

Southeast Timber Harvest Employment Impact Analysis

***PREPARED FOR:
Sealaska Corporation***



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Juneau
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The purpose of this study was to compare the employment impact of Sealaska timber harvests with the impact of Tongass timber harvests. The primary difference between the two harvests, in terms of job creation, is that Sealaska harvests, in addition to logging jobs, create jobs in shiploading. Tongass harvests, because of the primary manufacturing requirement, create jobs in sawmills. This report examines these and other employment characteristics. Key findings of this study are summarized below:

- Sealaska harvested an average of 92 million board feet (mmbf) of timber from its lands in 2002 and 2003. During those same years the Tongass harvest averaged 42 mmbf.
- Sealaska and Tongass logging typically account for approximately 2.1 jobs per mmbf of timber harvested. This does not include stevedoring or sawmill jobs.
- Sealaska-related stevedoring activity generated jobs for 209 Southeast village residents in 2002 and 2003, with earnings totaling approximately \$1 million annually. This equates to 2.2 jobs per mmbf. These mostly part-time jobs were in Hydaburg, Klawock, Kake and Hoonah.
- Tongass timber harvests created an average of 100 sawmill jobs in Southeast in 2002 and 2003 with payroll of \$2 million annually. This equates to 2.4 jobs per mmbf. These mostly full-time jobs were primarily in Ketchikan, Wrangell and Klawock.
- Including logging and sawmill employment, Tongass harvests created an average of 4.5 jobs per mmbf. This is a measure of direct employment impacts attributable to the Tongass harvest.
- Including logging and stevedoring jobs, Sealaska harvests created an average 4.3 jobs per mmbf. This is a measure of direct employment impacts only.
- Other Sealaska-related impacts are readily measurable. Including employment with Sealaska Timber Corporation (STC) contractors (logging and stevedoring), STC offices and Sealaska Corporation headquarters, Sealaska timber harvests accounted for an average of 416 jobs in 2002 and 2003, from an average annual harvest of 95 million board feet. That equates to 4.9 jobs per mmbf.
- Income from STC logging activity is widely dispersed among village residents and is an important source of cash, particularly for many who have a high degree of dependence on subsistence activities. Placing a domestic

manufacturing requirement on Sealaska timber harvests would transfer jobs from cash-poor areas to communities with existing sawmills.

- Not included in this study is the spending on goods and services by Sealaska Timber Corporation (other than logging and stevedoring), spending by Sealaska Corporation and Sealaska Heritage Institute, and spending by all of the employees of these organizations. This spending creates additional economic activity and employment in Southeast. Previous research has found that direct, indirect and induced employment related to Sealaska peaked at approximately 1,000 jobs in Southeast Alaska in 2002 and 2003.

- Also not factored into this analysis are other Sealaska contributions to Southeast including dividends paid to shareholders, SHI scholarships, and support for various regional programs. The shareholder intern program and shareholder hire policy, which have provided educational and career opportunities (that may not otherwise have been available) to many Southeast residents, are likewise not factored into this analysis.

In summary, the overall economic impact of Sealaska timber harvests is greater than that of the Tongass harvests (as would be expected, with about double the total harvest volume). Further, this analysis suggests that on a per mmbf basis, Sealaska's economic impact at least matches that of the Tongass (even with its primary manufacturing requirements).

Introduction

The purpose of this analysis is to compare the number of jobs created from timber harvests on Sealaska lands to harvests from the Tongass National Forest in Southeast Alaska on a per-million-board-foot basis.

There are two key components of the Southeast Alaska logging industry: logging activity in the Tongass National Forest and logging on private landholdings. In Southeast, the most significant volume of private timber is harvested by Sealaska Timber Corporation (STC). There are also timber harvests on land owned by the State of Alaska, University of Alaska, Alaska Mental Health Trust, as well as other much smaller scale harvests.

