be from the POW service region.)

- Relaxing CMAI to allow for harvest at 55 years is necessary to achieve the 15 mmbf baseline after a five year transition. Several analyses have recently been conducted in SE Alaska that evaluate the establishment of a young growth economic development strategy based on harvesting of 70 year old suitable young growth stands. The updated USFS data used in the 2013 analysis shows that significantly insufficient log volumes would be realized during the first two decades from a 70 year old young growth roaded PCT harvest regime in the POW service region. Sufficient baseline volume of 15 mmbf/yr would not be realized until the fifth decade under current CMAI restrictions (harvest at tree maturity of ~90 yrs) (see **Table 6**).

Table 6		**5 RDs: Roaded PCT (harvest acres only)**	
		(log mbf/yr)[23, 24]	
Decade		***@70 yrs.****	***@90 yrs.****
First	2015-2019	4,335	0
	2020-2024	503	0
Second	2025-2029	2,174	0
	2030-2034	6,078	6,184
Third	2035-2039	33,092	585
	2040-2044	36,456	785
Fourth	2045-2049	46,689	3,395
	2050-2054	35,923	9,493
Fifth	2055-2059	20,741	51,682
	2060-2064	35,744	56,936
Sixth	2065-2069	45,904	72,917
	2070-2074	23,102	56,104

**Assumes 20% gain in volume for log merchandizing*

- The size and viability of a young growth industry in SE Alaska may be larger than this analysis indicates. New data published in the Western Journal of Applied Forestry[25] (February 2012) discloses results of important lumber grade recovery research conducted on logs harvested from pre-commercially thinned and unthinned young growth stands from POW. The research results suggest that pre-commercial thinning of young growth stands may not be a prerequisite for achieving higher lumber grade recovery in 55 year old young growth stands. In this study, western hemlock and Sitka spruce logs from young growth PCT stands from POW were harvested and milled into lumber. PCT trees ranged from 36 years (436 trees/acre) to 73 years (109 trees per acre). PCT sites were identified on the basis of age and thinning history and the availability of an adjacent or nearby unthinned control plot from the same original stand. Relative to lumber grade recovery, treatment (thinned versus unthinned) had no significant effect for either species. Further, select structural lumber grade (the targeted grade desired from old growth logs) was achieved in only 18% of young growth hemlock log volume and 24% of Sitka spruce log volume. Conversely, 65% of all hemlock log volume and 77% of all Sitka spruce log volume achieved a No. 2 and Better lumber grade[26]. Select Structural lumber grade sells in the market for ~ $510/mbf; No. 2 and Better sells at ~$395/mbf (Dec 2012 prices). If thinning treatment produces little increase in lumber grade recovery from young growth supply in the 50-70 age class, might cost-savings be realized employing alternative forest management strategies that would help soften the impact of the lumber price difference noted above?

- Biomass that could be generated from harvesting 55 year old second growth stands from roaded PCT acres within the 5 targeted ranger districts should also be noted for product opportunity. **Table 7** shows the estimated volume of

[21] *Brackley*
[22] *Kleinhenz*
[23] *Brackley*
[24] *Tongass Futures Roundtable*
[25] *Lowell*
[26] *Lowell*

biomass per year assuming 5 green tons/acre of harvest (yield can range up to 10 green tons per acre in Site Class 4 acres). Prior woody biomass research for SE Alaska shows that potential demand for woody biomass for energy projects is primarily focused in Sitka, Wrangell, Thorne Bay, and Ketchikan[27]

Table 7 — ***Estimated Biomass/Year from 5 RDs in POW Region (55 year harvest; Roaded PCT; 5 gT/acre)***

Decade		Thorne Bay	Sitka	Petersburg	Wrangell	Craig	Total gT/yr.
		gT/yr.					
First							
(Brackley base)	2015-2019	9,130	6,882	4,181	3,515	6,430	30,139
	2020-2024	39,698	15,231	10,080	5,180	6,010	76,198
Second							
(Brackley base)	2025-2029	42,216	16,528	12,354	8,762	4,084	83,944
	2030-2034	53,497	22,763	14,982	12,499	3,765	107,507
Third							
(Brackley base)	2035-2039	33,215	6,118	29,494	13,173	718	82,717
	2040-2044	30,311	2,380	8,774	3,388	2,905	47,758
Fourth							
(Brackley base)	2045-2049	42,616	4,636	17,666	8,938	8,449	82,305
	2050-2054	43,326	12,643	18,468	16,549	14,715	105,701
Fifth							
(Brackley base)	2055-2059	17,542	2,962	11,193	7,694	13,807	53,196
	2060-2064	9,325	1,081	4,159	1,475	5,116	21,156
Sixth							
(Brackley base)	2065-2069	0	0	0	0	0	0
	2070-2074	9,130	6,882	4,181	3,515	6,430	30,139

Proposed Next Steps for 5-year Transition Period:

With discovery of significant volume of suitable second growth (55 years; roaded PCT) potentially available for harvest in SE Alaska, attention must quickly turned to addressing priority infrastructure challenges within the five year transition period documented in this report. As shown in **Table 8** (attached), a short-term Phase 1 critical path *dedicated to just the five ranger districts in the POW region* (Craig, Thorne Bay, Wrangell, Petersburg, and Sitka) is recommended to gain certainty on several policy, forestry, logging, and manufacturing fronts. A longer-term Phase 2 critical path focused on implementing landscape scale aerial LiDar scanning throughout all of SE Alaska is also recommended. An overview of elements in each phase is as follows:

Phase 1 (Short-term): *First 3 years of transition to second growth*

- **Policy Infrastructure**: Lifting CMAI restrictions within the five targeted RDs in the POW region is fundamental to achieve successful implementation of a second growth strategy in SE Alaska. As shown in this 2013 analysis, while second growth acres are identified throughout all Tongass ranger districts, only five service the POW region where milling infrastructure currently exists. Secretary Vilsak in his July 2, 2013 statement to Congress underscored the necessity for lifting CMAI restrictions from "a limited amount of young growth on the Tongass."[28] *Targeted task completion: 0+1 year*.

[27] *Sealaska Corporation*
[28] *Secretary Memorandum 1044-009*

Table 8 **Tongass Second Growth Critical Path Recommendations (5 Year Transition Period)**

		Transition Years	1	2	3	4	5	
Phase I (Short-term)	Policy	• Achieve lifting of CMAI restrictions in POW region	■					*POW RDs only**
	Forestry	• Ground-truth roaded and unroaded PCT acres by RD	■	■				
		• Determine changes in logging practices required to process second growth		■				
	Markets	• Document lumber commodity markets	■	■	■			
		• Conduct millwork 'cut up' study	■	■				
		• Document value-add wood product markets			■	■	■	
		• Document biomass markets	■	■	■	■	■	
	Manufact.	• Confirm mill upgrade data		■	■			
		• On-site dry kiln requirements		■	■			
Phase II (Long-term)	Forestry	Establish SE Alaska LiDar Consortium:	■					*Expanded SE Alaska landscape*
		• Secure funding to conduct LiDar scan	■	■				
		• Conduct LiDar scan			■	■	■	

**POW RDs = Craig, Thorne Bay, Petersburg, Wrangell, & Sitka*

- **Forestry Infrastructure:**

  a) *Road condition updates*: With second growth strategy start-up focused on roaded PCT areas as recommended in this analysis, some initial ramp up time and cost constraints with respect to forest infrastructure should be minimized. Verification of on-the-ground road conditions in designated roaded PCT areas will need to be completed. Identification of upgrades required to bring unroaded PCT acres into road serviceable status will also need to be done. *Targeted task completion: 0+2 years*

  b) *Logging equipment updates*. Determine operational and equipment changes in logging practices that may be required to efficiently harvest young growth stands in the POW region. Assist industry in the ramp-up to accommodate changes as required. *Targeted task completion: 0+3 years*.

- **Manufacturing Infrastructure:** Update equipment and pricing data from the 2009 TNC study for upgrading existing POW mill to efficiently handle a steady diet of second growth logs with typical log characteristics of 11" dbh, 8.5"-9.5" small end diameter. Manufacturing costs should include consideration for on-site drying, planing, and a possible remanufacturing center to service moulding and millwork markets. *Targeted task completion: 0+3 years*.

- **Marketing Infrastructure:** This "infrastructure" challenge is the most difficult to overcome as it often requires a "reinvention" of the industry: creation of custom grades; selling into new markets. Moving from a traditional lumber grades mindset (clear -no defect, tight, vertically-grained lumber) to an enlarged platform of grades to be sold into markets is never an easy transition. Neither is it prototype territory. There is no doubt that implementing a second growth strategy in SE Alaska will require a new way of doing business that will necessarily include:

  a) Identifying solid markets for lower grade commodity lumber. *Targeted task completion: 0+3 years*.

  b) Establishing custom or character grades for Alaskan lower grade lumber. The practice of creating custom grade lumber from lower grade logs (aka turning trash to cash) is but one of many manufacturing standards today thought absurd by those in the industry a decade ago. As example: In the mid 1990's, Canadian lumber producers were challenged with beetle-stained pine. Beetles would infest the growing stock and weave ribbons of blue stain throughout the wood resulting in high defect (low grade) lumber. Instead of settling for lower grade, the Canadians designed a 'denim wood' lumber grade taking full advantage of the wood character. Denim wood is now sold into the market as a custom grade. Similarly, in the late 1990's when chip prices dropped to all time lows in the pulp and paper industry, growers of pulpwood in the Pacific Northwest figured out they could transition their low grade pulpwood to custom grade softwood for the moulding and millwork industry. At the time, many in the industry characterized the effort as trying to put lipstick on a pig. Today, over 50 million lumber board feet of that 'pig' wood is now sold into worldwide markets as FSC-certified Pacific Albus – supported by a new mill built for processing the wood with over 40 new jobs created in what once was a highly depressed rural community in central Oregon. Biomass from both the forestry and the mill operations is directed to a new biofuels processing operation located in the same rural community. *Targeted task completion: 0+ 5 years.*

  c) Quickly evaluating the potential for servicing the moulding and millwork industry through completion of a 'cut up' study proposal already developed by the Sitka Wood Utilization Center. The study is designed to test the number and quality of parts and pieces that could be recovered from low grade second growth wood that could be sold into the millwork industry: door and window component parts; furniture and cabinet component parts. The study could be completed in ~ 18 months from authorization date and would cost $100,000. *Targeted task completion: 0+2 years.*

  d) Maximizing product development opportunity from the logging and manufacturing residual biomass. *Targeted task completion: 0+5 years*

Phase 2 (Longer-term):

Species/volume ground-truthing in second growth stands within all key forestry jurisdictions: As is expected to be underscored in the report to be released by the Forest Service in the next few months, additional acres of second growth not only in the Tongass NF, but also from other public and private forestlands in SE will expand the volume picture for second growth strategy development. GIS modeling continues to serve an important function in an area where boots on the ground verification is difficult at best. Use of high resolution aerial LiDar technology employed at landscape scale throughout SE Alaska should be the technology standard for dramatically improving information on forest resource inventory and biomass volume. This standard will actually be built on extensive stand level information and it will provide a very strong basis for maintenance of future forest inventories, at all levels and ownerships, not only to establish sustainable harvest levels but also for conservation issue analysis that requires stand and landscape level data.

Areal LiDar has been sporadically employed in SE Alaska over the last decade, but initiating a **SE Alaska Collaborative LiDar Consortium** with multi-agency and private landowner participation could significantly influence funding to be brought to the plate to accomplish a large scale SE Alaska LiDar Project. The results of such a project could dramatically improve forest inventory and growth data sets for all SE forest landowners. It could be used to provide a 'bankable' feedstock verification framework for biomass to energy projects and provide a credible inventory and monitoring tool for carbon sequestration projects. It couild also serv as a solid basis for a variety of multi-variate, multi-landowner analysis at the watershed, landscape, island, and regional scales for resource issues and overall conservation strategies.

Citations

Footnotes 6 and 16: Alexander, Susan J., Eric B. Henderson, and Randy Coleman. 2010. Economic Analysis of Southeast Alaska: Envisioning a sustainable economy with thriving communities. USDA Forest Service Region 10. R10-MB-725, Juneau, Alaska, 93 p.

Footnote 17: Beck Group. 2009. Transitioning to young growth: Prince of Wales Island, southeast Alaska. Project Report, February 2009. The Nature Conservancy, Juneau, Alaska.

Footnotes 5, 9, 11, 12, 15, 20, 23, 25, and 27: Brackley, Allen; Sitka Allen M. Brackley; Research Forester/Supervisor; Sitka Wood Utilization Center; USDA Forest Service, Pacific Northwest Research Station; 2013. Personal communication with C. Mater; spreadsheet young growth data for the Tongass National Forest shared.

Footnotes 4, 8, 10, 13, 14, 19, and 21: Grundy, Colleen. 2008. Tongass Young Growth Strategy. White paper. USDA Forest Service, Alaska Region. 90 pp.

Footnote 26: Kleinhenz, Brian L. and Jim McWhorter. August 2013. The Forest Working Group Report (draft). Consolidated young growth forest land base analysis for all land ownership in southeast Alaska and recommendations for federal land managers. USDA Forest Service, Alaska Region under FS Agreement No. 12-CS-11100100-017.

Footnote 31: Lowell, E.C., D.P. Dykstra, and R.A. Monserud. 2012. Evaluating effects of thinning on wood quality in southeast Alaska. Western Journal of Applied Forestry 27(2): 72-83.

Footnotes 1, 2, 18, 22, 24, & 28: Tongass Futures Roundtable Young Growth Committee. 2007. Young growth yield and future harvest projections v112907; Preliminary draft progress report. White paper, 15 pp.

Footnotes 3 & 7:Wolfe, Ron, B.L. Kleinhenz, J. McWhorter, A. Brackley, B. Case, C. Clark, C. McKenzie, K. Rush, S. Spores, P. Slenkamp, O. Graham, G. Woodbury. 2011. Exploring the sustainable yield capacity of the young growth lands on the Tongass National Forest while evaluating the impact of acreage reductions and rotation age. Draft Report, June 13, 2011. Prepared at the request of USDA Forest Service & Juneau Economic Development Council.

Footnotes 27: Sealaska Corporation, February 25, 2010 Powerpoint Presentation; Wood Biomass Energy Status and Options for Southeast Alaska.

Footnotes 28: USDA, Office of the Secretary; Secretary's Memorandum 1044-009 Addressing Sustainable Forestry in SE Alaska; July 2, 2013

Appendix 1

Assumptions and factors used in analysis

Tongass second growth inventory data by age class and Ranger District were supplied by Allen Brackley, Research Forester, Sitka Wood Utilization Center, USFS Pacific Northwest Research Station, Sitka, Alaska. We compared these figures with previous young growth (YG) data (Grundy, 2008).

A. Determining 'suitable' young growth:

Suitable young growth acres in the Tongass NF were given by age class in Alexander et al. 2010, but not by ranger district (RD) (Figure I-1, pg 17). To adapt Alexander's suitable acres to Brackley's total acres for each age class, we assumed that the ratio of Alexander's to Brackley's numbers represented percentage of the age class that was suitable for harvest. We then applied that percentage to the same age class in each RD. For example, for stands aged 20-29 years Alexander determined there were ~53,000 suitable acres, while Brackley's acres totaled 120,429, resulting in 44% of stands in that age class being suitable. Two age classes appeared to have more suitable than total acres, so we assumed 100% were suitable.

Percent suitable acres by age class.

Decade of origin	Age class (2013)	Approx. Suitable Acres[1]	Total Acres (Brackley)	% of Total (Brackley) that are deemed Suitable
2000-2009	0	11,000	9,670	100%[2]
1990-1999	10	59,200	61,851	96%
1980-1989	20	53,000	120,429	44%
1970-1979	30	62,000	127,527	49%
1960-1969	40	49,000	129,193	38%
1950-1959	50	7,000	55,758	13%
1940-1949	60	800	15,211	5%
pre-1940	70+	11,000	3,932	100%[2]
		243,732	523,571	48%

[1] *Alexander, Susan J., Eric B. Henderson, and Randy Coleman. 2010. Economic Analysis of Southeast Alaska: Envisioning a sustainable economy with thriving communities. USDA Forest Service Region 10. R10-MB-725, Juneau, Alaska, 93 p.*
[2] *Assumed*

B. Pre-commercially thinned acres:

Estimates were run for all suitable acres, for acreage pre-commercially thinned (PCT) and within 800 feet of a road, and for unroaded PCT acres. According to the Tongass Futures Roundtable Report, 2007, 45% of all suitable stands are PCT: 23% are unroaded and 22% are roaded. The forest-wide average percent of land that had been PCT was applied to every RD and every age group.

[1] *Tongass Futures Roundtable Young Growth Committee. 2007. Young growth yield and future harvest projections v112907; Preliminary draft progress report. White paper, 15 p.*

Summary of Brackley acres by age class, Tongass NF

Age Class in 2014 (yrs)	Original Brackley Acres	Suitable/ Available Acres	PCT – Unroaded (23%)	PCT & Roaded Acres* (22%)
5-9	9,670	9,670	2,224	2,127
10-14	21,360	20,444	4,702	4,498
15-19	40,491	38,756	8,914	8,526
20-24	66,711	29,359	6,753	6,459
25-29	53,717	23,641	5,437	5,201
30-34	58,548	28,464	6,547	6,262
35-39	68,979	33,536	7,713	7,378
40-44	68,474	25,971	5,973	5,714
45-49	60,719	23,029	5,297	5,066
50-54	38,160	4,791	1,102	1,054
55-59	17,599	2,209	508	486
60-64	9,289	489	112	107
65-69	5,922	311	72	69
70-74	3,932	3,932	904	865
Totals	523,571	244,602	56,258	53,812

C. Harvested v. natural disturbance stands

Our original data included harvested stands and stands originating after natural disturbances. Examples of natural disturbance stands may include those originating after fire, wind disturbance, and pre-national forest beachfront logging. Harvested and natural disturbance young growth acres were determined by subtracting harvested acres reported in Grundy 2008 from Brackley's total young growth acres. These percentages were applied to suitable acres within each RD, and no acreage for natural disturbance stands were included in any second growth volume calculations in this analysis. In reality some of these acres may be harvested in future years.

Acres of harvested and natural disturbance young growth

RD	Total Acres (Brackley)	YG Acres harvested (Grundy)	YG natural (total - harvested)*	% natural (total-hvst) /total
Thorne Bay	177,240	166,279	10,961	6.18%
Sitka	61,489	52,844	8,645	14.06%
Petersburg	91,248	65,043	26,205	28.72%
Ketchikan	44,818	35,406	9,412	21.00%
Wrangell	48,971	39,037	9,934	20.29%
Craig	37,436	33,364	4,072	10.88%
Juneau*	10,317	18,476	0	0.00%
Hoonah	28,786	5,266	23,520	81.71%
Yakutat	23,266	4,760	18,505	79.54%

**In Juneau RD harvested>total, so assumed all acres were harvested*

D. Site indices:

Most of the harvested young growth stands (87%) are in areas with site indices over 60 (Tongass EIS, 2008). Forest managers tend to thin more stands on high site quality land than low (Barbour 2005). It was assumed all PCT stands were on site classes 3 and 4. For this analysis we divided the percent of total acreage in Site 3 by the percent in Sites 3 and 4 together to determine the relative percent of PCT acreage in each site class (example: 21%÷87%=24% of PCT acres are on Site 3 sites). We applied these percentages to estimate the number of PCT acres in each site class.

Percent of harvested and PCT young growth by site class

Site Class Average Site Index	1 0-40	2 41-60	3 61-80	4 >80	Unmapped	3 & 4 Combined >60
Percent acres of harvested YG*	4%	6%	21%	66%	2%	87%
Assume 100% of PCT YG acres are Site Class 3 & 4	Percent acres of harvested & PCT YG (3 & 4 only)		21%÷87% = 24%	66%÷87% = 76%		

** Tongass Land and Resource Management Plan: Final Environmental Impact Statement. January 2008. USDA Forest Service R10-MF-603c. Chapter 3: Environment and Effects, Soils (p3-31-3-32).*

E. Log Volume:

For high site indices (Class 4) log volumes were assumed to be 21 mbf/acre for 55 year old stands (Wolfe et al. 2011), 38 mbf/ac for 70 year old stands, and 57 mbf/ac for 90 year old stands (Tongass Futures Roundtable report 2007). To determine mbf/acre for Site Class 3 we used results from a SE Alaska study of timber volumes produced after PCT to calculate the ratio of volume produced on SI 60 compared to SI 90 (Barbour et al. 2005). For 55 year stands the ratio was 81.5%, and for 90 year stands it was 97.8%; 81.5% was conservatively used for 70-year stands as well. These ratios were multiplied by SC 4 volumes to calculate SC 3 volumes: 21 mbf/ac * 81.5% = 17.1 mbf/ac.

Acres in each site class were multiplied by the appropriate mbf/acre to determine total mbf across the Tongass. Five percent of the resulting volume was then subtracted to account for variation or unexpected losses.

Average mbf/acre by stand age and site class.

	Ratio of Log Volumes: SI 60:SI 90[1]	Site Class 3 mbf/ac	Sit Class 4 mbf/ac
Site Index		61-80	>80
55 yo	81.5%	17	21[2]
70 yo	81.5%	31	38[3]
90 yo	97.8%	56	57[3]

[1]modified from Barbour, R.J., R.R. Zaborske, M.H. McClellan, L. Christian, D. Golnick, 2005. Young-stand management options and their implications for wood quality and other values. Landscape and Urban Planning 72: 79-94.

