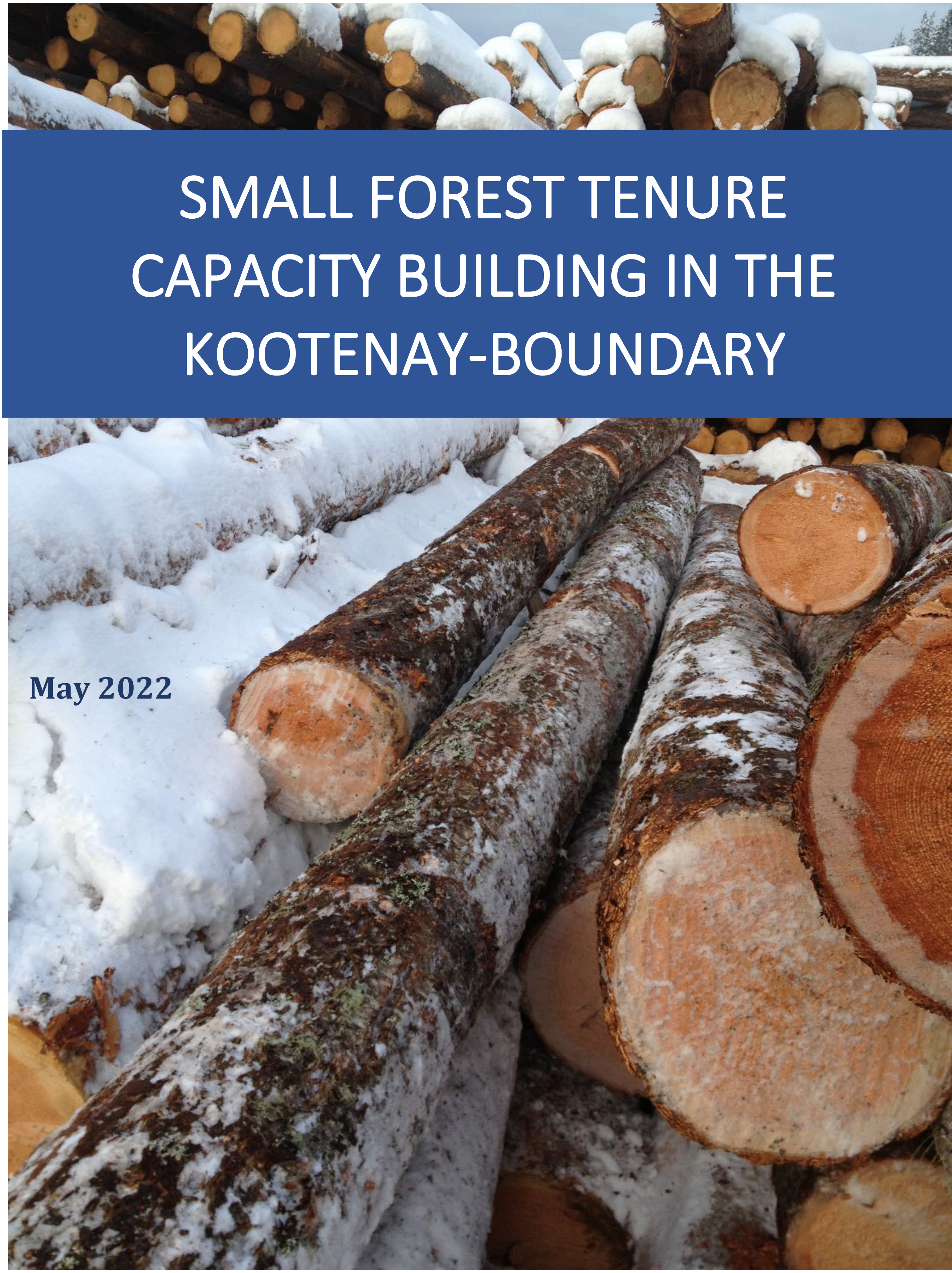
SMALL FOREST TENURE CAPACITY BUILDING IN THE KOOTENAY-BOUNDARY



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Volunteer Steering Committee:

Hugh Watt, RPF – Narrows Timber Co. Ltd., NACFOR General Manager
Brent Petrick, RPF – Smoky Woodlot Mngt. Ltd., Woodlot Product Development Council
Frances Swan, RPF – NACFOR Project Manager
Patrick Judd – NACFOR Manufacturing Committee Representative

NACFOR Manufacturing Committee/Village of Nakusp

Project Coordination

Corinne Tessier, Affirming Workplace Solutions Inc.

Contract Management

NACFOR

Research and Report Prepared by:

Tyler Hodgkinson
I.S. Forestry Ltd.
1340 Cheveldave Road
Castlegar, BC
V1N 4T8
tyler@isforestry.com

Beth Oldham
BC Rural Development Consultants
1031 Marshall Road
Castlegar, BC
V1N 4V1
beth@bcruraldevelopment.com

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Definitions

Annual Allowable Cut (AAC) – means in respect of a licence area of an area-based licence or private land parcel, is the rate of sustainable timber harvesting per year.

British Columbia Timber Sales (BCTS) - BC Timber Sales manages about 20 per cent of the province's allowable annual cut for Crown timber, generating economic prosperity for British Columbians through the safe, sustainable development and auction of Crown timber. BCTS operates in 33 communities and directly supports over 8,000 jobs across B.C.

Community Forest Agreement (CFA) – crown tenure entered into with an applicant that is a first nation, municipality or regional district, or a society.

Crown land - has the same meaning as in the Land Act, but does not include land owned by an agent of the government.

Crown tenure – is an agreement between an individual or company and the provincial which provides the individual or company with an interest in the land. Tenures are granted for specific purposes and periods of time.

Crown timber - means timber on Crown land, or timber reserved to the government.

First Nations Woodlands Licence (FNWL) - crown tenure entered into with an applicant that is a first nation.

Forest Management Administration (FMA) - costs directly related to supervision and administration of the tenure obligation adjustment activities; forest management administration, road development, road management and basic silviculture.

Major licence - means having a timber sale licence, forest licence, timber licence, tree farm licence, or forest licence to cut with an Annual Allowable Cut greater than or equal to 25,000m3.

Private Land - means land that is not Crown land.

Private Managed Forest Lands (PMFL) - the Private Managed Forest Land Act establishes management objectives for key public environmental values, including soil conservation, critical wildlife habitat, fish habitat, drinking water quality and reforestation. The private managed forest land program is voluntary.

Timber - means trees, whether standing, fallen, living, dead, limbed, bucked or peeled.

Woodlot (WL) – crown tenure entered into with an applicant that is a Canadian citizen or permanent resident of Canada who is 19 years of age or older, a first nation, or a corporation, other than a society, that is controlled by persons that is a Canadian citizen or permanent resident of Canada who is 19 years of age or older.

Abbreviations

AAC	Annual Allowable Cut
BA	Balsam
BCTS	British Columbia Timber Sales
BG	Grand Fir
CFA	Community Forest Agreement
CW	Cedar
DECID	Deciduous
FD	Douglas-Fir
FMA	Forest Management Administration
FNWL	First Nations Woodlands Licence
HE	Hemlock
LW	Larch
MPL	Managed Private Land
MX	Mixed Species
NRFL	Non-Replaceable Forest Licence
PL	Lodgepole Pine
PMFL	Private Managed Forest Lands
PW	White Pine
PY	Yellow Pine
SE	Spruce
SFT	Small Forest Tenure
SFTCB	Small Forest Tenure Capacity Building
SPF	Spruce, Pine and Balsam
SSS	Small-Scale Salvage
WL	Woodlot

Section I: Executive Summary

The Small Forest Tenure Capacity Building Project (SFT) proposes to strengthen the capacity of small forest tenure holders and small mill operators. The project was designed in an effort to address the need to optimize value from log products, to utilize and minimize wood waste, and to increase harvesting and manufacturing efficiency. The project interviewed small tenure holders and small wood manufacturers in the Kootenay-Boundary catchment area and collected SFT business-specific data; reviewed research and reports relevant to SFT; and reviewed information from industry experts. A major goal of this research was to identify realistic opportunities for economic development and to create a network database to facilitate information exchange and relationships among small operators.

Research questions for this component of the project focused on capacity, utilization, partners, and obstacles. Researchers formally interviewed participants who were either Small Tenure Holders (STH) or Small Wood Manufacturers (SWM). Both STH and SWM contributed data from their own operations. Researchers also gathered data from industry and provincial websites.

Results show that small operators face large obstacles in maximizing their capacity and utilization. Respondents cited several factors throughout their discussions with researchers that limit their operations and increase capacity:

1) Lack of consistent access to fibre supply for small sawmills and wood manufacturers;
2) Lack of qualified, competent contractors and labor for harvest, transport or manufacturing of fibre;
3) Lack of business capacity among small operators;
4) Inability to maximize profit due to scale and lack of integration with value-added activities;
5) Lack of communication and cooperation between small operators around pricing and lack of a unified voice or body to counter the influence of large sawmills;
6) Lack of public education resulting in public misconceptions about small-scale forestry enterprises;
7) Overlapping forestry constraints (Old Growth Deferrals, Visual Quality Objectives) that limit the ability of STH and SWM to fully utilize their volume or fibre;
8) Barriers to utilization, including lack of economic markets for low value products and value-added opportunities for non-log products; and industry cut specifications and log quality requirements that result in high levels of waste on the harvest site.

However, despite numerous challenges and barriers, respondents offered suggestions for increasing capacity and maximizing utilization. Suggestions included:

1) create positive media pieces about the small forest operations in the region to counter negative stories in the media;
2) create training programs to increase the availability of qualified, competent contractors, including truckers;
3) create an accessible database listing of qualified, competent small forest contractors;
4) build new or strengthen existing businesses to capitalize on opportunities throughout the region;
5) create a Southern Interior Log and Lumber exchange that provides a wholesale distribution channel that can be utilized by fibre suppliers, processors, small

manufacturers and retailers and which includes access to contractors, business capacity tools, and communication and networking functions;
6) explore BC Timber Sales pricing data to better understand log pricing disparities among small- and large mills;
7) create new outlets for wood waste, including hog/bark; and,
8) use the network generated by this project to strengthen communication and cooperation in an effort to increase collaboration and economies of scale.

This research provides unique insights into the struggles and successes of STH and SWM across the Kootenay-Boundary catchment area and offers several recommendations for next steps at the provincial, industry and local levels. While there are many challenges for STH, and while some of those challenges lie outside of their sphere of influence, most acknowledge that increased communication and collaboration between small operators as well as support with business and product education will strengthen their position in the industry and offer a unified front both to counter the influence of large sawmills and strengthen small scale forestry.

Section II: Introduction

Project Background and Description

The SFT began as a discussion between woodlot licence holders and the Nakusp and Area Community Forest (NACFOR) about optimizing value from log products, utilizing/minimizing fibre waste, and increasing harvesting/manufacturing capacity. NACFOR explored and applied for research funding from the Wood Product Development Council (WPDC), Bell Pole, and Regional District of Central Kootenay-Area K. In September 2021, the SFT launched with the goal of strengthening the capacity of small forest tenure holders and mill operators in the Kootenay-Boundary region and enhancing economic value and employment with their local communities.

About half of B.C.'s forest tenures and associated annual allowable cut is held by five major companies. Small Forest Tenure Holders makeup 7% of the Provincial annual allowable cut. In general, small tenures are expected to reflect local goals and priorities, manage for multiple forest values, generate benefits, spur economic diversification, test innovative forest practices, and support local milling, manufacturing, and value-added processing.[1] Small Tenures include:

1) **Community Forest Agreement (CFA)**: 25-to-99-year licenses with exclusive right to harvest timber and manage forests in a specified area, replaceable every 10 years. Community Forest Agreements are responsible for area protection, inventory, management plan, operational planning, road building, and reforestation. Stumpage fees and annual rent are provided as revenue to the BC Government. Community Forest Agreements may be entered into only with an applicant that is a First Nation, a municipality or regional district, or any of the following if the prescribed requirements are met: a society as defined in the Societies Act; an association as defined in the Cooperation Association Act; a corporation; a partnership.

[1] Ambus, L., D. Davis-Case, and S. Tyler. 2007. Big expectations for small forest tenures in British Columbia. BC Journal of Ecosystems and Management 8(2):46–57. http://www.forrex.org/publications/jem/ISS41/vol8_no2_art4.pdf

2) **First Nations Woodlands Licence (FNWL)**: 25-to-99-year licenses with exclusive right to harvest timber and manage forests in a specified area, replaceable every 10 years. First Nations Woodlands Licences are responsible for area protection, inventory, management plan, operational planning, road building, and reforestation. Stumpage fees and annual rent are provided as revenue to the BC Government. First Nations Woodlands Licences may be entered into only with a First Nation.
3) **Private Managed Forest Land (PMFL)**: The Private Managed Forest Land Program was established in 2003 under the Private Managed Forest Land Act, under which landowners commit to manage their property for long-term forest production, including meeting legislated objectives for key public environmental values.
4) **Woodlot Licence (WL)**: 20-year licenses with exclusive right to harvest timber and manage forests in a specified area, replaceable every 10 years. Woodlots are responsible for area protection, inventory, management plan, operational planning, road building, and reforestation. Stumpage fees, annual rent and a bonus offer are provided as revenue to the BC Government. Woodlot Licences may be entered into only with: 1) a Canadian citizen or permanent resident of Canada who is 19 years of age or older; 2) a First Nation; or 3) a corporation.

BC's forest industry has been a foundational player in the economy of and quality of life in the province for close to two centuries. Commercial logging dates back to the 1820's, with export production increasing during the 1860's.[2] Though traditionally centered on the province's west coast where large trees in temperate rainforests were ideally accessible by water and facilitated logging, sawmilling, and paper and pulp production, the total volume of timber cut in the interior since the early 1970's has exceeded that on the coast. The province holds nearly one-fifth of Canada's total forested land but two-fifths of its marketable timber. It produces nearly half of the wood harvested annually in Canada for lumber production.[3]

Numerous challenges are facing the forest industry in 2022. First, the mountain pine beetle has had a devastating effect on the forests of BC and has killed about 50% of the total volume of commercial lodgepole pine in the province.[4] Second, numerous global challenges – including trade relations between Canada and the US, the COVID-19 pandemic, and climate change – have directly impacted the forestry sector and ancillary businesses through mill closures, shift reductions and increased wildfires. Third, the province is developing a new forest landscape planning framework and is working towards modernizing forest policy, which poses many questions for STH and logging industry contractors. And finally, the province announced the temporary deferral of harvesting across 2.6 million hectares of old-growth forests which has had immediate impacts on the ability of tenure holders to harvest their scheduled allotments. While some of these impacts have been mediated by the exemption of woodlots, the ultimate degree of impact is undetermined.

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[2] Geography Open Textbook Collective. (2014). British Columbia in a global context. BCcampus. http://opentextbc.ca/geography/, p. 114.
[3] Brittanica.com, Retrieved 26/03/22 from https://www.britannica.com/place/British-Columbia/Agriculture-forestry-and-fishing.
[4] Geography Open Textbook Collective. (2014). British Columbia in a global context. BCcampus. http://opentextbc.ca/geography/, p. 119.

Studies and reports on the industry have indicated that despite the fact that small forest operators and manufacturers in the region play a critical role in supporting local rural economies, they face many challenges in developing new markets.[5,6,7] Among these are:

1) Accessing timber resources (fibre supply);
2) Investment constraints;
3) Marketing restrictions; and
4) Economies of scale.

This project seeks to strengthen the capacity of STH to respond to these challenges and to optimize product value, utilize and minimize waste, and increase harvesting efficiency. While the project focuses on the Kootenay-Boundary catchment area, NACFOR, and others throughout the region, hope that the model, if successful, can be deployed in other regions of the province.

Goal and Expected Benefits

The overall goal of the SFT project is to strengthen the capacity of STH and SWM to optimize product value, utilize and minimize wood waste, and increase harvesting efficiency. Toward this end, two research projects were initiated concurrently. The first examined STH capacity and sought to determine the unallocated wood basket (fibre not tied to large sawmills)[8], market potential, and harvesting capacity of STH in the region. The second examined SWM capacity and sought to determine existing and potential forest product manufacturing and waste utilization opportunities.

Benefits for local operators within the region are expected to continue beyond the initial project phases, and include:

- new and diversified log markets
- new and expanded forest product manufacturing operations
- greater access to fibre and diversified harvest capability
- increased employment
- new collaborative initiatives involving one or more parties
- external funding leveraged to support new initiatives
- ongoing education and training for STH
- ongoing support from a full spectrum of industry participants
- ongoing network as a tool for further learning and collaboration

A map of the project area can be found on the following page.

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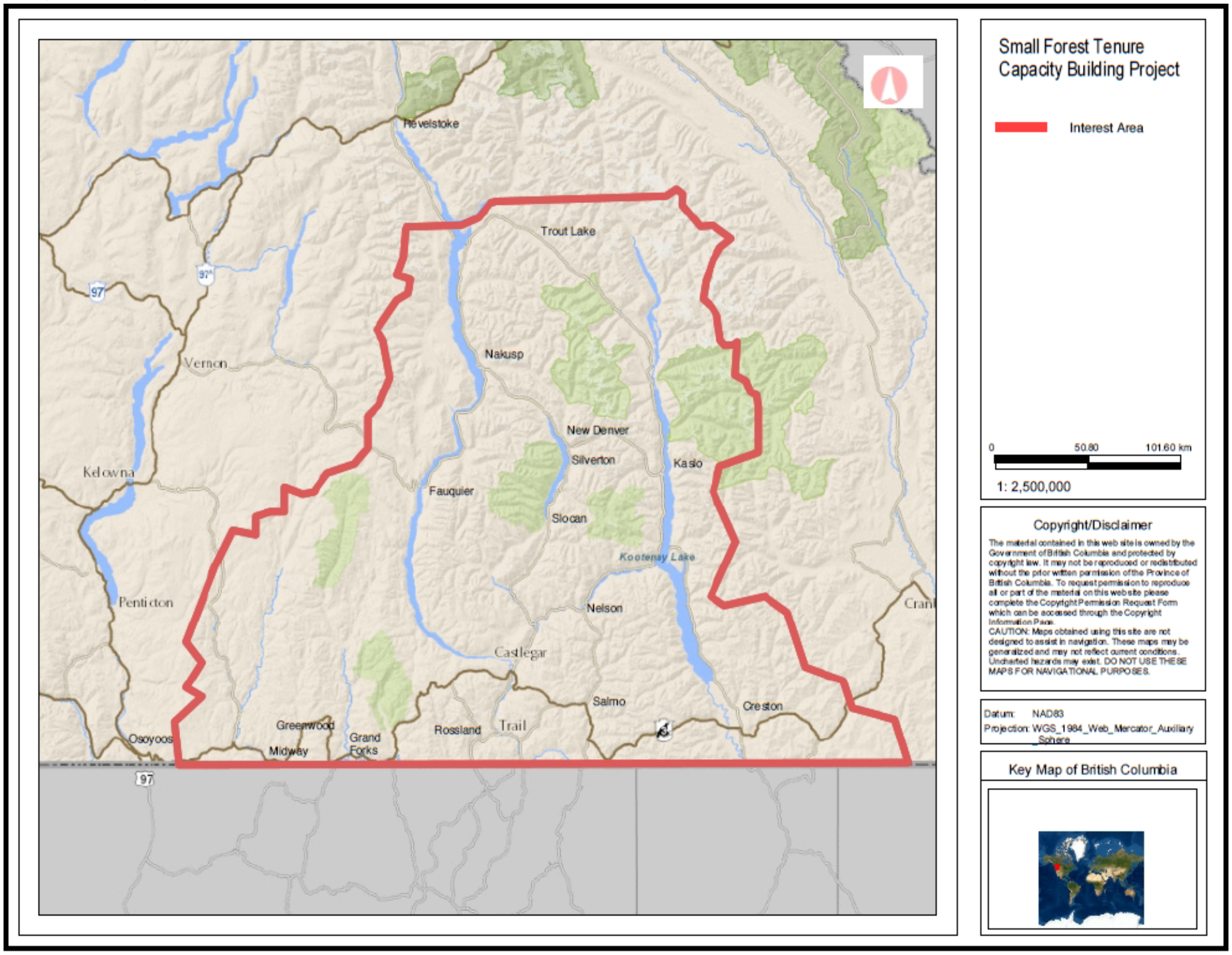
[5] Southern Interior Beetle Action Coalition, 2013. "Bridges II Project Summary & Case Studies: Creating More Economic Value from Regional Forests." Unfunded proposal for project.

[6] Grace, Philip, 2013. "Assessing the Keys and Barriers to Success in the Value-Added Wood Product Manufacturing Sector: A Multiple-Case Study Analysis of Small and Medium-Sized Enterprises." University of British Columbia Master's Thesis: July 2013.

[7] Wong, L., Stennes, B., and Bogdanski, B., 2019. "Secondary manufacturing of solid wood products in British Columbia 2016: Structure, economic contribution and changes since 1990." Natural Resources Canada: Canadian Forest Service Pacific Forestry Centre, Information Report BC-X-447.

[8] A large sawmill (major) is a mill that consumes greater than 100,00m^3/year.

Map of Project Area



Section III. Methodology

Research Questions

Each project sought to answer specific research questions. Research questions for the STH include:

1. Who and where are the small wood suppliers/log sellers in the region?
2. What volume of wood are they holding, cutting, and selling and what is available to sell into new markets? (available log basket)
3. What historical and current prices are they getting for different species and grades?
4. Given historical prices, how do small wood suppliers/log sellers view the correlation between log and lumber prices?
5. What is their capacity to harvest wood and what is potential capacity?
6. Can utilization be improved to increase volume?
7. What is the level of employment?
8. What are the obstacles?
9. Who can potentially partner with or support STH?

Research questions for the SWM include:

1. Who are the small volume wood manufacturers?
2. What is their current production volume and what is their manufacturing capacity?
3. What products are they making from wood?
4. What else can be made or done to add value to logs?
5. What are historic and current markets and prices?
6. What is the level of employment?
7. What are the obstacles?
8. Are there potential partners and supports?

Additionally, the project sought to create a network of project stakeholders via a network database that can be used to facilitate information exchange and relationships, and to leverage future opportunities.

Data Collection

Prior to the project launch, NACFOR developed a network map, Appendix A, that identified critical partners and roles in building Small Forest Tenure Capacity. These include:

1) **Primary Actors** – local regional log suppliers, First Nations, local wood manufacturers, specialty wood manufacturers and construction; and regional mills;
2) **Capacity Building Inputs** – harvesting capacity, equipment manufacturers and suppliers, support services (scaling, grading), funding and business structures, and potential partners and landowners;
3) **Supportive Organizations and Structures** – trade organizations and groups, experts, government and crown corporations, economic development resources, and educational institutions.

This network map informed the project through several key data collection activities. First, project investigators engaged primary actors through a formal interview process. Participants in both the STH and SWM studies were asked to submit current and historical pricing data, Annual

Allowable Cut (AAC) volumes (STH only), and employment rates. Respondents were then interviewed individually about their current and historical forestry practices, their ability to increase capacity under B.C.'s current forest policy and supports and resources that could be deployed to better support STH.

Second, project investigators explored the efficacy and existence of the identified capacity building inputs with primary actors, discussing the equipment, support, and resources that exist or are lacking within the region or their own experience. Finally, the project explored current support systems for participants as well as ideas for future support and resources to strengthen the small-scale forestry and wood manufacturing sector.