Timber harvested in the Tongass National Forest has primary manufacturing requirements, which mandate that most harvested logs be at least minimally processed in Alaska prior to export. Cedar can be exported as round logs and these exports are an important part of the financial viability of Tongass operators.¹ The primary manufacturing requirement creates employment in local sawmills. Timber harvested from private land in Southeast has no similar manufacturing requirements and is mostly exported as round logs.

While most Sealaska timber is not processed in Southeast Alaska, STC timber contracts create certain jobs that Tongass harvests do not. Log “manufacturing” and scaling are somewhat more labor intensive on Sealaska harvests, as logs are sorted and prepared to the exact specifications of the export market. Ship loading activity, in particular, provides significant employment and wages to village residents in Southeast. Logs are felled, transported to tidewater and loaded on ships in the remote locations along the coast of Prince of Wales (POW) Island, Hoonah and Kake to be transported to market. In addition, Sealaska timber harvests support the operations of Sealaska Corporation and Sealaska Heritage Institute, which provide employment and other economic opportunities in Southeast Alaska.

Methodology

The analysis was based on a combination of primary and secondary research. Primary research sources included a review of internal STC data supplemented by interviews with STC contractors regarding employment on STC contracts in 2002 and 2003. Secondary data sources included published and unpublished employment data from the Alaska Department of Labor and Tongass National Forest timber harvest volume from the USDA Forest Service.

In 2004, yellow cedar accounted for 7.2 percent of the Tongass National Forest harvest and Western red cedar accounted for 7.3 percent of the Tongass harvest.

Published employment data for the forestry and logging industry includes establishments primarily engaged in cutting and trucking timber. However, logging-related employment also includes road building, towing, log scaling, sorting and other jobs. Companies engaged in these logging support activities report their employment to the Alaska Department of Labor in different ways, because of the vertical integration of some companies, or other factors. As a result, establishments engaged in similar activities may be assigned different industry codes under the North American Industry Classification System (NAICS). Certain businesses may be categorized in non-logging NAICS categories. For example, establishments primarily engaged in trucking timber are classified in Industry 484220, Specialized Freight; however, employment numbers specific to timber trucking are not available. As a result, employment estimates for the logging industry as reported by the ADOL include some, but not all, employment in other logging support jobs such as road building, trucking and towing.

Due to these data limitations, this analysis focuses on the economic impacts of logging and sawmill components of the timber harvest process. Employment from logging activity in the Tongass is published annually by the USFS, but was considered preliminary at the time of this report. Following discussions with the USFS regional economist regarding the methodology of the agency's annual report on timber supply and demand, the study team calculated Tongass and Sealaska-related employment based on the most recent logging and sawmill industry employment data. The respective percentages of Tongass and Sealaska timber in 2002 and 2003 were applied to the total regional employment data for the logging industry to estimate employment in these occupations.

The assumption was made that road building, logging and log trucking activity are essentially the same on Tongass and Sealaska harvests. It was further assumed that the difference in employment between Tongass and Sealaska harvests occurs after the logs reach tidewater. For Tongass harvests, logs are either loaded on trucks or barged to sawmills for processing. For Sealaska, logs are staged and rafted by bundles into log booms and loaded on ships for transport (this 'in water' work includes log booming, towing, and rafting ground construction and maintenance) and also transported by truck and barge.

Because of the uncertainty regarding employment from Tongass harvests, the assumption that logging activities are similar for Tongass and Sealaska harvests may not be completely accurate in certain instances. For example, to fully optimize the value of logs for the export market, Sealaska harvests may require more time in bucking and quality control work. Further, it has been reported that Sealaska helicopter-supported harvests create more jobs (up to 50 percent more) than Tongass helicopter-supported harvests, due to the more selective nature of Sealaska's harvests.² Further, due to the importance of quality in log exports, STC contracts create more employment in sort yards. Nevertheless, the basic assumption that harvesting employment is essentially the same of Sealaska and Tongass harvests is required to insure an "apples to apples" comparison is made in the absence of detailed data related to Tongass contractor employment.

² This estimate is based on interviews with representatives of Columbia Helicopters, a firm that conducts helicopter logging on Sealaska land and on the Tongass.