[2] Wolfe, Ron, B.L. Kleinhenz, J. McWhorter, A. Brackley, B. Case, C. Clark, C. McKenzie, K. Rush, S. Spores, P. Slenkamp, O. Graham, G. Woodbury. 2011. Exploring the sustainable yield capacity of the young growth lands on the Tongass National Forest while evaluating the impact of acreage reductions and rotation age. Draft Report, June 13, 2011. Prepared at the request of USDA Forest Service & Juneau Economic Development Council.

[3] Tongass Futures Roundtable Young Growth Committee. 2007. Young growth yield and future harvest projections v112907; Preliminary draft progress report. White paper, 15 p

F. <u>Log recovery factor</u>:

A log recovery factor of 1.2 was used to account for long logs (32') shortened to merchantable logs (16') to reduce log volume loss during sawmilling (personal communication with Brackley, 2013).

Appendix 2

Original Young Growth Data, by Source, Ranger District (RD), and Age Class

[1]Grundy, 2008 [2]Brackley, 2013 Alaskan Native Corporation[4]

Grundy (USFS)

1 Age class distribution of YG for all Tongass NF
2 Age class distribution of YG by Ranger District
3 Suitable YG by age class by Ranger District
= 50% of total

Brackley (USFS)

1 Age class distribution of YG for all Tongass NF
2 Age class distribution of YG by Ranger District
3 Suitable YG by age class by Ranger District
per Alexander, 2010[3]

Alaskan Native Corp lands

1 Age class distribution of YG for all Tongass NF
2 Suitable YG by age class by Ranger District
per Alexander, 2010[3]

Original Tongass Young Growth Data, by Source, Ranger District (RD), and Age Class

[1]Grundy, 2008

Ranger District	Age Class in 2010	Total Acres	Suitable/ Available Acres
Tongass NF	0	11,280	5,640
Tongass NF	10	78,566	39,283
Tongass NF	20	84,483	42,241
Tongass NF	30	115,211	57,605
Tongass NF	40	105,291	52,646
Tongass NF	50	20,735	10,367
Tongass NF	60	3,178	1,589
Tongass NF	70	852	426
Tongass NF	80+	881	440
Tongass NF			
Tongass NF			
Tongass NF			
Tongass NF			
Tongass NF			
Tongass NF	Total	420,475	210,237

[2]Brackley, 2013

Age Class in 2010	Acres (incl. Admiralty Is)	Suitable/ Available Acres
SG05	9,970	9,670
SG10	44,510	20,444
SG15	40,924	38,756
SG20	67,011	29,359
SG25	54,017	23,641
SG30	58,848	28,464
SG35	70,244	33,536
SG40	69,624	25,971
SG45	62,933	23,029
SG50	39,134	4,791
SG55	18,277	2,209
SG60	10,140	489
SG65	6,491	311
SG70	4,341	3,932
Total	556,464	244,602

Alaskan Native Corp. Young Growth

[4]Kleinhenz and McWhorter, 2013

Age Class in 2010	Total Acres	Suitable/ Available Acres
0	4,294	4,294
10	31,751	30,390
20	75,860	33,386
30	110,171	53,562
40	16,266	6,169
50	8,691	1,091
60	1,347	71
70+	710	710
Total	249,090	129,673

[1] *Grundy, Colleen. 2008. Tongass Young Growth Strategy. White paper. USDA Forest Service, Alaska Region. 90 pp.*

[2] *Brackley, Allen. 2013. Personal communication. Young growth in the Tongass National Forest.*

[3] *Alexander, Susan J., Eric B. Henderson, and Randy Coleman. 2010. Economic Analysis of Southeast Alaska: Envisioning a sustainable economy with thriving communities. USDA Forest Service Region 10. R10-MB-725, Juneau, Alaska, 93 p.*

[4] *Kleinhenz, Brian L. and Jim McWhorter. 2013. Consolidated young growth forest land base analysis for all land ownership in southeast Alaska and recommendations for federal land managers. USDA Forest Service, Alaska Region under FS Agreement No. 12-CS-11100100-017. 13 p.*

Ranger District	Age Class in 2010	Total Acres	Suitable/ Available Acres	Age Class in 2010	Acres	Suitable/ Available Acres
CRAIG	0	2,826	1,413	SG05	1,369	1,369
CRAIG	10	9,429	4,714	SG10	3,860	3,695
CRAIG	20	3,350	1,675	SG15	4,114	3,938
CRAIG	30	2,212	1,106	SG20	5,138	2,261
CRAIG	40	10,432	5,216	SG25	1,766	777
CRAIG	50	4,578	2,289	SG30	395	192
CRAIG	60	347	173	SG35	2,073	1,008
CRAIG	70	93	47	SG40	2,882	1,093
CRAIG	80+	97	48	SG45	4,240	1,608
CRAIG				SG50	8,722	1,095
CRAIG				SG55	1,519	191
CRAIG				SG60	452	24
CRAIG				SG65	522	27
CRAIG				SG70	384	384
CRAIG	Total	33,364	16,682	Total	37,436	17,661
HOONAH	0	-	-	SG05	351	351
HOONAH	10	1,526	763	SG10	663	635
HOONAH	20	549	274	SG15	2,843	2,721
HOONAH	30	1,173	587	SG20	7,649	3,366
HOONAH	40	1,902	951	SG25	8,941	3,935
HOONAH	50	117	59	SG30	4,019	1,954
HOONAH	60	-	-	SG35	674	328
HOONAH	70	-	-	SG40	404	153
HOONAH	80+	-	-	SG45	1,252	475
HOONAH				SG50	681	86
HOONAH				SG55	388	49
HOONAH				SG60	300	16
HOONAH				SG65	300	16
HOONAH				SG70	319	319
HOONAH	Total	5,266	2,633	Total	28,786	14,404
JUNEAU	0	-	-	SG05	300	300
JUNEAU	10	7,395	3,698	SG10	300	287
JUNEAU	20	8,458	4,229	SG15	300	287
JUNEAU	30	1,246	623	SG20	1,825	803
JUNEAU	40	1,293	647	SG25	303	133
JUNEAU	50	69	34	SG30	891	433
JUNEAU	60	14	7	SG35	1,371	667
JUNEAU	70	-	-	SG40	1,763	669
JUNEAU	80+	-	-	SG45	1,496	567
JUNEAU				SG50	300	38
JUNEAU				SG55	345	43
JUNEAU				SG60	524	28
JUNEAU				SG65	300	16
JUNEAU				SG70	300	300
JUNEAU	Total	18,476	9,238	Total	10,317	4,571

KETCHIKAN	0	1,760	880	SG05	1,323	1,323
KETCHIKAN	10	9,844	4,922	SG10	4,401	4,213
KETCHIKAN	20	5,153	2,577	SG15	6,132	5,870
KETCHIKAN	30	8,131	4,066	SG20	3,993	1,757
KETCHIKAN	40	5,968	2,984	SG25	3,116	1,371
KETCHIKAN	50	4,003	2,002	SG30	2,513	1,222
KETCHIKAN	60	354	177	SG35	5,046	2,453
KETCHIKAN	70	95	48	SG40	2,740	1,039
KETCHIKAN	80+	98	49	SG45	2,701	1,024
KETCHIKAN				SG50	6,149	772
KETCHIKAN				SG55	5,550	697
KETCHIKAN				SG60	384	20
KETCHIKAN				SG65	347	18
KETCHIKAN				SG70	423	423
KETCHIKAN	Total	35,406	17,703	Total	44,818	22,203
PETERSBURG	0	2,696	1,348	SG05	1,391	1,391
PETERSBURG	10	9,783	4,891	SG10	3,912	3,745
PETERSBURG	20	15,628	7,814	SG15	6,456	6,179
PETERSBURG	30	20,227	10,113	SG20	13,430	5,911
PETERSBURG	40	13,681	6,840	SG25	6,670	2,935
PETERSBURG	50	1,966	983	SG30	20,297	9,868
PETERSBURG	60	687	343	SG35	10,311	5,013
PETERSBURG	70	185	92	SG40	10,898	4,133
PETERSBURG	80+	191	96	SG45	8,892	3,373
PETERSBURG				SG50	4,530	569
PETERSBURG				SG55	1,708	214
PETERSBURG				SG60	945	50
PETERSBURG				SG65	1,310	69
PETERSBURG				SG70	497	497
PETERSBURG	Total	65,043	32,521	Total	91,248	43,947
SITKA	0	-	-	SG05	300	300
SITKA	10	6,214	3,107	SG10	859	822
SITKA	20	1,946	973	SG15	3,666	3,508
SITKA	30	20,131	10,066	SG20	2,923	1,286
SITKA	40	22,651	11,325	SG25	1,501	660
SITKA	50	1,445	723	SG30	3,492	1,698
SITKA	60	295	148	SG35	12,993	6,317
SITKA	70	80	40	SG40	12,093	4,587
SITKA	80+	82	41	SG45	11,144	4,227
SITKA				SG50	8,448	1,061
SITKA				SG55	1,298	163
SITKA				SG60	1,520	80
SITKA				SG65	682	36
SITKA				SG70	571	571
SITKA	Total	52,844	26,422	Total	61,489	25,315

THORN BAY	0	1,778	889	SG05	2,371	2,371
THORN BAY	10	26,009	13,005	SG10	4,659	4,459
THORN BAY	20	37,095	18,547	SG15	11,507	11,014
THORN BAY	30	47,947	23,973	SG20	24,617	10,834
THORN BAY	40	44,110	22,055	SG25	17,509	7,706
THORN BAY	50	7,626	3,813	SG30	17,368	8,444
THORN BAY	60	1,108	554	SG35	27,973	13,600
THORN BAY	70	298	149	SG40	28,296	10,732
THORN BAY	80+	309	154	SG45	26,608	10,092
THORN BAY				SG50	7,990	1,003
THORN BAY				SG55	4,587	576
THORN BAY				SG60	1,726	91
THORN BAY				SG65	1,455	77
THORN BAY				SG70	575	575
THORN BAY	Total	166,279	83,139	Total	177,240	81,571
WRANGELL	0	679	340	SG05	441	441
WRANGELL	10	7,974	3,987	SG10	2,405	2,302
WRANGELL	20	10,032	5,016	SG15	5,173	4,951
WRANGELL	30	13,589	6,795	SG20	6,077	2,674
WRANGELL	40	5,254	2,627	SG25	2,303	1,014
WRANGELL	50	930	465	SG30	8,107	3,941
WRANGELL	60	373	187	SG35	7,692	3,740
WRANGELL	70	100	50	SG40	6,912	2,621
WRANGELL	80+	104	52	SG45	4,086	1,550
WRANGELL				SG50	1,039	130
WRANGELL				SG55	1,904	239
WRANGELL				SG60	1,563	82
WRANGELL				SG65	707	37
WRANGELL				SG70	563	563
WRANGELL	Total	39,037	19,518	Total	48,971	24,286
YAKUTAT	0	1,541	770	SG05	1,823	1,823
YAKUTAT	10	393	196	SG10	300	287
YAKUTAT	20	2,273	1,137	SG15	300	287
YAKUTAT	30	554	277	SG20	1,061	467
YAKUTAT	40	-	-	SG25	11,608	5,109
YAKUTAT	50	-	-	SG30	1,466	713
YAKUTAT	60	-	-	SG35	847	412
YAKUTAT	70	-	-	SG40	2,487	943
YAKUTAT	80+	-	-	SG45	300	114
YAKUTAT				SG50	300	38
YAKUTAT				SG55	300	38
YAKUTAT				SG60	1,875	99
YAKUTAT				SG65	300	16
YAKUTAT				SG70	300	300
YAKUTAT	Total	4,760	2,380	Total	23,266	10,643
			Total w/o Adm. Is.		523,571	244,602

AD Island	SG05	300.0
AD Island	SG10	23,150.0
AD Island	SG15	433.6
AD Island	SG20	300.0
AD Island	SG25	300.0
AD Island	SG30	300.0
AD Island	SG35	1,265.3
AD Island	SG40	1,149.5
AD Island	SG45	2,214.6
AD Island	SG50	974.1
AD Island	SG55	678.5
AD Island	SG60	850.9
AD Island	SG65	568.2
AD Island	SG70	409.2
AD Island	Total	32,894
	Total with Adm. Is.	556,464

Appendix 3 Suitable acres eligible for harvest (does not include stands regenerated after natural disturbance)
Acres in original age classes brought forward to 2015 and beyond.
gray = reharvest

	Grundy, 2008		Brackley, 2013			
RD		55 years		55 years	70 years	90 years
Thorne Bay	Decade	Suit ac	5-yr period	Suit ac	Suit ac	Suit ac
	2015-2024	4,670	2015-2019	2,177	611	-
	2025-2034	22,055	2020-2024	9,468	85	-
	2035-2044	23,973	2025-2029	10,068	540	-
	2045-2054	18,547	2030-2034	12,759	941	539
	2055-2064	13,005	2035-2039	7,921	9,468	72
	2065-2074	889	2040-2044	7,229	10,068	85
	2075-2084	4,670	2045-2049	10,164	12,759	540
	2085-2094	22,055	2050-2054	10,333	7,921	941
	Total	83,139	2055-2059	4,184	7,229	9,468
			2060-2064	2,224	10,164	10,068
			2065-2069	-	10,333	12,759
			2070-2074	2,177	4,184	7,921
			2075-2079	9,468	2,224	7,229
			Total	81,571	76,527	49,622
Sitka	Decade	Suit ac	5-yr period	Suit ac	Suit ac	Suit ac
	2015-2024	951	2015-2019	1,641	521	-
	2025-2034	11,325	2020-2024	3,632	69	-
	2035-2044	10,066	2025-2029	3,942	140	-
	2045-2054	973	2030-2034	5,429	911	490
	2055-2064	3,107	2035-2039	1,459	3,632	31
	2065-2074	-	2040-2044	568	3,942	69
	2075-2084	951	2045-2049	1,106	5,429	140
	2085-2094	11,325	2050-2054	3,015	1,459	911
	Total	26,422	2055-2059	706	568	3,632
			2060-2064	258	1,106	3,942
			2065-2069	-	3,015	5,429
			2070-2074	1,641	706	1,459
			2075-2079	3,632	258	568
			Total	21,756	21,756	16,671
Petersburg	Decade	Suit ac	5-yr period	Suit ac	Suit ac	Suit ac
	2015-2024	1,514	2015-2019	997	404	-
	2025-2034	6,840	2020-2024	2,404	35	-
	2035-2044	10,113	2025-2029	2,946	153	-
	2045-2054	7,814	2030-2034	3,573	405	354
	2055-2064	4,891	2035-2039	7,034	2,404	49
	2065-2074	1,348	2040-2044	2,092	2,946	35
	2075-2084	1,514	2045-2049	4,213	3,573	153
	2085-2094	6,840	2050-2054	4,404	7,034	405
	Total	32,521	2055-2059	2,669	2,092	2,404
			2060-2064	992	4,213	2,946
			2065-2069	-	4,404	3,573
			2070-2074	997	2,669	7,034
			2075-2079	2,404	992	2,092
			Total	31,326	31,326	19,047

Ketchikan

Decade	Suit ac
2015-2024	2,275
2025-2034	2,984
2035-2044	4,066
2045-2054	2,577
2055-2064	4,922
2065-2074	880
2075-2084	2,275
2085-2094	2,984
Total	17,703

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	1,525	349	-
2020-2024	809	16	-
2025-2029	821	550	-
2030-2034	1,938	610	334
2035-2039	965	809	14
2040-2044	1,083	821	16
2045-2049	1,388	1,938	550
2050-2054	4,637	965	610
2055-2059	3,328	1,083	809
2060-2064	1,046	1,388	821
2065-2069	-	4,637	1,938
2070-2074	1,525	3,328	965
2075-2079	809	1,046	1,083
Total	17,540	17,540	7,142

Wrangell

Decade	Suit ac
2015-2024	754
2025-2034	2,627
2035-2044	6,795
2045-2054	5,016
2055-2064	3,987
2065-2074	340
2075-2084	754
2085-2094	2,627
Total	19,518

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	838	478	-
2020-2024	1,235	66	-
2025-2029	2,090	191	-
2030-2034	2,981	104	449
2035-2039	3,142	1,235	30
2040-2044	808	2,090	66
2045-2049	2,132	2,981	191
2050-2054	3,947	3,142	104
2055-2059	1,835	808	1,235
2060-2064	352	2,132	2,090
2065-2069	-	3,947	2,981
2070-2074	838	1,835	3,142
2075-2079	1,235	352	808
Total	19,359	19,359	11,094

Craig

Decade	Suit ac
2015-2024	2,558
2025-2034	5,216
2035-2044	1,106
2045-2054	1,675
2055-2064	4,714
2065-2074	1,413
2075-2084	2,558
2085-2094	5,216
Total	16,682

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	1,533	366	-
2020-2024	1,433	21	-
2025-2029	974	170	-
2030-2034	898	976	342
2035-2039	171	1,433	24
2040-2044	693	974	21
2045-2049	2,015	898	170
2050-2054	3,509	171	976
2055-2059	3,293	693	1,433
2060-2064	1,220	2,015	974
2065-2069	-	3,509	898
2070-2074	1,533	3,293	171
2075-2079	1,433	1,220	693
Total	15,740	15,740	5,703

Juneau	Decade	Suit ac
	2015-2024	42
	2025-2034	647
	2035-2044	623
	2045-2054	4,229
	2055-2064	3,698
	2065-2074	-
	2075-2084	42
	2085-2094	647
	Total	9,238

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	424	316	-
2020-2024	567	28	-
2025-2029	669	43	-
2030-2034	667	38	300
2035-2039	433	567	16
2040-2044	133	669	28
2045-2049	803	667	43
2050-2054	287	433	38
2055-2059	287	133	567
2060-2064	300	803	669
2065-2069	-	287	667
2070-2074	424	287	433
2075-2079	567	300	133
Total	4,571	4,571	2,893

Hoonah	Decade	Suit ac
	2015-2024	59
	2025-2034	951
	2035-2044	587
	2045-2054	274
	2055-2064	763
	2065-2074	-
	2075-2084	59
	2085-2094	951
	Total	2,633

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	89	61	-
2020-2024	87	3	-
2025-2029	28	9	-
2030-2034	60	16	58
2035-2039	357	87	3
2040-2044	720	28	3
2045-2049	616	60	9
2050-2054	498	357	16
2055-2059	116	720	87
2060-2064	64	616	28
2065-2069	-	498	60
2070-2074	89	116	357
2075-2079	87	64	720
Total	2,635	2,635	1,341

Yakutat	Decade	Suit ac
	2015-2024	-
	2025-2034	-
	2035-2044	277
	2045-2054	1,137
	2055-2064	196
	2065-2074	770
	2075-2084	-
	2085-2094	-
	Total	2,380

5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	100	65	-
2020-2024	23	20	-
2025-2029	193	8	-
2030-2034	84	8	61
2035-2039	146	23	3
2040-2044	1,045	193	20
2045-2049	96	84	8
2050-2054	59	146	8
2055-2059	59	1,045	23
2060-2064	373	96	193
2065-2069	-	59	84
2070-2074	100	59	146
2075-2079	23	373	1,045
Total	2,178	2,178	1,592

Total MBF available from suitable 2G at 55 years

Suitable acres eligible for harvest (does not include stands regenerated after natural disturbance)
Acres in original age classes brought forward to 2015 and beyond.

Grundy, 2008

		55 years
Tongass NF	Decade	Suit ac
	2015-2024	12,822
	2025-2034	52,646
	2035-2044	57,605
	2045-2054	42,241
	2055-2064	39,283
	2065-2074	5,640
	2075-2084	12,822
		210,237

Brackley, 2013

	55 years	70 years	90 years
5-yr period	Suit ac	Suit ac	Suit ac
2015-2019	9,326	3,171	-
2020-2024	19,660	343	-
2025-2029	21,731	1,804	-
2030-2034	28,388	4,009	2,929
2035-2039	21,629	19,660	242
2040-2044	14,372	21,731	343
2045-2049	22,532	28,388	1,804
2050-2054	30,689	21,629	4,009
2055-2059	16,477	14,372	19,660
2060-2064	6,828	22,532	21,731
2065-2069	-	30,689	28,388
2070-2074	9,326	16,477	21,629
2075-2079	19,660	6,828	14,372
Total	191,632	191,631	115,106

Appendix 4 Summary of Conclusions (all Suitable)

Assumptions:

Grundy (USFS)[4], Brackley (USFS)[1] and Alaskan Native Corporation land (Kleinhenz and McWhorter)[5]:

1 55 years
2 Site Class 3 @ 17 mbf/acre
3 Site Class 4 @ 21 mbf/ac
4 Log merchandizing (+20% above long log volume) per Brackley[1]
5 5% reduction for defect
6 factored for harvested vs natural acres factored per Tongass EIS, 2008[2]
7 PCT = 45% of total suitable (23% unroaded; 22% roaded per Tongass Futures Roundtable[3]
8 Assumed 50% of ANC land was within the same region as targeted RDs.

Summary Runs:

All Tongass:

1 All suitable
2 All PCT
3 All unroaded PCT
4 All roaded PCT

Targeted Ranger Districts (Craig, Petersburg, Thorne Bay, Wrangell)

1 All suitable
2 All PCT
3 All unroaded PCT
4 All roaded PCT
Assumed 50% of ANC land was within the same region as targeted RDs.