Small Tenure Holder Data

STH Questionnaire Sample

The research goal was to gather data from a representative sample of all stakeholder groups. We identified a total of six Community Forests, one First Nations Woodlands, six Private Managed Forest Lands, and sixty-one woodlots. The total number of identified fibre sources in the Kootenay-Boundary region is listed in **Table 1**.

Table 1: Identified Fibre Sources in Kootenay-Boundary

Source	Arrow	Boundary	Kootenay Lake	Total
Community Forest	2	1	3	6
First Nation Woodlands	0	1	0	1
Private Managed Forest Land	5	0	1	6
Woodlots	13	34	14	61
Total	**20**	**36**	**18**	**74**

Several of the listed tenures were held by the same owners/mangers, therefore the actual achieved sample size was less. It is important to note that Private Managed Forest Land represents the largest percentage of volume available; however, the identities of many small-sized managed forest landowners are not public information and are protected due to privacy concerns. This limited our attempts to survey these fibre sources. Reasonable requests for participation were made through advertisement in stakeholder association publications, email notices and follow-up phone calls.

In total, 33 of the 74 identified fibre sources participated at various levels (45%). One of the tenure holders participated informally through phone conversations, 24 participated in formal interviews, and 26 questionnaire data forms were received.[9] The tenure type of participants and representation in our data collection process are in **Table 2**.

[9] Four of the participants held 2 woodlots each, therefore the questionnaire data submitted totaled 8.

Table 2: Fibre Source Representation in Data Collection

Source	Phone	Interviews	Questionnaire Data	Total
Community Forest	0	4	3	4
First Nation Woodlands	0	0	0	1[10]
Private Managed Forest Land	0	0	2	2[11]
Woodlots	1	17	26	22
Logging Contractors	1	3	0	4
Total	**2**	**24**	**31**	**33**

STH Data Submissions

Participants were provided questionnaires (Appendix B) in both Word and Adobe PDF formats to facilitate data collection. Questions targeted current contact information and background information on their corresponding fibre source.

Upon confirmation of participation, researchers sent questionnaires to STH and identified private managed forest lands from December 2021 to March 2022. Questions focused on the following areas:

1) current contact info and fibre source location;
2) location of support centre;
3) fibre volume held, sold and used;
4) fibre species and log products sold;
5) current and historic log pricing;
6) fibre source timber profile;
7) level of employment; and,
8) ease of difficulty in managing fibre source.

STH Interview Sample

Interviews were conducted via Zoom or telephone from December 2021 to March 2022. Interview questions focused on the following areas: 1) log and lumber pricing; 2) capacity; 3) log utilization; 4) potential partners; 5) barriers and obstacles; and 6) suggestions for improvements. Due to the fact that the interviews took place over several months and that the interview tool was refined after the first set of interviews, not every participant responded to each question. The total number of participants who responded to the question will be provided along with the response categories and data.

In total, 29 of the 74 identified fibre sources were surveyed, and 24 of the small tenure holders/local log suppliers participated in formal interviews (39%). Of the 24 STH participants, four of them managed multiple tenures. One of the tenure holders participated informally through phone conversations, 24 attended formal interviews and 29 questionnaire data forms were received.

[10] Interview captured in Community Forest as the manager managed both CF and FNWL.
[11] Interview captured in Woodlot as the manager managed both WL and PMFL.

Four additional STH participated in an informal discussion of their business practices and capacity for expansion but did not engage in the formal interview process. These interviews are not included in the presented data. All participants were emailed at least twice to schedule phone interviews. Those who did not respond to email requests were directly phoned.

Respondents were encouraged to provide as much information as they were willing and were not limited to a single response to each question. Participants offered multiple responses to the same question. In each case, all responses were coded and entered only once per respondent to ensure that the total number of responses did not exceed the number of respondents. Thus, while the number of total responses often exceeds the number of respondents, categorical responses do not.

STH Interview Analysis

Each interview was recorded and professionally transcribed. Responses were coded based on major themes presented in the data. Data are presented in tables with illustrative comments included. No individuals are identified by name or other identifying characteristic in the data analysis or reporting. All participants were assured that all data would be anonymized and coded before use in any reports, that individual responses would remain confidential unless they agreed to share specific information, and that all interview data would be aggregated and generalized to greatest degree possible. All formal interview participants were entered into a draw for an iPad.

Small Wood Manufacturer Data

SWM Questionnaire Sample

In total, 9 of the 20 identified manufacturers completed questionnaire data (Appendix D). Participants were provided questionnaires in both Word and Adobe PDF formats to facilitate data collection. Questions targeted current contact information and background information on their corresponding fibre source.

Upon confirmation of participation, researchers sent questionnaires to SWM from December 2021 to March 2022. Questions focused on the following areas:

1) current contact info and facility location;
2) support centre;
3) average annual fibre consumption;
4) current and historic fibre costs;
5) current manufacturing capacity;
6) wood products produced;
7) selling price of products produced; and,
8) level of employment.

SWM Interview Sample

Interviews were conducted via Zoom or telephone from December 2021 to March 2022. Interview questions focused on the following areas: 1) facility level of integration; 2) utilization and waste reduction efforts and products; 3) existing conditions supporting or limiting manufacturing; 4) potential markets; 5) barriers and obstacles; and 6) suggestions for improvement. Due to the fact that the interviews took place over several months and that the interview tool was refined after the first set of interviews, not every participant responded to each question.

In total, 8 of the 20 identified manufacturers participated in formal interviews (40%). All participants were emailed at least twice to schedule phone interviews. Those who did not respond to email requests were directly phoned.

Respondents were encouraged to provide as much information as they were willing and were not limited to a single response to each question. Some participants offered multiple responses to the same question. In each case, all responses were coded and entered only once per respondent to ensure that the total number of responses did not exceed the number of respondents. Thus, while the number of total responses often exceeds the number of respondents, categorical responses do not.

SWM Interview Analysis

Each interview was recorded and professionally transcribed. Responses were coded based on major themes presented in the data. Data are presented in tables with illustrative comments included. No individuals are identified by name or other identifying characteristic in the data analysis or reporting. All participants were assured that all data would be anonymized and coded before use in any reports, that individual responses would remain confidential unless they agreed to share specific information, and that all interview data would be aggregated and generalized to greatest degree possible. All formal interview participants were entered into a draw for an iPad.

First Nations Involvement

Researchers identified 21 First Nations and Tribal Bands[12] with asserted territorial boundaries in the Kootenay-Boundary region. Each organization received an informational email about the SFT project. Two entities, the Shuswap Band and the Penticton Band, responded and indicated interest in the project. Four First Nations with identified tenure holdings in the region were sent follow-up emails and phone calls to request participation in the research, but no responses were received.

Section IV: Results

This section of the report summarizes the evaluation results by data collection method and is segregated by status as a STH or a SWM. First, we will examine the data provided by STH and then look at the information provided by these STH in individual interviews. Next, we will examine the data provided by the SWM, followed by the information provided during their individual interviews.

It is important to note that industry representatives were not interviewed for this project. This project sought to understand the issues facing small tenure operators and opportunities to

[12] Lower Kootenay Development Corporation, Nk'mip Forestry Corporation, Osoyoos Indian Band, Yucwmenlucwu ("Caretakers of the Land") 2007 LLP, Nupqu, Okanagan Nation Alliance (ONA), Okanagan Indian Band, Westbank First Nation, Lower Similkameen Indian Band, Shuswap Indian Band, Little Shuswap Lake Band, Adams Lake Indian Band, Upper Nicola Band, Neskonlith Indian Band, Penticton Indian Band, Simpcw First Nation, Skeetchestn Indian Band, Tk'emlups te Secwepemc, Ktunaxa Nation Council, Ktunaxa First Nation, Splats'in First Nation, Sinixt.

increase the capacity of these operators. Our focus rests on grassroots participants in the industry rather than the industry's large sawmills. Additionally, while this report refers to the industry's largest producers as "large sawmills," respondents generally use the term "majors" as seen in their comments.

Snapshot of Participants

Legal Status of Participants

In total, 44 out of a potential field of 99 entities (44%), participated in the project. When asked to clarify the ownership details of their businesses, 30 respondents stated that their business is incorporated. Ten stated that they are organized as a sole proprietor. Two are partnerships; one each is organized as a society or as a cooperative. Results are in **Table 3**.

Table 3: Legal Status of Participants

Legal Status	Fibre Suppliers	Loggers	Manufacturers	Total
Corporation	19	4	7	30
Sole Proprietor	7	0	3	10
Partnership	2	0	0	2
Society	1	0	0	1
Cooperative	1	0	0	1
Total:	**30**	**4**	**10**	**44**

Support Centre

To explore the economic connections of STH and SWM to the Kootenay-Boundary Region and abroad, researchers asked participants to describe from where they acquire: 1) their staples (food/fuel/lodging), 2) forest management (professional/business services), 3) industrial supplies/parts, and 4) contractors/consultants. Responses are in **Table 4**.

Table 4: Support Centers by Region

Region	Type of Support	Support Center
Arrow Lakes	Staples	Castlegar, Internet, Nakusp, Revelstoke, Rossland
	Forest Management	Castlegar, Internet, Nakusp, Revelstoke, Trail
	Industrial Supplies	Castlegar, Nakusp, Revelstoke, Salmon Arm, Trail, Vernon
	Contractors/Consultants	Castlegar, Nakusp, Nelson, New Denver, Revelstoke, Calgary
Boundary Region	Staples	Castlegar, Christina Lake, Grand Forks, Greenwood, Kelowna, Midway, Oliver, Osoyoos, Rock Creek
	Forest Management	Castlegar, Grand Forks, Greenwood, Internet, Midway, Osoyoos
	Industrial Supplies	Castlegar, Grand Forks, Internet, Kamloops, Kelowna, Osoyoos, Rock Creek
	Contractors/Consultants	Beaverdell, Castlegar, Grand Forks, Greenwood, Kaslo, Kelowna, Midway, Osoyoos, Rock Creek, Slocan, Vancouver
Kootenay Lake	Staples	Castlegar, Gray Creek, Creston, Internet, Kaslo, Nelson
	Forest Management	Creston, Internet, Kaslo, Nelson
	Industrial Supplies	Austria, Creston, Cranbrook, Castlegar, Kamloops, Nelson, Vernon, USA, Western Canada

	Contractors/Consultants	Castlegar, Kaslo, Nelson

The top five support centers mentioned were Nelson 14%, Castlegar 14%, Grand Forks 11%, Midway 6% and Kelowna 6%. The internet was listed at third place with 13% mentions, which was mainly attributed to forest management and industrial supplies (**Table 5**).

Table 5: Frequency of Support Center Use

Support Centers	N	%
Nelson	34	14.9%
Castlegar	32	14.0%
Internet	30	13.2%
Grand Forks	25	11.0%
Kelowna	15	6.6%
Midway	15	6.6%
Osoyoos	15	6.6%
Nakusp	12	5.3%
Greenwood	9	3.9%
Rock Creek	9	3.9%
Revelstoke	9	3.9%
Kaslo	5	2.2%
Kamloops	4	1.8%
Vernon	4	1.8%
Creston	3	1.3%
New Denver	3	1.3%
Beaverdell	2	0.9%
Slocan	2	0.9%

Small Tenure Holders and Small Wood Manufacturers level of Employment

The majority of employment associated with the STH was part-time. Only a few WLs and PMFL had full-time employment. Nearly three-quarters (74%) of WL and PMFL carried out forest management administration activities internally whereas 60% of CFA use consultants for this activity. Both the CFA and PMFL contracted out roads, harvesting and log hauling 100% of the time, while 25% of the WL completed this work internally. Silviculture work was contracted out 84% of the time for all STH participants (**Table 6**).

Table 6: Small Tenure Holder Full-Time Equivalency

Small Tenure Holder	Forest Admin	Harvesting Roads	Hauling	Silviculture	Total FTE	AAC (m^3/yr)	m^3/FTE
FULL TIME EQUIVALENCY							
CFA	5.9	14.8	4.8	2.4	27.9	55,000	1971
PFML	3.0	3.7	1.7	1.2	9.5	17,750	1868
WL	5.1	5.1	9.3	2.1	21.5	29,276	1362
TOTAL:	**13.9**	**13.9**	**15.8**	**5.7**	**58.9**	**102,026**	**1732**

All of the employment associated with the SWM was full-time. Twenty-four percent (24%) of the work was management and administration, with 54% as trades, operators and labour. The remaining 5% was for specialized positions focused on purchasing fibre for the SWM operations (**Table 7**).

Table 7: Small Wood Manufacturer Full-Time Equivalency

Small Wood Manufacturer	Mng Admin	Trade	Operators	Labour	Total FTE	Consumption (m^3/yr)	m^3/FTE
FULL TIME EQUIVALENCY							
ALL	**33.5**	**15.3**	**47.5**	**20.3**	**117**	**139,569**	**1374**

First Nation Involvement

Both STH and SWM participants were asked to specify if their businesses were involved with any First Nations. All respondents stated no, except as part of the BC Government's procedural aspect of the consultation process requiring STH participants to refer forest operational plans to the First Nations with territorial claims over the southern interior. A few of the participants discussed that it was difficult to know which First Nations they could actually approach, as the numbers of First Nations entities claiming title to land in the Kootenay-Boundary region has increased over the years.

Small Tenure Holder Data

Fibre Source Location

The unallocated fibre supply (fibre not tied to large sawmills) within the Arrow, Boundary and Kootenay Lake areas is located on Crown land and Private land. As shown in **Table 1** the unallocated Crown land supply is made up of six Community Forests, one First Nations Woodlands and sixty-one Woodlots. The Private land supply was undetermined as researchers were unable to access a dataset of properties registered under the 'Private Managed Forest Land Act'. Due to the Privacy Act, which protects against the disclosure of personal information, Private Managed Forest Lands contact information was unavailable.

Fibre supply volume held, sold and use

In order to clarify the unallocated fibre supply, STH participants were asked to supply information on what volumes of fibre they are holding, cutting and selling annually. This information was used to understand what the unallocated fibre supply is, what is currently being done with it, and what could potentially be sold into new markets

Unallocated Fibre Supply AAC – Held

Due to the small number of participants contributing data – just 29 out of 74 potential respondents – researchers used existing government datasets on small forest tenures (CFS, FNWL and WL) to derive the unallocated fibre supply. This fibre is not directly tied to any large sawmills and could be assumed to be available to new markets. The total annual volume of unallocated fibre supply throughout the Kootenay-Boundary region can be viewed in **Table 8**.

Table 8: Unallocated Fibre Supply in Kootenay-Boundary Region[13]

Species	Arrow (m^3/yr)	Boundary (m^3/yr)	Kootenay Lake (m^3/yr)	Total (m^3/yr)
Douglas Fir (FD)	27,998	47,998	32,890	**108,886**
Larch (LW)	10,499	32,441	18,501	**61,441**
Hemlock (HW)	9,799	-	10,278	**20,077**
Lodgepole Pine (PL)	6,299	41,352	10,278	**57,929**
Balsam (BL)	4,200	1,479	12,334	**18,013**
Cedar (CW)	4,200	1,670	5,139	**11,009**
Spruce (SE)	3,500	5,317	11,306	**20,123**
White Pine (PW)	694	-	227	**921**
Yellow Pine (PY)	517	1,161	1,028	**2,706**
Grand Fir (BG)	366	-	329	**695**
Deciduous (DECID)	1,923	1,894	472	**4,289**
Total:	**69,994**[14]	**133,123**	**102,782**[15]	**306,089**

In the above table both the Arrow and Kootenay Lake datasets include AAC from private managed forest lands in addition to the government posted AAC for small forest tenures.

Unallocated Fibre Supply AAC – Sold

Nearly all of the unallocated fibre supply (98%) is sold. The remaining 2% is used internally and/or gets manufactured in suppliers own sawmills. Many participants noted that it was easier to sell their supply to one buyer. Additionally, they maintained that it was easier to sell all their supply to a large sawmill to ensure that they would be paid fairly and on time. Four different log suppliers described previous experiences supplying specific logs to small manufacturers but being unable to secure payment afterwards. These suppliers are consequently hesitant to support small manufacturers without payment upfront.

Additionally, participants stated that it was more efficient to manufacture one log product as opposed to multiple log products since the price paid for manufacturing multiple log products did not always justify the extra expense of making the sorts.

Respondent data shows the majority of the fibre sold in the Kootenay-Boundary region is sold to large sawmills. Only a minor amount is going to small manufacturers. Results are in **Table 9**.

Table 9: Location of Fibre Sales

Buyers of Fibre Supply	N	%
Large Sawmills/Manufacturers = 11 companies	781	77%
Small Sawmills = 35 companies	132	13%

[13] https://www2.gov.bc.ca/gov/content/industry/forestry/forest-tenures
[14] Includes PMFL MF53 AAC.
[15] Includes PMFL MF79 AAC.

Buyers of Fibre Supply	N	%
Pole Plants = 3 companies	71	7%
IFG-USA exports = 3 companies	27	3%

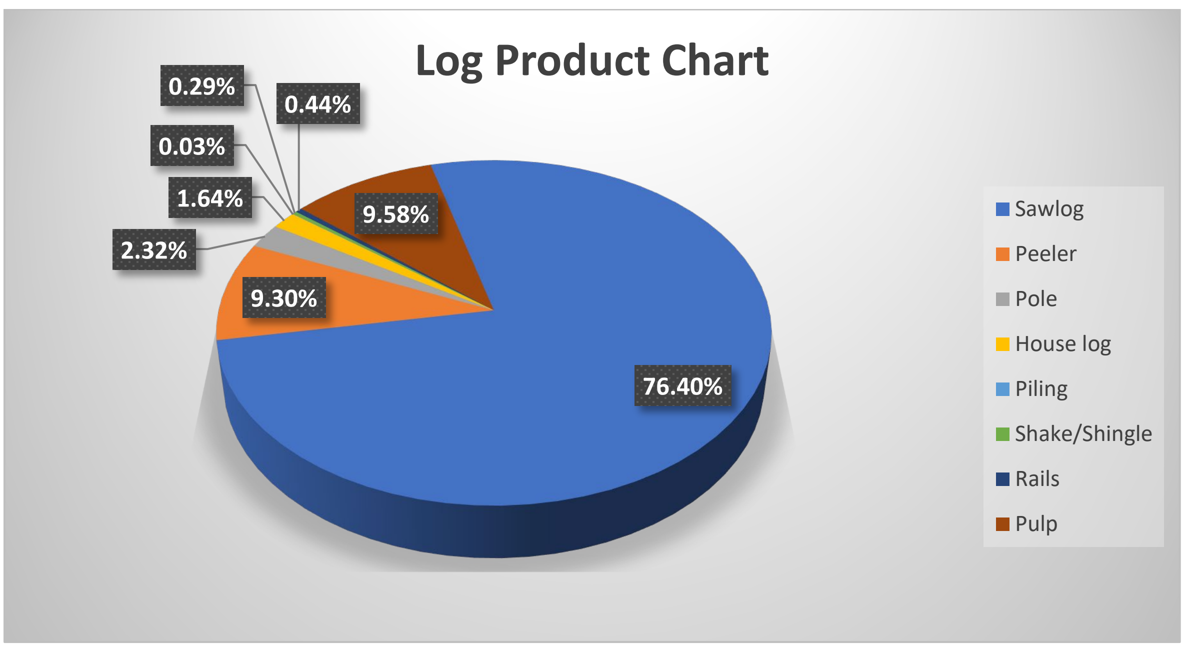
Unallocated Fibre Supply AAC – Use

Respondents provided log product data to understand in greater detail what is being done with their sold fibre. The majority of the fibre is being sold as sawlog with a lesser component of peeler, pole and house log. Just under 10% of the fibre is being sold as pulp. Results are in **Table 10** and **Figure A**.

Table 10: Uses of Fibre Sold

Product	%
Sawlog	76.40%
Pulp	9.58%
Peeler	9.30%
Pole	2.32%
House log	1.64%
Rails	0.44%
Shake/Shingle	0.29%
Piling	0.03%

Figure A: Uses of Fibre Sold



Current and Historic Log Pricing

Small tenure holders supplied information on fibre products and pricing for the last ten years. The larger tenures, such as CFAs, reported consistent pricing year over year (due to larger AAC), where WLs were more sporadic.

In order to increase economies of scale many WLs only carry out harvesting every 5 years. This corresponds with the 5-year cut control period specified for a WL.[16] In addition, having a larger volume to offer such as a 5-year cut as opposed to an annual cut, makes it easier to attract and hire larger logging contractors with logging trucks to carry out the work. Many participants noted that since there are few small-scale loggers left, and as large logging contractors are not interested in small timber volumes, they can no longer harvest timber annually.[17] As a result, the practice of cutting every 5-years on WLs has become the norm, a trend that has a negative impact on the small-scale manufacturers' relationships with small tenure holders, their wood supply and their ability to acquire fibre.

A graphical comparison of products and pricing illustrates substantial pricing increases over the last 10 years for higher-value fibre. For instance, both the average sawlog and 45'+ pole prices have increased 14% year over year, while low-value fibre such as pulp has only increased 5.2% year over year. Results can be viewed in ***Figure B***.

One factor that came to light during our examination of pricing data is the discrepancy between the bid price paid for BCTS logs by large mills versus the price that they're willing to pay to sawmills for the same log. However, analysis of BCTS data is complicated and beyond the capacity and scope of this project as it will require an extensive amount of time to fully gather, shape and analyze the data. Thus, carrying out an analysis of BCTS pricing data is presented as a recommendation for future steps but is not presented in this report.

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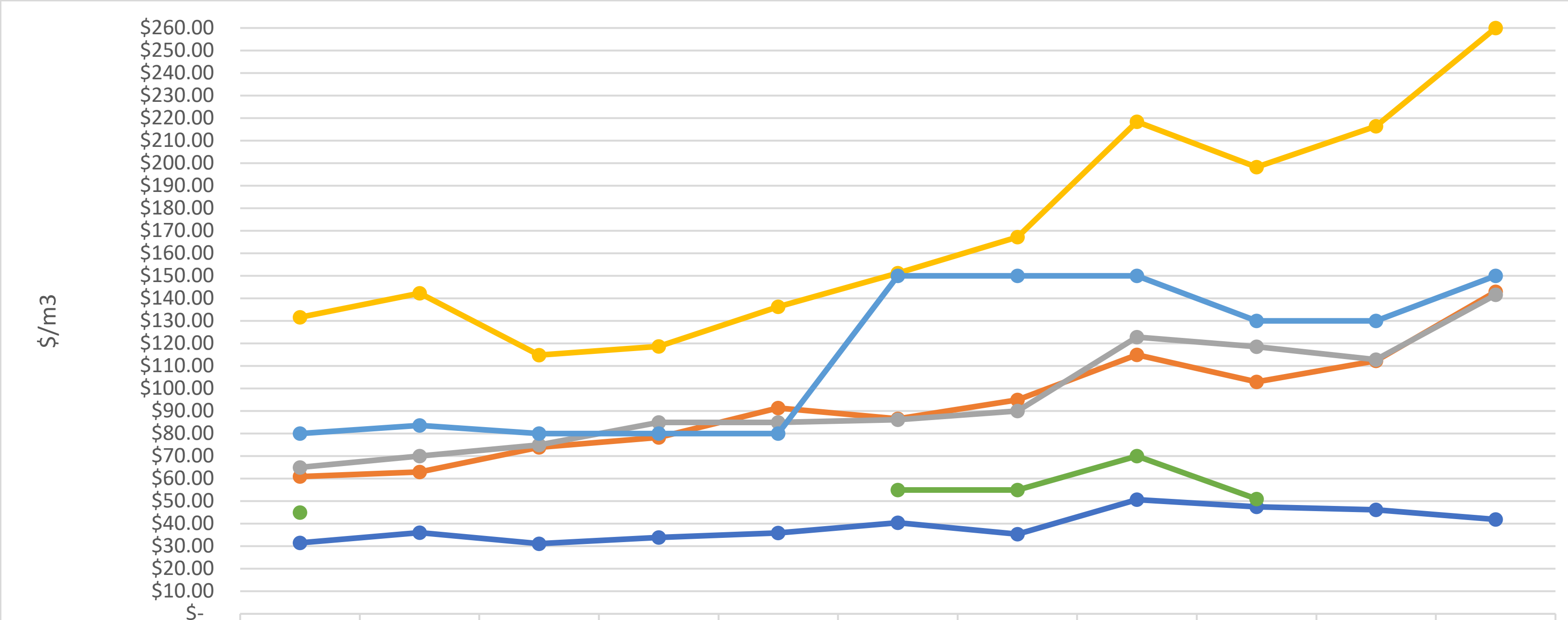
[16] The 5-year cut control period is designed to ensure that the volume of timber harvested is not more than 120% of the sum of the AAC for that period that are authorized for the licence.