Employment data provided by Sealaska contractors is considered to be accurate, but should be considered best estimates in the absence of Alaska Department of Labor data specific to STC contractors. Similar data on Tongass-related employment at the contractor level was not available; for this reason, the comparison of Sealaska and Tongass employment is based on uniform secondary data sources only. Additional employment data provided by STC contractors is presented at the conclusion of the Sealaska section to illustrate total direct, indirect and induced employment from Sealaska timber harvests. Similar data is not available for Tongass-related employment.

OVERVIEW OF SOUTHEAST ALASKA TIMBER HARVESTS

Southeast Alaska Timber Harvests

Sealaska Timber Corporation (STC) harvests represented 50 percent of the timber cut in Southeast Alaska in 2002 and 2003, while Tongass harvests in that period accounted for between 18 and 27 percent of the total harvest. Other timber harvests occurred on land owned by the State of Alaska, Alaska Mental Health Trust, University of Alaska, Bureau of Indian Affairs (BIA), or other Alaska Native corporations.

Southeast Alaska Timber Harvests, 2002-2003 (in million board feet)

	2002	2003	Average
Tongass National Forest	33.8	50.8	42.3
Sealaska	95.9	93.8	94.9
Other	63.1	41.7	52.4
Total Harvest	192.8	186.3	189.6

Source: USDA Forest Service, *Timber Supply and Demand 2003*

Tongass Harvest Volume

Current Tongass timber harvests are significantly lower than in prior decades and are expected to remain well below the allowable sale quantity (ASQ) of 187 million board feet (mmbf) annually, based on a 2004 McDowell Group report³. In 2003, the Tongass harvest volume was approximately 51 mmbf, a 50 percent increase over the previous year's harvest of 34 mmbf. The most recent two-year average harvest was just over 42 mmbf. Future Tongass harvests are uncertain due to a recent 9th Circuit Court of Appeals decision that found the Forest Service's timber demand analysis flawed.

Sealaska Harvest Volume

STC harvested 95 mmbf of timber annually between 2002 and 2003. Sealaska Corporation is the only ANCSA Corporation in Southeast Alaska with sufficient landholdings to maintain a sustained annual yield of timber⁴.

Southeast Alaska Logging Employment

In 2002 and 2003, logging in Southeast Alaska accounted for an average of 362 and 406 jobs, respectively.⁵ Employment peaked at 519 jobs in August of 2003 and 482

³ McDowell Group, 2004. *Timber Markets Update and Analysis of an Integrated Industry in Alaska*.

⁴ McDowell Group, 2004.

⁵ Alaska Department of Labor and Workforce Development. Does not include stevedoring jobs and all transportation and construction jobs related to logging.

jobs in August of 2003. Based on annual averages, logging in Southeast created 1.9 jobs per mmbf in 2002 and 2.2 jobs per mmbf in 2003.

TONGASS NATIONAL FOREST HARVESTS AND EMPLOYMENT

Tongass-Related Employment

Tongass National Forest logging and sawmilling directly created an average of 187 jobs for the years 2002 and 2003. Timber harvests on the Tongass National Forest create employment in several industries including road building, logging (tractor, shovel, standard cable and helicopter), towing, log scaling and sorting. Because of the prevalence of muskeg and other loose soils in Southeast Alaska, road construction is a significant part of logging support activity. Logging activity (excluding sawmilling) created an average of 63 and 111 jobs in Southeast in 2002 and 2003, respectively, with an average of 87 for the two-year period.

Tongass logging activity also creates employment in Southeast sawmills due to the primary manufacturing requirements for National Forest timber. Tongass timber accounted for 73 percent and 59 percent of the logs milled in Southeast mills in 2002 and 2003, respectively⁶. Based on this volume of Tongass timber supplied annually to Southeast Alaska mills, the Tongass accounted for 110 and 89 sawmill jobs in 2002 and 2003, respectively, for a two-year average of 100 jobs.