Identical runs for Brackley (USFS) data were also run for harvests at:

* 70 years (38 mbf/ac)
* 90 years (57 mbf/ac)

[1] *Brackley, Allen. 2013. Personal communication. Young growth in the Tongass National Forest.*

[2] *Tongass Land and Resource Management Plan: Final Environmental Impact Statement. January 2008. USDA Forest Service R10-MF-603c. Chapter 3: Environment and Effects, Soils (p3-31-3-32).*

[3] *Tongass Futures Roundtable Young Growth Committee. 2007. Young growth yield and future harvest projections v112907; Preliminary draft progress report. White paper, 15 pp.*

[4] *Grundy, Colleen. 2008. Tongass Young Growth Strategy. White paper. USDA Forest Service, Alaska Region. 90 pp.*

[5] *Kleinhenz, Brian L. and Jim McWhorter. 2013. Consolidated young growth forest land base analysis for all land ownership in southeast Alaska and recommendations for federal land managers. USDA Forest Service, Alaska Region under FS Agreement No. 12-CS-11100100-017. 13 p.*

Appendix 4	Grundy @ 21 mbf/acre			Brackley @ 21 mbf/ac			ANC land (K & McW) @21 mbf/ac		
At 55 years	*acres*	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*
All Tongass			*long->merch log*	**All Tongass**		*long->merch log*	**All Tongass**		*long->merch log*
all suitable YG	**204,597**			**191,632**			**125,379**		
2015-2019				9,326	35,549	42,659			
2020-2024	12,822	25,581	30,697	19,660	74,939	89,926	1,872	3,552	4,263
2025-2029				21,731	82,834	99,401			
2030-2034	52,646	105,028	126,033	28,388	108,211	129,854	6,169	11,649	13,979
2035-2039				21,629	82,446	98,935			
2040-2044	57,605	114,923	137,907	14,372	54,782	65,739	53,562	101,964	122,357
2045-2049				22,532	85,888	103,065			
2050-2054	42,241	84,271	101,126	30,689	116,983	140,379	33,386	63,437	76,125
2055-2059				16,477	62,807	75,368			
2060-2064	39,283	78,369	94,043	6,828	26,028	31,234	30,390	57,899	69,479
2065-2069				0	0	0			
2070-2074	5,640	11,251	13,502	9,326	35,549	42,659	4,294	8,180	9,816
All PCT	**92,069**			**86,234**			**56,421**		
2015-2019				4,197	15,997	19,197			
2020-2024	5,770	11,511	13,814	8,847	33,722	40,467	843	1,605	1,925
2025-2029				9,779	37,275	44,730			
2030-2034	23,690	47,262	56,715	12,775	48,695	58,434	2,776	5,288	6,346
2035-2039				9,733	37,101	44,521			
2040-2044	25,922	51,715	62,058	6,467	24,652	29,582	24,103	45,911	55,093
2045-2049				10,139	38,649	46,379			
2050-2054	19,009	37,922	45,506	13,810	52,642	63,171	15,023	28,616	34,340
2055-2059				7,415	28,263	33,916			
2060-2064	17,677	35,266	42,320	3,073	11,713	14,055	13,676	26,049	31,259
2065-2069				0	0	0			
2070-2074	2,538	5,063	6,076	4,197	15,997	19,197	843	3,681	4,417
All Unroaded PCT	**47,057**			**44,075**			**28,838**		
2015-2019				2,145	8,176	9,812			
2020-2024	2,949	5,884	7,060	4,522	17,236	20,683	431	820	984
2025-2029				4,998	19,052	22,862			
2030-2034	12,108	24,156	28,988	6,529	24,889	29,866	1,419	2,703	3,243
2035-2039				4,975	18,963	22,755			
2040-2044	13,249	26,432	31,719	3,305	12,600	15,120	12,319	23,465	28,159
2045-2049				5,182	19,754	23,705			
2050-2054	9,715	19,382	23,259	7,059	26,906	32,287	7,679	14,626	17,551
2055-2059				3,790	14,446	17,335			
2060-2064	9,035	18,025	21,630	1,570	5,986	7,184	6,990	13,314	15,977
2065-2069				0	0	0			
2070-2074	1,297	2,588	3,105	2,145	8,176	9,812	988	1,881	2,257
All Roaded PCT	**45,011**			**42,159**			**27,584**		
2015-2019				2,052	7,821	9,385			
2020-2024	2,821	5,628	6,753	4,325	16,486	19,784	412	784	941
2025-2029				4,781	18,223	21,868			
2030-2034	11,582	23,106	27,727	6,245	23,806	28,568	1,357	2,585	3,102
2035-2039				4,758	18,138	21,766			
2040-2044	12,673	25,283	30,340	3,162	12,052	14,462	11,784	22,445	26,934
2045-2049				4,957	18,895	22,674			
2050-2054	9,293	18,540	22,248	6,752	25,736	30,883	7,345	13,990	16,788
2055-2059				3,625	13,818	16,581			
2060-2064	8,642	17,241	20,690	1,502	5,726	6,871	6,686	12,735	15,282
2065-2069				0	0	0			
2070-2074	1,241	2,475	2,970	2,052	7,821	9,385	945	1,799	2,159

	Grundy @ 21 mbf/acre			Brackley @ 21 mbf/ac			ANC land (K & McW) @21 mbf/ac		
At 55 years	*acres*	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*
5 RDs (C, P, S, TB, W)			*long->merch log*	**5 RDs**		*long->merch log*	**5 RDs**		*long->merch log*
all suitable YG	**174,293**			**164,708**			**62,690**		
2015-2019				7,188	27,399	32,879			
2020-2024	10,447	20,842	25,011	18,173	69,271	83,126	936	1,776	2,984
2025-2029				20,020	76,313	91,576			
2030-2034	48,064	95,887	115,065	25,640	97,734	117,280	3,085	5,824	9,785
2035-2039				19,727	75,198	90,237			
2040-2044	52,053	103,846	124,615	11,390	43,416	52,099	26,781	50,982	85,650
2045-2049				19,629	74,823	89,788			
2050-2054	34,025	67,879	81,455	25,209	96,091	115,310	16,693	31,719	53,287
2055-2059				12,687	48,360	58,032			
2060-2064	29,704	59,260	71,112	5,046	19,233	23,079	15,195	28,950	48,635
2065-2069				0	0	0			
2070-2074	3,990	7,959	9,551	7,188	27,399	32,879	2,147	4,090	6,871
All PCT	**66,542**			**74,119**			**28,211**		
2015-2019				3,235	12,330	14,795			
2020-2024	4,701	9,379	11,255	8,178	31,172	37,406	422	802	2,984
2025-2029				9,009	34,341	41,209			
2030-2034	21,629	43,149	51,779	11,538	43,980	52,776	1,388	2,644	9,785
2035-2039				8,877	33,839	40,607			
2040-2044	23,424	46,731	56,077	5,125	19,537	23,445	12,051	22,955	85,650
2045-2049				8,833	33,670	40,404			
2050-2054	15,311	30,546	36,655	11,344	43,241	51,889	7,512	14,308	53,287
2055-2059				5,709	21,762	26,115			
2060-2064	13,367	26,667	32,000	2,270	8,655	10,386	6,838	13,025	48,635
2065-2069				0	0	0			
2070-2074	1,795	3,582	4,298	3,235	12,330	14,795	422	1,840	6,871
All Unroaded PCT	**34,010**			**37,883**			**14,419**		
2015-2019				1,653	6,302	7,562			
2020-2024	2,403	4,794	5,752	4,180	15,932	19,119	216	410	2,984
2025-2029				4,605	17,552	21,062			
2030-2034	11,055	22,054	26,465	5,897	22,479	26,974	709	1,351	9,785
2035-2039				4,537	17,295	20,755			
2040-2044	11,972	23,885	28,662	2,620	9,986	11,983	6,160	11,733	85,650
2045-2049				4,515	17,209	20,651			
2050-2054	7,826	15,612	18,735	5,798	22,101	26,521	3,839	7,313	53,287
2055-2059				2,918	11,123	13,347			
2060-2064	6,832	13,630	16,356	1,160	4,423	5,308	3,495	6,657	48,635
2065-2069				0	0	0			
2070-2074	918	1,831	2,197	1,653	6,302	7,562	494	941	6,871
All Roaded PCT	**32,532**			**36,236**			**13,792**		
2015-2019				1,581	6,028	7,233			
2020-2024	2,298	4,585	5,502	3,998	15,240	18,288	206	392	2,984
2025-2029				4,404	16,789	20,147			
2030-2034	10,574	21,095	25,314	5,641	21,501	25,802	679	1,293	9,785
2035-2039				4,340	16,543	19,852			
2040-2044	11,452	22,846	27,415	2,506	9,552	11,462	5,892	11,223	85,650
2045-2049				4,318	16,461	19,753			
2050-2054	7,485	14,933	17,920	5,546	21,140	25,368	3,672	6,995	53,287
2055-2059				2,791	10,639	12,767			
2060-2064	6,535	13,037	15,645	1,110	4,231	5,077	3,343	6,368	48,635
2065-2069				0	0	0			
2070-2074	878	1,751	2,101	1,581	6,028	7,233	472	900	6,871

	Brackley @ 70 yrs (38 mbf/ac)			Brackley @ 90 years (57 mbf/ac)		
	acres	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*
All Tongass	**All Tongass**		*long->merch log*	**All Tongass**		*long->merch log*
all suitable YG	**181,632**			**100,734**		
2015-2019	3,171	21,872	26,246	0	0	0
2020-2024	343	2,363	2,835	0	0	0
2025-2029	1,804	12,443	14,931	0	0	0
2030-2034	4,009	27,650	33,180	2,929	31,551	37,861
2035-2039	19,660	135,603	162,724	242	2,608	3,130
2040-2044	21,731	149,890	179,868	343	3,690	4,428
2045-2049	28,388	195,811	234,973	1,804	19,433	23,319
2050-2054	21,629	149,188	179,026	4,009	43,183	51,819
2055-2059	14,372	99,130	118,955	19,660	211,782	254,138
2060-2064	22,532	155,415	186,499	21,731	234,094	280,913
2065-2069	30,689	211,683	254,019	28,388	305,813	366,975
2070-2074	16,477	113,651	136,381	21,629	232,999	279,598
All PCT	**81,735**			**45,330**		
2015-2019	1,427	9,842	11,811	0	0	0
2020-2024	154	1,063	1,276	0	0	0
2025-2029	812	5,599	6,719	0	0	0
2030-2034	1,804	12,442	14,931	1,318	14,198	17,037
2035-2039	8,847	61,021	73,226	109	1,174	1,408
2040-2044	9,779	67,450	80,941	154	1,661	1,993
2045-2049	12,775	88,115	105,738	812	8,745	10,494
2050-2054	9,733	67,135	80,562	1,804	19,432	23,319
2055-2059	6,467	44,608	53,530	8,847	95,302	114,362
2060-2064	10,139	69,937	83,924	9,779	105,342	126,411
2065-2069	13,810	95,257	114,309	12,775	137,616	165,139
2070-2074	7,415	51,143	61,371	9,733	104,849	125,819
All Unroaded PCT	**41,775**			**23,169**		
2015-2019	729	5,031	6,037	0	0	0
2020-2024	79	543	652	0	0	0
2025-2029	415	2,862	3,434	0	0	0
2030-2034	922	6,359	7,631	674	7,257	8,708
2035-2039	4,522	31,189	37,426	56	600	720
2040-2044	4,998	34,475	41,370	79	849	1,019
2045-2049	6,529	45,036	54,044	415	4,470	5,363
2050-2054	4,975	34,313	41,176	922	9,932	11,918
2055-2059	3,305	22,800	27,360	4,522	48,710	58,452
2060-2064	5,182	35,746	42,895	4,998	53,842	64,610
2065-2069	7,059	48,687	58,424	6,529	70,337	84,404
2070-2074	3,790	26,140	31,368	4,975	53,590	64,308
All Roaded PCT	**39,959**			**22,161**		
2015-2019	698	4,812	5,774	0	0	0
2020-2024	75	520	624	0	0	0
2025-2029	397	2,737	3,285	0	0	0
2030-2034	882	6,083	7,300	644	6,941	8,329
2035-2039	4,325	29,833	35,799	53	574	689
2040-2044	4,781	32,976	39,571	75	812	974
2045-2049	6,245	43,078	51,694	397	4,275	5,130
2050-2054	4,758	32,821	39,386	882	9,500	11,400
2055-2059	3,162	21,809	26,170	4,325	46,592	55,910
2060-2064	4,957	34,191	41,030	4,781	51,501	61,801
2065-2069	6,752	46,570	55,884	6,245	67,279	80,735
2070-2074	3,625	25,003	30,004	4,758	51,260	61,512

At 70 years	Brackley @ 70 yrs (38 mbf/ac)			Brackley @ 90 years (57 mbf/ac)		
	acres	*log mbf/yr*	*1.2*	*acres*	*log mbf/yr*	*1.2*
5 RDs (C, TB, W, P)			*long->merch log*	**5 RDs**		*long->merch log*
all suitable YG	**157,282**			**90,748**		
2015-2019	2,380	16,419	19,703	0	0	0
2020-2024	276	1,904	2,285	0	0	0
2025-2029	1,194	8,233	9,880	0	0	0
2030-2034	3,338	23,023	27,627	2,175	23,426	28,111
2035-2039	18,173	125,348	150,418	206	2,217	2,661
2040-2044	20,020	138,090	165,708	276	2,973	3,568
2045-2049	25,640	176,851	212,221	1,194	12,858	15,430
2050-2054	19,727	136,072	163,286	3,338	35,956	43,148
2055-2059	11,390	78,563	94,275	18,173	195,765	234,919
2060-2064	19,629	135,394	162,473	20,020	215,666	258,799
2065-2069	25,209	173,880	208,656	25,640	276,202	331,442
2070-2074	12,687	87,509	105,011	19,727	212,514	255,016
All PCT	**5,572**			**40,836**		
2015-2019	1,071	7,389	8,866	0	0	0
2020-2024	124	857	1,028	0	0	0
2025-2029	537	3,705	4,446	0	0	0
2030-2034	1,502	10,360	12,432	979	10,542	12,650
2035-2039	8,178	56,407	67,688	93	998	1,197
2040-2044	9,009	62,141	74,569	124	1,338	1,606
2045-2049	11,538	79,583	95,500	537	5,786	6,943
2050-2054	8,877	61,232	73,479	1,502	16,180	19,416
2055-2059	5,125	35,353	42,424	8,178	88,094	105,713
2060-2064	8,833	60,927	73,113	9,009	97,050	116,460
2065-2069	11,344	78,246	93,895	11,538	124,291	149,149
2070-2074	5,709	39,379	47,255	8,877	95,631	114,757
All Unroaded PCT	**36,175**			**20,872**		
2015-2019	548	3,776	4,532	0	0	0
2020-2024	63	438	525	0	0	0
2025-2029	275	1,894	2,272	0	0	0
2030-2034	768	5,295	6,354	500	5,388	6,466
2035-2039	4,180	28,830	34,596	47	510	612
2040-2044	4,605	31,761	38,113	63	684	821
2045-2049	5,897	40,676	48,811	275	2,957	3,549
2050-2054	4,537	31,297	37,556	768	8,270	9,924
2055-2059	2,620	18,069	21,683	4,180	45,026	54,031
2060-2064	4,515	31,141	37,369	4,605	49,603	59,524
2065-2069	5,798	39,992	47,991	5,897	63,526	76,232
2070-2074	2,918	20,127	24,153	4,537	48,878	58,654
All Roaded PCT	**34,602**			**19,964**		
2015-2019	524	3,612	4,335	0	0	0
2020-2024	61	419	503	0	0	0
2025-2029	263	1,811	2,174	0	0	0
2030-2034	734	5,065	6,078	478	5,154	6,184
2035-2039	3,998	27,577	33,092	45	488	585
2040-2044	4,404	30,380	36,456	61	654	785
2045-2049	5,641	38,907	46,689	263	2,829	3,395
2050-2054	4,340	29,936	35,923	734	7,910	9,493
2055-2059	2,506	17,284	20,741	3,998	43,068	51,682
2060-2064	4,318	29,787	35,744	4,404	47,447	56,936
2065-2069	5,546	38,254	45,904	5,641	60,764	72,917
2070-2074	2,791	19,252	23,102	4,340	46,753	56,104

Appendix 5 Detailed Analysis: Brackley (USFS)

Total Tongass per Ranger District, by Age Class:

1 Second growth acres
2 Suitable second growth
3 PCT acres, unroaded
4 PCT acres, roaded
5 Total acres regenerated from previous harvests
6 Suitable acres regenerated from previous harvests

Total Tongass by Ranger District, by 5-year period, eligible for harvest at 55, 70, and 90 years:

1 Suitable acres by origin (harvested or natural), per Tongass EIS, 2008
Natural origin stands then removed from the analysis
2 Suitable acres by Site Class (Site 3 or 4), per Tongass EIS, 2008
3 Log volumes harvested over 5 years, minus 5% for defect
4 Average annual mbf harvested in 5-year period

Unroaded and Roaded PCT stands by Ranger District, by 5-year period, eligible for harvest at 55, 70, and 90 years

Appendix 5 Brackley Tongass 2G

Total Log MBF available from all suitable at 55 years

By Age Class	Age Class in 2014 (yrs)	Total Acres	Suitable/ Available Acres	PCT - unroaded	PCT & Roaded Acres*	Total Ac - from harvest	Suitable of hvst acres
Thorne Bay RD	5-9	2,371	2,371	545	522	2,224	2,224
	10-14	4,659	4,459	1,026	981	4,371	4,184
	15-19	11,507	11,014	2,533	2,423	10,796	10,333
	20-24	24,617	10,834	2,492	2,383	23,094	10,164
	25-29	17,509	7,706	1,772	1,695	16,426	7,229
	30-34	17,368	8,444	1,942	1,858	16,294	7,921
	35-39	27,973	13,600	3,128	2,992	26,243	12,759
	40-44	28,296	10,732	2,468	2,361	26,546	10,068
	45-49	26,608	10,092	2,321	2,220	24,962	9,468
	50-54	7,990	1,003	231	221	7,496	941
	55-59	4,587	576	132	127	4,303	540
	60-64	1,726	91	21	20	1,620	85
	65-69	1,455	77	18	17	1,365	72
	70-74	575	575	132	126	539	539
	Total	177,240	81,571	18,761	17,946	166,279	76,527
Sitka RD	5-9	300	300	69	66	258	258
	10-14	859	822	189	181	738	706
	15-19	3,666	3,508	807	772	3,150	3,015
	20-24	2,923	1,286	296	283	2,512	1,106
	25-29	1,501	660	152	145	1,290	568
	30-34	3,492	1,698	390	374	3,001	1,459
	35-39	12,993	6,317	1,453	1,390	11,167	5,429
	40-44	12,093	4,587	1,055	1,009	10,393	3,942
	45-49	11,144	4,227	972	930	9,577	3,632
	50-54	8,448	1,061	244	233	7,260	911
	55-59	1,298	163	37	36	1,115	140
	60-64	1,520	80	18	18	1,306	69
	65-69	682	36	8	8	586	31
	70-74	571	571	131	126	490	490
	Total	61,489	25,315	5,822	5,569	52,844	21,756

By 5-yr Period	Years	*acre totals do not include re-harvest	Suit YG: Harv	Suit YG: Nat	YG: Site3	YG: Site4		Annual avg mbf harvested
Thorne Bay RD	Years	Suit ac	acres				mbf -5%	annual mbf
	2015-2019	2,321	2,177	144	526	1,652	41,501	8,300
	2020-2024	10,092	9,468	624	2,285	7,182	180,446	36,089
	2025-2029	10,732	10,068	664	2,430	7,638	191,892	38,378
	2030-2034	13,600	12,759	841	3,080	9,679	243,167	48,633
	2035-2039	8,444	7,921	522	1,912	6,009	150,977	30,195
	2040-2044	7,706	7,229	477	1,745	5,484	137,779	27,556
	2045-2049	10,834	10,164	670	2,453	7,710	193,710	38,742
	2050-2054	11,014	10,333	681	2,494	7,839	196,938	39,388
	2055-2059	4,459	4,184	276	1,010	3,174	79,735	15,947
	2060-2064	2,371	2,224	147	537	1,687	42,388	8,478
	2065-2069	-	-	-	-	-	-	-
	2070-2074	2,321	2,177	144	526	1,652	41,501	8,300
	2075-2079	10,092	9,468	624	2,285	7,182	180,446	36,089
	Total	81,571*	76,527	5,812	21,283	66,889	1,680,479	336,096
Sitka RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	1,910	1,641	269	396	1,245	31,283	6,257
	2020-2024	4,227	3,632	594	877	2,756	69,230	13,846
	2025-2029	4,587	3,942	645	951	2,990	75,127	15,025
	2030-2034	6,317	5,429	888	1,310	4,118	103,470	20,694
	2035-2039	1,698	1,459	239	352	1,107	27,809	5,562
	2040-2044	660	568	93	137	431	10,818	2,164
	2045-2049	1,286	1,106	181	267	839	21,071	4,214
	2050-2054	3,508	3,015	493	728	2,287	57,467	11,493
	2055-2059	822	706	116	170	536	13,461	2,692
	2060-2064	300	258	42	62	196	4,914	983
	2065-2069	-	-	-	-	-	-	-
	2070-2074	1,910	1,641	269	396	1,245	31,283	6,257
	2075-2079	4,227	3,632	594	877	2,756	69,230	13,846
	Total	25,315	21,756	4,422	6,524	20,505	515,162	103,032