[17] One of the only forms of tenure available to small scale loggers is the Small Scale Salvage Program. Over time this program has become less economic due to a number of factors, including high stumpage rates vs. small volumes, permitting effort and cost, lack of governmental capacity, competition for timber supply, and timber value vs. costs to harvest. This used to be the rearing ground for small loggers but is no longer economically viable.

Figure B: Ten-Year Product and Pricing Averages[18]



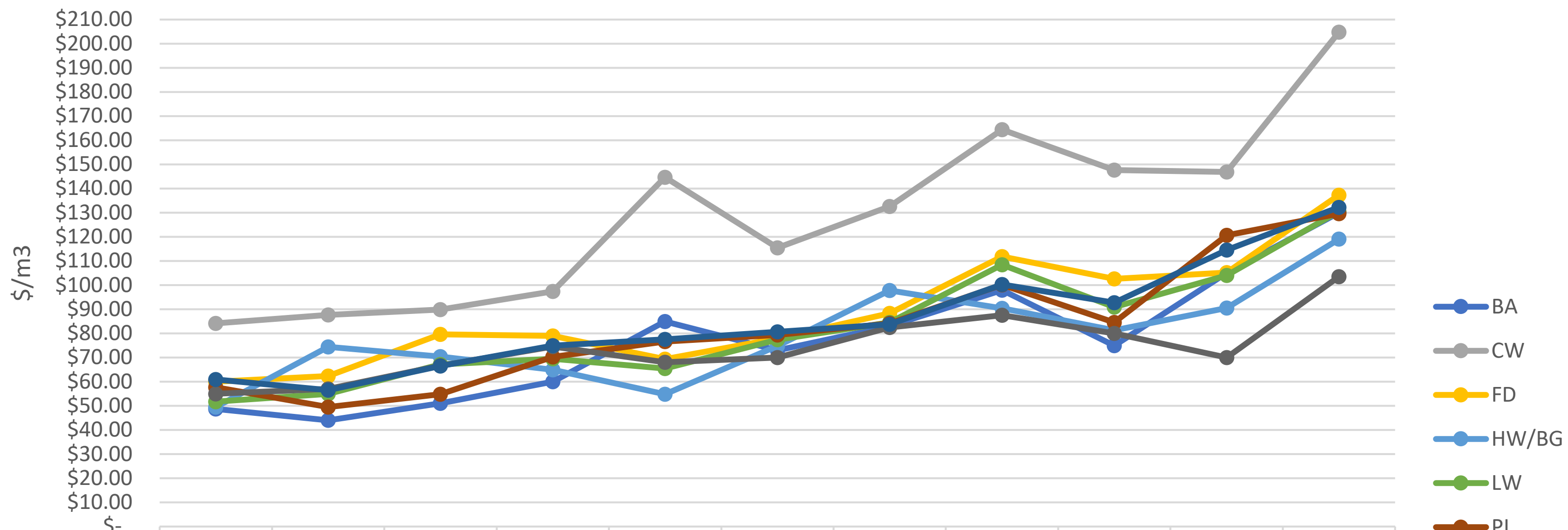
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pulp	$31.50	$36.00	$31.14	$33.88	$35.91	$40.45	$35.33	$50.67	$47.47	$46.17	$41.83
Sawlog	$60.91	$63.00	$73.85	$78.31	$91.33	$86.58	$94.97	$114.90	$102.95	$112.22	$142.96
Peeler	$65.00	$70.00	$75.00	$85.00	$85.00	$86.13	$90.00	$122.78	$118.57	$112.86	$141.57
Pole 45' plus	$131.63	$142.25	$114.83	$118.67	$136.33	$151.25	$167.25	$218.33	$198.25	$216.33	$260.00
Shake/Shingle	$80.00	$83.60	$80.00	$80.00	$80.00	$150.00	$150.00	$150.00	$130.00	$130.00	$150.00
Post/Rails	$45.00					$55.00	$55.00	$70.00	$51.00		

Year

[18] Source: SFTCB participant data.

The average sawlog price by species has gradually climbed over the last 10 years, with the greatest year over year increase of Balsam and Lodgepole Pine. Both Balsam and Lodgepole Pine have risen year over year by 21% and 19% respectively since 2011, while the year over year average increase across all species has been 14%. These results can be found in **Figure C**. Log species abbreviations can be found on page 7.

Figure C: Average Sawlog Price by Species[19]



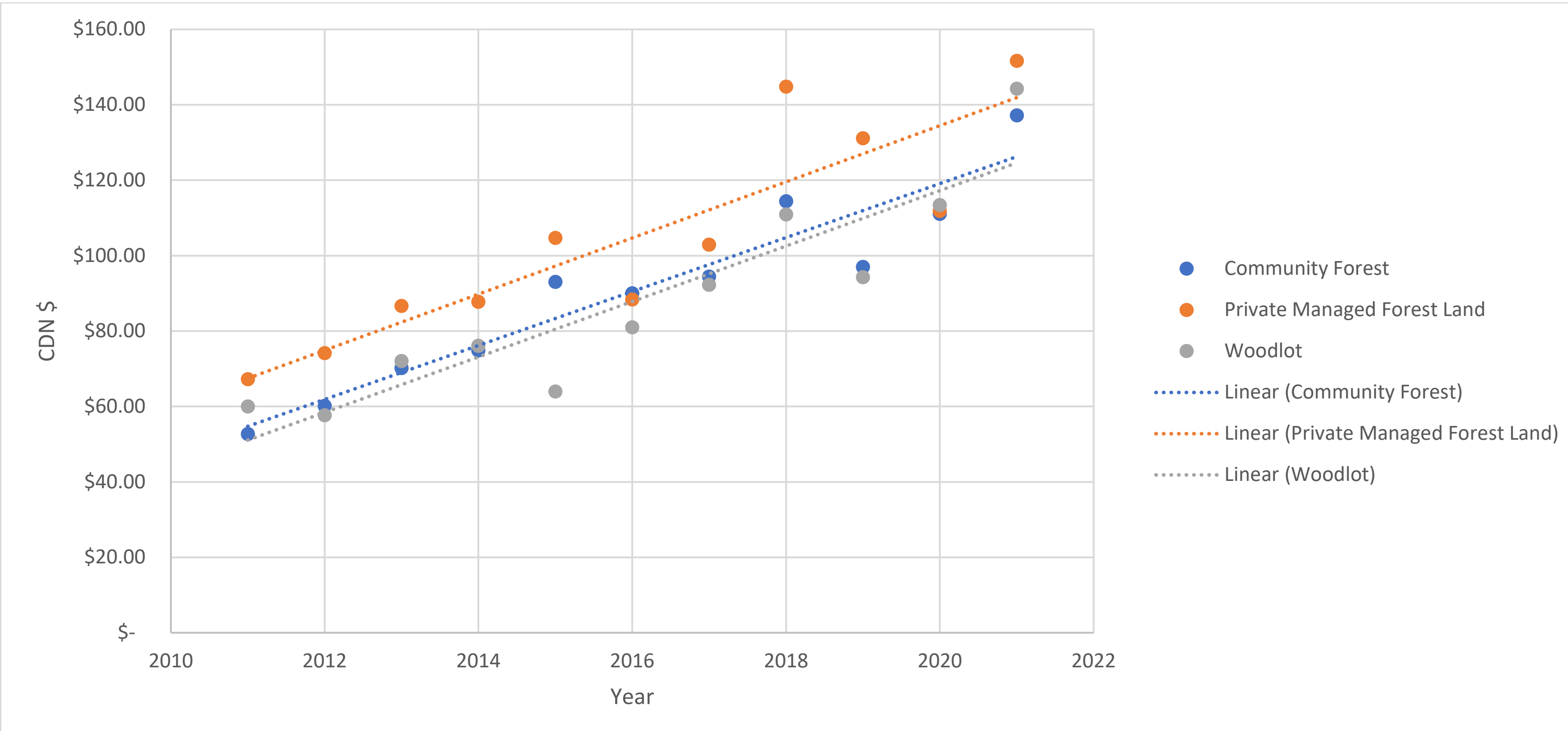
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
BA	$48.67	$44.00	$51.00	$60.00	$85.00	$73.00	$83.00	$97.86	$75.00	$105.00	$130.00
CW	$84.17	$87.69	$89.86	$97.36	$144.62	$115.47	$132.64	$164.38	$147.63	$146.92	$204.77
FD	$60.00	$62.29	$79.67	$78.95	$69.36	$77.96	$88.29	$111.81	$102.55	$105.20	$137.31
HW/BG	$49.50	$74.39	$70.42	$64.95	$54.83	$74.86	$97.83	$90.35	$81.34	$90.47	$119.02
LW	$51.75	$55.00	$67.11	$69.50	$65.50	$77.39	$84.54	$108.44	$90.85	$103.97	$130.56
PL	$57.63	$49.50	$54.75	$70.30	$76.67	$79.40	$84.21	$100.08	$84.50	$120.63	$129.58
PW	$55.00	$57.00	$66.60	$74.50	$68.00	$70.00	$82.50	$87.50	$80.00	$70.00	$103.50
SE	$60.88	$56.50	$66.50	$74.90	$77.50	$80.63	$83.71	$100.25	$92.69	$114.58	$132.25

Year

[19] Source: SFTCB participant data.

Figure D below illustrates the average sawlog price obtained by three supply sources: Community Forest, Private Managed Forest Land, and Woodlot. The PMFL pricing is on average $15/m^3 higher than the CFAs and WL data due to raw log exports of lower demand species Hemlock and Grand Fir. The CFA pricing is on average $2.65/m^3 higher than the WL pricings because one of the CFAs gets a $2.50/m^3 price increase over market value due to chain of custody for Forest Stewardship Council forest certification credits.

Figure D: Average Sawlog Price by Source[20]

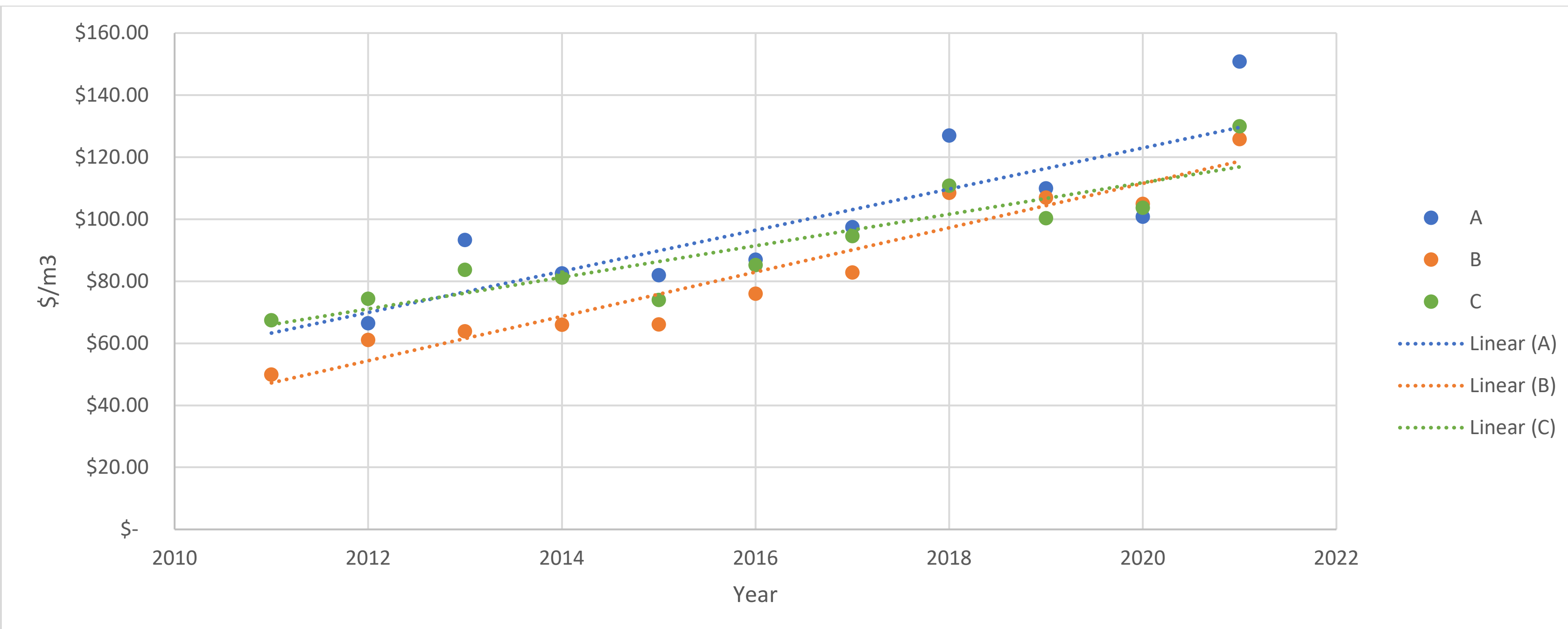


[20] Source: SFTCB participant data.

To understand sawlog price fluctuations among buyers, we examined the average price paid for Douglas-fir and Cedar sawlogs over a ten-year period. Trend lines for the average price of Douglas-fir sawlogs paid by buyers varied from 8% to 15% year over year with an overall average increase of 11% year over year (**Figure E**). Trend lines for the average buyer price for Cedar sawlogs varied from 10% to 24% year over year with an overall average increase of 16% (**Figure F**).

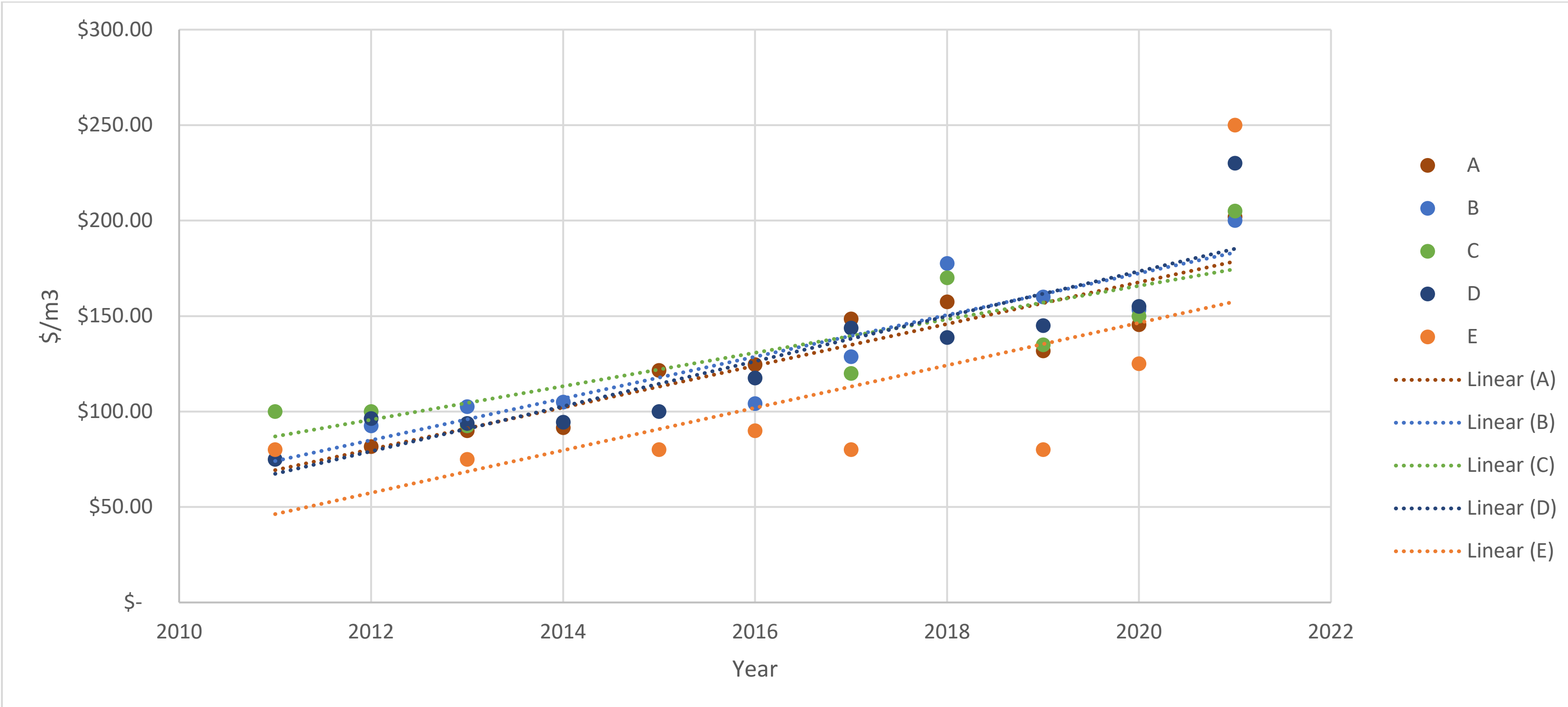
Pricing variability is affected by many factors, including the log-haul distance from the mill, demand for sawlogs to fill customer orders, and overall market demand. Our data shows that the largest factor affecting pricing variability among the buyers in Figures E and F is the mill distance from the wood source. For example, the price paid for Douglas Fir by Buyer A falls within the trend lines when logs were sourced close to the mill. In 2013, 2018, and 2021, this buyer sourced wood farther from the mill, and pricing exceeded the regional average.

Figure E: Average Price of Douglas Fir Sawlog vs. Buyer[21]



[21] Source: SFTCB participant data

Figure F: Average of Cedar Sawlog Price vs. Buyer[22]



The following series of graphs illustrate B.C. interior log market pricing[23] against participant log pricing. Participant log pricing reflects the Kootenay-Boundary region market pricing, whereas the B.C. interior log market pricing reflects all pricing data for the entire B.C. interior, including the Kootenay-Boundary. On average, the Kootenay-Boundary STH pricing data illustrates higher prices for most species and products compared to the B.C. Interior log market, except for pulp logs which are less. There are more sawmills

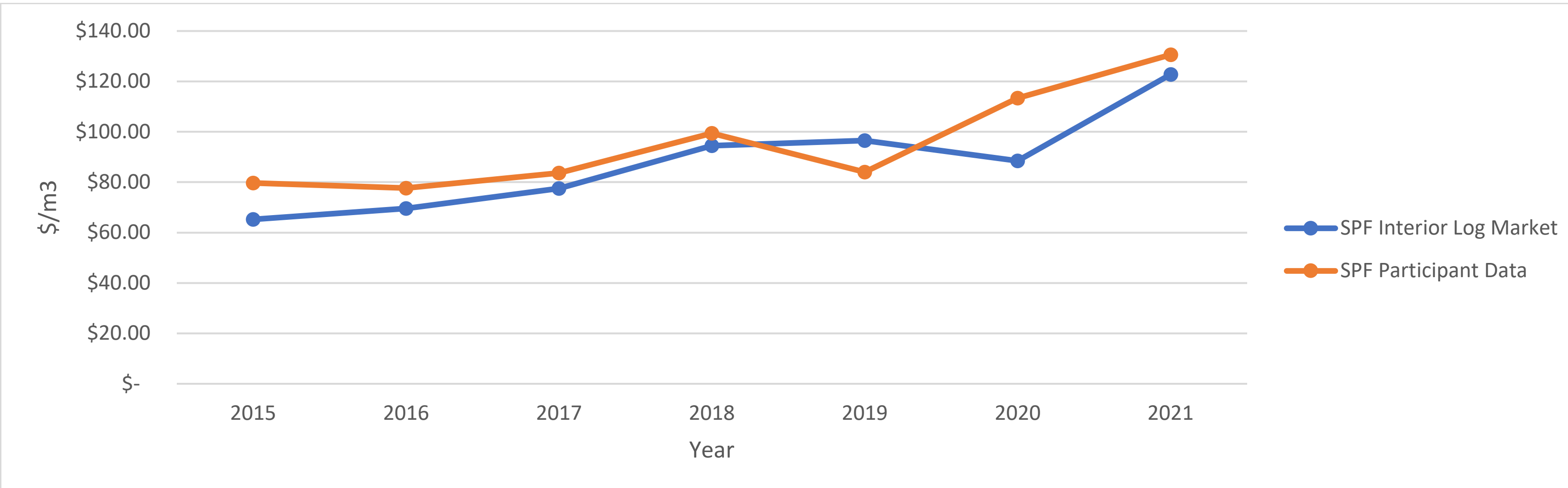
[22] Source: SFTCB participant data

[23] The interior monthly log market report is a record of all arm's length log purchase transactions for logs originating in the B.C. Interior for consumption within the B.C. Interior. https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/interior-timber-pricing/interior-log-market-reports

in the Kootenay-Boundary and Okanagan regions than in the northern regions or the Rocky Mountain Trench, which creates a more competitive market for most species and products.

On average, participant pricing for Spruce, Pine and Balsam was $7.70/m^3 more than the B.C. Interior log market pricing (**Figure G**).

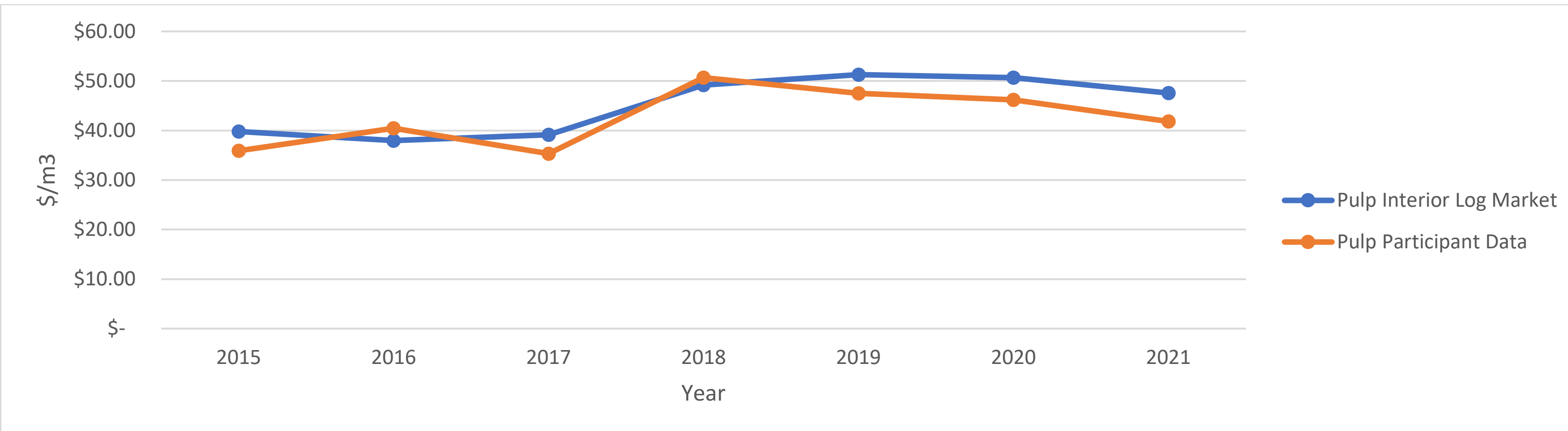
Figure G: Spruce/Pine/Balsam Sawlog: Interior Log Market vs. Participant Pricing Data



On average, participant pricing for Douglas-fir and Larch was $2.88/m^3 more than the B.C. Interior log market pricing (Appendix F, **Figure T**). Participant pricing for Hemlock and Grand Fir, on average, was $7.33/m^3 more than the B.C. Interior log market pricing (Appendix F: **Figure U**). This high differential can be attributed to log exports to the USA. Likewise, on average, participant pricing for Cedar was $6.36/m^3 more than the B.C. Interior log market pricing (Appendix F: **Figure V**). B.C. Interior log market pricing for peelers is split out by SPF; and FD-LW (Appendix F: **Figure W**). Where participant pricing for peelers is not separated, 90% of the participant pricing data points are FD-LW in this cohort.