Tongass-Related Logging and Sawmill Employment in Southeast Alaska, 2002-2003

Year	Tongass Logging Employment	Sawmill Employment	Total Tongass-Related Employment
2002	63	110	173
2003	111	89	200
2002-2003 average	87	100	187

Source: McDowell Group estimate based on employment data from Alaska Department of Labor and Workforce Development and USDA Forest Service, *Timber Supply and Demand 2003*.

Based on the average timber harvest volume of 42 mmbf from the Tongass National Forest, Tongass logging activity created 5.1 jobs per mmbf in 2002, decreasing to 3.9 jobs per mmbf in 2003. The two-year average was approximately 4.4 jobs per mmbf of Tongass timber.

Jobs per Million Board-Feet of Tongass National Forest Timber Harvested, 2002-2003

Year	Total Tongass-Related Employment	Tongass Harvest (in mmbf)	Employment per mmbf
2002	173	33.8	5.1
2003	200	50.8	3.9
2002-2003 average	187	42.3	4.4

Source: McDowell Group estimates based on employment data from the Alaska Department of Labor and Workforce Development and timber harvest volumes from USDA Forest Service, *Timber Supply and Demand 2003*.

⁶ Kilborn (2004) in USDA Forest Service, *Timber Supply and Demand 2003*

This estimate of employment per mmbf of timber harvested includes sawmill employment. Because the labor requirements for Tongass logging activity are assumed to be generally similar to Sealaska harvests, any difference in employment rates occurs after the timber is harvested and transported to tidewater. In the case of Tongass timber harvests, this is primarily sawmill employment (while shiploading activity is unique to Sealaska harvests).

The following table illustrates sawmill employment per mmbf for the sawmill component of Tongass employment, indicating an average range of 1.8 to 3.3 sawmill jobs per mmbf of Tongass timber harvested. Sawmill jobs are typically higher paying than jobs created in stevedoring. Statewide, the average annual earnings in the sawmill industry was \$31,716 in 2003 (Southeast regional data is not available due to confidentiality of the data). At the statewide average, Southeast sawmills generated \$2.8 million in earnings in 2003.

**Sawmill Jobs per Million Board-Feet of Tongass National Forest
Timber Harvested, 2002-2003**

Year	Tongass-Related Sawmill Employment	Tongass Harvest (in mmbf)	Employment per mmbf
2002	110	33.8	3.3
2003	89	50.8	1.8
2002-2003 average	100	42.3	2.4

Source: McDowell Group estimates based on employment data from the Alaska Department of Labor and Workforce Development and timber harvest volumes from USDA Forest Service, *Timber Supply and Demand 2003*.

In addition to logging and sawmill employment, other economic impacts created from Tongass logging include indirect and induced employment. This includes employment created from spending by companies in support of their operations and the induced employment created from spending by employees in the local economies of Southeast Alaska. Fully quantifying these “multiplier” effects is beyond the scope of this study.

OVERVIEW OF SEALASKA HARVESTS AND EMPLOYMENT

Sealaska-Related Employment

Sealaska Timber Corporation logging activity is conducted on Sealaska Corporation's landholdings in remote areas of Southeast Alaska. STC's logging activity is an important source of employment for rural Southeast residents, many of whom who find limited employment opportunities in their communities. Income from STC activity is widely dispersed among village residents and is an important source of cash, particularly for many who have a high degree of dependence on subsistence activities. These economic impacts have been documented in previous research⁷.

STC harvested an annual average of 95 mmbf of timber in 2002 and 2003. Most of this harvest occurred in the Prince of Wales Island area (POW), including Dall Island, Natzuhini and Soda Bay. Approximately 65 mmbf was harvested from POW, 17 mmbf from the Hoonah area, and approximately 12 mmbf near Kake in 2003.

Based on the assumption that STC represented 50 percent of the timber harvested in Southeast Alaska in 2002 and 2003, it was assumed that 50 percent of logging employment, as reported by the Alaska Department of Labor, was due to STC logging contracts in that period. Based on that assumption, STC contracts created an annual average of approximately 192 logging jobs in 2002 and 2003. This estimate excludes subcontract activities, and is not a full accounting of STC-related employment due to the data limitations cited above.