Petersburg RD	5-9	1,391	1,391	320	306	992	992	Petersburg RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	3,912	3,745	861	824	2,789	2,669		2015-2019	1,399	997	402	241	757	19,007	3,801
	15-19	6,456	6,179	1,421	1,359	4,602	4,404		2020-2024	3,373	2,404	969	580	1,824	45,818	9,164
	20-24	13,430	5,911	1,359	1,300	9,573	4,213		2025-2029	4,133	2,946	1,187	711	2,235	56,154	11,231
	25-29	6,670	2,935	675	646	4,755	2,092		2030-2034	5,013	3,573	1,440	862	2,711	68,101	13,620
	30-34	20,297	9,868	2,270	2,171	14,468	7,034		2035-2039	9,868	7,034	2,834	1,698	5,336	134,062	26,812
	35-39	10,311	5,013	1,153	1,103	7,350	3,573		2040-2044	2,935	2,092	843	505	1,587	39,881	7,976
	40-44	10,898	4,133	951	909	7,768	2,946		2045-2049	5,911	4,213	1,697	1,017	3,196	80,298	16,060
	45-49	8,892	3,373	776	742	6,338	2,404		2050-2054	6,179	4,404	1,774	1,063	3,341	83,944	16,789
	50-54	4,530	569	131	125	3,229	405		2055-2059	3,745	2,669	1,075	644	2,025	50,876	10,175
	55-59	1,708	214	49	47	1,217	153		2060-2064	1,391	992	400	239	752	18,903	3,781
	60-64	945	50	11	11	674	35		2065-2069	-	-	-	-	-	-	-
	65-69	1,310	69	16	15	934	49		2070-2074	1,399	997	402	241	757	19,007	3,801
	70-74	497	497	114	109	354	354		2075-2079	3,373	2,404	969	580	1,824	45,818	9,164
	Total	91,248	43,947	10,108	9,668	65,043	31,326		Total	43,947	31,326	13,991	8,382	26,345	661,868	132,374
Ketchikan RD	5-9	1,323	1,323	304	291	1,046	1,046	Ketchikan RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	4,401	4,213	969	927	3,477	3,328		2015-2019	1,930	1,525	405	368	1,157	29,064	5,813
	15-19	6,132	5,870	1,350	1,291	4,844	4,637		2020-2024	1,024	809	215	195	614	15,425	3,085
	20-24	3,993	1,757	404	387	3,154	1,388		2025-2029	1,039	821	218	198	623	15,649	3,130
	25-29	3,116	1,371	315	302	2,461	1,083		2030-2034	2,453	1,938	515	468	1,470	36,935	7,387
	30-34	2,513	1,222	281	269	1,986	965		2035-2039	1,222	965	257	233	732	18,398	3,680
	35-39	5,046	2,453	564	540	3,986	1,938		2040-2044	1,371	1,083	288	261	822	20,646	4,129
	40-44	2,740	1,039	239	229	2,165	821		2045-2049	1,757	1,388	369	335	1,053	26,458	5,292
	45-49	2,701	1,024	236	225	2,134	809		2050-2054	5,870	4,637	1,233	1,119	3,518	88,374	17,675
	50-54	6,149	772	178	170	4,857	610		2055-2059	4,213	3,328	885	803	2,525	63,427	12,685
	55-59	5,550	697	160	153	4,384	550		2060-2064	1,323	1,046	278	252	793	19,927	3,985
	60-64	384	20	5	4	303	16		2065-2069	-	-	-	-	-	-	-
	65-69	347	18	4	4	274	14		2070-2074	1,930	1,525	405	368	1,157	29,064	5,813
	70-74	423	423	97	93	334	334		2075-2079	1,024	809	215	195	614	15,425	3,085
	Total	44,818	22,203	5,107	4,885	35,406	17,540		Total	22,203	17,540	5,284	4,797	15,077	378,792	75,758
Wrangell RD	5-9	441	441	102	97	352	352	Wrangell RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	2,405	2,302	529	506	1,917	1,835		2015-2019	1,052	838	213	202	636	15,979	3,196
	15-19	5,173	4,951	1,139	1,089	4,123	3,947		2020-2024	1,550	1,235	314	298	937	23,544	4,709
	20-24	6,077	2,674	615	588	4,844	2,132		2025-2029	2,621	2,090	532	504	1,585	39,828	7,966
	25-29	2,303	1,014	233	223	1,836	808		2030-2034	3,740	2,981	759	720	2,261	56,814	11,363
	30-34	8,107	3,941	906	867	6,462	3,142		2035-2039	3,941	3,142	800	758	2,383	59,879	11,976
	35-39	7,692	3,740	860	823	6,131	2,981		2040-2044	1,014	808	206	195	613	15,400	3,080
	40-44	6,912	2,621	603	577	5,510	2,090		2045-2049	2,674	2,132	542	515	1,617	40,629	8,126
	45-49	4,086	1,550	356	341	3,257	1,235		2050-2054	4,951	3,947	1,004	953	2,994	75,222	15,044
	50-54	1,039	130	30	29	828	104		2055-2059	2,302	1,835	467	443	1,392	34,971	6,994
	55-59	1,904	239	55	53	1,518	191		2060-2064	441	352	90	85	267	6,705	1,341
	60-64	1,563	82	19	18	1,246	66		2065-2069	-	-	-	-	-	-	-
	65-69	707	37	9	8	563	30		2070-2074	1,052	838	213	202	636	15,979	3,196
	70-74	563	563	129	124	449	449		2075-2079	1,550	1,235	314	298	937	23,544	4,709
	Total	48,971	24,286	5,586	5,343	39,037	19,359		Total	24,286	19,359	5,454	5,173	16,260	408,495	81,699

Craig RD	5-9	1,369	1,369	315	301	1,220	1,220	Craig RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	3,860	3,695	850	813	3,440	3,293		2015-2019	1,721	1,533	187	370	1,163	29,226	5,845
	15-19	4,114	3,938	906	866	3,667	3,509		2020-2024	1,608	1,433	175	346	1,087	27,318	5,464
	20-24	5,138	2,261	520	497	4,579	2,015		2025-2029	1,093	974	119	235	739	18,565	3,713
	25-29	1,766	777	179	171	1,574	693		2030-2034	1,008	898	110	217	681	17,116	3,423
	30-34	395	192	44	42	352	171		2035-2039	192	171	21	41	130	3,262	652
	35-39	2,073	1,008	232	222	1,847	898		2040-2044	777	693	85	167	526	13,203	2,641
	40-44	2,882	1,093	251	240	2,568	974		2045-2049	2,261	2,015	246	486	1,529	38,406	7,681
	45-49	4,240	1,608	370	354	3,779	1,433		2050-2054	3,938	3,509	428	847	2,662	66,886	13,377
	50-54	8,722	1,095	252	241	7,773	976		2055-2059	3,695	3,293	402	795	2,498	62,759	12,552
	55-59	1,519	191	44	42	1,354	170		2060-2064	1,369	1,220	149	294	926	23,253	4,651
	60-64	452	24	5	5	403	21		2065-2069	-	-	-	-	-	-	-
	65-69	522	27	6	6	466	24		2070-2074	1,721	1,533	187	370	1,163	29,226	5,845
	70-74	384	384	88	84	342	342		2075-2079	1,608	1,433	175	346	1,087	27,318	5,464
	Total	37,436	17,661	4,062	3,886	33,364	15,740		Total	17,661	15,740	2,283	4,515	14,191	356,538	71,308
Juneau RD	5-9	300	300	69	66	300	300	Juneau RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	300	287	66	63	300	287		2015-2019	424	424	-	102	322	8,086	1,617
	15-19	300	287	66	63	300	287		2020-2024	567	567	-	137	430	10,813	2,163
	20-24	1,825	803	185	177	1,825	803		2025-2029	669	669	-	161	507	12,743	2,549
	25-29	303	133	31	29	303	133		2030-2034	667	667	-	161	506	12,706	2,541
	30-34	891	433	100	95	891	433		2035-2039	433	433	-	105	328	8,252	1,650
	35-39	1,371	667	153	147	1,371	667		2040-2044	133	133	-	32	101	2,541	508
	40-44	1,763	669	154	147	1,763	669		2045-2049	803	803	-	194	609	15,308	3,062
	45-49	1,496	567	130	125	1,496	567		2050-2054	287	287	-	69	218	5,473	1,095
	50-54	300	38	9	8	300	38		2055-2059	287	287	-	69	218	5,473	1,095
	55-59	345	43	10	10	345	43		2060-2064	300	300	-	72	228	5,718	1,144
	60-64	524	28	6	6	524	28		2065-2069	-	-	-	-	-	-	-
	65-69	300	16	4	3	300	16		2070-2074	424	424	-	102	322	8,086	1,617
	70-74	300	300	69	66	300	300		2075-2079	567	567	-	137	430	10,813	2,163
	Total	10,317	4,571	1,051	1,006	10,317	4,571		Total	4,571	4,571	-	1,343	4,220	106,010	
Hoonah RD	5-9	351	351	81	77	64	64	Hoonah RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	663	635	146	140	121	116		2015-2019	485	89	397	21	67	1,692	338
	15-19	2,843	2,721	626	599	520	498		2020-2024	475	87	388	21	66	1,655	331
	20-24	7,649	3,366	774	741	1,399	616		2025-2029	153	28	125	7	21	535	107
	25-29	8,941	3,935	905	866	1,636	720		2030-2034	328	60	268	14	45	1,143	229
	30-34	4,019	1,954	449	430	735	357		2035-2039	1,954	357	1,597	86	271	6,814	1,363
	35-39	674	328	75	72	123	60		2040-2044	3,935	720	3,215	174	546	13,721	2,744
	40-44	404	153	35	34	74	28		2045-2049	3,366	616	2,750	149	467	11,737	2,347
	45-49	1,252	475	109	104	229	87		2050-2054	2,721	498	2,224	120	378	9,489	1,898
	50-54	681	86	20	19	125	16		2055-2059	635	116	519	28	88	2,214	443
	55-59	388	49	11	11	71	9		2060-2064	351	64	287	15	49	1,224	245
	60-64	300	16	4	3	55	3		2065-2069	-	-	-	-	-	-	-
	65-69	300	16	4	3	55	3		2070-2074	485	89	397	21	67	1,692	338
	70-74	319	319	73	70	58	58		2075-2079	475	87	388	21	66	1,655	331
	Total	28,786	14,404	3,313	3,169	5,266	2,635		Total	14,404	2,635	12,553	678	2,132	53,570	

Yakutat RD	5-9	1,823	1,823	419	401	373	373	Yakutat RD	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	10-14	300	287	66	63	61	59		2015-2019	490	100	390	24	76	1,910	382
	15-19	300	287	66	63	61	59		2020-2024	114	23	91	6	18	444	89
	20-24	1,061	467	107	103	217	96		2025-2029	943	193	750	47	146	3,678	736
	25-29	11,608	5,109	1,175	1,124	2,375	1,045		2030-2034	412	84	327	20	64	1,605	321
	30-34	1,466	713	164	157	300	146		2035-2039	713	146	567	35	111	2,779	556
	35-39	847	412	95	91	173	84		2040-2044	5,109	1,045	4,063	252	793	19,921	3,984
	40-44	2,487	943	217	207	509	193		2045-2049	467	96	371	23	72	1,821	364
	45-49	300	114	26	25	61	23		2050-2054	287	59	228	14	45	1,120	224
	50-54	300	38	9	8	61	8		2055-2059	287	59	228	14	45	1,120	224
	55-59	300	38	9	8	61	8		2060-2064	1,823	373	1,450	90	283	7,109	1,422
	60-64	1,875	99	23	22	384	20		2065-2069	-	-	-	-	-	-	-
	65-69	300	16	4	3	61	3		2070-2074	490	100	390	24	76	1,910	382
	70-74	300	300	69	66	61	61		2075-2079	114	23	91	6	18	444	89
	Total	23,266	10,643	2,448	2,342	4,760	2,178		Total	10,643	2,178	8,946	555	1,746	43,859	

Tongass total	Age Class in 2014 (yrs)	Total Acres	Suitable/ Available Acres	PCT - unroaded	PCT & Roaded Acres*	Total Ac - from harvest	Suitable of hvst acres
2005-2010	5-9	9,670	9,670	2,224	2,127	6,828	6,828
2000-2004	10-14	21,360	20,444	4,702	4,498	17,215	16,477
1995-1999	15-19	40,491	38,756	8,914	8,526	32,063	30,689
1990-1994	20-24	66,711	29,359	6,753	6,459	51,198	22,532
1985-1989	25-29	53,717	23,641	5,437	5,201	32,656	14,372
1980-1984	30-34	58,548	28,464	6,547	6,262	44,489	21,629
1975-1979	35-39	68,979	33,536	7,713	7,378	58,392	28,388
1970-1974	40-44	68,474	25,971	5,973	5,714	57,295	21,731
1965-1969	45-49	60,719	23,029	5,297	5,066	51,834	19,660
1960-1964	50-54	38,160	4,791	1,102	1,054	31,931	4,009
1955-1959	55-59	17,599	2,209	508	486	14,369	1,804
1950-1954	60-64	9,289	489	112	107	6,514	343
1945-1949	65-69	5,922	311	72	69	4,604	242
1940-1944	70-74	3,932	3,932	904	865	2,929	2,929
		523,571	244,602	56,258	53,812	412,315	191,632

Total Log MBF available from all suitable at 55 years

Tongass total	Years	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	11,732	9,326	2,406	2,251	7,075	177,746	35,549
	2020-2024	23,029	19,660	3,370	4,745	14,914	374,693	74,939
	2025-2029	25,971	21,731	4,240	5,245	16,485	414,169	82,834
	2030-2034	33,536	28,388	5,147	6,852	21,536	541,056	108,211
	2035-2039	28,464	21,629	6,835	5,221	16,408	412,231	82,446
	2040-2044	23,641	14,372	9,269	3,469	10,903	273,911	54,782
	2045-2049	29,359	22,532	6,827	5,439	17,093	429,438	85,888
	2050-2054	38,756	30,689	8,066	7,408	23,282	584,913	116,983
	2055-2059	20,444	16,477	3,967	3,977	12,500	314,035	62,807
	2060-2064	9,670	6,828	2,841	1,648	5,180	130,140	26,028
	2065-2069	-	0	0	0	0	0	0
	2070-2074	11,732	9,326	2,406	2,251	7,075	177,746	35,549
		244,602*	191,632	55,376	48,507	152,451	3,830,078	

Total Log MBF Tongass NF

		at 70 year	Suit YG: Harv	Suit YG: Nat	YG: Site3	YG: Site4		Annual avg mbf harvested	at 90 year	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested
Thorne Bay RD	Decade	Suit ac	acres				mbf -5%	annual mbf	acres	acres				mbf - 5%	annual mbf
	2015-2019	651	611	40	147	464	21,073	4,215	-	-	-	-	-	-	-
	2020-2024	91	85	6	21	65	2,938	588	-	-	-	-	-	-	-
	2025-2029	576	540	36	130	410	18,632	3,726	-	-	-	-	-	-	-
	2030-2034	1,003	941	62	227	714	32,455	6,491	126	119	8	29	90	6,390	1,278
	2035-2039	10,092	9,468	624	2,285	7,182	326,521	65,304	17	16	1	4	12	851	170
	2040-2044	10,732	10,068	664	2,430	7,638	347,232	69,446	20	19	1	5	14	1,009	202
	2045-2049	13,600	12,759	841	3,080	9,679	440,016	88,003	127	119	8	29	90	6,402	1,280
	2050-2054	8,444	7,921	522	1,912	6,009	273,196	54,639	221	207	14	50	157	11,151	2,230
	2055-2059	7,706	7,229	477	1,745	5,484	249,315	49,863	2,220	2,083	137	503	1,580	112,189	22,438
	2060-2064	10,834	10,164	670	2,453	7,710	350,523	70,105	2,361	2,215	146	535	1,680	119,306	23,861
	2065-2069	11,014	10,333	681	2,494	7,839	356,365	71,273	2,992	2,807	185	678	2,129	151,185	30,237
	2070-2074	4,459	4,184	276	1,010	3,174	144,283	28,857	1,858	1,743	115	421	1,322	93,868	18,774
	2075-2079	2,371	2,224	147	537	1,687	76,701	15,340	1,695	1,590	105	384	1,207	85,662	17,132
	Total	81,571	76,527	5,045	18,472	58,055	2,639,249	527,850	11,637	10,917	720	2,635	8,282	588,013	117,603
Sitka RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	606	521	85	126	395	17,972	3,594	-	-	-	-	-	-	-
	2020-2024	80	69	11	17	52	2,369	474	-	-	-	-	-	-	-
	2025-2029	163	140	23	34	106	4,829	966	-	-	-	-	-	-	-
	2030-2034	1,061	911	149	220	691	31,436	6,287	126	108	18	26	82	5,810	1,162
	2035-2039	4,227	3,632	594	877	2,756	125,274	25,055	8	7	1	2	5	365	73
	2040-2044	4,587	3,942	645	951	2,990	135,944	27,189	18	15	2	4	11	814	163
	2045-2049	6,317	5,429	888	1,310	4,118	187,232	37,446	36	31	5	7	23	1,659	332
	2050-2054	1,698	1,459	239	352	1,107	50,320	10,064	233	201	33	48	152	10,801	2,160
	2055-2059	660	568	93	137	431	19,575	3,915	930	799	131	193	606	43,043	8,609
	2060-2064	1,286	1,106	181	267	839	38,128	7,626	1,009	867	142	209	658	46,709	9,342
	2065-2069	3,508	3,015	493	728	2,287	103,988	20,798	1,390	1,194	195	288	906	64,331	12,866
	2070-2074	822	706	116	170	536	24,359	4,872	374	321	53	77	244	17,290	3,458
	2075-2079	300	258	42	62	196	8,892	1,778	145	125	20	30	95	6,726	1,345
	Total	25,315	21,756	3,559	5,251	16,505	750,318	150,064	4,268	3,668	600	885	2,782	197,548	39,510

Petersburg RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	566	404	163	97	306	13,918	2,784	-	-	-	-	-	-	-
	2020-2024	50	35	14	9	27	1,222	244	-	-	-	-	-	-	-
	2025-2029	214	153	62	37	116	5,271	1,054	-	-	-	-	-	-	-
	2030-2034	569	405	163	98	308	13,982	2,796	109	78	31	19	59	4,200	840
	2035-2039	3,373	2,404	969	580	1,824	82,909	16,582	15	11	4	3	8	582	116
	2040-2044	4,133	2,946	1,187	711	2,235	101,613	20,323	11	8	3	2	6	420	84
	2045-2049	5,013	3,573	1,440	862	2,711	123,231	24,646	47	34	14	8	26	1,811	362
	2050-2054	9,868	7,034	2,834	1,698	5,336	242,588	48,518	125	89	36	22	68	4,804	961
	2055-2059	2,935	2,092	843	505	1,587	72,165	14,433	742	529	213	128	401	28,487	5,697
	2060-2064	5,911	4,213	1,697	1,017	3,196	145,301	29,060	909	648	261	156	492	34,913	6,983
	2065-2069	6,179	4,404	1,774	1,063	3,341	151,899	30,380	1,103	786	317	190	596	42,341	8,468
	2070-2074	3,745	2,669	1,075	644	2,025	92,061	18,412	2,171	1,547	623	374	1,174	83,351	16,670
	2075-2079	1,391	992	400	239	752	34,205	6,841	646	460	185	111	349	24,795	4,959
	Total	43,947	31,326	12,621	7,561	23,764	1,080,363	216,073	5,879	4,190	1,688	1,011	3,179	225,704	45,141
Ketchikan RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	441	349	93	84	265	12,028	2,406	-	-	-	-	-	-	-
	2020-2024	20	16	4	4	12	550	110	-	-	-	-	-	-	-
	2025-2029	697	550	146	133	418	18,983	3,797	-	-	-	-	-	-	-
	2030-2034	772	610	162	147	463	21,030	4,206	93	74	20	18	56	3,962	792
	2035-2039	1,024	809	215	195	614	27,912	5,582	4	3	1	1	2	171	34
	2040-2044	1,039	821	218	198	623	28,316	5,663	4	4	1	1	3	189	38
	2045-2049	2,453	1,938	515	468	1,470	66,835	13,367	153	121	32	29	92	6,522	1,304
	2050-2054	1,222	965	257	233	732	33,292	6,658	170	134	36	32	102	7,226	1,445
	2055-2059	1,371	1,083	288	261	822	37,360	7,472	225	178	47	43	135	9,590	1,918
	2060-2064	1,757	1,388	369	335	1,053	47,876	9,575	229	181	48	44	137	9,729	1,946
	2065-2069	5,870	4,637	1,233	1,119	3,518	159,916	31,983	540	426	113	103	323	22,964	4,593
	2070-2074	4,213	3,328	885	803	2,525	114,773	22,955	269	212	56	51	161	11,439	2,288
	2075-2079	1,323	1,046	278	252	793	36,058	7,212	302	238	63	58	181	12,836	2,567
	Total	22,203	17,540	4,663	4,234	13,306	604,929	120,986	1,989	1,571	418	379	1,192	84,629	16,926
Wrangell RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	600	478	122	115	363	16,497	3,299	-	-	-	-	-	-	-
	2020-2024	82	66	17	16	50	2,260	452	-	-	-	-	-	-	-
	2025-2029	239	191	48	46	145	6,571	1,314	-	-	-	-	-	-	-
	2030-2034	130	104	26	25	79	3,586	717	124	99	25	24	75	5,317	1,063
	2035-2039	1,550	1,235	314	298	937	42,604	8,521	8	7	2	2	5	351	70
	2040-2044	2,621	2,090	532	504	1,585	72,069	14,414	18	14	4	3	11	776	155
	2045-2049	3,740	2,981	759	720	2,261	102,806	20,561	53	42	11	10	32	2,258	452
	2050-2054	3,941	3,142	800	758	2,383	108,352	21,670	29	23	6	6	17	1,232	246
	2055-2059	1,014	808	206	195	613	27,867	5,573	341	272	69	66	206	14,638	2,928
	2060-2064	2,674	2,132	542	515	1,617	73,520	14,704	577	460	117	111	349	24,762	4,952
	2065-2069	4,951	3,947	1,004	953	2,994	136,116	27,223	823	656	167	158	498	35,323	7,065
	2070-2074	2,302	1,835	467	443	1,392	63,280	12,656	867	691	176	167	524	37,229	7,446
	2075-2079	441	352	90	85	267	12,134	2,427	223	178	45	43	135	9,575	1,915
	Total	24,286	19,359	4,927	4,673	14,686	667,662	133,532	3,062	2,441	621	589	1,852	131,462	26,292