On average the B.C. Interior log market pricing for pulp was $2.54/m^3 more than participant pricing (**Figure H**).

Figure H: Pulp Interior Log Market vs. Participant Pricing Data

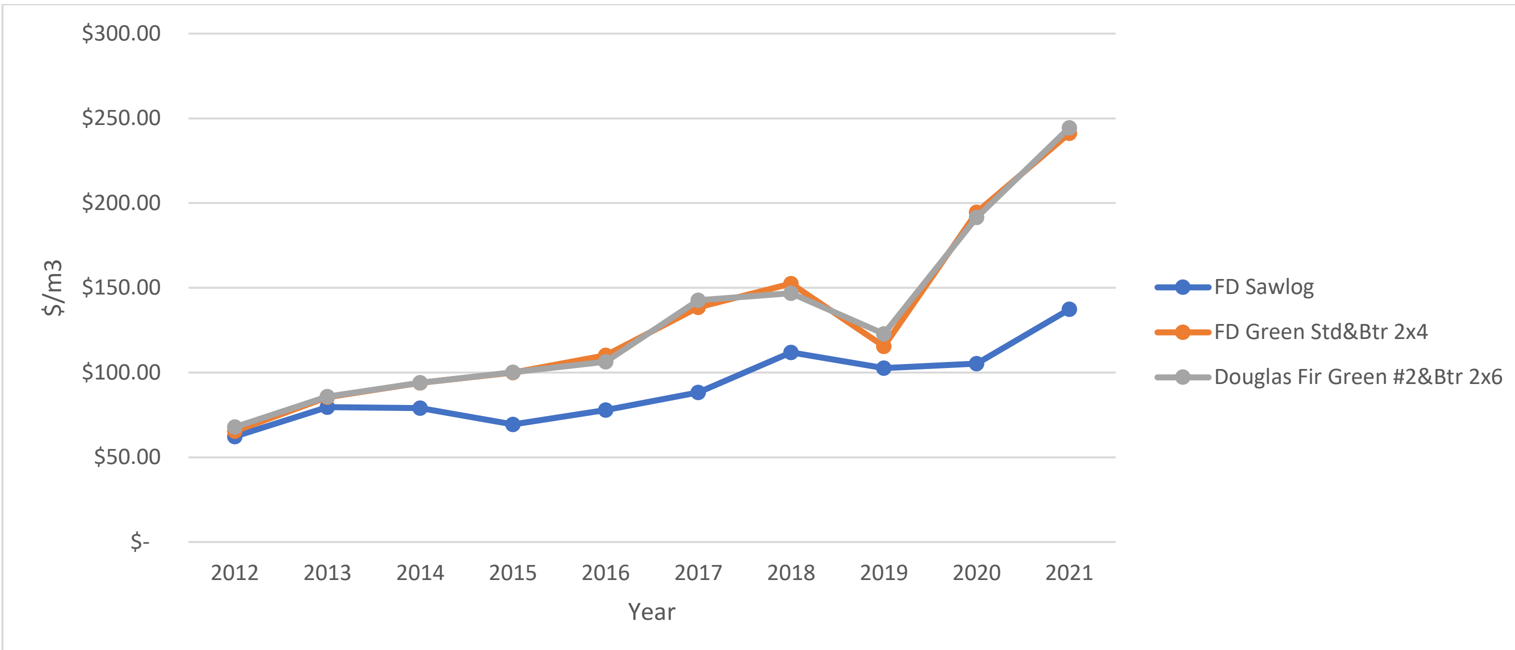


The following series of charts illustrate the North American sell price per cubic metre of green FD - CW lumber and 9.5mm plywood. The sell price shown has been determined by converting US$/mfbm to CD$/m^3.[24]

The average sawlog price for Dougals-fir has gradually climbed over the last 10 years, with a year over year average increase of 12%. As comparison both the FD green 2x4 and 2x6 have risen year over year by 38% since 2011.

The price of Douglas-fir is depicted in **Figure I**.

Figure I: Average FD Sawlog Purchase Price vs. FD green 2x4 and 2x6

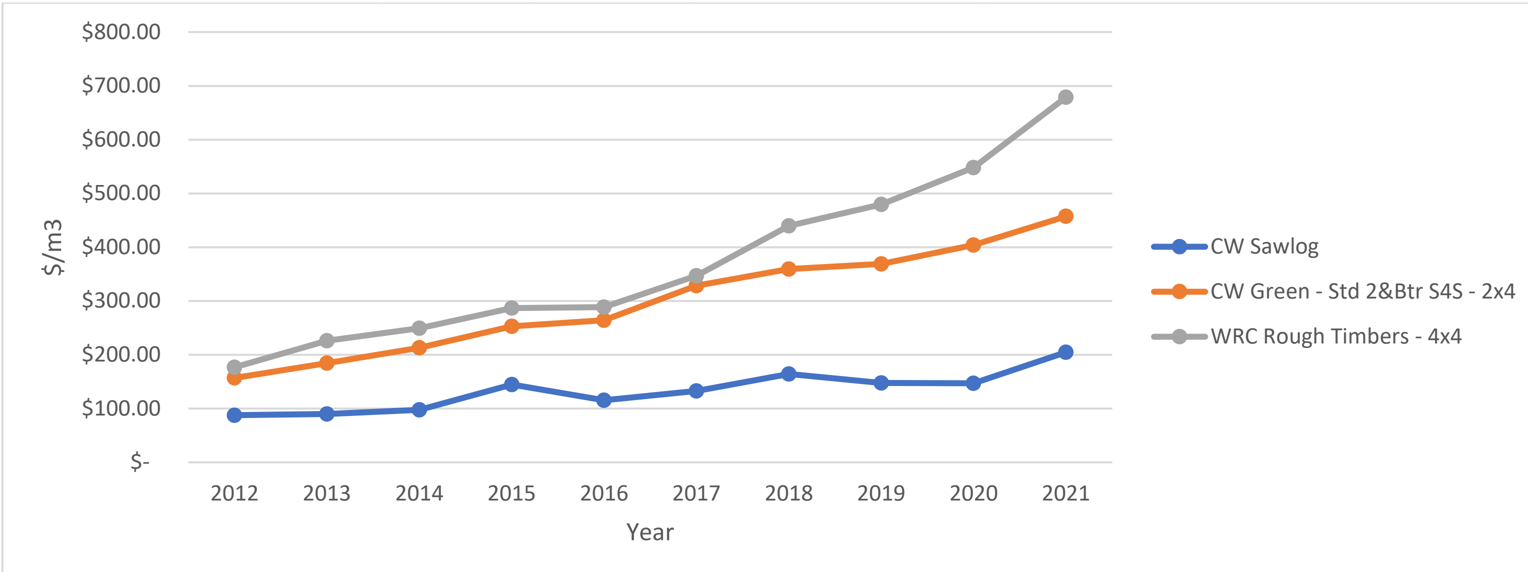


[24] Source: Madisons Lumber Reporter. https://madisonsreport.com/ USD to CND conversions. https://ca.investing.com/currencies/usd-cad-historical-data mfbm conversion to m3 was derived from the average conversions used by various manufacturers and log exporters. An average conversion of 4 was used for Douglas-fir and 5 for Cedar. Douglas-fir and Cedar sawlog source is from SFTCB participant data.

The average sawlog price for Cedar has gradually climbed over the last 10 years, with a year over year average increase of 15%. As comparison both the CW green 2x4 and 4x4 have risen year over year by 28% and 56% respectively since 2011.

The price of cedar is demonstrated below in **Figure J**.

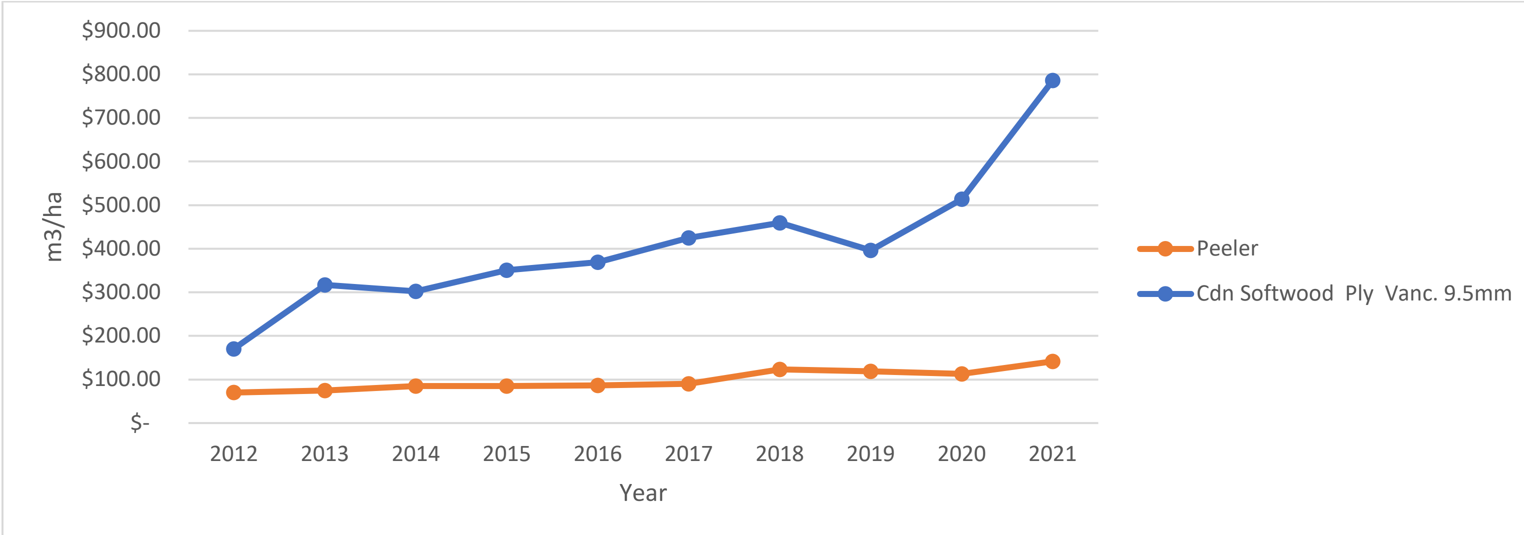
Figure J: Average CW Sawlog Purchase Price vs. CW green 2x4 and 4x4



The average peeler price for FD-LW has gradually climbed over the last 10 years, with a year over year average increase of 12%. As comparison the Canadian softwood for 9.5mm plywood has risen year over year by 31% since 2011.

The average FD-LW peeler price is compared to the price of 9.5 mm plywood in **Figure K**.

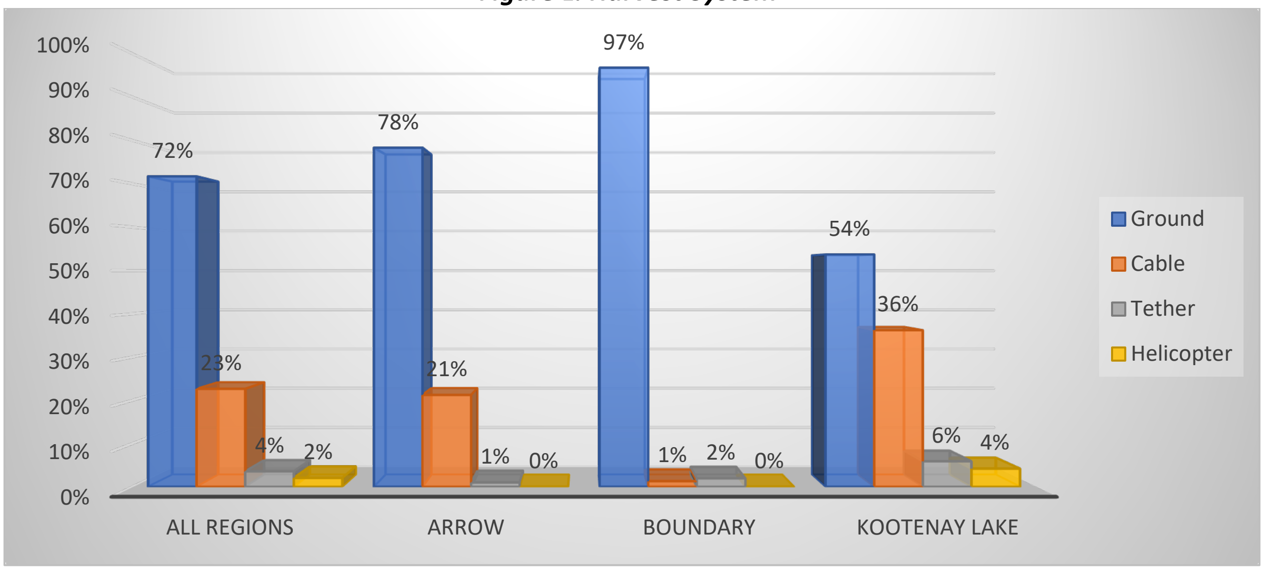
Figure K: Average Peeler Price vs. Plywood Vancouver 9.5mm



Fibre Source Harvest System

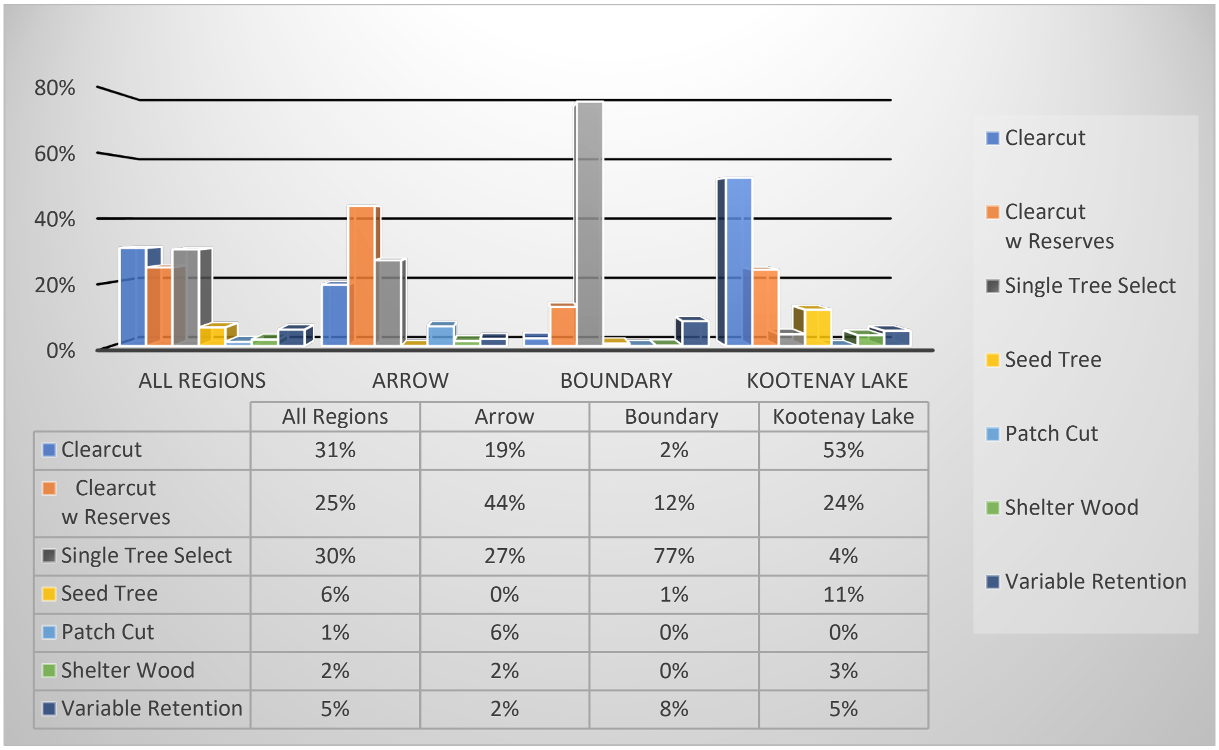
Nearly three-quarters (72%) of participant harvest systems were ground based, particularly those in the Boundary area. However, within the Kootenays, the use of steep slope harvest systems such as cable, tether and helicopter are more common (**Figure L**).

Figure L: Harvest System



There is a similar trend in the use of clear cutting and clear cutting with reserves from the Boundary into the Kootenay area that corresponds to the increase in steep slope harvest systems. Furthermore, the difference in ecology from the Boundary (dry) to the Arrow-Kootenay (moist-wet) influences the silvicultural systems used. The Interior Douglas-fir bio-geoclimatic zone, which is prevalent in the Boundary, is well suited for selective harvest such as Single Tree Select (**Figure M**).

Figure M: Silviculture Systems

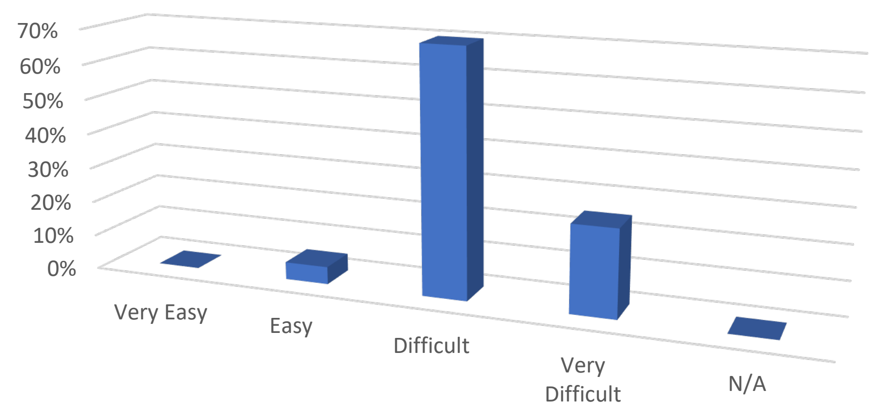


	All Regions	Arrow	Boundary	Kootenay Lake
Clearcut	31%	19%	2%	53%
Clearcut w Reserves	25%	44%	12%	24%
Single Tree Select	30%	27%	77%	4%
Seed Tree	6%	0%	1%	11%
Patch Cut	1%	6%	0%	0%
Shelter Wood	2%	2%	0%	3%
Variable Retention	5%	2%	8%	5%

Management of Fibre Source

Researchers asked STH participants about the ease or difficulty in finding the right harvesting contractor to achieve their forest management objectives. Ninety five percent (95%) stated that finding the right contractor was either difficult or very difficult, stating that there are very few loggers left who can do specialty logging (**Figure N**). Many of the large contractors are not interested in taking the time to do what smaller operators have been accustomed to doing in regards to the specialty logging more typically required for small harvests.

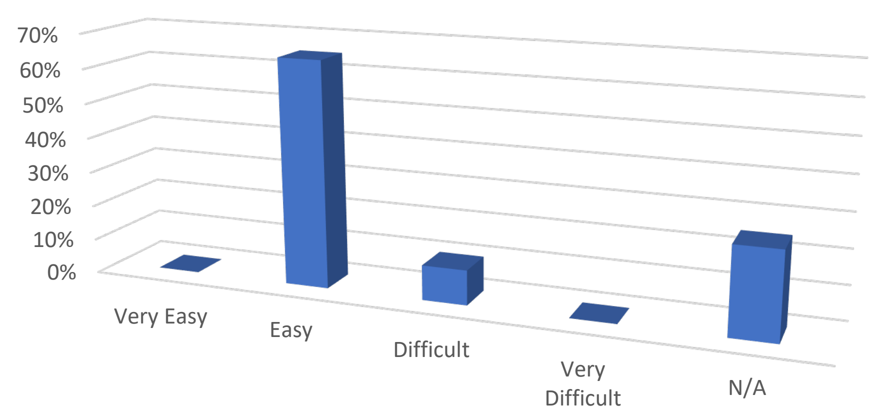
Figure N: Ease in Finding the Right Harvesting Contractor



	Very Easy	Easy	Difficult	Very Difficult	N/A
Right Contractor	0%	5%	70%	25%	0%

Researchers asked STH participants how easy or difficult it is to find consultants to carry out forest management administration (FMA). Overall, most respondents had no troubles in finding FMA consultants to complete the work. A few of the participants complete their own FMA work, which is illustrated below as N/A (**Figure O**).

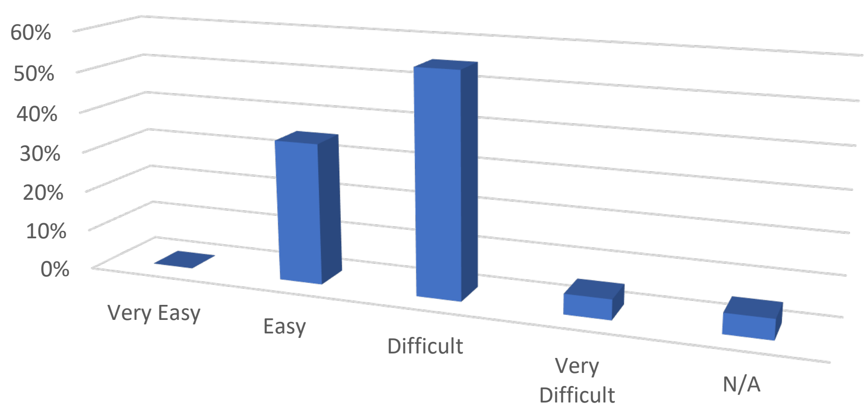
Figure O: Hiring Forest Management Administration Consultant



	Very Easy	Easy	Difficult	Very Difficult	N/A
Consultants	0%	65%	10%	0%	25%

Researchers asked STH participants how easy or difficult it is to find contractors to carry out road construction and harvesting. Sixty percent (60%) of the respondents stated this was difficult to very difficult, stating that most contractors are either tied to a large sawmill or require higher volumes than what a small tenure holder has to offer. Many of the respondents hold annual volumes less than 2000m^3 and find it difficult to attract contractors to harvest such low volumes. Consequently, many have resorted to only one harvest per 5-year period as they find it easier to attract a harvesting contractor with a larger volume. Thirty five percent of participants (35%) find it easy to find a harvesting contractor as they have resorted to selling their 5-year cut to a large sawmill, which provides a dedicated harvesting contractor. In turn, many of the large sawmills use this dedicated harvesting contractor to leverage a purchase of all the volume a STH may hold. Results are in **Figure P**.