Sealaska-Related Logging Employment in Southeast Alaska, 2002-2003

Year	Sealaska % of Total Harvest	Total Logging Employment	Sealaska Logging Employment
2002	50%	362	180
2003	50%	406	204
2002-2003 Average	50%	384	192

Source: McDowell Group estimates based on employment data from the Alaska Department of Labor and Workforce Development and timber harvest volumes from USDA Forest Service, *Timber Supply and Demand 2003*

An important source of employment not reflected in this data is stevedoring-related activity. This includes preparing the logs for shipping (bundling) and loading the logs on ships. Sealaska logging activity generated employment and income opportunities for an average of 209 individuals in Southeast Alaska in 2002 and 2003. This translates to an average of 2.2 stevedoring jobs per mmbf.

⁷ McDowell Group, 2004, *The Impact of Sealaska Corporation on the Southeast Alaska Economy*.

**Stevedoring Jobs per Million Board-Feet of
Sealaska Timber Harvest, 2002-2003**

Year	Sealaska harvest in mmbf	Number of Workers	Jobs per mmbf
2002	95.9	211	2.2
2003	93.8	206	2.2
Average	94.9	209	2.2

Care must be taken in comparing these stevedoring jobs with the sawmill jobs created from Tongass timber harvests (which averaged 100 jobs in 2002 and 2003). Tongass sawmill activity provides generally regular, day-to-day jobs for a smaller number of workers. STC stevedoring-related activity provides intermittent jobs for a larger number of workers. The approximately 100 sawmill workers dependent on the Tongass earned a total of \$2 million in payroll, while the 209 STC-related stevedoring workers earned approximately \$1 million.

Other Sealaska Timber Harvest Related Employment

The total number of jobs that are in some way dependent on the income generated by Sealaska logging activity is greater than the logging and stevedoring jobs. STC activity supports the operations of STC headquarters in Ketchikan, plus three regional offices elsewhere in Southeast Alaska. Logging income also supports employment at Sealaska corporate headquarters and Sealaska Heritage Institute in Juneau. Without logging income, employment levels of both organizations would likely be significantly reduced (if not non-existent).

Based on a 2004 report by McDowell Group, STC contracts created an average of at least 461 jobs in Southeast Alaska in 2002 and 2003. The seasonal nature of logging activity and related changes in demand for labor provide significant peak employment for a larger number of residents than is reflected in the average employment numbers. Peak employment was approximately 713 full-time and part-time employees in 2002 and 2003.

**Sealaska Corporation Direct Employment and STC Contractor
Employment Southeast Alaska, 2002-2003
(Annual Average Employment)**

Year	STC Headquarters	STC Contractors	Sealaska Corporation and SHI	Total Employment
2002	29	425	53	507
2003	29	331	55	415
2002 - 2003 Average	29	378	54	461

Based on direct Sealaska and STC contractor employment, Sealaska logging activity created an average of approximately 4.9 jobs per mmbf of timber harvested in 2002 and 2003.

**Jobs per Million Board-Feet
from Sealaska Timber Harvests, 2002-2003
(Annual Average Employment)**

Year	Harvest Volume	Employment	Average Jobs per mmbf
2002	95.9	507	5.3
2003	93.8	415	4.4
2002-2003 Average	94.9	461	4.9

This method captured some indirect employment impacts, but not all. It did not capture induced impacts. Spending on payroll and purchases of goods and services by Sealaska Timber Corporation, Sealaska Corporation and Sealaska Heritage Institute creates additional economic activity and employment, referred to as a multiplier effect. Including direct, indirect and induced employment, STC activity created approximately 1,000 jobs in Southeast Alaska in 2002 and 2003.

Some of Sealaska's contributions to Southeast are beyond the scope of this report, including dividends paid to shareholders, SHI scholarships, the shareholder intern program and shareholder hire policy, which provide educational and career opportunities to many Southeast residents.