Craig RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	411	366	45	88	278	12,636	2,527	-	-	-	-	-	-	-
	2020-2024	24	21	3	5	16	731	146	-	-	-	-	-	-	-
	2025-2029	191	170	21	41	129	5,862	1,172	-	-	-	-	-	-	-
	2030-2034	1,095	976	119	236	740	33,656	6,731	84	75	9	18	57	4,052	810
	2035-2039	1,608	1,433	175	346	1,087	49,433	9,887	6	5	1	1	4	290	58
	2040-2044	1,093	974	119	235	739	33,593	6,719	5	5	1	1	4	251	50
	2045-2049	1,008	898	110	217	681	30,971	6,194	42	37	5	9	28	2,014	403
	2050-2054	192	171	21	41	130	5,903	1,181	241	215	26	52	163	11,564	2,313
	2055-2059	777	693	85	167	526	23,891	4,778	354	315	38	76	239	16,985	3,397
	2060-2064	2,261	2,015	246	486	1,529	69,497	13,899	240	214	26	52	163	11,542	2,308
	2065-2069	3,938	3,509	428	847	2,662	121,032	24,206	222	198	24	48	150	10,641	2,128
	2070-2074	3,695	3,293	402	795	2,498	113,563	22,713	42	38	5	9	29	2,028	406
	2075-2079	1,369	1,220	149	294	926	42,078	8,416	171	152	19	37	116	8,209	1,642
	Total	17,661	15,740	1,921	3,799	11,941	542,846	108,569	1,408	1,255	153	303	952	67,576	13,515
Juneau RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	YG - Site3	YG - Site4	mbf - 5%	annual mbf
	2015-2019	316	316	-	76	240	10,891	2,178	-	-	-	-	-	-	-
	2020-2024	28	28	-	7	21	950	190	-	-	-	-	-	-	-
	2025-2029	43	43	-	10	33	1,493	299	-	-	-	-	-	-	-
	2030-2034	38	38	-	9	29	1,299	260	66	66	-	16	50	3,555	711
	2035-2039	567	567	-	137	430	19,566	3,913	3	3	-	1	3	187	37
	2040-2044	669	669	-	161	507	23,058	4,612	6	6	-	1	5	326	65
	2045-2049	667	667	-	161	506	22,991	4,598	10	10	-	2	7	513	103
	2050-2054	433	433	-	105	328	14,932	2,986	8	8	-	2	6	446	89
	2055-2059	133	133	-	32	101	4,599	920	125	125	-	30	95	6,723	1,345
	2060-2064	803	803	-	194	609	27,700	5,540	147	147	-	36	112	7,923	1,585
	2065-2069	287	287	-	69	218	9,903	1,981	147	147	-	35	111	7,900	1,580
	2070-2074	287	287	-	69	218	9,903	1,981	95	95	-	23	72	5,131	1,026
	2075-2079	300	300	-	72	228	10,346	2,069	29	29	-	7	22	1,580	316
	Total	4,571	4,571	-	1,103	3,467	157,630	31,526	636	636	-	154	483	34,283	6,857
Hoonah RD	Decade	Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	Suit YG -Harv	Suit YG - Na	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	335	61	274	15	47	2,115	423	-	-	-	-	-	-	-
	2020-2024	16	3	13	1	2	100	20	-	-	-	-	-	-	-
	2025-2029	49	9	40	2	7	307	61	-	-	-	-	-	-	-
	2030-2034	86	16	70	4	12	540	108	70	13	57	3	10	693	139
	2035-2039	475	87	388	21	66	2,995	599	3	1	3	0	0	34	7
	2040-2044	153	28	125	7	21	968	194	3	1	3	0	0	34	7
	2045-2049	328	60	268	14	45	2,068	414	11	2	9	0	1	106	21
	2050-2054	1,954	357	1,597	86	271	12,329	2,466	19	3	15	1	3	185	37
	2055-2059	3,935	720	3,215	174	546	24,828	4,966	104	19	85	5	14	1,029	206
	2060-2064	3,366	616	2,750	149	467	21,238	4,248	34	6	28	1	5	333	67
	2065-2069	2,721	498	2,224	120	378	17,170	3,434	72	13	59	3	10	711	142
	2070-2074	635	116	519	28	88	4,006	801	430	79	351	19	60	4,236	847
	2075-2079	351	64	287	15	49	2,215	443	866	158	707	38	120	8,531	1,706
	Total	14,404	2,635	11,769	636	1,999	90,879	18,176	1,613	295	1,318	71	224	15,891	3,178

Yakutat RD	Decade	Suit ac	Suit YG -Harv	Suit YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf cut - 5%	annual mbf
	2015-2019	316	65	251	16	49	2,228	446	-	-	-	-	-	-	-
	2020-2024	99	20	78	5	15	696	139	-	-	-	-	-	-	-
	2025-2029	38	8	30	2	6	266	53	-	-	-	-	-	-	-
	2030-2034	38	8	30	2	6	266	53	66	14	52	3	10	727	145
	2035-2039	114	23	91	6	18	803	161	3	1	3	0	1	38	8
	2040-2044	943	193	750	47	146	6,655	1,331	22	4	17	1	3	239	48
	2045-2049	412	84	327	20	64	2,904	581	8	2	7	0	1	91	18
	2050-2054	713	146	567	35	111	5,029	1,006	8	2	7	0	1	91	18
	2055-2059	5,109	1,045	4,063	252	793	36,048	7,210	25	5	20	1	4	276	55
	2060-2064	467	96	371	23	72	3,295	659	207	42	165	10	32	2,287	457
	2065-2069	287	59	228	14	45	2,026	405	91	19	72	4	14	998	200
	2070-2074	287	59	228	14	45	2,026	405	157	32	125	8	24	1,728	346
	2075-2079	1,823	373	1,450	90	283	12,863	2,573	1,124	230	894	56	174	12,386	2,477
	Total	10,643	2,178	8,466	526	1,652	75,105	15,021	1,711	350	1,361	85	266	18,861	3,772

Total Log MBF available from all suitable at 70 years **at 90 years**

Tongass total		Suit ac	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	4,243	3,171	1,072	765	2,406	109,359	21,872	-	-	-	-	-	-	-
	2020-2024	489	343	146	83	260	11,814	2,363	-	-	-	-	-	-	-
	2025-2029	2,209	1,804	405	435	1,369	62,214	12,443	-	-	-	-	-	-	-
	2030-2034	4,791	4,009	782	968	3,041	138,249	27,650	865	644	221	156	489	34,706	6,941
	2035-2039	23,029	19,660	3,370	4,745	14,914	678,016	135,603	69	53	15	13	40	2,869	574
	2040-2044	25,971	21,731	4,240	5,245	16,485	749,449	149,890	107	75	32	18	57	4,059	812
	2045-2049	33,536	28,388	5,147	6,852	21,536	979,054	195,811	486	397	89	96	301	21,376	4,275
	2050-2054	28,464	21,629	6,835	5,221	16,408	745,941	149,188	1,054	882	172	213	669	47,501	9,500
	2055-2059	23,641	14,372	9,269	3,469	10,903	495,648	99,130	5,066	4,325	741	1,044	3,281	232,960	46,592
	2060-2064	29,359	22,532	6,827	5,439	17,093	777,077	155,415	5,714	4,781	933	1,154	3,627	257,504	51,501
	2065-2069	38,756	30,689	8,066	7,408	23,282	1,058,414	211,683	7,378	6,245	1,132	1,508	4,738	336,394	67,279
	2070-2074	20,444	16,477	3,967	3,977	12,500	568,254	113,651	6,262	4,758	1,504	1,149	3,610	256,298	51,260
	Total	234,932	184,803	50,128	44,608	140,196	6,373,490	1,274,698	27,001	22,161	4,840	5,349	16,812	1,193,667	238,733

Unroaded PCT		at 55 years							Unroaded PCT						
Unroaded PCT	Log MBF harvested	*acre totals do not include re-harvest	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested	at 70 yea	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested
Thorne Bay RD	Decade	acres	acres				mbf - 5%	annual mbf	acres	acres				mbf -5%	annual mbf
	2015-2019	534	501	33	121	380	9,545	1,909	150	141	9	34	107	4,847	969
	2020-2024	2,321	2,178	144	526	1,652	41,502	8,300	21	20	1	5	15	676	135
	2025-2029	2,468	2,316	153	559	1,757	44,135	8,827	132	124	8	30	94	4,285	857
	2030-2034	3,128	2,934	193	708	2,226	55,928	11,186	231	216	14	52	164	7,465	1,493
	2035-2039	1,942	1,822	120	440	1,382	34,725	6,945	2,321	2,178	144	526	1,652	75,100	15,020
	2040-2044	1,772	1,663	110	401	1,261	31,689	6,338	2,468	2,316	153	559	1,757	79,863	15,973
	2045-2049	2,492	2,338	154	564	1,773	44,553	8,911	3,128	2,934	193	708	2,226	101,204	20,241
	2050-2054	2,533	2,377	157	574	1,803	45,296	9,059	1,942	1,822	120	440	1,382	62,835	12,567
	2055-2059	1,026	962	63	232	730	18,339	3,668	1,772	1,663	110	401	1,261	57,342	11,468
	2060-2064	545	512	34	123	388	9,749	1,950	2,492	2,338	154	564	1,773	80,620	16,124
	2065-2069	-	-	-	-	-	-	-	2,533	2,377	157	574	1,803	81,964	16,393
	2070-2074	534	501	33	121	380	9,545	1,909	1,026	962	63	232	730	33,185	6,637
	2075-2079	2,321	2,178	144	526	1,652	41,502	8,300	545	512	34	123	388	17,641	3,528
	Total	18,761*	20,280	1,337	4,895	15,384	386,510		18,761	17,601	1,160	4,249	13,353	607,027	121,405
Sitka RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	439	378	62	91	286	7,195	1,439	139	120	20	29	91	4,134	827
	2020-2024	972	835	137	202	634	15,923	3,185	18	16	3	4	12	545	109
	2025-2029	1,055	907	148	219	688	17,279	3,456	37	32	5	8	24	1,111	222
	2030-2034	1,453	1,249	204	301	947	23,798	4,760	244	210	34	51	159	7,230	1,446
	2035-2039	390	336	55	81	255	6,396	1,279	972	835	137	202	634	28,813	5,763
	2040-2044	152	131	21	32	99	2,488	498	1,055	907	148	219	688	31,267	6,253
	2045-2049	296	254	42	61	193	4,846	969	1,453	1,249	204	301	947	43,063	8,613
	2050-2054	807	693	113	167	526	13,217	2,643	390	336	55	81	255	11,574	2,315
	2055-2059	189	162	27	39	123	3,096	619	152	131	21	32	99	4,502	900
	2060-2064	69	59	10	14	45	1,130	226	296	254	42	61	193	8,770	1,754
	2065-2069	-	-	-	-	-	-	-	807	693	113	167	526	23,917	4,783
	2070-2074	439	378	62	91	286	7,195	1,439	189	162	27	39	123	5,603	1,121
	2075-2079	972	835	137	202	634	15,923	3,185	69	59	10	14	45	2,045	409
	Total	5,822	6,217	1,017	1,501	4,716	118,487		5,822	5,004	819	1,208	3,796	172,573	34,515

Petersburg RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	322	229	92	55	174	4,372	874	130	93	37	22	70	3,201	640
	2020-2024	776	553	223	133	419	10,538	2,108	11	8	3	2	6	281	56
	2025-2029	951	678	273	164	514	12,915	2,583	49	35	14	8	27	1,212	242
	2030-2034	1,153	822	331	198	623	15,663	3,133	131	93	38	23	71	3,216	643
	2035-2039	2,270	1,618	652	391	1,227	30,834	6,167	776	553	223	133	419	19,069	3,814
	2040-2044	675	481	194	116	365	9,173	1,835	951	678	273	164	514	23,371	4,674
	2045-2049	1,359	969	390	234	735	18,469	3,694	1,153	822	331	198	623	28,343	5,669
	2050-2054	1,421	1,013	408	245	768	19,307	3,861	2,270	1,618	652	391	1,227	55,795	11,159
	2055-2059	861	614	247	148	466	11,701	2,340	675	481	194	116	365	16,598	3,320
	2060-2064	320	228	92	55	173	4,348	870	1,359	969	390	234	735	33,419	6,684
	2065-2069	-	-	-	-	-	-	-	1,421	1,013	408	245	768	34,937	6,987
	2070-2074	322	229	92	55	174	4,372	874	861	614	247	148	466	21,174	4,235
	2075-2079	776	553	223	133	419	10,538	2,108	320	228	92	55	173	7,867	1,573
	Total	10,108	7,987	3,218	1,928	6,059	152,230		10,108	7,205	2,903	1,739	5,466	248,484	49,697
Ketchikan RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	444	351	93	85	266	6,685	1,337	102	80	21	19	61	2,766	553
	2020-2024	236	186	49	45	141	3,548	710	5	4	1	1	3	126	25
	2025-2029	239	189	50	46	143	3,599	720	160	127	34	31	96	4,366	873
	2030-2034	564	446	118	108	338	8,495	1,699	178	140	37	34	106	4,837	967
	2035-2039	281	222	59	54	168	4,232	846	236	186	49	45	141	6,420	1,284
	2040-2044	315	249	66	60	189	4,749	950	239	189	50	46	143	6,513	1,303
	2045-2049	404	319	85	77	242	6,085	1,217	564	446	118	108	338	15,372	3,074
	2050-2054	1,350	1,066	284	257	809	20,326	4,065	281	222	59	54	168	7,657	1,531
	2055-2059	969	765	203	185	581	14,588	2,918	315	249	66	60	189	8,593	1,719
	2060-2064	304	240	64	58	182	4,583	917	404	319	85	77	242	11,011	2,202
	2065-2069	-	-	-	-	-	-	-	1,350	1,066	284	257	809	36,781	7,356
	2070-2074	444	351	93	85	266	6,685	1,337	969	765	203	185	581	26,398	5,280
	2075-2079	236	186	49	45	141	3,548	710	304	240	64	58	182	8,293	1,659
	Total	5,107	4,571	1,215	1,103	3,468	87,122		5,107	4,034	1,072	974	3,060	139,134	27,827
Wrangell RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	242	193	49	47	146	3,675	735	138	110	28	27	83	3,794	759
	2020-2024	356	284	72	69	216	5,415	1,083	19	15	4	4	11	520	104
	2025-2029	603	481	122	116	365	9,160	1,832	55	44	11	11	33	1,511	302
	2030-2034	860	686	174	165	520	13,067	2,613	30	24	6	6	18	825	165
	2035-2039	906	723	184	174	548	13,772	2,754	356	284	72	69	216	9,799	1,960
	2040-2044	233	186	47	45	141	3,542	708	603	481	122	116	365	16,576	3,315
	2045-2049	615	490	125	118	372	9,345	1,869	860	686	174	165	520	23,645	4,729
	2050-2054	1,139	908	231	219	689	17,301	3,460	906	723	184	174	548	24,921	4,984
	2055-2059	529	422	107	102	320	8,043	1,609	233	186	47	45	141	6,409	1,282
	2060-2064	102	81	21	20	61	1,542	308	615	490	125	118	372	16,910	3,382
	2065-2069	-	-	-	-	-	-	-	1,139	908	231	219	689	31,307	6,261
	2070-2074	242	193	49	47	146	3,675	735	529	422	107	102	320	14,554	2,911
	2075-2079	356	284	72	69	216	5,415	1,083	102	81	21	20	61	2,791	558
	Total	5,586	4,930	1,254	1,190	3,740	93,954		5,586	4,453	1,133	1,075	3,378	153,562	30,712

Craig RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	396	353	43	85	268	6,722	1,344	95	84	10	20	64	2,906	581
	2020-2024	370	330	40	80	250	6,283	1,257	5	5	1	1	4	168	34
	2025-2029	251	224	27	54	170	4,270	854	44	39	5	9	30	1,348	270
	2030-2034	232	207	25	50	157	3,937	787	252	224	27	54	170	7,741	1,548
	2035-2039	44	39	5	10	30	750	150	370	330	40	80	250	11,370	2,274
	2040-2044	179	159	19	38	121	3,037	607	251	224	27	54	170	7,726	1,545
	2045-2049	520	463	57	112	352	8,833	1,767	232	207	25	50	157	7,123	1,425
	2050-2054	906	807	99	195	612	15,384	3,077	44	39	5	10	30	1,358	272
	2055-2059	850	757	92	183	575	14,434	2,887	179	159	19	38	121	5,495	1,099
	2060-2064	315	281	34	68	213	5,348	1,070	520	463	57	112	352	15,984	3,197
	2065-2069	-	-	-	-	-	-	-	906	807	99	195	612	27,837	5,567
	2070-2074	396	353	43	85	268	6,722	1,344	850	757	92	183	575	26,120	5,224
	2075-2079	370	330	40	80	250	6,283	1,257	315	281	34	68	213	9,678	1,936
	Total	4,062	4,303	525	1,039	3,264	82,004		4,062	3,620	442	874	2,746	124,855	24,971
Juneau RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	98	98	-	24	74	1,860	372	73	73	-	18	55	2,505	501
	2020-2024	130	130	-	31	99	2,487	497	6	6	-	2	5	218	44
	2025-2029	154	154	-	37	117	2,931	586	10	10	-	2	8	343	69
	2030-2034	153	153	-	37	116	2,922	584	9	9	-	2	7	299	60
	2035-2039	100	100	-	24	76	1,898	380	130	130	-	31	99	4,500	900
	2040-2044	31	31	-	7	23	585	117	154	154	-	37	117	5,303	1,061
	2045-2049	185	185	-	45	140	3,521	704	153	153	-	37	116	5,288	1,058
	2050-2054	66	66	-	16	50	1,259	252	100	100	-	24	76	3,434	687
	2055-2059	66	66	-	16	50	1,259	252	31	31	-	7	23	1,058	212
	2060-2064	69	69	-	17	52	1,315	263	185	185	-	45	140	6,371	1,274
	2065-2069	-	-	-	-	-	-	-	66	66	-	16	50	2,278	456
	2070-2074	98	98	-	24	74	1,860	372	66	66	-	16	50	2,278	456
	2075-2079	130	130	-	31	99	2,487	497	69	69	-	17	52	2,380	476
	Total	1,051	1,279	-	309	971	24,382		1,051	1,051	-	254	797	36,255	7,251
Hoonah RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	112	20	91	5	15	389	78	77	14	63	3	11	487	97
	2020-2024	109	20	89	5	15	381	76	4	1	3	0	1	23	5
	2025-2029	35	6	29	2	5	123	25	11	2	9	0	2	71	14
	2030-2034	75	14	62	3	10	263	53	20	4	16	1	3	124	25
	2035-2039	449	82	367	20	62	1,567	313	109	20	89	5	15	689	138
	2040-2044	905	166	739	40	126	3,156	631	35	6	29	2	5	223	45
	2045-2049	774	142	633	34	107	2,699	540	75	14	62	3	10	476	95
	2050-2054	626	115	511	28	87	2,182	436	449	82	367	20	62	2,836	567
	2055-2059	146	27	119	6	20	509	102	905	166	739	40	126	5,710	1,142
	2060-2064	81	15	66	4	11	281	56	774	142	633	34	107	4,885	977
	2065-2069	-	-	-	-	-	-	-	626	115	511	28	87	3,949	790
	2070-2074	112	20	91	5	15	389	78	146	27	119	6	20	921	184
	2075-2079	109	20	89	5	15	381	76	81	15	66	4	11	509	102
	Total	3,313	646	2,887	156	490	12,321		3,313	606	2,707	146	460	20,902	4,180

Yakutat RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	113	23	90	6	17	439	88	73	15	58	4	11	512	102
	2020-2024	26	5	21	1	4	102	20	23	5	18	1	4	160	32
	2025-2029	217	44	173	11	34	846	169	9	2	7	0	1	61	12
	2030-2034	95	19	75	5	15	369	74	9	2	7	0	1	61	12
	2035-2039	164	34	130	8	25	639	128	26	5	21	1	4	185	37
	2040-2044	1,175	240	935	58	182	4,582	916	217	44	173	11	34	1,531	306
	2045-2049	107	22	85	5	17	419	84	95	19	75	5	15	668	134
	2050-2054	66	14	53	3	10	258	52	164	34	130	8	25	1,157	231
	2055-2059	66	14	53	3	10	258	52	1,175	240	935	58	182	8,291	1,658
	2060-2064	419	86	333	21	65	1,635	327	107	22	85	5	17	758	152
	2065-2069	-	-	-	-	-	-	-	66	14	53	3	10	466	93
	2070-2074	113	23	90	6	17	439	88	66	14	53	3	10	466	93
	2075-2079	26	5	21	1	4	102	20	419	86	333	21	65	2,959	592
	Total	2,448	529	2,058	128	402	10,087		2,448	501	1,947	121	380	17,274	3,455