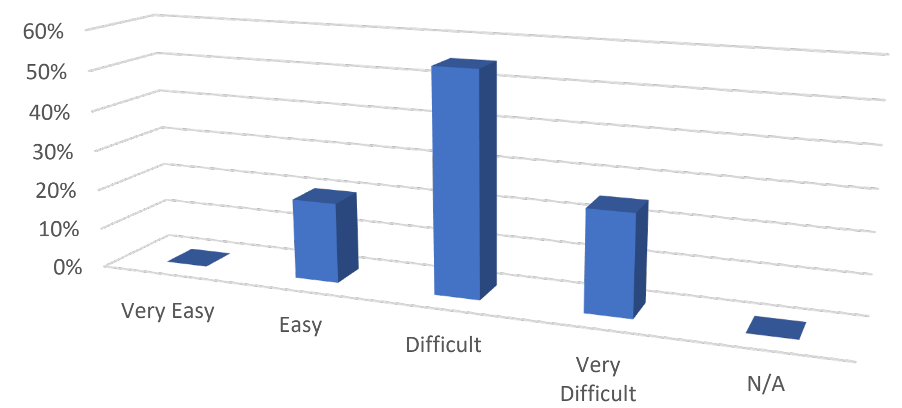
Figure P: Hiring Road and Harvesting Contractors



	Very Easy	Easy	Difficult	Very Difficult	N/A
Road and Harvesting Contractor	0%	35%	55%	5%	5%

Researchers asked STH participants how easy or difficult it is to find log haulers. Eighty percent (80%) of respondents stated this was difficult to very difficult. Many have had to resort to utilizing full phase harvesting contractors with a trucking fleet as opposed to a harvesting contractor without trucking capabilities. During individual interviews, some participants stated that they gave up on logging their wood or using smaller harvesting contractors due to this lack of log haulers. The shortage of self-loading log haulers came up numerous times during these interviews, highlighting how challenging it is to move small volumes of fibre. Results are below in **Figure Q**.

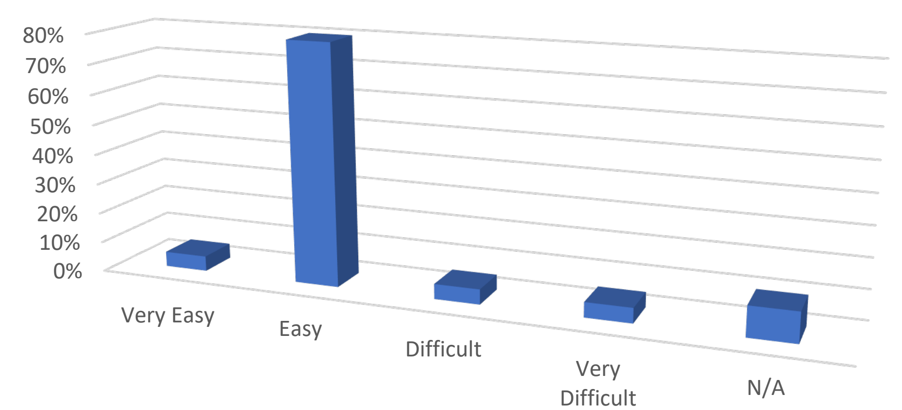
Figure Q: Hiring Log Haulers



	Very Easy	Easy	Difficult	Very Difficult	N/A
Log Haulers	0%	20%	55%	25%	0%

STH participants described how easy or difficult it is to find consultants and contractors to carry out silviculture. Eighty five percent (85%) of respondents stated is easy or very easy and agreed that there is no shortage of silviculture contractors (**Figure R**).

Figure R: Hiring Silviculture Contractor



	Very Easy	Easy	Difficult	Very Difficult	N/A
Silviculture Contractor	5%	80%	5%	5%	10%

Small Tenure Holder Interviews

Log and Lumber Pricing

In an effort to understand the perceived relationship between logs and lumber pricing, participants were asked about the correlation between the two. Only three respondents stated that there was no correlation. Another three respondents stated that they didn't know. The remaining respondents (75%), saw a correlation between log and lumber pricing.

There is little agreement on the extent of this correlation and the way that prices are determined, however. For example, only 15% of responses indicated that the correlation is very strong. Forty-three percent (43%) of responses agreed that log prices go up only slightly when lumber prices go up. Thirteen percent (13%) indicated that prices are fixed by the mills and are not impacted directly by market conditions. Ten percent (10%) of responses stated that there is only a loose correlation due to the separation of log and lumber businesses. Two responses (5%) stated that the value of logs is impacted by the local market and their usage. Results can be found in **Table 11**.

Table 11: Correlation between Log and Lumber Pricing

Given the historical prices, what correlation exists between log and lumber prices?	N = 24	%
slight when lumber goes up (supply/demand)	17	43%
strong correlation	6	15%
Mills set price, basically price fixing	5	13%
Only loose correlation because businesses are separate	4	10%
no correlation	3	8%
don't know	3	8%
Value of logs are impacted by local sectors	2	5%

Comments below are illustrative.

- *There is a loose correlation, but not a tight correlation. Just because the businesses are separated.*
- *Having sold logs in the Kootenay area for over 30 years I have a relatively deep understanding of the correlation between the log and lumber prices, and also the fact that log prices don't necessarily follow lumber prices for various reasons, including inventories in the mills, what the mill is doing, what the mill is looking for, for a species because of their contacts, and also the type of log quality that you have in your woodlot and what you're able to deliver. So there is a very loose correlation between logs and lumber prices. But the value of our logs is far greater impacted by local factors of what mill is buying what log and how much inventory they have in their yard and what log you can produce for them.*
- *There is a correlation, but there's, of course, many other factors on the log prices that we get, that aren't directly related to lumber prices…. like, is [business name]'s mill-yard full or not, right? Is [business name] buying or not?*
- *I would say there aways seems to be a lag period that we watched lumber prices go up and log prices get slowly dragged along. And then the other way is when lumber prices are falling it doesn't take any time at all for the log prices to be dropped.*

When asked about their ability to capture market upswings and seasonal requirements of their tenure or private land, only 14% of responses stated that they could unconditionally take advantage of market swings. Sixty-six percent (66%) stated that, given the right conditions – contractor availability, seasonal conditions or the possession of One Cutting Permit, they would be able to take advantage of market conditions. Three responses, or 10%, stated that they were not always able to take advantage of market upswings. Two responses (7%) stated that bureaucracy gets in the way, and one participant (3%) stated that the recent old growth deferral has made it impossible to capture market upswings. Results are presented in ***Table 12***.

Table 12: Adjusting to Market Demands

Are you able to capture market upswings and seasonal requirements of your tenure or private land? Please explain.	N = 18	%
yes, depends on conditions (seasonal)	9	31%
yes, if able to find contractor	8	28%
yes, unconditionally	4	14%
not always able to take advantage of it	3	10%
1CP helps	2	7%
bureaucracy impedes	2	7%
not with the old growth deferrals	1	3%

Comments are illustrative.

- *If I could find a logger, sure, sure. …but you can't just turn them* [contractors] *on or off, you know, you've got to give them lots of warning, and how much volume you've got, when you want to do it. … Other than that, you've got fire season that hurt us all this year, threw the schedule way off, on and on. So all those issues depend on availability of a logger, and the conditions.*
- *But like I put there at the end, the 1CP definitely helps us small area-based tenures take advantage of markets. That thing is great…. If we were juggling all this without 1-CP it would be a whole different scenario, I think.*
- *We wanted to log a block of salvage, for beetle salvage…. We couldn't harvest in there because we'd already exceeded the PR number. So I had to amend the FSP to be able to log there… it took months. So we had to get the VQO done, I submitted it all and then they said, "No, that's not good enough." I submitted it three times to finally be able to harvest it. …. Meanwhile, contractors moved on and now we can't get them back.*
- *Often not able to harvest to capture market upswings. Sometimes yes, sometimes no…. it's not like we can suddenly bring on an extra contractor on a one-month notice and get them to hammer out a whole bunch of wood when the market goes up.*

Participants obtain information on log markets from a wide range of sources. Nearly half of responses (48%) indicate that participants get their information from their network – calling their contacts or talking to folks in the bush. Most other respondents (33%) get their information directly from log buyers. Six responses (10%) indicated that log market pricing is not part of their job or is the responsibility of someone else. Single responses were received for getting information from: 1) online, 2) solo efforts, 3) woodlot association, 4) fibre managers or 5) the futures market. Results can be found in **Table 13**.

Table 13: Source for Information on Log Markets

Where do you get information on log markets?	N = 24	%
network/bush/word of mouth/phone	29	48%
log buyers	20	33%
not my job	6	10%
online	1	2%
markets own wood	1	2%
woodlot association	1	2%
fibre managers	1	2%
Futures market	1	2%

Comments below are illustrative.

- *Oh, through the grapevine, from log buyers, from other sellers, small sellers, from you know, what buyers are offering, usually keep in touch with them and just update pricing whether or not there's immediate fibre to be sold or not. Just to keep the hand in there. A little bit through or association, our woodlot association. Yeah, just basically a bit of snooping and sniffing around there.*
- *I would say we could support each other with some, you know, ranges of numbers. For stuff.*
- *Yeah, networking, just letting the next guy know what you're getting for your logs and being upfront because there is a bit of discrepancy there, since I've run into that. And some of it has to do with log quality. If you're not striving to produce a good quality log for the mills then they're not going to offer you so much money.*
- *Well, I've written there the Woodlot Association is great in getting information.*

Capacity

To explore their current and potential capacity, participants described: 1) their ability to harvest their full timber profile, 2) whether or not they employed contractors and if that affected their ability to manage their tenure, and 3) their current level of readiness to increase capacity.

Of the 40 responses received, 28% indicated that there were no components of their timber profile that they could not harvest due to a lack of capacity. Thirty-eight percent (38%) of responses indicated that their timber harvest was affected by market capacity. Thirty-five percent (35%) indicated that they could not harvest their complete timber profile due to contractor capacity. Results are in **Table 14**.

Table 14: Lack of Capacity Due to Timber Profile

Are there any components of your timber profile that you cannot harvest due to a lack of capacity?	N = 23	%
yes, due to market capacity	15	38%
yes, due to contractor capacity	14	35%
No	11	28%

When looking at contractor capacity, 20% stated that there is an inability to maximize harvest due to a lack of specific equipment for challenging terrains and a lack of capacity to address cleanup of logging sites. Other contractor barriers include a lack of transport trucks (7%) and a lack of trained, competent workers (7%).

As far as market capacity, the biggest limitation listed by participants (30% of responses) lies in the species limits within the market. Some species are more difficult to sell than others. Another 13% stated that the lack of secondary markets for wood products or salvage limits their ability to maximize capacity. Furthermore, 10% of responses noted that maximizing timber harvest can be difficult if not a big producer and that STH suffer when markets are either high or low (7%). One response (3%) each stated 1) an inability to maximize harvest due to First Nations consultation issues and 2) that the issue of Social Licence, or a lack of public education and understanding of forestry practices, was a barrier. Results are presented below in **Table 15**.

Table 15: Capacity Barriers for Timber Harvest

Type of Capacity	Response	N = 19	%
Market	some species difficult to sell	9	30%
Contractor	lack of cable yarders/equipment	6	20%
Market	don't have secondary markets/salvage	4	13%
Market	can be hard if not a big producer	3	10%
Market	suffer on low/high end	2	7%
Contractor	lack of transport/trucks	2	7%
Contractor	lack of trained workers	2	7%
Market	First Nations issues	1	3%
Market	lack of public education, understanding of forestry practices	1	3%

Comments are illustrative.

- *We struggle with the hemlock and the grand fir profile. … hemlock and grand fir are the most difficult to sell and their market is sporadic at best. … there's times that I've had to walk away from hemlock or grand fir areas that I would like to harvest just because the market isn't there to cover my annual costs of the woodlot or the private land.*
- *In the past I've had a hard time finding contractors to log on the woodlot because of the lower volume. I can't do a one-year cut; it has to be a four or five year cut to get somebody up there to do it.*

- *My last cut in 2020, nobody wanted Yellow Pine. They didn't want any of it, so it all stayed on the woodlot. That's limiting the ability to market it.*
- *We've waited probably 20 years for a market for the Hemlock, and the market finally came around. And I was going to address a large part of our Hemlock difficulty this year, but it's 140 years old, and it's in the deferral area now.*
- *Market capacity, we used to not do pulp much, because it was such a loss, but we decided to do pulp like a bunch of people. And we just take a loss on it, so we count on the saw logs to cover it.*
- *On the contractor capacity, it's finding the small operators. Market capacity, we have some species that we just can't deal with. The yellow pine or ponderosa pine is one.*

Twenty-eight percent (28%) of respondents indicated that they harvest their timber themselves. Nearly two-thirds (62%) select their own contractors to harvest timber. A small number (10%) use contractors selected by the mills to whom they sell wood. Results are in **Table 16**

Table 16: Harvest Capacity

Who do you use for harvesting your timber?	N = 21	%
self-selected contractors	18	62%
myself	8	28%
mill-selected contractors	3	10%

When asked if these contractors could use support, nine responses (82%) indicated that they could. Two responses (18%) replied negatively. Results are in **Table 17**.

Table 17: Contractor Need for Support

Do you know if they could use support?	N = 10	%
yes	9	82%
no	2	18%

When prompted to describe what type of support contractors could use, more than one-quarter of responses (27%) indicated that developing new and small contractors able to capitalize on smaller volumes associated with selective logging would be most helpful. Twenty-three percent (23%) each indicated that contractors needed skilled personnel and new equipment specific to small-scale forestry, such as scalers, skidders and bunchers. Seventeen percent (17%) each of responses indicated that 1) business support and outreach, and 2) instruction or training for contractors, specific to selective logging or business regulations, would be helpful. Ten percent (10%) of respondents indicated that increasing access to timber supply would be most beneficial.

Finally, 3% of responses indicated that contractors would benefit from 1) a central repository or network for loggers that included contractor information and skills/equipment sets, and 2) a way to keep contractors paid during down times. Responses can be seen in **Table 18**.

Table 18: Form of Support for Contractors

What would this be in the form of?	N = 15	%
developing new & small contractors for selective logging	8	27%
equipment/scalers/bunchers	7	23%
business support/outreach	5	17%
Instruction/training for smaller profiles/support in dealing with regulations/oversight	5	17%
access to timber supply	3	10%
central repository/network for loggers	1	3%
a way to cover those not getting paid	1	3%

Comments below are illustrative.

- *We actually need support in developing new and small contractors. Selective logging – we need support from all levels of industry and paying a bit more per cubic metre for logging.... And we probably need support on the equipment side, like equipment complement. Stuff that's right sized for what we're trying to do, which is more selective logging. It leads into wildfire risk reduction, specialized equipment to mechanize that end and make it a bit more cost effective.*
- *We support them through good rates. You know, we try and pay a good rate that they can work with, and we support them with a little bit of the administrative end of it, like the work safe stuff, coordinating safety plans. The community forest tries to hire certified contractors but honestly, some of these little guys aren't certified because it's a lot of work for a guy who's potentially working a couple of months or whatever to maintain the certification.*
- *Definitely trucking is a weak spot in the link and constrains all of us.*
- *There's not really any dealers around, there's not really any, like I said earlier, schooling or training that could at least give somebody the grounds of basic machine operation.*
- *Well, I'd say that having the woodlot federation there is really good because if a person really did have a big problem with it, I'm sure that you'd have some backup, if you explained your situation.*

Of the respondents, forty-five percent (45%) stated that they do not harvest their own timber (**Table 19**). Of those who do, seven, or 88%, practice ground-based harvesting. Only one respondent (12%) practices selective logging (**Table 20**). When asked if traveling to work out of their area (**Table 21**), 57% stated that they were unwilling to travel for other harvesting opportunities; 43% stated that they were willing.

Table 19: Capacity to Harvest Own Timber

Q16. If you harvest your own timber, what is your current capacity to harvest it?	N = 20	%
don't harvest own timber	9	45%

Table 20: Equipment Complement and Harvest System Capability

Q16b. What is your equipment complement and harvest system capability?	N = 7	%
ground-based	7	88%
selective harvesting	1	13%

Table 21: Capacity to Travel for Harvesting Opportunities

Are you willing to travel for other harvesting opportunities?	N = 7	%
No	4	57%
Yes	3	43%

When asked about the use of contractual labor, 15% stated that they do their own work. Nearly half (49%) stated that they select their own contractors. Nearly one-third (33%) stated that it's necessary to have a strong network and contacts to obtain qualified, competent contractors. Only one respondent (3%) stated that he/she used contractors selected by the mill. Results are provided in **Table 22**.

Table 22: Contractor use and Availability

Who are you using to do the work and are they readily available?	N = 20	%
contractors	19	49%
contractors, but requires contacts in field	13	33%
do own work	6	15%
mill contractors	1	3%

Comments are illustrative.

- *For the conventional harvesting and road building, we were using [name]. He was a very small operator, local guy, so we made a commitment to him to give him the bulk of our work for two to three years, so he could purchase equipment. So, with that agreement he purchased a power feller buncher and a processor, so it's enabled local contractor capacity. Some other local contractors aren't too keen on it, to say the least, but that's, they've already got tonnes of work, so it's nice to support someone else.*
- *The only time we've been able to cable log is selling blocks as a timber sale. We use who they have available. We haven't been able to secure a cable logger ourselves yet, but we've managed to flog a bit of cable over the past three years, so it's worked out.*

- *I've got a full time crew. They're there all the time, right. I'd say the average age is probably 50. … And one issue with finding younger guys, like if somebody young comes into [community name] they seem to always just go to the bigger contractors right away.*

Participants were asked about the availability of contractors and its potential impact on managing their tenure. One-quarter of respondents (25%) indicated that the availability of contractors does not interfere with their ability to manage their tenure or private land. Forty-six percent (46%) stated that it did. When asked to elaborate, 11% of respondents stated that they always try to hire local and this adds to the availability issues. Seven percent (7%) of responses stated that the issue isn't contractor availability, but contractor performance that hinders their management of tenure. Likewise, seven percent (7%) of responses indicated that they try to dovetail harvesting contractors with other harvest opportunities or projects to ensure enough work is available to attract them. Four percent (4%) stated that trucking contractor availability is as much an issue as harvesting contractor availability. Results are presented in **Table 23**.

Table 23: Impact of Contractor Availability on Land Management

Does the availability of contractors hinder your ability to manage your tenure or private land?	N = 18	%
yes	13	46%
no	7	25%
try to always hire local	3	11%
can't always find due to small work/try to dovetail contractor work with another harvest opportunity to increase work for the contractor	2	7%
not availability, but performance of contractors	2	7%
not only harvesting but trucking	1	4%

To assess current capacity for expansion, participants were asked about their level of readiness to increase capacity. In total, 82% indicated that they were ready to increase capacity. Nearly one-third of respondents (32%) stated that they were ready to increase capacity but lacked the wood supply. Nineteen percent (19%) each stated that they were: 1) ready to increase capacity now, or that 2) they were waiting for family/community readiness – either through community interest in the management of the community forest agreement or community support for or against a proposed harvest. Ten percent (10%) each stated that they were: 1) not ready to increase capacity; 2) had no interest in increasing capacity (working towards retirement); or were ready but needed more government readiness. Results can be viewed in **Table 24**.

Table 24: Level of Readiness to Increase Capacity

What is your level of readiness to increase capacity?	N =22	%
ready, but need more volume	10	32%
depends on family, community readiness	6	19%
ready	6	19%

not ready	3	10%
no interest	3	10%
yes, need more government readiness	3	10%

Comments are illustrative.

- *It would depend on … either family or key employees or whatever. Helping them get set up. Personally I've already got opportunities that need to be carried through to completion, right? … no problem helping them try to realize those opportunities. But I don't necessarily want to do that myself. I've got enough crap that I haven't finished yet.*
- *The interests that I have are primarily around management and increasing the value of our logs, through a group networking or accumulating volume. I'm more than ready to help and be involved with that kind of stuff. I have no interests at this time in any harvesting capacity. And I'm also ready to help amalgamate licences or volumes or whatever to support the second level or the smaller operators, harvesting operators so that we can get more ability for selective harvesting or new operating systems, innovative harvesting systems…. I hope that's what comes out of it, is that we learn to support our contractors more uniformly.*
- *We're well-positioned to be able to do it if the volume was available, but getting the volume is challenging. We can't get the volume, we don't have the volume and honestly working with government … [is] a very long, slow process that's going to involve lengthy First Nations referrals. We're ready and we're working towards it, and we've actually taken some steps in that direction…. We need more readiness by government.*
- *I would be ready if something like that happened. But as you know, my woodlot is sitting with that old growth, and I've lost 159 hectares on one of my woodlots. Yeah.*
- *If I had the guarantee that I had the volume to move forward and increase, that would be pretty much all I need because I have enough equity in the company now where I can make moves to access further equipment if need be.*
- *I'd definitely be on board, I mean I would be time constrained depending on kind of what the level of involvement was with my other commitments, but I definitely think it's possible.*

Barriers/Obstacles

As a follow up to questions of capacity, researchers asked participants what obstacles affected their ability to increase capacity or volume sold, a question that prompted lengthy discussions and the greatest number of responses.

The greatest percentage of responses, 26%, related to the regulatory bureaucracy and social license that impact wood supply, harvest areas and constraints on the land base. An additional 23% stated species limitations, poor wood supply, and the market impact their ability to increase capacity or wood sold.

Fifteen percent (15%) indicated that their age, motivation or issues with succession affected their ability and desire to increase capacity. Another 15% stated that the large sawmills didn't have the capacity to deal with small volumes and contractor availability.

Nine percent (9%) of responses stated that obstacles included business constraints – either lacking capital or business savvy, diversified operations, the ability to purchase needed equipment, or the agility to cope with inflation amidst troubling national and international economics.

Four responses (8%) indicated that seasonal considerations, such as the increase in length of the summer fire season or early breakup, affected their ability to increase capacity. Finally, one respondent each (2%) stated that they faced the following obstacles: 1) gender, and 2) consultations with First Nations. Two respondents indicated that they were not interested in increasing capacity and thus experienced no obstacles. Results are presented in **Table 25**.

Table 25: Obstacles Affecting Ability to Increase Capacity

What obstacles affect your ability to increase capacity or volume sold?	N = 24	%
social license impacting land-based constraints and government regulatory bureaucracy	14	26%
species limitations, wood supply, market	12	23%
age, motivation, succession, not interested in increasing	8	15%
large sawmills not having capacity to deal w/small volumes/contractor availability	8	15%
business sense, need financial help, lack of diversified operations, equipment upgrades, costs of doing business, inflation	5	9%
timing/seasonal	4	8%
gender	1	2%
First Nations consultations	1	2%

Comments are illustrative.

- *Old age. That's a really handicap. If they can solve that I can put more wood to the market.*
- *One thing that would increase capacity, is we see a lot of salvage opportunities and they're getting wasted. And it's because of that whole aspect of the majors not having the capacity to deal with small areas, small volumes. But it adds up to a lot of wood. And I'm talking about blowdown, bugs, whatever. The timber supply is just too concentrated.*
- *We should throw old growth in there. That's going to affect the ability to increase capacity or volume.*
- *First Nations. Info sharing and working with First Nations…. Can be, could be challenging.*
- *VQOs. Just lengthy delays in almost every piece of paperwork to do with any particular application, whether it's removal of Schedule A, whether it's a cutting permit, whether*

it's the whole thing. Comes down to who's doing the managing, the ministry or the woodlot licensee.

- *The deferral decision really has us working in the opposite direction. I mean there's not an increase in capacity at all. Like I feel like at best we're going to be decreasing our capacity because 27 percent of the land-base is now not directly available, even for the coming two years.*
- *We miss a bunch of time in the spring for breakup. Fire season is becoming more of an issue. You're laid off during fire season, you know.*
- *All the negativity that comes out of the media in regard to forestry in general.... There's tons of negativity, and I don't think we've handled that both as an industry or provincially. I don't think the governments have done a really, really good job to actually demonstrate some of the changes that people want to see.*
- *People, weather, and then actual being able to attract people to the logging industry in general, that's getting more and more challenging.*
- *If there's some way where you establish a customer base and you can lay out your work for the entire year; that's the hardest part. Because you go on hearsay, you may lose a couple of opportunities because you're thinking you're getting something better. If there was a way the harvest plan for small contractors was laid out with a potential to either or bid or look or – you know, like a catalogue for the year… That would be really helpful.*
- *Inflation, in the last couple of years. We've been hit hard in fuel prices. And a major one too is the ability to find qualified drivers. Guys are struggling to find conventional drivers, and we can't find specialty drivers for the hook truck without training guys, right?*

Log Utilization

When questioned about their level of fiber utilization and how to improve it, nearly one-quarter of responses (23%) stated that producers need a market for value-added products. Eleven percent (11%) would like to see the development of a market for minor forest products. One in five responses (21%) stated it's difficult to find a use for, thus sell, shorter logs.

Six responses (10%) stated that smarter log processing or educating processor operators to better manage waste would increase log utilization. Six respondents (10%) noted that higher pricing would increase log utilization. Four responses (6%) each stated that increasing utilization could happen with 1) the ability to chip wood waste on-site; 2) improved log hauling/trucking and supply chain; and 3) availability of a smaller complement of equipment to maximize wood volume utilization.

Two respondents (3%) noted that getting the Ministry to follow its own utilization regulations would help facilitate log utilization. Finally, one respondent (2%) stated that 1) he/she currently used all wood fibre and didn't need to increase utilization; and 2) that local STH should adapt the

Scandinavian wood processing methods which maximize utilization and leave little waste. Results can be seen in **Table 26**.

Table 26: Suggestions to Improve Fibre Utilization

How can your utilization of fibre be improved?	N = 23	%
need more markets, missing value-added	14	23%
find a use for shorter (<12 ft) pieces	13	21%
create market (open) for minor forest products	7	11%
reduce contractor waste/educate processor operators to better manage waste	6	10%
higher pricing/economics	6	10%
Chip on site-outlet for by-products	4	6%
additional equipment for smaller profiles/no small equipment dealer	4	6%
supply chain issue/ Improve log hauling/trucking in area	4	6%
Get the ministry to make mills follow its utilization rules	2	3%
all good, no need to improve	1	2%
use Scandinavian process	1	2%

Comments are illustrative.

- *The ministry allowing the mills not to follow the utilization rules is one of them. And the other is the pulp mill wants 12 foot logs, or longer. They don't want any short pieces. A lot of the utilization is lost in those short chunks.*
- *[Removing] another barrier, is just to have more flexible lengths in bucking. Like when you're cutting a metric product or whatever… if there's not enough lengths to utilize the top logs, that can create waste unless you just cut them and throw them in there anyways.*
- *We need to not just be able to sell for the primary breakdown, we need to be able to get logs to people who are breaking it down and adding value to it and stuff like that. So increasing our market opportunities through value-added people or smaller guys is probably one of the only ways that we can increase our degree of utilization and cut barriers to utilization. We can utilize more if there's more markets.*
- *My utilization is all 100 percent already. … I do ship by pulp volumes, and I utilize my dry pulp volumes as firewood. Plus, I clean out my landing as firewood, so there's not a whole lot left of anything.*
- *I know some Woodlot licensees who just won't even sell it [*pulp*] to [*the pulp mill*] – they just sort of say you know what I'd rather just have it sit on a landing than pay them to take it. So there isn't really a great market option for that small stuff, or that lower grade stuff.*
- *How much is getting wasted, because the minimum length is at least twelve feet or whatever for just a top log? You end up losing volume there.*

- *Trying to find out how to move this wood off the landing, a whole bunch of fifteen-foot rat-tail tops or something, you need bunk logs for them. They don't have short-log trucks or hay racks. There's logistical issues there.*
- *The Scandinavian equipment is brilliant. Very, very precise. You can set it up to have these really close tolerances and taper. [*It*] makes it super easy to set up the profile to go to the right mill.... The average Finnish or Swedish [*machines*] have different species sorts. They have a small saw, a medium saw, a large saw, and an oversize saw slash peeler deck, and it goes to several different mills.... The landowner sells the wood to the most lucrative market. It's not without flaw, but their system is much more robust in the opportunity to utilize every stem appropriately.... Because merchandising your log at the stump can bring a lot more wealth than bundling it all and sending it a bush run price, right?*
- *The economics just isn't there.... If you're any distance from the market, the logistics of transporting stuff is usually getting in the way [*of being*] innovative.*
- *Biggest barrier to us utilizing our timber is what [*business name*] will pay for pulp. If they could raise the price $10 a cubic metre, we would be able to economically deliver pulp. And I find it absolutely appalling that we are probably physically the closet wood supplier to the pulp mill, and we lose money before the truck leaves the landing if we load up with pulp.*
- *It'd be great to not have to burn slash piles. It would be [*great*] to have the mills accept smaller top size because that's always a struggle. And then if there was an economical way to chip and haul or just haul raw slash to a facility of some sort.*
- *I've been in talks with [*business name*] about rigging out a short log hook truck just to get all those little tops and stuff to the mill.... There's definitely room for improvement in waste in terms of short logs.*

Partners

Researchers asked several questions about partners of small fibre suppliers or log sellers, beginning with a request for respondents to identify potential partners and/or supporters of small fibre suppliers/log sellers. Out of all interview questions, respondents found this question to be the most difficult to answer. In fact, ten respondents (29% of responses) stated that they knew of no potential partners or supporters. One each (3%) stated that 1) they knew of no supporters outside their own network, and 2) that it was difficult to cooperate.

Twenty percent (20%) of responses stated that small sawmills needed the support of medium-sized mills and secondary manufacturers to level the playing field with large sawmills. Another 20% stated that potential partners included community forests and woodlot owners. Four responses (11%) stated that First Nations are potential partners and supporters, with 6% stating that certain regions or community groups, including recreation groups, could be partners. Finally, one respondent each (3% of responses) indicated that potential partners were: 1) a former company that hosted a website to connect log buyers and sellers; 2) end-users for direct sales; and 3) contractors. Results can be found in **Table 27**.

Table 27: Potential Partners

Do you know of potential partners and/or supporters of small fibre suppliers/log sellers?	N = 23	%
none	10	29%
small sawmills, cooperation with med-large mills keeps Large sawmills honest	7	20%
community forests, woodlot owners	7	20%
First Nations	4	11%
certain regions/communities, recreation groups	2	6%
not outside of own network	1	3%
a former company that had a website to connect log buyers/sellers	1	3%
direct sales	1	3%
it’s difficult to cooperate	1	3%
contractors	1	3%

Comments below are illustrative

- *I would say First Nations partnering on land base.*
- *I know of two or three small partners in the sawmilling industry that are trying to get small sawmills up and running. It's a double-edged sword because they are trying to develop their business and they're trying to get logs from us, and so we struggle sometimes when we sell logs to them getting paid in a timely fashion. But there is the potential partners out there, the people that can add value to our logs and have niche markets for our logs.*
- *I'd say, cooperate, but boy that is really hard. Everybody wants to do it their way… If I wanted to log with you to mix our volume together, yes, you and I would get along fine. We talk the same language, so we can probably do it. But logistically it’s hard.*
- *Small fibre suppliers try to sell locally first, we have some local mills, [*business name*], [*business name*] and another small operator moved to town last year, so we try to sell them as much logs as we can…. As a community forest, we try to support the local smaller guys first, but we couldn't do it without the bigger mills either. There's just not enough capacity in the smaller mills to take all the volume.*
- *The college does have access to some pretty skookum management tools… drone surveys, or access to dual processing of specific LiDAR data, or layout, or those sorts of things. That would be sort of the potential partners I could think of: other Woodlot licensees, but also First Nations that maybe have an interest in doing management and don’t have the tools.*
- *A lot of the woodlot community are good partners. And it seems to be a fairly tight knit community, at least in our area. Most everybody gets along and is willing to help each other out. I know quite a few more on the processing side which are helpful partners to have when you’re trying to maximize utilization and maximize value.*

- *It comes back to talk about the contractors. Partners, I'm thinking about recreational groups, trail groups, supporters in the community. In the indigenous communities as well too. They have brushing crews. Supporting small fibre suppliers is good because they are smaller contracts that can not just diversify those people's profile but also allows us to move through and do a real proper job.*

When asked if any potential partners or supporters might be interested in increasing their capacity, responses fell into three categories: 1) smaller mills (43%); 2) employees (29%); and 3) community forests (29%). Results are in **Table 28**.

Table 28: Partners who Might be Interested in Increasing Capacity

Do you know of potential partners that might be interested in increasing their capacity?	N = 4	%
smaller mills	3	43%
employees	2	29%
community forests	2	29%

When asked to elaborate on the form of support offered to partners, nearly one-quarter (23%) of responses stated that partners could use business and management support. Fifteen percent each stated that partners could use: 1) access to small scales or a regional sort yard; 2) technical support; 3) financial support; and log supply. Finally, one response each stated that partners could use 1) a sliding scale stumpage rate for salvage; or 2) a preferred partnership agreement with a mill. Results are in **Table 29**.

Table 29: Type of Support Needed

What would that support look like?	N = 7	%
business support, management support	3	23%
access to small scale sales, regional sort yard	2	15%
tech support	2	15%
financial support	2	15%
log supply	2	15%
sliding stumpage rate	1	8%
preferred partnership	1	8%

Comments below are illustrative.

- *Having access to small scale sales. If they had a certain amount of access to these small volumes then they would be buying more wood from us because they're in business. The salvage program needs to be revamped dramatically. It needs a sliding scale stumpage rate, depending on the volume. And that is critical to bring[*ing*] back the small scale salvage program.*

- *He needs business help, he needs financial help, and he needs lumber – I mean logs. Good quality logs. Peeler quality. You know, big top-quality logs.*
- *Two or three guys like that that are really interested in getting into the harvesting business on a smaller scale with better equipment. But they need business, financial, training support to get that done. They dabble in it right now, and they want to go forward but they don't have the financial business or training background to be a safe certified. So supporting those kind of people and bringing them up to increase the employment of our smaller contractors and smaller mills.*
- *There's a partnership sometimes through our mill with private land owners in the area, because we're also a very small flat log buyer. Also, there's a lot of partnerships, mostly informal. Landowners in our area might ask for my informal advice on management-related stuff, which I'll just pretty much have an informal policy of give a couple of hours to any landowner in the [*community name*] area who has questions about their land.*
- *I wish the timber frame guys would get more involved, and the log builders, not even just regionally but even in the Okanagan. They need our timber more than they realize. It would be nice to be able to network – through a sort yard, would be really nice if we had a regional two or three sort yards that were just ran as sort yards. By professional scalers and log loaders.*

Suggestions

When asked for suggestions to support connections and cooperation among STH, nearly sixty percent of responses (59%) stated that increasing communication and using a cooperative approach to counter the out-sized impact of the large sawmills would help. Fourteen percent (14%) of responses indicated that creating an open market website with prices would help small producers compete. Nine percent (9%) stated that developing and maintaining good relationships with log builders or other secondary manufacturers would help. And 5% each stated that connections and cooperation could be facilitated by 1) opening up more timber supply for small capacity producers; 2) succession planning for the current cadre of aging tenure holders; 3) a database for STH that listed available contractors and their equipment complements, skills sets and experience; and 4) a legal advisor for STH to turn to when faced with legal issues such as lack of payment or breach of contract. Results are in **Table 30**.

Table 30: Ways to Support Connections and Cooperation

How can we support one another to create connections and cooperation?	N = 13	%
cooperative approach/communication	13	59%
competition/open market/website for prices	3	14%
good relationships w/log builders	2	9%
more timber for small capacity	1	5%
succession planning	1	5%
database w/active loggers	1	5%
legal advisor	1	5%

Comments below are illustrative.

- *We've talked about a cooperative approach between community forests, between woodlots. That's a tough one just because the logistics have to line up and the timing has to line up. I think there's almost capacity issues that makes that really hard to pull off, except in limited circumstances.*
- *We build it through communication. We build it through association building, more conversations. We build it with good relationships with log buyers. Taking the long view sometimes. And we could definitely build it if there was more timber dedicated to small tenures, capacity would be built…. It would create way more opportunities in the marketplace and would make more timber more competitive. And would help on the pricing side.*
- *We just need to be connected. The other way we can support each other is to look at options in terms of grouping cut and selling our logs communally, getting higher value, higher volume sales available.*
- *Support young people coming in, to support new – not necessarily young but new loggers…. And that succession planning piece.*
- *Thanks to one or two honest people who know the conversion factor… and how these log buyers manipulate the price they give you, through the conversion rate, I've been able to negotiate higher conversion rates and get better prices because I have that knowledge…. They need to teach someone about [*conversion rates*] so they have an understanding about it.*
- *The creation of a database with reputable and qualified logging contractors with a fully qualified crew… which would include their specialty whether they're… a clear-cut guy or select operator. And their equipment size and capability.*
- *Creation of a legal advisor. And something like in the Woodlot Almanac, we have a stumpage advisor both for the coast and for the interior…. It would be nice to have somebody that you could phone up or email them and say hey, this is the situation. What's going on here? And he would give you the generic advice.*

When asked for suggestions to better support small fibre suppliers and log sellers, the main point of agreement (34% of responses) was to increase networks between loggers and increase access to small contractors via association building, or a website. Likewise, 11% suggested that small fibre suppliers band together to counter the outsized impact of the large sawmills. Nine percent each (9%) stated that small fibre suppliers could use 1) additional training to diversify their operations, and 2) positive marketing and media pieces.

Seven percent of responses indicated that they would like to see value-added enterprises in logging communities and government incentives to get these up and running. Two respondents (5% of responses) indicate that small loggers need better access to market pricing information. And finally, one respondent each (2% of responses) stated that small fibre suppliers and log sellers can be supported with: 1) the implementation of a small-scale salvage program, particularly to deal with bark beetle harvests; 2) a sliding-scale stumpage rate; 3) a fund for payment when small mills don't pay log sellers; 4) access to a forest policy advisor; 5) more equipment; 6) more volume; 7) training large tenure holders to work with highly trained, small local crews on fire mitigation and using Community Forests to introduce/try the new small-scale salvage approach used in Europe; 8) fee-forgiveness, or support from the government to protect Canadian logging; 9) support in dealing with the Old Growth deferrals and subsequent loss of land use; 10) management/business support for small producers; and 11) rate increases to keep pace with the cost of doing business. Results are in **Table 31**.

Table 31: Suggestions to Support Small Fibre Suppliers and Log Sellers

Do you have any suggestions for how we can better support small fibre suppliers/log sellers?	N = 22	%
networks between loggers, access to small contractors, communication/website	15	34%
group together to counter "large sawmills"	5	11%
training	4	9%
marketing/positive media pieces	4	9%
value-added enterprises in each community, government incentives to get new businesses up and running	3	7%
better access to log market info	2	5%
implement "trap" tree program for bark beetle, small-scale salvage	1	2%
sliding-scale stumpage for salvage	1	2%
fund for payment when small mills don't pay	1	2%
access to forest policy advisor	1	2%
more equipment	1	2%
more volume	1	2%
larger tenure holders work w/highly trained, small local crews on fire mitigation, use Community forest to introduce/try new stumpage approach using European equipment	1	2%
fee-forgiveness	1	2%
deal with Old Growth deferrals and loss of use issues	1	2%
management support for small producers	1	2%
rate increases	1	2%

Comments below are illustrative.

- *Well that repository would be a good place to go and access a lot of that information that people need. Like if it's a little mill, [and] they are looking for a certain kind of log, they can go to that and check and say, OK, who's logging? And they can phone them up and say, have you got some wood for that?*
- *That goes back to… a contingency plan that would cover people who are not getting paid. And that would all tie in together. It would make the small scale operators much more efficient and much more reliable.*
- *Implement a trap tree program in the district for bark beetle. And have a sliding scale stumpage depending on volume, because that way then we'll get a bunch of little guys*

back working again. And that small scale salvage program was a training ground for a lot of our bigger contractors today. And we're missing that link now. We don't have a place where small people can get started.

- *Association building. Communication. Outreach. Business training. Discussion about business…. Cultivating linkages between similar players, like woodlots and community forests.*
- *Fibre suppliers and log sellers create markets for them, and opportunities for value-added are the most important things. And create networks and start working together and not be so individualistic…. And learn that we have the logs, and we have the wherewithal to support a much stronger, smaller fibre supplier industry. We just have to work together.*
- *Trying to set up something in each town or CFA to do a little bit of milling would be cool, but more ways to do value added for each CFA or wood lot, it would be neat. And if we had someone helping on the marketing end, whether domestic or in the States, then we could all do each product or work together on products and have an avenue to sell them through.*
- *There's been talk of buying a firewood processor, and maybe we could all share one of those instead of sending pulp to the pulp mill. There's been talk of trying to merchandise, even buying pulp… reselling those, fire wooding what we can and then sending the rest to the pulp mill. So, just trying to do more with the logs.*
- *Better support would be to have more hook trucks. Because that's the way you're going to get your wood moved in smaller amounts.*
- *What if [the Ministry] were to give those difficult operating areas to contractors [*who*] can specialise in that and become highly specialised, and work in these areas?... The government's got to give up it's timber stumpage on that, but it allows us to thin and treat these decadent or dog's hair areas that we need to treat, or we're going to lose it anyways. Train highly specialised small crews that either live in the area or are directly from the area, and that is all they do…. We're basically logging for a different reason and objective.*
- *You get a fire and it's more pressure. And then you get an old growth deferral, it's more pressure. And then you get somebody saying you know what, I want to park here. Well, it becomes economically not viable to keep buying and trading log from eight hours away to make your mill run…. We've got the mills in place that are begging for fibre. We've got small-town people, small-town working areas. We've got a relatively stable contractor base. We've got highly skilled specialised logging crews. We just need to redirect them. And we need a little forgiveness from the government in terms of their fees.*
- *We want to increase our profile, volume and quality in the stand, and we also want to protect our communities at the same time. The only way to do that is to thin. So why are we not pushing this big time?*

- *There's an awful lot of people with little mills around now.... But having capacity of having smaller mills around to make trim wood and door stock and stuff like that out of those speciality logs because it's actually a darn shame to send some of that wood to a commodity mill and them just have it run it through the mill and make two-by-fours out of it.*
- *It would be really nice if there was a database where there was somebody coordinating the whole thing.*
- *A little bit more recognition. Information goes out with a lot of associations and the federation a little bit, but it's glazed over the good practices that are done in woodlots that you know, 80 percent of people don't know about.*
- *We're going to see these different policies that really want more attention on the landscape and less of a clear-cut implant. It's the management of the backyards of these indigenous communities and rural communities [*that's*] in the spotlight more than ever today.*

Small Wood Manufacturer Data

Average Annual Fibre Consumption

As noted previously in the STH data (**Table 9**, pp. 21-22), respondent data shows the majority of the fibre sold in the Kootenay-Boundary region is sold to large sawmills. Only 13% of fibre is sold to small manufacturers

Eleven (11) SWM participants participated in some form: two pole manufacturers; one post and rail facility; and eight small sawmills. All of the participants currently acquire fibre from other sources in addition to the unallocated supply listed in the STH dataset. For instance, the annual CW consumption data below (**Table 32**) is 128% higher than the SWM holding AAC. There is a significant demand for CW across the southern interior which is reflected in the average sawlog pricing chart previously presented in **Figure C**.

Table 32: Average Annual Fibre Consumption Small Wood Manufacturers

Facility Type	**CW** (m^3/yr)	**FD** (m^3/yr)	**HW/BG** (m^3/yr)	**PW** (m^3/yr)	**MX** (m^3/yr)
Pole Manufacturers	90,000	0	0	0	0
Post and Rail	26,000	0	0	0	0
Small Sawmill	15,707	5,014	1,728	120	1,000
Total:	**131,707**	**5,014**	**1,728**	**120**	**1,000**

Historic and Current Fibre Pricing

The fibre costs submitted from the SWM participants reflects that of the STH participants and can be referenced in the ***Historic and Current Fibre Pricing*** data in the preceding presentation of STH data.

Current Manufacturing Capacity

Respondents provided variable and inconsistent data to examine manufacturing capacity. Thus, researchers do not have enough information to be able to present the results with any relevance. However, it is worth noting the majority of participants did mention that they could, and would be positioned to, increase their capacity given an increase in the consistency of fibre supply.

Wood Products Produced

When asked to describe the type of product they produce, a majority of respondents described producing dimensional lumber and timbers from their fibre supply. However, a few sawmills manufacture their lumber into additional products, adding value into some of the secondary and tertiary products listed below. One sawmill is equipped with a small kiln, which enables them to dry products for specific customer needs. The kiln also enables the business to produce molding, siding and flooring products, which adds significant value to the fiber acquired.

One participant has curtailed custom cutting activities and now only focuses on the core business of timber framing, as the fibre supply is insufficient to meet both activities. Another participant described how the recent Old Growth deferrals have drastically impacted their business and essentially cut off their supply of fibre overnight. Results are in **Table 33**.

Table 33: Range of Wood Products Produced

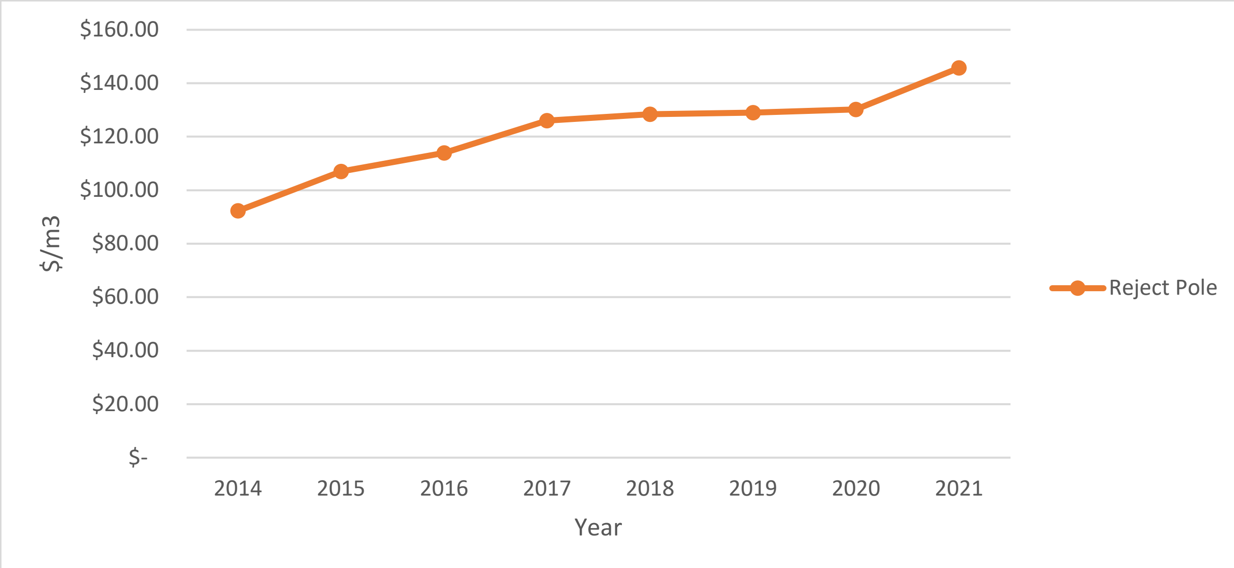
Facility Type	Primary	Secondary	Tertiary	Bi-Products
Pole Manufacturers	Pole	Reject Poles	Hog	Sawdust
Post and Rail	Post & Rail	Shake & Shingle	Bark mulch	
Small Sawmill	Dimensional Lumber & Timbers	Custom-cut Live-edge & Slabs & Furniture Post & Beam Homes	Flooring Siding Ceiling Planks Trim Timber Frame Homes	Firewood Chips Hog Sawdust

Selling Price of Wood Products

Researchers asked respondents to list the selling prices of their wood products over the past ten years. Similar to the data issues with manufacturing capacity described above, respondent data was highly variable and inconsistently provided. Thus, researchers do not have enough information to be able to present the results with any relevance

Respondents did not provide current pole pricing. However, one respondent provided their last 8 years of reject pole pricing (**Figure S**).