Log MBF harvested

Unroaded PCT	Log MBF harvested	at 55 years							No Naturally Regenerated 2G					at 70 years	
Tongass total		acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf -5%	annual mbf
	2015-2019	2,698	2,145	553	518	1,627	40,882	8,176	976	729	247	176	553	25,153	5,031
	2020-2024	5,297	4,522	775	1,091	3,430	86,179	17,236	112	79	34	19	60	2,717	543
	2025-2029	5,973	4,998	975	1,206	3,792	95,259	19,052	508	415	93	100	315	14,309	2,862
	2030-2034	7,713	6,529	1,184	1,576	4,953	124,443	24,889	1,102	922	180	223	699	31,797	6,359
	2035-2039	6,547	4,975	1,572	1,201	3,774	94,813	18,963	5,297	4,522	775	1,091	3,430	155,944	31,189
	2040-2044	5,437	3,305	2,132	798	2,508	62,999	12,600	5,973	4,998	975	1,206	3,792	172,373	34,475
	2045-2049	6,753	5,182	1,570	1,251	3,931	98,771	19,754	7,713	6,529	1,184	1,576	4,953	225,182	45,036
	2050-2054	8,914	7,059	1,855	1,704	5,355	134,530	26,906	6,547	4,975	1,572	1,201	3,774	171,566	34,313
	2055-2059	4,702	3,790	913	915	2,875	72,228	14,446	5,437	3,305	2,132	798	2,508	113,999	22,800
	2060-2064	2,224	1,570	654	379	1,191	29,932	5,986	6,753	5,182	1,570	1,251	3,931	178,728	35,746
	2065-2069	0	0	0	0	0	0	0	8,914	7,059	1,855	1,704	5,355	243,435	48,687
	2070-2074	2,698	2,145	553	518	1,627	40,882	8,176	4,702	3,790	913	915	2,875	130,698	26,140
	Total	56,258*	46,220	12,736	11,157	35,064	880,918		54,034	42,505	11,530	10,260	32,245	1,465,903	293,181

		Unroaded PCT							at 55 years	Roaded PCT					
	Log MBF harvested	at 90 years	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested	*acre totals do not include re-harvest	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested
Thorne Bay RD	Decade	acres cut	acres				mbf - 5%	annual mbf	acres cut	acres				mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	511	479	32	116	363	9,130	1,826
	2020-2024	-	-	-	-	-	-	-	2,220	2,083	137	503	1,580	39,698	7,940
	2025-2029	-	-	-	-	-	-	-	2,361	2,215	146	535	1,680	42,216	8,443
	2030-2034	132	124	8	30	94	6,680	1,336	2,992	2,807	185	678	2,129	53,497	10,699
	2035-2039	18	17	1	4	13	889	178	1,858	1,743	115	421	1,322	33,215	6,643
	2040-2044	21	20	1	5	15	1,055	211	1,695	1,590	105	384	1,207	30,311	6,062
	2045-2049	132	124	8	30	94	6,693	1,339	2,383	2,236	147	540	1,696	42,616	8,523
	2050-2054	231	216	14	52	164	11,658	2,332	2,423	2,273	150	549	1,725	43,326	8,665
	2055-2059	2,321	2,178	144	526	1,652	117,289	23,458	981	920	61	222	698	17,542	3,508
	2060-2064	2,468	2,316	153	559	1,757	124,729	24,946	522	489	32	118	371	9,325	1,865
	2065-2069	3,128	2,934	193	708	2,226	158,057	31,611	-	-	-	-	-	-	-
	2070-2074	1,942	1,822	120	440	1,382	98,134	19,627	511	479	32	116	363	9,130	1,826
	2075-2079	1,772	1,663	110	401	1,261	89,556	17,911	2,220	2,083	137	503	1,580	39,698	7,940
	Total	12,166	11,413	752	2,755	8,658	614,741	122,948	17,946*	19,398	1,279	4,682	14,716	369,705	
Sitka RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	420	361	59	87	274	6,882	1,376
	2020-2024	-	-	-	-	-	-	-	930	799	131	193	606	15,231	3,046
	2025-2029	-	-	-	-	-	-	-	1,009	867	142	209	658	16,528	3,306
	2030-2034	131	113	18	27	86	6,074	1,215	1,390	1,194	195	288	906	22,763	4,553
	2035-2039	8	7	1	2	5	382	76	374	321	53	77	244	6,118	1,224
	2040-2044	18	16	3	4	12	851	170	145	125	20	30	95	2,380	476
	2045-2049	37	32	5	8	24	1,735	347	283	243	40	59	185	4,636	927
	2050-2054	244	210	34	51	159	11,292	2,258	772	663	109	160	503	12,643	2,529
	2055-2059	972	835	137	202	634	44,999	9,000	181	155	25	38	118	2,962	592
	2060-2064	1,055	907	148	219	688	48,832	9,766	66	57	9	14	43	1,081	216
	2065-2069	1,453	1,249	204	301	947	67,255	13,451	-	-	-	-	-	-	-
	2070-2074	390	336	55	81	255	18,075	3,615	420	361	59	87	274	6,882	1,376
	2075-2079	152	131	21	32	99	7,031	1,406	930	799	131	193	606	15,231	3,046
	Total	4,462	3,834	627	926	2,909	206,527	41,305	5,569	5,947	973	1,435	4,511	113,336	

Petersburg RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	308	219	88	53	166	4,181	836
	2020-2024	-	-	-	-	-	-	-	742	529	213	128	401	10,080	2,016
	2025-2029	-	-	-	-	-	-	-	909	648	261	156	492	12,354	2,471
	2030-2034	114	82	33	20	62	4,391	878	1,103	786	317	190	596	14,982	2,996
	2035-2039	16	11	5	3	9	608	122	2,171	1,547	623	374	1,174	29,494	5,899
	2040-2044	11	8	3	2	6	439	88	646	460	185	111	349	8,774	1,755
	2045-2049	49	35	14	8	27	1,893	379	1,300	927	373	224	703	17,666	3,533
	2050-2054	131	93	38	23	71	5,022	1,004	1,359	969	390	234	735	18,468	3,694
	2055-2059	776	553	223	133	419	29,782	5,956	824	587	237	142	446	11,193	2,239
	2060-2064	951	678	273	164	514	36,500	7,300	306	218	88	53	166	4,159	832
	2065-2069	1,153	822	331	198	623	44,266	8,853	-	-	-	-	-	-	-
	2070-2074	2,270	1,618	652	391	1,227	87,140	17,428	308	219	88	53	166	4,181	836
	2075-2079	675	481	194	116	365	25,922	5,184	742	529	213	128	401	10,080	2,016
	Total	6,146	4,381	1,765	1,057	3,323	235,963	47,193	9,668	7,640	3,078	1,844	5,796	145,611	
Ketchikan RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	425	335	89	81	255	6,394	1,279
	2020-2024	-	-	-	-	-	-	-	225	178	47	43	135	3,394	679
	2025-2029	-	-	-	-	-	-	-	229	181	48	44	137	3,443	689
	2030-2034	97	77	20	19	58	4,142	828	540	426	113	103	323	8,126	1,625
	2035-2039	4	3	1	1	3	178	36	269	212	56	51	161	4,048	810
	2040-2044	5	4	1	1	3	197	39	302	238	63	58	181	4,542	908
	2045-2049	160	127	34	31	96	6,819	1,364	387	305	81	74	232	5,821	1,164
	2050-2054	178	140	37	34	106	7,554	1,511	1,291	1,020	271	246	774	19,442	3,888
	2055-2059	236	186	49	45	141	10,026	2,005	927	732	195	177	555	13,954	2,791
	2060-2064	239	189	50	46	143	10,172	2,034	291	230	61	56	174	4,384	877
	2065-2069	564	446	118	108	338	24,008	4,802	-	-	-	-	-	-	-
	2070-2074	281	222	59	54	168	11,959	2,392	425	335	89	81	255	6,394	1,279
	2075-2079	315	249	66	60	189	13,420	2,684	225	178	47	43	135	3,394	679
	Total	2,079	1,643	437	396	1,246	88,475	17,695	4,885	4,372	1,162	1,055	3,317	83,334	
Wrangell RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	231	184	47	45	140	3,515	703
	2020-2024	-	-	-	-	-	-	-	341	272	69	66	206	5,180	1,036
	2025-2029	-	-	-	-	-	-	-	577	460	117	111	349	8,762	1,752
	2030-2034	129	103	26	25	78	5,559	1,112	823	656	167	158	498	12,499	2,500
	2035-2039	9	7	2	2	5	367	73	867	691	176	167	524	13,173	2,635
	2040-2044	19	15	4	4	11	812	162	223	178	45	43	135	3,388	678
	2045-2049	55	44	11	11	33	2,361	472	588	469	119	113	356	8,938	1,788
	2050-2054	30	24	6	6	18	1,288	258	1,089	868	221	210	659	16,549	3,310
	2055-2059	356	284	72	69	216	15,304	3,061	506	404	103	97	306	7,694	1,539
	2060-2064	603	481	122	116	365	25,888	5,178	97	77	20	19	59	1,475	295
	2065-2069	860	686	174	165	520	36,929	7,386	-	-	-	-	-	-	-
	2070-2074	906	723	184	174	548	38,921	7,784	231	184	47	45	140	3,515	703
	2075-2079	233	186	47	45	141	10,010	2,002	341	272	69	66	206	5,180	1,036
	Total	3,201	2,552	649	616	1,936	137,438	27,488	5,343	4,715	1,200	1,138	3,577	89,869	

Craig RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	379	337	41	81	256	6,430	1,286
	2020-2024	-	-	-	-	-	-	-	354	315	38	76	239	6,010	1,202
	2025-2029	-	-	-	-	-	-	-	240	214	26	52	163	4,084	817
	2030-2034	88	79	10	19	60	4,236	847	222	198	24	48	150	3,765	753
	2035-2039	6	6	1	1	4	303	61	42	38	5	9	29	718	144
	2040-2044	5	5	1	1	4	262	52	171	152	19	37	116	2,905	581
	2045-2049	44	39	5	9	30	2,106	421	497	443	54	107	336	8,449	1,690
	2050-2054	252	224	27	54	170	12,089	2,418	866	772	94	186	586	14,715	2,943
	2055-2059	370	330	40	80	250	17,757	3,551	813	724	88	175	550	13,807	2,761
	2060-2064	251	224	27	54	170	12,067	2,413	301	268	33	65	204	5,116	1,023
	2065-2069	232	207	25	50	157	11,125	2,225	-	-	-	-	-	-	-
	2070-2074	44	39	5	10	30	2,120	424	379	337	41	81	256	6,430	1,286
	2075-2079	179	159	19	38	121	8,582	1,716	354	315	38	76	239	6,010	1,202
	Total	1,472	1,312	160	317	995	70,648	14,130	3,886	4,116	502	993	3,122	78,438	
Juneau RD	Decade	acres cut	YG -Harv	YG - Nat	YG - Site3	YG - Site4	mbf - 5%	annual mbf	acres cut	YG -Harv	YG - Nat	YG - Site3	YG - Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	93	93	-	23	71	1,779	356
	2020-2024	-	-	-	-	-	-	-	125	125	-	30	95	2,379	476
	2025-2029	-	-	-	-	-	-	-	147	147	-	36	112	2,803	561
	2030-2034	69	69	-	17	52	3,717	743	147	147	-	35	111	2,795	559
	2035-2039	4	4	-	1	3	195	39	95	95	-	23	72	1,815	363
	2040-2044	6	6	-	2	5	341	68	29	29	-	7	22	559	112
	2045-2049	10	10	-	2	8	536	107	177	177	-	43	134	3,368	674
	2050-2054	9	9	-	2	7	467	93	63	63	-	15	48	1,204	241
	2055-2059	130	130	-	31	99	7,028	1,406	63	63	-	15	48	1,204	241
	2060-2064	154	154	-	37	117	8,283	1,657	66	66	-	16	50	1,258	252
	2065-2069	153	153	-	37	116	8,259	1,652	-	-	-	-	-	-	-
	2070-2074	100	100	-	24	76	5,364	1,073	93	93	-	23	71	1,779	356
	2075-2079	31	31	-	7	23	1,652	330	125	125	-	30	95	2,379	476
	Total	665	665	-	161	505	35,841	7,168	1,006	1,224	-	295	928	23,322	
Hoonah RD	Decade	acres cut	Suit YG -Harv	Suit YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres cut	Suit YG -Harv	Suit YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	107	20	87	5	15	372	74
	2020-2024	-	-	-	-	-	-	-	104	19	85	5	14	364	73
	2025-2029	-	-	-	-	-	-	-	34	6	28	1	5	118	24
	2030-2034	73	13	60	3	10	724	145	72	13	59	3	10	251	50
	2035-2039	4	1	3	0	1	36	7	430	79	351	19	60	1,499	300
	2040-2044	4	1	3	0	1	36	7	866	158	707	38	120	3,019	604
	2045-2049	11	2	9	0	2	110	22	741	135	605	33	103	2,582	516
	2050-2054	20	4	16	1	3	194	39	599	110	489	26	83	2,088	418
	2055-2059	109	20	89	5	15	1,076	215	140	26	114	6	19	487	97
	2060-2064	35	6	29	2	5	348	70	77	14	63	3	11	269	54
	2065-2069	75	14	62	3	10	743	149	-	-	-	-	-	-	-
	2070-2074	449	82	367	20	62	4,429	886	107	20	87	5	15	372	74
	2075-2079	905	166	739	40	126	8,918	1,784	104	19	85	5	14	364	73
	Total	1,686	308	1,378	74	234	16,614	3,323	3,169	618	2,762	149	469	11,785	

Yakutat RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	108	22	86	5	17	420	84
	2020-2024	-	-	-	-	-	-	-	25	5	20	1	4	98	20
	2025-2029	-	-	-	-	-	-	-	207	42	165	10	32	809	162
	2030-2034	69	14	55	3	11	760	152	91	19	72	4	14	353	71
	2035-2039	4	1	3	0	1	40	8	157	32	125	8	24	611	122
	2040-2044	23	5	18	1	4	250	50	1,124	230	894	56	174	4,383	877
	2045-2049	9	2	7	0	1	95	19	103	21	82	5	16	401	80
	2050-2054	9	2	7	0	1	95	19	63	13	50	3	10	246	49
	2055-2059	26	5	21	1	4	288	58	63	13	50	3	10	246	49
	2060-2064	217	44	173	11	34	2,391	478	401	82	319	20	62	1,564	313
	2065-2069	95	19	75	5	15	1,043	209	-	-	-	-	-	-	-
	2070-2074	164	34	130	8	25	1,806	361	108	22	86	5	17	420	84
	2075-2079	1,175	240	935	58	182	12,949	2,590	25	5	20	1	4	98	20
	Total	1,789	366	1,423	88	278	19,719	3,944	2,342	506	1,968	122	384	9,649	

Unroaded PCT **Roaded PCT**

		at 90 years							at 55 years						
Tongass total		acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	-	-	-	-	-	-	-	2,581	2,052	529	495	1,556	39,104	7,821
	2020-2024	-	-	-	-	-	-	-	5,066	4,325	741	1,044	3,281	82,432	16,486
	2025-2029	-	-	-	-	-	-	-	5,714	4,781	933	1,154	3,627	91,117	18,223
	2030-2034	904	674	231	163	511	36,283	7,257	7,378	6,245	1,132	1,508	4,738	119,032	23,806
	2035-2039	72	56	16	13	42	2,999	600	6,262	4,758	1,504	1,149	3,610	90,691	18,138
	2040-2044	112	79	34	19	60	4,244	849	5,201	3,162	2,039	763	2,399	60,260	12,052
	2045-2049	508	415	93	100	315	22,348	4,470	6,459	4,957	1,502	1,197	3,760	94,476	18,895
	2050-2054	1,102	922	180	223	699	49,660	9,932	8,526	6,752	1,775	1,630	5,122	128,681	25,736
	2055-2059	5,297	4,522	775	1,091	3,430	243,549	48,710	4,498	3,625	873	875	2,750	69,088	13,818
	2060-2064	5,973	4,998	975	1,206	3,792	269,208	53,842	2,127	1,502	625	363	1,140	28,631	5,726
	2065-2069	7,713	6,529	1,184	1,576	4,953	351,685	70,337	0	0	0	0	0	0	0
	2070-2074	6,547	4,975	1,572	1,201	3,774	267,948	53,590	2,581	2,052	529	495	1,556	39,104	7,821
	Total	28,228	23,169	5,060	5,592	17,576	1,247,925		53,812*	44,211	12,183	10,672	33,539	842,617	

Roaded PCT	Log MBF harvested	Roaded PCT at 70 year	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested	Roaded PCT at 90 year	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested
Thorne Bay RD	Decade	acres	acres				mbf - 5%	annual mbf	acres	acres				mbf - 5%	annual mbf
	2015-2019	143	134	9	32	102	4,636	927	-	-	-	-	-	-	-
	2020-2024	20	19	1	5	14	646	129	-	-	-	-	-	-	-
	2025-2029	127	119	8	29	90	4,099	820	-	-	-	-	-	-	-
	2030-2034	221	207	14	50	157	7,140	1,428	126	119	8	29	90	6,390	1,278
	2035-2039	2,220	2,083	137	503	1,580	71,835	14,367	17	16	1	4	12	851	170
	2040-2044	2,361	2,215	146	535	1,680	76,391	15,278	20	19	1	5	14	1,009	202
	2045-2049	2,992	2,807	185	678	2,129	96,803	19,361	127	119	8	29	90	6,402	1,280
	2050-2054	1,858	1,743	115	421	1,322	60,103	12,021	221	207	14	50	157	11,151	2,230
	2055-2059	1,695	1,590	105	384	1,207	54,849	10,970	2,220	2,083	137	503	1,580	112,189	22,438
	2060-2064	2,383	2,236	147	540	1,696	77,115	15,423	2,361	2,215	146	535	1,680	119,306	23,861
	2065-2069	2,423	2,273	150	549	1,725	78,400	15,680	2,992	2,807	185	678	2,129	151,185	30,237
	2070-2074	981	920	61	222	698	31,742	6,348	1,858	1,743	115	421	1,322	93,868	18,774
	2075-2079	522	489	32	118	371	16,874	3,375	1,695	1,590	105	384	1,207	85,662	17,132
	Total	17,946	16,836	1,110	4,064	12,772	580,635	116,127	11,637	10,917	720	2,635	8,282	588,013	117,603
Sitka RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	133	115	19	28	87	3,954	791	-	-	-	-	-	-	-
	2020-2024	18	15	2	4	11	521	104	-	-	-	-	-	-	-
	2025-2029	36	31	5	7	23	1,062	212	-	-	-	-	-	-	-
	2030-2034	233	201	33	48	152	6,916	1,383	126	108	18	26	82	5,810	1,162
	2035-2039	930	799	131	193	606	27,560	5,512	8	7	1	2	5	365	73
	2040-2044	1,009	867	142	209	658	29,908	5,982	18	15	2	4	11	814	163
	2045-2049	1,390	1,194	195	288	906	41,191	8,238	36	31	5	7	23	1,659	332
	2050-2054	374	321	53	77	244	11,070	2,214	233	201	33	48	152	10,801	2,160
	2055-2059	145	125	20	30	95	4,306	861	930	799	131	193	606	43,043	8,609
	2060-2064	283	243	40	59	185	8,388	1,678	1,009	867	142	209	658	46,709	9,342
	2065-2069	772	663	109	160	503	22,877	4,575	1,390	1,194	195	288	906	64,331	12,866
	2070-2074	181	155	25	38	118	5,359	1,072	374	321	53	77	244	17,290	3,458
	2075-2079	66	57	9	14	43	1,956	391	145	125	20	30	95	6,726	1,345
	Total	5,569	4,786	783	1,155	3,631	165,070	33,014	4,268	3,668	600	885	2,782	197,548	39,510

Petersburg RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	125	89	36	21	67	3,062	612	-	-	-	-	-	-	-
	2020-2024	11	8	3	2	6	269	54	-	-	-	-	-	-	-
	2025-2029	47	34	14	8	26	1,160	232	-	-	-	-	-	-	-
	2030-2034	125	89	36	22	68	3,076	615	109	78	31	19	59	4,200	840
	2035-2039	742	529	213	128	401	18,240	3,648	15	11	4	3	8	582	116
	2040-2044	909	648	261	156	492	22,355	4,471	11	8	3	2	6	420	84
	2045-2049	1,103	786	317	190	596	27,111	5,422	47	34	14	8	26	1,811	362
	2050-2054	2,171	1,547	623	374	1,174	53,369	10,674	125	89	36	22	68	4,804	961
	2055-2059	646	460	185	111	349	15,876	3,175	742	529	213	128	401	28,487	5,697
	2060-2064	1,300	927	373	224	703	31,966	6,393	909	648	261	156	492	34,913	6,983
	2065-2069	1,359	969	390	234	735	33,418	6,684	1,103	786	317	190	596	42,341	8,468
	2070-2074	824	587	237	142	446	20,253	4,051	2,171	1,547	623	374	1,174	83,351	16,670
	2075-2079	306	218	88	53	166	7,525	1,505	646	460	185	111	349	24,795	4,959
	Total	9,668	6,892	2,777	1,664	5,228	237,680	47,536	5,879	4,190	1,688	1,011	3,179	225,704	45,141
Ketchikan RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	97	77	20	19	58	2,646	529	-	-	-	-	-	-	-
	2020-2024	4	4	1	1	3	121	24	-	-	-	-	-	-	-
	2025-2029	153	121	32	29	92	4,176	835	-	-	-	-	-	-	-
	2030-2034	170	134	36	32	102	4,627	925	93	74	20	18	56	3,962	792
	2035-2039	225	178	47	43	135	6,141	1,228	4	3	1	1	2	171	34
	2040-2044	229	181	48	44	137	6,230	1,246	4	4	1	1	3	189	38
	2045-2049	540	426	113	103	323	14,704	2,941	153	121	32	29	92	6,522	1,304
	2050-2054	269	212	56	51	161	7,324	1,465	170	134	36	32	102	7,226	1,445
	2055-2059	302	238	63	58	181	8,219	1,644	225	178	47	43	135	9,590	1,918
	2060-2064	387	305	81	74	232	10,533	2,107	229	181	48	44	137	9,729	1,946
	2065-2069	1,291	1,020	271	246	774	35,181	7,036	540	426	113	103	323	22,964	4,593
	2070-2074	927	732	195	177	555	25,250	5,050	269	212	56	51	161	11,439	2,288
	2075-2079	291	230	61	56	174	7,933	1,587	302	238	63	58	181	12,836	2,567
	Total	4,885	3,859	1,026	931	2,927	133,084	26,617	1,989	1,571	418	379	1,192	84,629	16,926
Wrangell RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	132	105	27	25	80	3,629	726	-	-	-	-	-	-	-
	2020-2024	18	14	4	3	11	497	99	-	-	-	-	-	-	-
	2025-2029	53	42	11	10	32	1,446	289	-	-	-	-	-	-	-
	2030-2034	29	23	6	6	17	789	158	124	99	25	24	75	5,317	1,063
	2035-2039	341	272	69	66	206	9,373	1,875	8	7	2	2	5	351	70
	2040-2044	577	460	117	111	349	15,855	3,171	18	14	4	3	11	776	155
	2045-2049	823	656	167	158	498	22,617	4,523	53	42	11	10	32	2,258	452
	2050-2054	867	691	176	167	524	23,837	4,767	29	23	6	6	17	1,232	246
	2055-2059	223	178	45	43	135	6,131	1,226	341	272	69	66	206	14,638	2,928
	2060-2064	588	469	119	113	356	16,174	3,235	577	460	117	111	349	24,762	4,952
	2065-2069	1,089	868	221	210	659	29,945	5,989	823	656	167	158	498	35,323	7,065
	2070-2074	506	404	103	97	306	13,922	2,784	867	691	176	167	524	37,229	7,446
	2075-2079	97	77	20	19	59	2,669	534	223	178	45	43	135	9,575	1,915
	Total	5,343	4,259	1,084	1,028	3,231	146,886	29,377	3,062	2,441	621	589	1,852	131,462	26,292

Craig RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	90	81	10	19	61	2,780	556	-	-	-	-	-	-	-
	2020-2024	5	5	1	1	4	161	32	-	-	-	-	-	-	-
	2025-2029	42	37	5	9	28	1,290	258	-	-	-	-	-	-	-
	2030-2034	241	215	26	52	163	7,404	1,481	84	75	9	18	57	4,052	810
	2035-2039	354	315	38	76	239	10,875	2,175	6	5	1	1	4	290	58
	2040-2044	240	214	26	52	163	7,391	1,478	5	5	1	1	4	251	50
	2045-2049	222	198	24	48	150	6,814	1,363	42	37	5	9	28	2,014	403
	2050-2054	42	38	5	9	29	1,299	260	241	215	26	52	163	11,564	2,313
	2055-2059	171	152	19	37	116	5,256	1,051	354	315	38	76	239	16,985	3,397
	2060-2064	497	443	54	107	336	15,289	3,058	240	214	26	52	163	11,542	2,308
	2065-2069	866	772	94	186	586	26,627	5,325	222	198	24	48	150	10,641	2,128
	2070-2074	813	724	88	175	550	24,984	4,997	42	38	5	9	29	2,028	406
	2075-2079	301	268	33	65	204	9,257	1,851	171	152	19	37	116	8,209	1,642
	Total	3,886	3,463	423	836	2,627	119,426	23,885	1,408	1,255	153	303	952	67,576	13,515
Juneau RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf
	2015-2019	69	69	-	17	53	2,396	479	-	-	-	-	-	-	-
	2020-2024	6	6	-	1	5	209	42	-	-	-	-	-	-	-
	2025-2029	10	10	-	2	7	328	66	-	-	-	-	-	-	-
	2030-2034	8	8	-	2	6	286	57	66	66	-	16	50	3,555	711
	2035-2039	125	125	-	30	95	4,304	861	3	3	-	1	3	187	37
	2040-2044	147	147	-	36	112	5,073	1,015	6	6	-	1	5	326	65
	2045-2049	147	147	-	35	111	5,058	1,012	10	10	-	2	7	513	103
	2050-2054	95	95	-	23	72	3,285	657	8	8	-	2	6	446	89
	2055-2059	29	29	-	7	22	1,012	202	125	125	-	30	95	6,723	1,345
	2060-2064	177	177	-	43	134	6,094	1,219	147	147	-	36	112	7,923	1,585
	2065-2069	63	63	-	15	48	2,179	436	147	147	-	35	111	7,900	1,580
	2070-2074	63	63	-	15	48	2,179	436	95	95	-	23	72	5,131	1,026
	2075-2079	66	66	-	16	50	2,276	455	29	29	-	7	22	1,580	316
	Total	1,006	1,006	-	243	763	34,679	6,936	636	636	-	154	483	34,283	6,857
Hoonah RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf-5%	annual mbf
	2015-2019	74	13	60	3	10	465	93	-	-	-	-	-	-	-
	2020-2024	3	1	3	0	0	22	4	-	-	-	-	-	-	-
	2025-2029	11	2	9	0	1	68	14	-	-	-	-	-	-	-
	2030-2034	19	3	15	1	3	119	24	70	13	57	3	10	693	139
	2035-2039	104	19	85	5	14	659	132	3	1	3	0	0	34	7
	2040-2044	34	6	28	1	5	213	43	3	1	3	0	0	34	7
	2045-2049	72	13	59	3	10	455	91	11	2	9	0	1	106	21
	2050-2054	430	79	351	19	60	2,712	542	19	3	15	1	3	185	37
	2055-2059	866	158	707	38	120	5,462	1,092	104	19	85	5	14	1,029	206
	2060-2064	741	135	605	33	103	4,672	934	34	6	28	1	5	333	67
	2065-2069	599	110	489	26	83	3,777	755	72	13	59	3	10	711	142
	2070-2074	140	26	114	6	19	881	176	430	79	351	19	60	4,236	847
	2075-2079	77	14	63	3	11	487	97	866	158	707	38	120	8,531	1,706
	Total	3,169	580	2,589	140	440	19,993	3,999	1,613	295	1,318	71	224	15,891	3,178

Yakutat RD	Decade	acres	YG -Harv	YG - Nat	Site3	Site4	mbf - 5%	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf-5%	annual mbf
	2015-2019	69	14	55	3	11	490	98	-	-	-	-	-	-	-
	2020-2024	22	4	17	1	3	153	31	-	-	-	-	-	-	-
	2025-2029	8	2	7	0	1	58	12	-	-	-	-	-	-	-
	2030-2034	8	2	7	0	1	58	12	66	14	52	3	10	727	145
	2035-2039	25	5	20	1	4	177	35	3	1	3	0	1	38	8
	2040-2044	207	42	165	10	32	1,464	293	22	4	17	1	3	239	48
	2045-2049	91	19	72	4	14	639	128	8	2	7	0	1	91	18
	2050-2054	157	32	125	8	24	1,106	221	8	2	7	0	1	91	18
	2055-2059	1,124	230	894	56	174	7,931	1,586	25	5	20	1	4	276	55
	2060-2064	103	21	82	5	16	725	145	207	42	165	10	32	2,287	457
	2065-2069	63	13	50	3	10	446	89	91	19	72	4	14	998	200
	2070-2074	63	13	50	3	10	446	89	157	32	125	8	24	1,728	346
	2075-2079	401	82	319	20	62	2,830	566	1,124	230	894	56	174	12,386	2,477
	Total	2,342	479	1,862	116	363	16,523	3,305	1,711	350	1,361	85	266	18,861	3,772

Log MBF harvested

Roaded PCT	Log MBF harvested	at 70 years							at 90 years						No Naturally Regenerated 2G
Tongass total		acres	YG -Harv	YG - Nat	Site3	Site4	mbf cut	annual mbf	acres	YG -Harv	YG - Nat	Site3	Site4	mbf-5%	annual mbf
	2015-2019	934	698	236	168	529	24,059	4,812	-	-	-	-	-	-	-
	2020-2024	107	75	32	18	57	2,599	520	-	-	-	-	-	-	-
	2025-2029	486	397	89	96	301	13,687	2,737	-	-	-	-	-	-	-
	2030-2034	1,054	882	172	213	669	30,415	6,083	865	644	221	156	489	34,706	6,941
	2035-2039	5,066	4,325	741	1,044	3,281	149,164	29,833	69	53	15	13	40	2,869	574
	2040-2044	5,714	4,781	933	1,154	3,627	164,879	32,976	107	75	32	18	57	4,059	812
	2045-2049	7,378	6,245	1,132	1,508	4,738	215,392	43,078	486	397	89	96	301	21,376	4,275
	2050-2054	6,262	4,758	1,504	1,149	3,610	164,107	32,821	1,054	882	172	213	669	47,501	9,500
	2055-2059	5,201	3,162	2,039	763	2,399	109,043	21,809	5,066	4,325	741	1,044	3,281	232,960	46,592
	2060-2064	6,459	4,957	1,502	1,197	3,760	170,957	34,191	5,714	4,781	933	1,154	3,627	257,504	51,501
	2065-2069	8,526	6,752	1,775	1,630	5,122	232,851	46,570	7,378	6,245	1,132	1,508	4,738	336,394	67,279
	2070-2074	4,498	3,625	873	875	2,750	125,016	25,003	6,262	4,758	1,504	1,149	3,610	256,298	51,260
	Total	51,685	40,657	11,028	9,814	30,843	1,402,168	280,434	13,361	11,158	2,203	2,693	8,464	600,975	120,195

Appendix 6 **Detailed Analysis for 5 targeted Ranger Districts: Brackley (USFS)**

Craig
Petersburg — No stands of natural origin
Sitka — Log Recovery Factor (LRF) of 1.2
Thorne Bay
Wrangell

Roaded PCT acres and log volume by 55, 70, and 90 years:

Roaded PCT	Lbr MBF harvested	at 55 years		Annual avg mbf harvested	at 70 years		Annual avg mbf harvested	at 90 years		Annual avg mbf harvested
RD	5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf
Craig RD	2015-2019	337	7,716	1,543	90	3,336	667	-	-	-
Petersburg		219	5,018	1,004	125	3,674	735	-	-	-
Sitka		361	8,259	1,652	133	4,745	949	-	-	-
Thorne Bay		479	10,956	2,191	143	5,563	1,113	-	-	-
Wrangell		184	4,218	844	132	4,355	871	-	-	-
	Total	1,581	36,167	7,233	624	21,674	4,335	-	-	-
Craig RD	2020-2024	315	7,212	1,442	5	193	39	-	-	-
Petersburg		529	12,096	2,419	11	323	65	-	-	-
Sitka		799	18,277	3,655	18	625	125	-	-	-
Thorne Bay		2,083	47,638	9,528	20	776	155	-	-	-
Wrangell		272	6,216	1,243	18	597	119	-	-	-
	Total	3,998	91,438	18,288	72	2,513	503	-	-	-
Craig RD	2025-2029	214	4,901	980	42	1,547	309	-	-	-
Petersburg		648	14,825	2,965	47	1,392	278	-	-	-
Sitka		867	19,833	3,967	36	1,275	255	-	-	-
Thorne Bay		2,215	50,659	10,132	127	4,919	984	-	-	-
Wrangell		460	10,515	2,103	53	1,735	347	-	-	-
	Total	4,404	100,733	20,147	304	10,868	2,174	-	-	-
Craig RD	2030-2034	198	4,519	904	241	8,885	1,777	75	4,862	972
Petersburg		786	17,979	3,596	125	3,691	738	78	5,040	1,008
Sitka		1,194	27,316	5,463	233	8,299	1,660	108	6,972	1,394
Thorne Bay		2,807	64,196	12,839	221	8,568	1,714	119	7,668	1,534
Wrangell		656	14,999	3,000	29	947	189	99	6,381	1,276
	Total	5,641	129,008	25,802	849	30,390	6,078	478	30,922	6,184
Craig RD	2035-2039	38	861	172	354	13,050	2,610	5	348	70
Petersburg		1,547	35,392	7,078	742	21,888	4,378	11	698	140
Sitka		321	7,341	1,468	930	33,072	6,614	7	438	88
Thorne Bay		1,743	39,858	7,972	2,220	86,201	17,240	16	1,021	204
Wrangell		691	15,808	3,162	341	11,247	2,249	7	421	84
	Total	4,340	99,261	19,852	4,587	165,459	33,092	45	2,927	585
Craig RD	2040-2044	152	3,486	697	240	8,869	1,774	5	301	60
Petersburg		460	10,528	2,106	909	26,826	5,365	8	504	101
Sitka		125	2,856	571	1,009	35,889	7,178	15	977	195
Thorne Bay		1,590	36,374	7,275	2,361	91,669	18,334	19	1,211	242
Wrangell		178	4,066	813	577	19,026	3,805	14	932	186
	Total	2,506	57,309	11,462	5,097	182,279	36,456	61	3,925	785
Craig RD	2045-2049	443	10,139	2,028	222	8,176	1,635	37	2,417	483
Petersburg		927	21,199	4,240	1,103	32,533	6,507	34	2,173	435
Sitka		243	5,563	1,113	1,390	49,429	9,886	31	1,991	398
Thorne Bay		2,236	51,139	10,228	2,992	116,164	23,233	119	7,682	1,536
Wrangell		469	10,726	2,145	823	27,141	5,428	42	2,709	542
	Total	4,318	98,766	19,753	6,529	233,443	46,689	263	16,973	3,395

Craig RD	2050-2054	772	17,658	3,532	42	1,558	312	215	13,877	2,775
Petersburg		969	22,161	4,432	2,171	64,043	12,809	89	5,765	1,153
Sitka		663	15,171	3,034	374	13,285	2,657	201	12,961	2,592
Thorne Bay		2,273	51,992	10,398	1,858	72,124	14,425	207	13,382	2,676
Wrangell		868	19,859	3,972	867	28,605	5,721	23	1,478	296
	Total	5,546	126,841	25,368	5,311	179,615	35,923	734	47,463	9,493
Craig RD	2055-2059	724	16,568	3,314	171	6,307	1,261	315	20,382	4,076
Petersburg		587	13,431	2,686	646	19,051	3,810	529	34,184	6,837
Sitka		155	3,554	711	145	5,168	1,034	799	51,651	10,330
Thorne Bay		920	21,050	4,210	1,695	65,819	13,164	2,083	134,627	26,925
Wrangell		404	9,232	1,846	223	7,357	1,471	272	17,566	3,513
	Total	2,791	63,836	12,767	2,880	103,703	20,741	3,998	258,410	51,682
Craig RD	2060-2064	268	6,139	1,228	497	18,347	3,669	214	13,851	2,770
Petersburg		218	4,990	998	1,300	38,360	7,672	648	41,896	8,379
Sitka		57	1,297	259	283	10,066	2,013	867	56,051	11,210
Thorne Bay		489	11,190	2,238	2,383	92,538	18,508	2,215	143,167	28,633
Wrangell		77	1,770	354	588	19,409	3,882	460	29,715	5,943
	Total	1,110	25,387	5,077	5,053	178,720	35,744	4,404	284,679	56,936
Craig RD	2065-2069	-	-	-	866	31,953	6,391	198	12,770	2,554
Petersburg		-	-	-	1,359	40,101	8,020	786	50,809	10,162
Sitka		-	-	-	772	27,453	5,491	1,194	77,197	15,439
Thorne Bay		-	-	-	2,423	94,080	18,816	2,807	181,422	36,284
Wrangell		-	-	-	1,089	35,935	7,187	656	42,388	8,478
	Total	-	-	-	6,510	229,521	45,904	5,641	364,586	72,917
Craig RD	2070-2074	337	7,716	1,543	813	29,981	5,996	38	2,434	487
Petersburg		219	5,018	1,004	824	24,304	4,861	1,547	100,021	20,004
Sitka		361	8,259	1,652	181	6,431	1,286	321	20,747	4,149
Thorne Bay		479	10,956	2,191	981	38,091	7,618	1,743	112,641	22,528
Wrangell		184	4,218	844	506	16,706	3,341	691	44,675	8,935
	Total	1,581	36,167	7,233	3,305	115,512	23,102	4,340	280,518	56,104
Craig RD	2075-2079	315	7,212	1,442	301	11,109	2,222	152	9,851	1,970
Petersburg		529	12,096	2,419	306	9,030	1,806	460	29,754	5,951
Sitka		799	18,277	3,655	66	2,347	469	125	8,071	1,614
Thorne Bay		2,083	47,638	9,528	522	20,249	4,050	1,590	102,795	20,559
Wrangell		272	6,216	1,243	97	3,203	641	178	11,490	2,298
	Total	3,998	91,438	18,288	1,292	45,938	9,188	2,506	161,960	32,392

Roaded PCT		at 55 yrs			at 70 yrs			at 90 yrs		
Region total	5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf
Craig RD	2015-2019	1,581	36,167	7,233	624	21,674	4,335	-	-	-
Petersburg	2020-2024	3,998	91,438	18,288	72	2,513	503	-	-	-
Sitka	2025-2029	4,404	100,733	20,147	304	10,868	2,174	-	-	-
Thorne Bay	2030-2034	5,641	129,008	25,802	849	30,390	6,078	478	30,922	6,184
Wrangell	2035-2039	4,340	99,261	19,852	4,587	165,459	33,092	45	2,927	585
	2040-2044	2,506	57,309	11,462	5,097	182,279	36,456	61	3,925	785
	2045-2049	4,318	98,766	19,753	6,529	233,443	46,689	263	16,973	3,395
	2050-2054	5,546	126,841	25,368	5,311	179,615	35,923	734	47,463	9,493
	2055-2059	2,791	63,836	12,767	2,880	103,703	20,741	3,998	258,410	51,682
	2060-2064	1,110	25,387	5,077	5,053	178,720	35,744	4,404	284,679	56,936
	Total	36,236	828,746	165,749	31,305	1,108,664	221,733	9,984	645,299	129,060
	2065-2069	-	-	-	6,510	229,521	45,904	5,641	364,586	72,917
	2070-2074	1,581	36,167	7,233	3,305	115,512	23,102	4,340	280,518	56,104

Appendix 6 **Detailed Analysis for 5 targeted Ranger Districts: Brackley (USFS)** Appendix 6

Craig
Petersburg — No stands of natural origin
Sitka — Log Recovery Factor (LRF) of 1.2
Thorne Bay
Wrangell

Unroaded PCT acres and log volume by 55, 70, and 90 years:

Unroaded PCT	Lbr MBF harvested	at 55 years		Annual avg mbf harvested	at 70 years		Annual avg mbf harvested	at 90 years		Annual avg mbf harvested	All PCT combined
RD	5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	RD
Craig RD	2015-2019	353	8,066	1,613	95	3,488	698	-	-	-	Craig RD
Petersburg		229	5,246	1,049	130	3,841	768	-	-	-	Petersburg
Sitka		378	8,634	1,727	139	4,960	992	-	-	-	**Sitka**
Thorne Bay		501	11,454	2,291	150	5,816	1,163	-	-	-	Thorne Bay
Wrangell		193	4,410	882	138	4,553	911	-	-	-	Wrangell
	Total	1,653	37,811	7,562	652	22,659	4,532	-	-	-	
Craig RD	2020-2024	330	7,540	1,508	5	202	40	-	-	-	Craig RD
Petersburg		553	12,646	2,529	11	337	67	-	-	-	Petersburg
Sitka		835	19,108	3,822	18	654	131	-	-	-	Sitka
Thorne Bay		2,178	49,803	9,961	21	811	162	-	-	-	Thorne Bay
Wrangell		284	6,498	1,300	19	624	125	-	-	-	Wrangell
	Total	4,180	95,594	19,119	75	2,627	525	-	-	-	
Craig RD	2025-2029	224	5,124	1,025	44	1,618	324	-	-	-	Craig RD
Petersburg		678	15,499	3,100	49	1,455	291	-	-	-	Petersburg
Sitka		907	20,735	4,147	37	1,333	267	-	-	-	Sitka
Thorne Bay		2,316	52,962	10,592	132	5,142	1,028	-	-	-	Thorne Bay
Wrangell		481	10,992	2,198	55	1,814	363	-	-	-	Wrangell
	Total	4,605	105,312	21,062	318	11,362	2,272	-	-	-	
Craig RD	2030-2034	207	4,724	945	252	9,289	1,858	79	5,083	1,017	Craig RD
Petersburg		822	18,796	3,759	131	3,859	772	82	5,270	1,054	Petersburg
Sitka		1,249	28,558	5,712	244	8,676	1,735	113	7,289	1,458	Sitka
Thorne Bay		2,934	67,114	13,423	231	8,958	1,792	124	8,016	1,603	Thorne Bay
Wrangell		686	15,681	3,136	30	990	198	103	6,671	1,334	Wrangell
	Total	5,897	134,872	26,974	887	31,771	6,354	500	32,328	6,466	
Craig RD	2035-2039	39	900	180	370	13,644	2,729	6	364	73	Craig RD
Petersburg		1,618	37,001	7,400	776	22,883	4,577	11	730	146	Petersburg
Sitka		336	7,675	1,535	972	34,575	6,915	7	458	92	Sitka
Thorne Bay		1,822	41,670	8,334	2,321	90,120	18,024	17	1,067	213	Thorne Bay
Wrangell		723	16,527	3,305	356	11,759	2,352	7	441	88	Wrangell
	Total	4,537	103,773	20,755	4,795	172,980	34,596	47	3,060	612	
Craig RD	2040-2044	159	3,644	729	251	9,272	1,854	5	315	63	Craig RD
Petersburg		481	11,007	2,201	951	28,045	5,609	8	527	105	Petersburg
Sitka		131	2,986	597	1,055	37,521	7,504	16	1,021	204	Sitka
Thorne Bay		1,663	38,027	7,605	2,468	95,836	19,167	20	1,266	253	Thorne Bay
Wrangell		186	4,250	850	603	19,891	3,978	15	974	195	Wrangell
	Total	2,620	59,914	11,983	5,328	190,565	38,113	63	4,103	821	
Craig RD	2045-2049	463	10,600	2,120	232	8,548	1,710	39	2,527	505	Craig RD
Petersburg		969	22,162	4,432	1,153	34,012	6,802	35	2,272	454	Petersburg
Sitka		254	5,816	1,163	1,453	51,676	10,335	32	2,082	416	Sitka
Thorne Bay		2,338	53,464	10,693	3,128	121,444	24,289	124	8,031	1,606	Thorne Bay
Wrangell		490	11,214	2,243	860	28,374	5,675	44	2,833	567	Wrangell
	Total	4,515	103,256	20,651	6,826	244,055	48,811	275	17,744	3,549	