Figure S: Reject Pole Pricing



Current participant pricing for post and rail was $8.00/piece. Shake and Shingles was $1,733/cord in 2021 and currently is sell for $2,500/cord. Secondary product pricing for Chips was submitted as $40/BDU and for Hog it was $30/tn.

Current respondent pricing for lumber and timbers was also variable and is detailed below (**Table 34**). This data can be compared **Figure I** and **Figure J** presented previously.

Table 34: Dimensional Lumber and Timbers Pricing

Product	Selling Price (per mfbm)
CW 1" Boards	$1,500
CW 2" Boards	$2,000 to $3,500
CW Fence Panels	$3,200
CW Clear Boards	$3,500
CW Timbers	$2,000 to $2,750
FD Boards	$2,000
FD Timbers	$2,000 to $3,250[25]
FD FOH[26] Timbers	$2,800 to $4,000
CW and FD 6X6	$3,500
CW and FD 8X1	$4,500
CW and FD 12X1	$5,000
BG and HW 2X8 2X10	$1,200
BG and HW 2X6 4X4	$1,300
BG and HW 8X8 12X12	$1,500

[25] Pricing is reflective of the size of the timber.
[26] FOH is free of heart.

Product	Selling Price (per mfbm)
Live Edge	$500/piece

Small Wood Manufacturer Interviews

Small manufacturers were interviewed to follow up on the data submissions that they provided to researchers and were designed to assess their current capacity to optimize value from their log products, utilize/minimize waste, and increase harvesting/manufacturing efficiency. From the list of twenty identified manufacturers, two participated informally over the phone, eight participated in formal interviews, and six submitted data.

Facility Level of Integration

Respondents were asked to describe their facility's level of integration, and what happens to the wood fibre they purchase. Seven respondents state that they use all of the wood fibre they purchase. Two respondents (15% of total responses) indicated that they are a primary breakdown facility, using all wood fibre that comes to them. One respondent each (8%) stated that they 1) trade reject poles with other regions; 2) sell short pole lengths (<8 feet) to mills; 3) use or sell off-grade, non-manufactured wood for firewood; and 5) burn unused, unsalvageable wood. Results are in **Table 35**.

Table 35: Wood Manufacturer Facility's Level of Integration

What is your facility's level of integration; essentially what happens to wood fibre you purchase?	N = 8	%
use it all	7	54%
primary breakdown facility	2	15%
reject poles are traded w/other region - primary breakdown facilities	1	8%
sells short pole lengths <8 ft to small sawmills	1	8%
off grade, non-manufactured wood becomes firewood	1	8%
burn unused wood	1	8%

Comments below are illustrative:

- *We get some wood off of our own tenures, but the majority is used to trade for fibre to feed [the community mill]. Essentially, we peel the bark off of logs that are decently straight and have the qualities native for a utility pole, and we buck them to certain lengths based on their specifications and engineering standards and they get ready to go and be shipped to a treating plant…. Any reject that's of merchantable lengths we turn around and sell that either back to those that sold us the fibre or to small mills…. We try to use some of that wood for trade when we can, and otherwise we just try to support local manufacturers with it.*
- *We will take the log, we will put it on the mill, mill it into either boards or timbers, depending on the quality of the log, and use it to its utmost use.*

The manufacturers interviewed produce a wide range of products for a variety of different markets. The most common product (27% of responses) is local lumber, timbers and beams sold to BC and Alberta contractors. Twenty percent (20%) of responses stated that they send lumber to secondary producers for treatment before being sold. Two manufacturers (13% of responses) stated that they produced utility poles. And one manufacturer each stated that they use their wood fibre for 1) shipment out of the region; 2) benches; 3) split rail fencing; 4) slabs; 5) trim, moulding; 6) landscaping supplies such as mulch. Results are in **Table 36**.

Table 36: Value-Added Wood Manufacturing

Adding value and manufacturing to what?	N = 8	%
local lumber sales/timbers and beams, for BC/Alberta contractors	4	27%
treated wood product	3	20%
utility poles	2	13%
shipments out of region	1	7%
benches	1	7%
split rail fencing	1	7%
slabs	1	7%
trim, molding	1	7%
landscaping	1	7%

Comments below are illustrative

- *We have a kiln that holds about 2,000 board-feet of lumber, 1-inch and 2-inch primarily, that is turned mostly into flooring, soffiting and baseboard and window trim, etc.*
- *We're primary break down. We break down into rough green lumber and timbers. We have the ability to dress timbers, so we do S for S green as well as S for S standing dry. We've partnered with two large remanufacturers in the lower mainland. And they're set up to kiln dry and add value on the finishing side.*
- *You know we've got a following of contractors to builders in local areas, so a lot of that stuff is staying local. And for some reason a lot of it ends up – I do get a lot of customers from the lower – Alberta and Calgary and Lethbridge area.*
- *If it's clear enough, we would then make it into a shake block or a shingle block. But a lot of the stuff that we make is way too small to make into shake or shingle, and so it's more second growth wood that's growing at the wrong elevation, and we manufacture it into a split fencing product.*

Markets and Log and Lumber Pricing

The typical buyers of manufactured wood products vary. A large number of responses (38%) indicated that they sell to the open market throughout North America. Five responses (31%) stated that they sold locally to end-users. Thirteen percent (13%) sell directly to contractors. And

6% each state that they 1) collaborate with timber sellers to share wood purchases to meet different needs; 2) sell to retail stores; and 3) never sell to the U.S. Results are in **Table 37**.

Table 37: Typical Buyers

Who are the typical buyers of your products?	N = 8	%
Open Market, North America	6	38%
local, end users	5	31%
contractors	2	13%
Collaborate w/timber sellers	1	6%
retail stores	1	6%
never U.S.	1	6%

Comments below are illustrative:

- *We have probably five hundred regular customers that will order ten loads a year, some of them will order a load every second year. But we have quite a few customers and it is spread out all across North America.*
- *I supply to some end users. Those would be probably landscapers that actually buy from me. And then I also supply quite a few stores who then it would sell it to smaller landscapers.*
- *Most of our buyers are either local contractors and homeowners, or else we also supply quite few builders in Kelowna with specialty products.*
- *We can sell everything that we can touch. I'm going to say that probably it took us ten years of finding the right people to work with, but once you find the right people to work with, we've remained loyal to them, they've remained loyal to ourselves and I think that's the biggest thing that any small independent lumber manufacturer has to do. To be trying to market and move your product to more than five customers taking 90 percent of your production. Way too much risk and way too much energy and cost associated with getting those products to the end users.*

Not all manufacturers are reaching their potential buyers. Out of the four responses to this question, only one response stated categorically that they are reaching their potential buyers. One stated that in a good year, they could reach buyers, and two stated that they are not reaching potential buyers. Results are in **Table 38**.

Table 38: Reaching Potential Buyers

Q12a. Are you reaching all your potential buyers?	N = 4	%
no	2	50%
in a good year	1	25%
yes	1	25%

More than half of responses (57%) stated that they could use support in reaching potential buyers. Forty-three percent stated that they did not need support (**Table 39**).

Table 39: Need for Support

Q12b. Do you need support?	N = 5	%
1=yes	4	57%
2=no	3	43%

If support were offered, 50% of responses indicated that they needed help with expanding operations. One-third (33%) indicated that they would like to see a lumber/log exchange/ marketing board website to facilitate sales and collaboration. One response stated that they'd like to see small mills collaborating to fill large orders. Responses are in **Table 40**.

Table 40: Type of Support Needed

If so, what would that look like?	N = 4	%
expansion	3	50%
lumber/log exchange/marketing board website	2	33%
small mills collaborating to fill orders	1	17%

Comments below are illustrative:

- *We're lacking [a] market board or something like that [*where*] I can look up, "Oh, they need this over here…." Some kind of website [*that shows*] "Joe Blow is looking for cedar decking for a wharf, willing to pay this much." Some kind of website you can go to…*
- *We want to expand the operation and grow it obviously; you know that would be where some assistance could come in, and I have been starting to talk to some equity guys and whatnot, but we'll see where that goes this year.*

Participants obtain information on log markets from a wide range of sources. Twenty-two percent of responses (22%) indicated that no one gives them information on log markets. The same percentage, 22%, get their information from their competitors or get information from the local large sawmills. Single responses were received stating: 1) they take the prices they can get; 2) they get pricing from an industry newsletter; or 3) they get pricing information from log suppliers. Results can be found in **Table 41**.

Table 41: Source for Information on Log Markets

Where do you go to get information on log markets?	N = 7	%
no one	2	22%
large sawmills (local)	2	22%
competitors	2	22%
take what's offered	1	11%
industry newsletter	1	11%

log suppliers	1	11%

Comments below are illustrative.

- *Yeah, I'm lacking there. You know, a guy like [name] just pretty well tells me what I'm going to have to pay and that's it. I'm a pretty trustworthy person and I just rather would – you know just get on with it and get the wood and keep going. I specialize in a lot of what I'm doing. I learned my lesson during 2008 when the market crashed, and I don't do anything that is tied to that commodity market.*
- *I do get other loggers once in a while, phoning me asking me what I'm paying. If there was a way to find out what the market is, kind of where I fit into it; that would help for sure.*
- *I talk to the guys I compete against. Nobody wants to split up log and nobody wants to be pissing the guys off that you compete with. So you just say hey look, you know what are you guys paying right now? How are you guys sort of logged? And I think there's a lot of respect amongst the local guys who compete for the same fibre…. Everybody knows that the competitors that may be running the same species aren't necessarily producing the same products. And there's been a strong understanding over the last ten years that what log doesn't work for us is better suited to our competitor…. And it's been reciprocated the last ten years as you know, the log that doesn't work in our competitor's mills often finds it's way into our yard from just word of mouth and recommendations supplied by the competition.*

When prompted to describe who they talk to when seeking out lumber pricing, results are similar to the above list. Two respondents (29%) stated that they talk to log buyers. One response (14%) each indicated that small manufacturers talk to: 1) loggers; 2) government reports/websites; 3) WoodX, an online subscription database; 4) truckers; and 5) woodlot owners. Results can be viewed in **Table 42**.

Table 42: Who To Talk To for Log/Lumber Pricing

Who do you talk to?	N = 4	%
log buyers	2	29%
loggers	1	14%
government reports/websites	1	14%
WoodX	1	14%
truckers	1	14%
woodlot owners	1	14%

Comments below are illustrative.

- *WoodX is there, and you can go through there and it tells you the averages of stuff in that, but it's almost 400 bucks for a year for a subscription. It gives you kind of a ballpark what people are paying for timber sales and stuff like that.*

- *Being a log buyer, I'm always in close contact with other buyers and we have industry partners that we work with and grade partners. So just basically through conversation you can get a really good idea of where markets are at.*

Utilization and Waste Reduction Efforts and Products

The interviewed manufacturers have concrete ideas to add value to wood fibre and reduce waste. Though three respondents stated that they couldn't add value or reduce waste because they already use it all, respondents provided nearly a dozen suggestions to add value or reduce waste. Two respondents indicated that they've had people approach them to ask about using short wood lengths for fence posts or split rail fencing. These respondents believed that there could be a market for fencing, though possibly prohibited by the cost for trucking small lengths.

One respondent felt that if there were an open marketplace, such as a website, on which under-utilized wood, with pricing, were listed, that could add value. Another wanted to see a firewood processer on site at the mill to recover 100% of their fibre. Other ideas for adding value to wood fibre and reducing waste were: 1) open up stands of beetle-killed old growth for harvest; 2) use sawdust for animal bedding; 3) using rotting wood fibre for maggots to sell to fisherman; 4) create an outlet for hog and bark now that open burning is prohibited; and 5) train fibre suppliers to better recognize the potential of raw logs and maximize wood usage. Ideas are listed in **Table 43**.

Table 43: Ideas to Add Value to Wood Fibre and Reduce Waste

Do you have any other ideas to add value to wood fibre and/or reduce waste?	N = 8	%
no/already use it all	3	25%
fence posts	2	17%
open marketplace	1	8%
firewood	1	8%
open up old growth beetle kill	1	8%
animal bedding	1	8%
maggot growing	1	8%
outlet for wood waste	1	8%
train fibre suppliers to better recognize potential for raw logs	1	8%

Comments below are illustrative:

- *… like nowadays you can get rid of everything, right? You know, if there was some – the same idea as the marketing board, if there was a wood board.* [CFA name] *they sell their slabs, they bundle them, and people come and get them all the time and they never have a problem with waste, right?*
- *We need to deal with our side flitch because we're essentially just burning it, and that's a lot of low hanging fruit. That's probably 30 percent of your wood fibre right there, off the side flitch, so we want to build a machine where that side flitch comes off the mill,*

goes down a conveyer and then slides through a saw with a stack of saws set at 14 inches, essentially making firewood, right?

- *Our mill has created a whole market out of our waste. Without the value of the waste, our mill could not exist. We do everything from bagging bark mulch, bagging wood chips, baling bark mulch, baling wood chips. Everything that actually comes into the mill is sold; literally every piece of wood, whether it's bark, rot, everything is sold.*
- *Maggot growing is gone because there's no fishing left. But in the fishing days I used to give away a lot for maggot guys.*
- *The single biggest need is an outlet for wood waste, whether it's somewhere for slabs to go, for small manufacturers that don't have the ability to chip. Definitely needs somewhere for sawdust and bark to do. When we started we had the option of open burning. Now that's gone. And anybody in primary breakdown, they definitely need an outlet for their waste product and their biproduct.*
- *If the forestry side, the guys that are delivering round logs had a better understanding of what a good deck or specialty sawmills looked like, that would definitely be something that would be worthwhile.... Educating and training the forestry side of the industry ... I think that's probably one of the biggest weaknesses we have between market loggers and specialty manufacturers. It's ... the same conversation we have every time we talk to this individual about buying wood - just because it's big doesn't mean it's worth $300 a cubic meter.*

When asked if they needed support to add value to wood fibre and to reduce waste, only one manufacturer (14%) said no. Three (43%) said that they needed additional equipment. One each (14%) stated that 1) they need marketing support; 2) more fibre needs to be made available to small manufacturing; and 3) they need advocacy. Results are in **Table 44**.

Table 44: Support Needed

Do you need support? And what would that look like?	N = 4	%
yes, equipment	3	43%
yes, marketing	1	14%
more fibre needs to be made available for small manufacturing	1	14%
no	1	14%
yes, advocacy	1	14%

Capacity

To assess current capacity for expansion, participants were asked about their level of readiness to increase capacity. In total all participants, except one respondent who indicated that he was winding down his career, stated that they were ready to increase capacity. One-third of respondents (33%) stated that they were ready to increase capacity without condition. However, another third (33%) stated that they needed access to salvage or wood fibre. Thirteen percent (13%) stated that needed more equipment before they could increase capacity. Seven percent

(7%) each stated that they: 1) couldn't compete with the large sawmills; or 2) needed reliable labor. Results can be viewed in **Table 45**.

Table 45: Level of Readiness to Increase Capacity

What is your level of readiness to increase capacity?	N = 8	%
need access to salvage/fibre	5	33%
ready to grow	5	33%
need more equipment	2	13%
can't compete with large sawmills	1	7%
winding down my career, not looking to increase capacity	1	7%
need reliable labor	1	7%

Comments below are illustrative.

- *Well, I'm 65 years old…. I don't think I have any desire to increase capacity.*
- *We are scrambling, trying to figure out a solution that we can keep our guys employed doing something…. I saw the writing on the wall about five months ago. I bought a small industrial version of a sawmill, and I thought, all of a sudden there's no old growth, so I'll start buying saw logs and can utilize part of that saw log in my post and rail plant, and the sounder part, I can run it through myself and make lumber out of it and cants and timbers.*
- *Is it the best use of the community forest's tenure and money, and is that what they are set up to do, to make every dollar they can and reduce the taxes of the community, or give it away as little grants, or whatever? I don't think so; I actually don't think that's what their initiative is, and that's why I think, maybe if I get something set up that's efficient, they will see a bigger picture and be interested in doing that.*
- *I'm hoping I can maybe get wood from our community forest and put maybe a little bit of pressure on our local community forest, that maybe some of the logs, instead of selling them to the large major sawmills … And maybe I could put a little pressure on them to say, "hey, I think you need to supply a mill in [community name]. It's called the [community name] community forest, maybe that means it should actually give the mills in the [community name] area first right of refusal on the wood.*
- *And it's also labor. It's hard to find people that are solid that want to work in the yard.*
- *If we had twice as much fibre available we could be running two shifts. If we had a comfort level with fibre supply we'd probably put $2 million into a new edger and an optimized edger line and the ability to sort of minimize the manning we need to run our mill…. It's just a matter of the fibre being available.*

Researchers asked participants if they knew of potential partners and/or supporters of small manufacturers who might be interested in increasing the capacity of small manufacturers. Three respondents (38%) stated that partnerships in this business don't work out or they can't trust anyone. One response each stated that the following might be potential partners or supporters: 1) community forests; 2) First Nations; 3) small loggers; 4) competitors; and 5) coastal businesses that have been slowed down by Old Growth deferrals. Results are in **Table 46**.

Table 46: Potential Partners to Increase Capacity

Do you know of potential partners and/or supporters of small manufacturers who might be interested in increasing the capacity of small wood manufacturers?	N = 7	%
can't trust anyone; in this business partnerships don't work out	3	38%
community forests	1	13%
First Nations	1	13%
small loggers	1	13%
competitors	1	13%
coastal businesses slowed down by Old Growth deferrals	1	13%

Comments below are illustrative.

- *Yes. So, I've actually kind of pinpointed the community forest as a long-term log supply, and a perfect person to partner with, because they no longer give out tree farm licences. In fact, what they're doing is, they're giving the tree farm licences to community forests, so that's the natural person to try and partner with, and thus that is part of my goal in the next few years.*
- *I've learned over time not to have partners. Just doesn't end well.*
- *[name] could have sold that wood to [city]. He had a buyer in [city] but he says "No, I'm going to sell it to you." That's what he told me. Number one, I pay better. I pay as soon as that truck gets here. The cash is in his hands.*
- *You just got to really watch who you deal with in this environment here. That's why I do it locally; I always get paid.*
- *Our two brokers, we've already had conversation that they're concerned that they have to shift their focus from coastal suppliers to interior suppliers that aren't going to be as impacted by the Old Growth deferrals…. They see a major shift coming to their suppliers and they're already supportive of stronger, long term partnerships to get them the rough green fibre that they require to service their customer base globally.*

Barriers and Obstacles

As a follow up to questions of capacity, researchers asked participants what obstacles affected their ability to increase capacity or grow their businesses. As with the STH, this question prompted lengthy discussions and the greatest number of responses.

The greatest percentage of responses, 20%, stated simply that small manufacturers can't compete with the large sawmills in the area. An additional 17% indicated that a lack of a consistent fibre supply affects their ability to grow. Four responses (13%) stated that there were too many mills for the wood quota, which again, leads to an inadequate fibre supply.

Three respondents (10% of responses) stated that not having a common marketplace to determine the price of logs/lumber and consequently not knowing what to charge is an obstacle. Another 10% stated that uncertainty around Old Growth deferrals have decreased the availability of open market fibre.

Two responses each (7%) indicated that: 1) the economics of wood manufacturing depended on national and international economics that limited the buying power of end-users; 2) fibre supply may be compromised as tenures are moved to First Nations; and 3) there are few small loggers working on private land, and since there are only large contractors left, wood fibre gets sold to the large sawmills.

Finally, one respondent each (3%) stated that they faced the following obstacles: 1) business savvy and capital for equipment purchases; 2) an end-use product that is easily marketed and sold; and 3) bureaucracy. Results can be found in **Table 47**.

Table 47: Obstacles to Increasing Capacity

What are the obstacles facing you and/or other small wood manufacturers to increase capacity or grow your business?	N = 8	%
large sawmills – can't compete	6	20%
log supply	5	17%
too many mills for wood quota	4	13%
price of logs, knowing what to charge, need common marketplace	3	10%
old growth deferrals	3	10%
economics of wood manufacturing against buying power of end-users	2	7%
tenures moved to First Nations	2	7%
no small loggers left	2	7%
business help, capital, equipment purchases	1	3%
no end products, need to make end products	1	3%
Bureaucracy	1	3%

Comments below are illustrative.

- *You can't go to [name]… and go, "For your logging can you throw me two loads off to one side?" Before you used to be able to do that, but you can't do it anymore because the mills want it now, right? They want that primo log, right?*
- *You can get the logs if you want to pay more than what the log's worth, but the problem is there's no small operators doing private land; all those guys are gone. They pretty well have mechanized everything, right?*
- *Because there's only three or four big mills in this area, they're going to squish you like a bug as soon as you get a certain size.*
- *As soon as you want to expand…* [and] *decide you want to break into the cedar end of it or the fir end of it, there's a truckload here and there but as soon as you start to put*

out four or five truckloads you won't get a truck. They'll phone their broker, whoever the guy is buying the wood and say, "Hey, don't buy it off that guy anymore or else you're going to lose our partner."

- *I've got a good crew. It's implementing the equipment and it really boils down to capital.... I probably need an equity partner and an accounting firm, so that I can focus on running the business. Somebody else can keep on top of the money side of it and keep it all upright. I've run a couple of companies and it's tough to do it all.*
- *Right after that decision was made, and there were no more timber sales, I thought, well, I'll bid on a timber sale that has smaller second growth, at which point in time all of the majors with large timber licences bid so aggressively on them.*
- *That's part of the challenge for anyone starting a sawmill anywhere. The sawmills that are long-time established all have tree farms of some form or fashion, and they can outbid any small guy getting started off. And if they really want that wood fibre, they can squeeze him out of the marketplace so easily….*
- *Economic outlook, which could easily turn people's attention away from purchasing wood to work on their house, to mainly just get by and pay their bills. When gas goes to two bucks a litre here, it's going to get ugly. And when groceries go up another 10 percent, that's going to get worse. And when everything from soups to nuts goes up, that's going to top the icing on the cake and you're going to have 10 million people in Canada broke and under water. They won't be able to pay their bills.*
- *What our BC government has done is really forced all the larger licensees to feed their manufacturing facilities with the timber that they have. That they would normally sell to a value-added producer, right?*
- *We're going to see tenure flowing to First Nations and maybe at the same time as cedar being reduced…. We just need the fibre; we need access to the fibre, it doesn't really matter to us who owns it. We just need to be able to buy it.*
- *It used to be a big part was not having that one cutting permit, to go into a certain zone. If you noticed, "Oh, it looks like the beetles are hitting this area hard. We should chase it." But then all of a sudden, "Oh, no. You've got to apply for another…." Some of it's just more bureaucracy and red tape and money…. If you're doing a good job, you should just be allowed to go around your area, taking care of it the best, and it's all in our best interests. It's our backyard, literally, like our backyard.*
- *Because of the Old Growth deferrals there's areas that have been temporarily chopped out of their fibre basket where we would [*normally*]be able to get wood from. That is now not available. And because there's less wood, there's more competition for it, and everybody's throwing in. Competing for that log is more difficult.*
- *Fibre. It's that simple, is 80 percent of available fibre is allocated to one or two sawmills out of the you know, 30 manufacturers that need it.*

Suggestions

When asked how utilization of purchased fibre can be improved, nearly one-quarter (23%) of responses stated that it can't because they've maxed out their value-added capacity. Fifteen percent (15%) indicated that: 1) when they do salvage, they sell poor quality logs and keep the premium ones; and 2) that they could reduce costs/wastes by finding an end-use for hog/sawdust.