Craig RD	2050-2054	807	18,461	3,692	44	1,629	326	224	14,507	2,901	Craig RD
Petersburg		1,013	23,169	4,634	2,270	66,954	13,391	93	6,027	1,205	Petersburg
Sitka		693	15,861	3,172	390	13,888	2,778	210	13,550	2,710	Sitka
Thorne Bay		2,377	54,355	10,871	1,942	75,402	15,080	216	13,990	2,798	Thorne Bay
Wrangell		908	20,761	4,152	906	29,905	5,981	24	1,546	309	Wrangell
	Total	5,798	132,606	26,521	5,553	187,779	37,556	768	49,620	9,924	
Craig RD	2055-2059	757	17,321	3,464	179	6,594	1,319	330	21,308	4,262	Craig RD
Petersburg		614	14,042	2,808	675	19,917	3,983	553	35,738	7,148	Petersburg
Sitka		162	3,715	743	152	5,403	1,081	835	53,999	10,800	Sitka
Thorne Bay		962	22,007	4,401	1,772	68,811	13,762	2,178	140,747	28,149	Thorne Bay
Wrangell		422	9,652	1,930	233	7,691	1,538	284	18,365	3,673	Wrangell
	Total	2,918	66,737	13,347	3,011	108,416	21,683	4,180	270,156	54,031	
Craig RD	2060-2064	281	6,418	1,284	520	19,181	3,836	224	14,480	2,896	Craig RD
Petersburg		228	5,217	1,043	1,359	40,103	8,021	678	43,800	8,760	Petersburg
Sitka		59	1,356	271	296	10,523	2,105	907	58,599	11,720	Sitka
Thorne Bay		512	11,699	2,340	2,492	96,744	19,349	2,316	149,675	29,935	Thorne Bay
Wrangell		81	1,851	370	615	20,291	4,058	481	31,066	6,213	Wrangell
	Total	1,160	26,541	5,308	5,282	186,844	37,369	4,605	297,619	59,524	
Craig RD	2065-2069	-	-	-	906	33,405	6,681	207	13,350	2,670	Craig RD
Petersburg		-	-	-	1,421	41,924	8,385	822	53,119	10,624	Petersburg
Sitka		-	-	-	807	28,701	5,740	1,249	80,706	16,141	Sitka
Thorne Bay		-	-	-	2,533	98,357	19,671	2,934	189,669	37,934	Thorne Bay
Wrangell		-	-	-	1,139	37,568	7,514	686	44,315	8,863	Wrangell
	Total	-	-	-	6,806	239,954	47,991	5,897	381,158	76,232	
Craig RD	2070-2074	353	8,066	1,613	850	31,343	6,269	39	2,544	509	Craig RD
Petersburg		229	5,246	1,049	861	25,409	5,082	1,618	104,568	20,914	Petersburg
Sitka		378	8,634	1,727	189	6,723	1,345	336	21,691	4,338	Sitka
Thorne Bay		501	11,454	2,291	1,026	39,822	7,964	1,822	117,761	23,552	Thorne Bay
Wrangell		193	4,410	882	529	17,465	3,493	723	46,705	9,341	Wrangell
	Total	1,653	37,811	7,562	3,455	120,763	24,153	4,537	293,269	58,654	
Craig RD	2075-2079	330	7,540	1,508	315	11,613	2,323	159	10,298	2,060	Craig RD
Petersburg		553	12,646	2,529	320	9,441	1,888	481	31,107	6,221	Petersburg
Sitka		835	19,108	3,822	69	2,454	491	131	8,438	1,688	Sitka
Thorne Bay		2,178	49,803	9,961	545	21,170	4,234	1,663	107,467	21,493	Thorne Bay
Wrangell		284	6,498	1,300	102	3,349	670	186	12,012	2,402	Wrangell
	Total	4,180	95,594	19,119	1,351	48,027	9,605	2,620	169,322	33,864	

Unroaded PCT	Lbr MBF harvested		**at 55 years**			**at 70 years**			**at 90 years**		**All PCT combine**
Region total	5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	Region total
Craig RD	2015-2019	1,653	37,811	7,562	652	22,659	4,532	-	-	-	Craig RD
Petersburg	2020-2024	4,180	95,594	19,119	75	2,627	525	-	-	-	Petersburg
Sitka	2025-2029	4,605	105,312	21,062	318	11,362	2,272	-	-	-	Sitka
Thorne Bay	2030-2034	5,897	134,872	26,974	887	31,771	6,354	500	32,328	6,466	Thorne Bay
Wrangell	2035-2039	4,537	103,773	20,755	4,795	172,980	34,596	47	3,060	612	Wrangell
	2040-2044	2,620	59,914	11,983	5,328	190,565	38,113	63	4,103	821	
	2045-2049	4,515	103,256	20,651	6,826	244,055	48,811	275	17,744	3,549	
	2050-2054	5,798	132,606	26,521	5,553	187,779	37,556	768	49,620	9,924	
	2055-2059	2,918	66,737	13,347	3,011	108,416	21,683	4,180	270,156	54,031	
	2060-2064	1,160	26,541	5,308	5,282	186,844	37,369	4,605	297,619	59,524	
	2055-2059	37,883	866,416	173,283	32,728	1,159,058	231,812	10,438	674,631	134,926	
	2065-2069	-	-	-	6,806	239,954	47,991	5,897	381,158	76,232	
	2070-2074	1,653	37,811	7,562	3,455	120,763	24,153	4,537	293,269	58,654	

Lbr MBF harvested	at 55 years		Annual avg mbf harvested	at 70 years		Annual avg mbf harvested	at 90 years		Annual avg mbf harvested
5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf
2015-2019	690	15,782	3,156	185	6,824	1,365	-	-	-
	449	10,264	2,053	255	7,516	1,503	-	-	-
	739	16,893	3,379	273	9,705	1,941	-	-	-
	980	22,411	4,482	293	11,379	2,276	-	-	-
	377	8,629	1,726	270	8,908	1,782	-	-	-
Total	3,235	73,977	14,795	1,276	44,332	8,866	-	-	-
2020-2024	645	14,752	2,950	11	395	79	-	-	-
	1,082	24,742	4,948	22	660	132	-	-	-
	1,635	37,384	7,477	36	1,279	256	-	-	-
	4,260	97,441	19,488	41	1,586	317	-	-	-
	556	12,714	2,543	37	1,220	244	-	-	-
Total	8,178	187,032	37,406	147	5,140	1,028	-	-	-
2025-2029	438	10,025	2,005	86	3,165	633	-	-	-
	1,326	30,323	6,065	96	2,846	569	-	-	-
	1,774	40,569	8,114	73	2,608	522	-	-	-
	4,531	103,621	20,724	259	10,061	2,012	-	-	-
	940	21,507	4,301	108	3,549	710	-	-	-
Total	9,009	206,045	41,209	622	22,229	4,446	-	-	-
2030-2034	404	9,242	1,848	493	18,174	3,635	154	9,945	1,989
	1,608	36,775	7,355	256	7,550	1,510	160	10,310	2,062
	2,443	55,874	11,175	477	16,975	3,395	221	14,261	2,852
	5,741	131,310	26,262	451	17,526	3,505	243	15,684	3,137
	1,341	30,679	6,136	59	1,936	387	202	13,051	2,610
Total	11,538	263,880	52,776	1,736	62,162	12,432	979	63,250	12,650
2035-2039	77	1,761	352	724	26,694	5,339	11	712	142
	3,165	72,393	14,479	1,518	44,771	8,954	22	1,428	286
	657	15,017	3,003	1,902	67,648	13,530	14	896	179
	3,565	81,527	16,305	4,541	176,321	35,264	32	2,088	418
	1,414	32,335	6,467	697	23,006	4,601	13	862	172
Total	8,877	203,033	40,607	9,382	338,440	67,688	93	5,987	1,197
2040-2044	312	7,130	1,426	492	18,140	3,628	10	616	123
	942	21,535	4,307	1,860	54,871	10,974	16	1,030	206
	255	5,842	1,168	2,064	73,410	14,682	31	1,998	400
	3,253	74,401	14,880	4,829	187,505	37,501	38	2,477	495
	364	8,316	1,663	1,180	38,918	7,784	29	1,906	381
Total	5,125	117,224	23,445	10,425	372,844	74,569	124	8,028	1,606
2045-2049	907	20,739	4,148	453	16,725	3,345	76	4,943	989
	1,896	43,361	8,672	2,256	66,545	13,309	69	4,446	889
	498	11,378	2,276	2,843	101,105	20,221	63	4,073	815
	4,574	104,603	20,921	6,120	237,608	47,522	243	15,713	3,143
	959	21,940	4,388	1,683	55,515	11,103	86	5,542	1,108
Total	8,833	202,022	40,404	13,354	477,498	95,500	537	34,717	6,943

2050-2054	1,579	36,119	7,224	86	3,187	637	439	28,384	5,677
	1,982	45,330	9,066	4,441	130,998	26,200	182	11,792	2,358
	1,357	31,032	6,206	764	27,173	5,435	410	26,511	5,302
	4,650	106,347	21,269	3,800	147,526	29,505	423	27,371	5,474
	1,776	40,620	8,124	1,774	58,510	11,702	47	3,024	605
Total	11,344	259,447	51,889	10,864	367,394	73,479	1,502	97,082	19,416
2055-2059	1,482	33,890	6,778	350	12,901	2,580	645	41,690	8,338
	1,201	27,473	5,495	1,321	38,969	7,794	1,082	69,922	13,984
	318	7,269	1,454	297	10,570	2,114	1,635	105,651	21,130
	1,883	43,057	8,611	3,468	134,630	26,926	4,260	275,374	55,075
	826	18,884	3,777	456	15,048	3,010	556	35,931	7,186
Total	5,709	130,573	26,115	5,892	212,119	42,424	8,178	528,567	105,713
2060-2064	549	12,557	2,511	1,017	37,529	7,506	438	28,331	5,666
	446	10,207	2,041	2,660	78,463	15,693	1,326	85,696	17,139
	116	2,653	531	579	20,589	4,118	1,774	114,650	22,930
	1,001	22,889	4,578	4,875	189,282	37,856	4,531	292,842	58,568
	158	3,621	724	1,203	39,701	7,940	940	60,780	12,156
Total	2,270	51,928	10,386	10,335	365,564	73,113	9,009	582,299	116,460
2065-2069	-	-	-	1,772	65,357	13,071	404	26,120	5,224
	-	-	-	2,781	82,025	16,405	1,608	103,928	20,786
	-	-	-	1,579	56,153	11,231	2,443	157,903	31,581
	-	-	-	4,956	192,437	38,487	5,741	371,091	74,218
	-	-	-	2,228	73,502	14,700	1,341	86,702	17,340
Total	-	-	-	13,316	469,475	93,895	11,538	745,745	149,149
2070-2074	690	15,782	3,156	1,663	61,324	12,265	77	4,978	996
	449	10,264	2,053	1,685	49,713	9,943	3,165	204,589	40,918
	739	16,893	3,379	370	13,154	2,631	657	42,438	8,488
	980	22,411	4,482	2,007	77,913	15,583	3,565	230,402	46,080
	377	8,629	1,726	1,036	34,171	6,834	1,414	91,380	18,276
Total	3,235	73,977	14,795	6,760	236,275	47,255	8,877	573,787	114,757
2075-2079	645	14,752	2,950	616	22,722	4,544	312	20,149	4,030
	1,082	24,742	4,948	626	18,471	3,694	942	60,861	12,172
	1,635	37,384	7,477	135	4,802	960	255	16,509	3,302
	4,260	97,441	19,488	1,067	41,419	8,284	3,253	210,262	42,052
	556	12,714	2,543	199	6,552	1,310	364	23,502	4,700
Total	8,178	187,032	37,406	2,643	93,965	18,793	5,125	331,283	66,257

d	at 55 years			at 70 years			at 90 years		
5-yr period	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf	acres cut	mbf - 5%	annual mbf
2015-2019	3,235	73,977	14,795	1,276	44,332	8,866	-	-	-
2020-2024	8,178	187,032	37,406	147	5,140	1,028	-	-	-
2025-2029	9,009	206,045	41,209	622	22,229	4,446	-	-	-
2030-2034	11,538	263,880	52,776	1,736	62,162	12,432	979	63,250	12,650
2035-2039	8,877	203,033	40,607	9,382	338,440	67,688	93	5,987	1,197
2040-2044	5,125	117,224	23,445	10,425	372,844	74,569	124	8,028	1,606
2045-2049	8,833	202,022	40,404	13,354	477,498	95,500	537	34,717	6,943
2050-2054	11,344	259,447	51,889	10,864	367,394	73,479	1,502	97,082	19,416
2055-2059	5,709	130,573	26,115	5,892	212,119	42,424	8,178	528,567	105,713
2060-2064	2,270	51,928	10,386	10,335	365,564	73,113	9,009	582,299	116,460
Total	74,119	1,695,162	339,032	64,033	2,267,722	453,544	20,421	1,319,930	263,986
2065-2069	-	-	-	13,316	469,475	93,895	11,538	745,745	149,149
2070-2074	3,235	73,977	14,795	6,760	236,275	47,255	8,877	573,787	114,757

Appendix 7 Assumed 5 gt of biomass per mbf harvested

Roaded PCT	Log MBF harvested	at 55 years	YG -Harv	YG - Nat	YG - Site3	YG - Site4		Annual avg mbf harvested	Biomass (gT/ year)	Biomass 5-yr total
Thorne Bay RD	Decade	acres cut	acres				mbf cut - 5%	annual mbf	gT/yr	gT
	2015-2019	511	479	32	116	363	9,130	1,826	9,130	45,651
	2020-2024	2,220	2,083	137	503	1,580	39,698	7,940	39,698	198,490
	2025-2029	2,361	2,215	146	535	1,680	42,216	8,443	42,216	211,081
	2030-2034	2,992	2,807	185	678	2,129	53,497	10,699	53,497	267,483
	2035-2039	1,858	1,743	115	421	1,322	33,215	6,643	33,215	166,074
	2040-2044	1,695	1,590	105	384	1,207	30,311	6,062	30,311	151,557
	2045-2049	2,383	2,236	147	540	1,696	42,616	8,523	42,616	213,081
	2050-2054	2,423	2,273	150	549	1,725	43,326	8,665	43,326	216,632
	2055-2059	981	920	61	222	698	17,542	3,508	17,542	87,709
	2060-2064	522	489	32	118	371	9,325	1,865	9,325	46,626
	2065-2069	-	-	-	-	-	-	-	-	-
	2070-2074	511	479	32	116	363	9,130	1,826	9,130	45,651
	2075-2079	2,220	2,083	137	503	1,580	39,698	7,940	39,698	198,490
	Total	17,946	19,398	1,279	4,682	14,716	369,705			1,848,527
Sitka RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf cut - 5%	annual mbf	gT/yr	gT
	2015-2019	420	361	59	87	274	6,882	1,376	6,882	34,411
	2020-2024	930	799	131	193	606	15,231	3,046	15,231	76,153
	2025-2029	1,009	867	142	209	658	16,528	3,306	16,528	82,640
	2030-2034	1,390	1,194	195	288	906	22,763	4,553	22,763	113,817
	2035-2039	374	321	53	77	244	6,118	1,224	6,118	30,589
	2040-2044	145	125	20	30	95	2,380	476	2,380	11,900
	2045-2049	283	243	40	59	185	4,636	927	4,636	23,178
	2050-2054	772	663	109	160	503	12,643	2,529	12,643	63,214
	2055-2059	181	155	25	38	118	2,962	592	2,962	14,808
	2060-2064	66	57	9	14	43	1,081	216	1,081	5,405
	2065-2069	-	-	-	-	-	-	-	-	-
	2070-2074	420	361	59	87	274	6,882	1,376	6,882	34,411
	2075-2079	930	799	131	193	606	15,231	3,046	15,231	76,153
	Total	5,569	5,947	973	1,435	4,511	113,336			566,678
Petersburg RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf cut - 5%	annual mbf	gT/yr	gT
	2015-2019	308	219	88	53	166	4,181	836	4,181	20,907
	2020-2024	742	529	213	128	401	10,080	2,016	10,080	50,400
	2025-2029	909	648	261	156	492	12,354	2,471	12,354	61,770
	2030-2034	1,103	786	317	190	596	14,982	2,996	14,982	74,911
	2035-2039	2,171	1,547	623	374	1,174	29,494	5,899	29,494	147,468
	2040-2044	646	460	185	111	349	8,774	1,755	8,774	43,869
	2045-2049	1,300	927	373	224	703	17,666	3,533	17,666	88,328
	2050-2054	1,359	969	390	234	735	18,468	3,694	18,468	92,338
	2055-2059	824	587	237	142	446	11,193	2,239	11,193	55,963
	2060-2064	306	218	88	53	166	4,159	832	4,159	20,793
	2065-2069	-	-	-	-	-	-	-	-	-
	2070-2074	308	219	88	53	166	4,181	836	4,181	20,907
	2075-2079	742	529	213	128	401	10,080	2,016	10,080	50,400
	Total	9,668	7,640	3,078	1,844	5,796	145,611			728,054

Wrangell RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf cut - 5%	annual mbf	gT/yr	gT
	2015-2019	231	184	47	45	140	3,515	703	3,515	17,577
	2020-2024	341	272	69	66	206	5,180	1,036	5,180	25,899
	2025-2029	577	460	117	111	349	8,762	1,752	8,762	43,811
	2030-2034	823	656	167	158	498	12,499	2,500	12,499	62,495
	2035-2039	867	691	176	167	524	13,173	2,635	13,173	65,867
	2040-2044	223	178	45	43	135	3,388	678	3,388	16,940
	2045-2049	588	469	119	113	356	8,938	1,788	8,938	44,692
	2050-2054	1,089	868	221	210	659	16,549	3,310	16,549	82,744
	2055-2059	506	404	103	97	306	7,694	1,539	7,694	38,468
	2060-2064	97	77	20	19	59	1,475	295	1,475	7,376
	2065-2069	-	-	-	-	-	-	-	-	-
	2070-2074	231	184	47	45	140	3,515	703	3,515	17,577
	2075-2079	341	272	69	66	206	5,180	1,036	5,180	25,899
	Total	5,343	4,715	1,200	1,138	3,577	89,869			449,344
Craig RD	Decade	acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf cut - 5%	annual mbf	gT/yr	gT
	2015-2019	379	337	41	81	256	6,430	1,286	6,430	32,148
	2020-2024	354	315	38	76	239	6,010	1,202	6,010	30,050
	2025-2029	240	214	26	52	163	4,084	817	4,084	20,421
	2030-2034	222	198	24	48	150	3,765	753	3,765	18,827
	2035-2039	42	38	5	9	29	718	144	718	3,588
	2040-2044	171	152	19	37	116	2,905	581	2,905	14,523
	2045-2049	497	443	54	107	336	8,449	1,690	8,449	42,247
	2050-2054	866	772	94	186	586	14,715	2,943	14,715	73,575
	2055-2059	813	724	88	175	550	13,807	2,761	13,807	69,034
	2060-2064	301	268	33	65	204	5,116	1,023	5,116	25,579
	2065-2069	-	-	-	-	-	-	-	-	-
	2070-2074	379	337	41	81	256	6,430	1,286	6,430	32,148
	2075-2079	354	315	38	76	239	6,010	1,202	6,010	30,050
	Total	3,886	4,116	502	993	3,122	78,438			392,192

Log MBF harvested

Roaded PCT Log MBF harvested **at 55 years** **No Naturally Regenerated 2G**

Tongass total		acres cut	YG -Harv	YG - Nat	Site3	Site4	mbf cut	annual mbf	Biomass (gT/ year)	Biomass 5-yr total gT
	2015-2019	1,848	1,581	267	382	1,200	30,139	6,028	30,139	150,694
	2020-2024	4,587	3,998	589	965	3,033	76,198	15,240	76,198	380,992
	2025-2029	5,097	4,404	692	1,063	3,341	83,944	16,789	83,944	419,722
	2030-2034	6,529	5,641	888	1,362	4,279	107,507	21,501	107,507	537,534
	2035-2039	5,311	4,340	971	1,048	3,292	82,717	16,543	82,717	413,587
	2040-2044	2,880	2,506	375	605	1,901	47,758	9,552	47,758	238,789
	2045-2049	5,053	4,318	734	1,042	3,276	82,305	16,461	82,305	411,526
	2050-2054	6,510	5,546	964	1,339	4,207	105,701	21,140	105,701	528,503
	2055-2059	3,305	2,791	514	674	2,117	53,196	10,639	53,196	265,982
	2060-2064	1,292	1,110	182	268	842	21,156	4,231	21,156	105,779
	2065-2069	0	0	0	0	0	0	0	0	0
	2070-2074	1,848	1,581	267	382	1,200	30,139	6,028	30,139	150,694
	Total	42,412	37,817	6,443	9,128	28,689	720,761			3,603,803