One response each (8%) indicated that utilization of purchased fibre can be increased by: 1) obtaining premium logs from large sawmills instead of poor quality; 2) opening a mill for custom work to create specific project packages for end-use customers; 3) knowing the final product type and destination to best match fibre being sold; 4) offering waste to local end-users; and 5) running a firewood processor to create firewood from small lengths. One respondent didn't know any ways to increase utilization. Results are in **Table 48**.

Table 48: Suggestions to Increase Utilization of Purchased Fibre

How can utilization of your purchased fibre be improved?	N = 8	%
Can't. We've maxed out value-added	3	23%
in doing own salvage, sell poor quality logs, keep premium logs	2	15%
reduce costs/wastes by finding end use for hog/sawdust	2	15%
obtaining premium logs from large sawmills instead of poor quality	1	8%
open mill for custom work to create specific project packages for end-use customers	1	8%
know final product type/destination	1	8%
give away waste to local end-users	1	8%
don't know	1	8%
firewood processor	1	8%

Comments below are illustrative.

- *I don't think we could utilize it any more than it's already being utilized. Every single thing goes to its highest value, and that's how we've been able to be successful. Literally everything that comes to the mill is created into a form that we feel is the highest value.*
- *When I get a call, I* [ask] *"What are you using it for?" so I can get the lowdown on what they're using it for, what kind of grade they can get away with. If they don't need number one, I don't want to rope them for a pile of money they might not want to spend.*
- *I give everything away I can. I got a guy comes in, gets all my slabs, the ones I don't want. He's probably got 10 lifts in his yard down there and he just sells them to people that run out of cedar or run out of kindling and stuff and firewood in the middle of winter in [town]…. It gets out of my hair and all I'm left with is the bigger slabs, right?*
- *A firewood processor is the next step locally here, which unfortunately puts probably a lot of people* [at risk]*, because a lot of people rely on that as their income too.*

- *So we're utilizing 83 percent of the fiber that we bring in. 17 percent of the remaining fibre is chips, hog and sawdust.... out of the 17 percent, 10 percent goes into chips. So that puts us at about a 90 percent utilization out of every cubic meter of log and that leaves us 10 percent in sawdust and hog that we don't have an outlet for. There's a definite need for somewhere for hog and sawdust to go to maximize the utilization of every cubic meter we produce.*

When asked how to create connections and cooperation, 40% of responses indicated that businesses should stay local and support local producers. Another 40% stated that small manufacturers needed a lumber/log exchange and marketing board website. Twenty percent (20%) stated that they didn't know how to create connections and support. Results can be viewed in **Table 49**.

Table 49: Support Needed to Create Connections and Cooperation

How can we support one another to create connections and cooperation?	N = 4	%
stay local/support local producers	2	40%
lumber/log exchange/marketing board website	2	40%
don't know	1	20%

Finally, small manufacturers offered suggestions to better support SWM. Six respondents, or 33% of responses, stated that small loggers needed support through the salvage and small tenures program, including holding quarterly meetings to establish a consistent wood fibre supply. Seventeen percent (17%) indicated that manufacturers need established markets or a fair shot at markets that are dominated by large producers.

Two respondents (11%) stated that: 1) loggers need to stop sending premium logs to large mills; 2) the province needs to clear up the uncertainty in the market created by the First Nations and Old Growth deferrals; and 3) the BC Timber Supply system is broken and geared towards sawmills that can consume all the volume, eliminating opportunities for small players to focus on one primary product.

Finally, one response each (6%) indicated that 1) there should be a lumber/log exchange and marketing board website; 2) there needs to be protection for loggers selling to small manufacturers who don't pay; and 3) there needs to be a credit system or Category 3 sales for smaller amounts of fibre. Results are in **Table 50**.

Table 50: Suggestions to Better Support Small Wood Manufacturers

Do you have any suggestions for how we can better support small wood manufacturers?	N = 8	%
support small scale loggers through the salvage and small-tenures program and quarterly meetings	6	33%
establish markets	3	17%
stop sending premium logs to large sawmills	2	11%

clear up uncertainty in market regarding First Nations and Old Growth deferrals	2	11%
BCTS is broken	2	11%
lumber/log exchange/marketing board website	1	6%
protection to ensure payment	1	6%
credit system or Category 3 sale for smaller amounts	1	6%

Comments below are illustrative.

- *The system needs to change. It needs to be a smaller block, more geared towards the value-added guys so that we can have a better shot at it. Because [*in*] those cat 2 sales you have to be able [*to*] consume that amount of wood.*
- *If we can start pulling out the premium wood, instead of sending it down to [*business name*] and grinding it all down to 2 x 6. I mean even the same with [*second business name*]. Why put a really nice tight grain Fir, you know with a 34 inch diameter on it, through that mill, instead of sending it off so that it can be part of somebody's house?*
- *If you guys are starting to talk as woodlot owners then we should all be talking, you know from the small mill to the woodlot owners, even just having a quarterly meeting…. and getting us involved in those discussions.*
- *That's the problem at the other end. Sure, they'll say they'll take it, but will they pay you on time or at all?*
- *We need to clear up who owns what in this province and get everybody thinking about an industry that has a whole lot less uncertainty. Let's figure out who is going to own the timber. Who is going to manage the timber? We're talking about First Nations. Are we going to see, you know these Old Growth deferrals or are they going to be permanent, or what are we going to do for caribou? You know there are a number of different potential constraints out there and uncertainty as to who is going to own what.*
- *The industry as a whole is fairly hesitant to invest in the province. … We just need to get through this and figure out what's available, who are the players and how do we get the wood that we need? And if we can't … get the wood that [we] need [we're] not going to be around. What's the industry going to look like?*
- *More access to tenure for small producers. We consume about 10,000 meters a year. It would be a game changer for us if we had a tenure of even an annual allowable cut of four or five thousand meters. When [large sawmill] sold their [*large*] tenure to [second large sawmill]. Wouldn't it have been a benefit if they dropped off even 100,000 of that annual allowable cut and divided it up between 10 or even 20 small producers or manufacturers? It would make a massive difference to them whereas it's like a rounding error to a company like [second large sawmill].*
- *Our BCTS system, it's fairly broken. It's fairly geared towards the people that can consume all the volume…. We can bid on cat 2 sales, but a lot of the times your other people that have those cat 2's are bidding on behalf of somebody else. So you're bidding against all the same players anyway.*

- *I would like to see maybe a category 3 sale that is for smaller amounts. And I've said this to BCTS before – why do sales have to be 16,000 or 40,000 cubes? Why can't you have a nice little sale that's 3,000 or 2,000 that is more geared towards these specialty companies?*
- *I would like to see the government put more effort into sales that are geared towards certain manufacturers.... Why can't you have three small sales a year geared toward that? There's still healthy competition with three people bidding.*
- *Honestly, the biggest thing that you can do for a small wood manufacturer is to give him cost-effective logs on a regular basis that fits his size and marker requirements. Better support for small wood manufacturers. They need fibre. It's that simple.... probably 30 to 50 percent of what the majors run through their plant would be better suited in a smaller manufacture that could produce the equivalent cubic meters of finished product that brings in a premium of 200 to 300 percent of what a commodity mill produces.*

Section V: Discussion

This section provides a discussion of the results presented above. It is organized according to the categories previously listed:

- Log and Fibre Pricing
- Capacity
- Log/Fibre Utilization
- Barriers/Obstacles
- Partners and Supporters
- Suggestions

Log and Fibre Pricing

An examination of the log and fibre pricing provided by respondents and through government databases shows that prices received by respondents correspond closely to the Interior monthly log market data, with respondents reporting slightly higher prices on many species. However, respondents, particularly SWM, stated that they do not always know where to find accurate pricing information. Many stated that they would like to see an online marketplace such as a log and lumber exchange website featuring SWM lumber to be sold. The website could update log and lumber market info monthly and could be used as an exchange to reach more lumber buyers abroad.

Additionally, while pricing for sawlogs has risen steadily in the past ten years, the price for pulp has remained flat despite the fact that the costs of doing business – goods and services, fuel, contractor rates, etc. – have all increased throughout this time. An increase in pulp pricing would increase utilization by reducing the economic burden of shipping pulp to the pulp mill.

Log Fibre Utilization

Consistent access to log fibre is the most critical issue facing SWM and is also an obstacle for STH. Many of our STH respondents have stated that they have difficulties finding contractors who are willing to work on low volume harvests, so they are forced to harvest every five years in order to build up the workload for contractors.

Additionally, the majority of all fibre in the Kootenay-Boundary goes to two large companies. This leaves many SWM without access to the fibre needed to consistently produce and market their products. Most SWM report that if they had consistent access to fibre, they could increase operations and capacity. For STH, this also comes into play when small sawmills withhold payment for log purchases until their finished product is sold. This creates an undue burden on the log seller and disincentivizes them from working with SWM.

Several SWM discussed the lack of salvage harvesting throughout the Kootenay-Boundary due to inequitable stumpage rates which limits utilization of forest health-related losses. Utilization of forest health-related losses could be improved if the government adopted a sliding scale for salvage stumpage rates, thereby increasing the available fibre for SWM.

Lastly, fibre utilization varies considerably across the industry and is primarily driven by log buyers' bucking specifications and the economics of delivering pulp. At least one SWM recommended exploring the use of Scandinavian equipment and techniques that maximize wood harvests from tip to stump to overcome this.

As noted, STH are unable to cost-effectively ship pulp to the pulp mill, which prohibits utilization. Additionally, some STH suggested that large mills could be incentivised to increase whole log utilization as they are set up to chip what doesn't make their grade rather than throwing the unused wood into the burn pile. Some suggested that whole trees be sent to a processing plant to facilitate the separation of whole logs from pulp and wood waste in order to create two processing streams. Additional suggestions include moving to smaller tops to increase utilization.

Capacity

Several factors complicate the issue of capacity for STH and SWM. First, government interventions and regulations have had an outsized impact on small businesses which typically don't have the capital or flexibility to adjust to new conditions or requirements. In particular, the old growth deferrals have hit some STH and SWM hard, removing area and volume from their tenure or potential production respectively. Additionally, many respondents stated that they would be ready to increase capacity with a guaranteed increase in access to fibre. Though the province has increased sales through the BC Timber Sales program, those sales are too large for small tenure holders, effectively cutting out STH and SWM from bidding on these sales.

Additionally, the lack of certain types of contractors affects capacity. Small Tenure Holders and contractors experience a lack of skilled operators to run logging equipment or logging trucks. SWM have acknowledged a shortage of skilled operators and labourers required for their endeavours. Additionally, the province has emphasized and supported large scale harvests without support for smaller STH. Consequently, there are very few small harvesting contractors left in the industry. In order to build capacity of STH there is a distinct need for small loggers and the self-loading logging trucks to support them.

For both STH and SWM, a shortage of log hauling contractors is a large barrier. There are not enough trucks or contractors to facilitate the movement of wood waste (chip trucks), logs and short-logs.

Both STH and SWM listed specific supports that could help them increase capacity. SWM stated that they need capital, or financing for expansion or to support innovative ventures. They additionally stated that they need support in the form of business training and advice. Many of the SWM, though highly skilled in their field, lack a background in business and could use support and consultation that includes a designated industry contact for legal issues, as well. STH additionally requested the development of a fund to help SWM pay for fibre within 30-days of delivery.

Finally, STH noted that the One Cutting Permit, available to CFAs and WLs, allows them to maximize use and management of their tenures.

Barriers/Obstacles

The lack of log haulers in the region, particularly self-loading logging trucks that enable small loggers to deliver logs to mills, is a barrier. This is a greater issue in the Boundary, where the area's large sawmill has moved to short logs only, and where there are no self-loading short log trucks. Thus, sales from small operators are effectively shut out unless they use a mill-approved harvest contractor geared towards short-log harvesting and prioritize their short-logs over long-logs.

This same large sawmill also limits wood intake to a 22" maximum butt size, while a medium mill in the Boundary is limited to a 16" max butt size. This presents barriers for STH in the Boundary who are unable to sell oversized wood.

Provincial and industry actions are also a barrier for both STH and SWM. The Old Growth deferrals are already having an impact on the Kootenay-Boundary forest industry. While both STH and SWM acknowledge the importance of maintaining the Old Growth, they have been left with no timetable to resolve issues of lost tenure and no ability to harvest their full volume. Additionally, BC Timber Sales has stopped issuing sales with Old Growth, creating a shortage of fibre supply for both SWM and the large sawmills. Government inaction after these major events has created confusion, hardship, and a struggle among STH and SWM to generate business-sustaining revenues.

Most STH and SWM would agree that the government and BC Timber Sales have abandoned any pretense of support for small operators. Changes to forest policy over the past fifteen years have essentially eliminated small-scale forestry in the region, and small operators do not feel as if they have an ally in the forest service or the province. Additionally, the provincial requirement for STH or SWM to consult with First Nations has complicated tenure management, as tenure holders don't necessarily receive timely responses or even any response from First Nations with land claims.

Finally, constraints on the landscape limit fibre supply. Visual Quality Objectives and a lack of understanding about small-scale forestry are constraints to the Arrow and Kootenay STH and SWM.

Partners and Supporters

While many STH and SWM struggled to list partners and supporter of their industry, others provided suggestions that may prove helpful. Potential supporters and partners for STH include:

- Small and medium sawmills
- Community Forests
- Woodlot owners
- First Nations
- Communities and recreation groups
- Contractors

Potential supporters and partners listed by SWM include:

- Community Forests
- Small loggers
- First Nations
- Competitors
- Coastal businesses slowed down by Old Growth deferrals

Suggestions

Small Tenure Holders and SWM offered suggestions to improve their capacity as well as to stabilize their role in an industry that they believe is leaving them behind.

STH suggestions include:

1. Create and maintain an active network between loggers to facilitate access to small contractors and communication about log market information;
2. Group together to increase scale of log sales and loosen stranglehold of large sawmills;
3. Create positive media pieces and positive publicity to increase public knowledge about the importance of small-scale forestry and innovative practices that dispel community myths or misconceptions about forestry;
4. Create training programs to increase the numbers of machine operators and logging truck drivers;
5. Create value-added enterprises in each community, including government incentives to get new businesses up and running;
6. Lobby BC Timber Sales to set up small-scale timber sales that are geared towards SWM and small loggers.
7. Increase access to forest policy makers, equipment, fibre volume;
8. Explore selective forestry approach using Scandinavian methods and equipment;
9. Incentivise mills to accept logs to government utilization standards, thereby reducing wood waste and increasing utilization rates across the region.
10. Support utilization by increasing the price of pulp to include the costs of transportation thereby ensuring that STH can economically deliver this fibre and not burn it.

SWM suggestions include:

1. Support small scale loggers through the salvage and small tenures program with quarterly meetings to establish a consistent wood supply;
2. Start a sawmill in the Boundary region that consumes oversized logs in order to establish a local market for this timber;
3. Begin milling underutilized species such as PY;
4. Clear up uncertainty about First Nations tenure and Old Growth deferrals;
5. Set up a log/lumber exchange;
6. Stop sending premium logs to large mills; and
7. Create a credit system or Category 3 sales for smaller amounts.

Research Lessons Learned

This project has provided valuable insights into small-scale forestry operations, and it could not have been possible without the participation of STH and SWM. With an eye to further research or future projects, the researchers have gained insights into the approach used on this project and have summarized them below.

First, direct contact and conversations with STH and SWM is essential. Though we reached out via email and phone to seventy-four individual STH businesses, only 39% participated in the project. Likewise, only 45% of SWM participated to any extent. Some were unwilling to take the time for a recorded interview or were willing to talk but didn't want to be recorded. Others, particularly SWM, were reluctant to share pricing data.

However, the strength of this research lies in the direct participation of STH and SWM, particularly in the individual interviews which allowed them to provide unfiltered and unlimited responses. While online surveys are cost-effective and can be self-administered, they are also reliant on comfort with technology and access to the internet. Individual interviews, on the other hand, simply require a phone and time. Additionally, interviews give participants opportunities to respond to questions with thoughtful, direct commentary. Any follow-up research should continue with face-to-face or telephone research efforts.

Moreover, due to privacy concerns, researchers were unable to establish contacts with STH managing Private Managed Forest Lands. While public databases exist for Woodlots, Community Forests and First Nations Woodland Licences, we were unable to obtain any listing for PMFL and thus were limited to network or personal contacts.

Finally, while this research project has been focused on the Kootenay-Boundary region, it is relevant to STH and SWM throughout the province. One can surmise that the comments and results provided in this report might be echoed across BC's forest industry, and some of the recommendations and obstacles discussed are directly relevant to the province itself. There is a distinct feeling among STH and SWM that the province has geared forestry policy towards the large producers. Thus, there is a need for the government to build on this research to increase the capacity of small tenure holders and small wood manufacturers, whether through access to data, additional research, or policy changes.

Section VI: Conclusions and Recommendations

This research provides insights into the capacity of the small-scale forest industry in the Kootenay-Boundary region, using data and comments provided by STH and SWM. Participant data and interviews reveal the strengths and challenges, many shared, which face small operators.

The strengths of STH and SWM are evident throughout these pages: small-scale fibre operators, whether harvest- or manufacture-focused, are committed to the health and diversity of the forests they utilize. Participants are passionate about the landscapes in which they live and work. Many have spent decades building their businesses, establishing networks and contacts, and investing in their communities. Together, these operators have a wealth of knowledge and insights into the role of small-scale forestry in the region. While many are ready and eager to increase their capacity, others are winding down their careers and looking at retirement rather than expansion.

The challenges facing small-scale forest operators are numerous. Many STH and SWM noted that pricing can be a challenge - whether finding the right price or knowing what to charge for fibre and fibre products or obtaining a price for pulp that covers the cost of utilization. Additionally, for reasons previously discussed, consistent access to log fibre is the greatest challenge for both SWM and STH in this study. Finding qualified contractors to work on smaller tenures or in small mills is also challenging. Some SWM stated that they needed financial or business support (training and advice).

STH and SWM feel as if they are being squeezed out of the market by the province and the large mills. Many expressed frustrations with new regulations, deferrals and policies that limit their ability to do business. Indeed, when asked about potential partners and supporters of small operators, no respondents listed either the province or large mills. Instead, participants focused on other small- to large-operators, Community Forests, woodlot owners, First Nations, communities, contractors and even competitors.

Recommendations to increase the capacity of small-scale forestry are listed below. These include actions that can be initiated by STH and SWM and others involved in small-scale operations, as well as those that require industry collaboration, and provincial support. In order to thrive, the small-scale forestry industry needs support, resources and advocacy. While we are primarily focusing on actions that can be addressed within our region, our recommendations also suggest some changes at higher levels. Recommendations are provided below and are separated into the following categories: 1) Local and 2) Provincial.

Local Recommendations

- **Create a Log and Lumber exchange** to provide the Southern Interior with a wholesale distribution channel to be utilized by fibre suppliers, processors, small manufacturers and retailers. Through transparent and standardized supply contract terms, the log/lumber exchange platform can connect these players to an extensive network of potential buyers and sellers throughout BC and Alberta. Clients need to make informed decisions about log and lumber product pricing on a business-to-business basis, and the exchange could act as an online marketplace with hundreds of listings that include: 1) product and quality characteristics, 2) volume and location data, and 3) an ability to easily place bids and execute trades. Users would be able to transact both spot- and forward-term deals, and secure market representative pricing for log and lumber supply needs.

- **Create an outlet for the disposal of hog/bark**, including the potential of partnering with Regional Districts to build regional compost facilities.
- **Establish a small forest operators' network with quarterly or bi-annual meetings** for STH to set up a reliable harvest schedule upon which a small logger can invest in and build their business. Equally, involve SWM to understand what their mill needs are and how this system could support their needs. It is also critical to ensure that SWM pay for fibre within two weeks of delivery as is policy with large mills.
- **Create positive media pieces and positive publicity** to increase public knowledge about the importance of small-scale forestry and innovative practices that dispel community myths or misconceptions about forestry.
- **Increase the availability of qualified contractors**, through training, certification programs or other means, both for logging contractors and mills alike to address the local shortage of machine operators, logging truck drivers and mill labour.
- **Explore ways to increase the numbers of self-loading logging truck drivers and standard logging truck drivers** through collaboration with the Mountain Training Institute or others.
- **Assess the viability of a cooperative model between wood manufacturing and wood harvesting** to create more revenue for log sellers and stabilize fibre source for small manufacturers. Small tenure holders could build more equity and have a stake in a small manufacturing facility, while managing risk.
- **Research and compare BC Timber Sales bids against interior log markets** and participant selling prices of logs and log products.
- **Present the findings of this research to local politicians and advisory boards**, so they understand the obstacles facing STH and SWM and their capacity to add value and optimize wood products for end-use. Discuss the obstacles that impact the level of cubic meters per full-time job and how current forest policy affects the ability of STH and SWM to stay in business. Reinforce the need to get a consistent fibre supply to SWM.

Provincial Recommendations

- **Establish a Small-Scale Forestry Development Fund** to help small loggers and sawmillers invest in and build their businesses.
- **Lobby BC Timber Sales to pilot Category 3 timber sales** which focus on volumes less than 10,000m^3. Open these sales only to SWM, giving small operators a chance to increase capacity.
- **Set up a pilot project to increase the level of thinning throughout the working forest** based on other models of forestry and examine how the method can be incorporated into our local region to maximize utilization and small-scale selective harvests. Focus on SWM and small logging contractors to ensure that they have access to innovative practices and are able to sustain operations.
- **Set up a pilot project to create a sliding scale for stumpage applied to salvage**. Generally, high stumpage rates make many salvage opportunities uneconomic. By increasing the volume of salvaged dead, dying or infested timber, this type of project could increase the amount of fibre available to SWM and make better use of fibre that is currently lost.

Appendices

Appendix A: Network Map

Appendix B: Small Tenure Holder Data Questionnaires and Interview Questions

SMALL FOREST TENURE CAPACITY BUILDING PROJECT

Thank you for agreeing to participate in this project. We hope that the results will strengthen the capacity of small forest tenure holders/mill operators in the region and enhance economic value and employment within their local communities.

Please read the instructions below before completing any part of this packet.

Participants should:

1. Respond to the ***Data Collection Questions***[27] for **EACH** forest tenure holding or private land management in which they are engaged;
2. Complete all responses to the best of their knowledge. *Examples of data entry are included in many of the tables*;
3. Contact Research Lead Tyler Hodgkinson, RPF, about any questions concerning the data collection process; and
4. Review the Interview Questions at the end of this document prior to meeting with Tyler for the interview.

Participants can rest assured that:

1. All data will be anonymized and coded before use in any reports.
2. Individual responses will remain confidential unless you agree to share specific information.
3. Interview data will be aggregated and generalized to greatest degree possible.

[27] Data sheet includes pp. 1-10.

LEGAL NAME:	
PRIMARY CONTACT (TITLE):	
SECONDARY CONTACT (TITLE):	
ADDRESS 1:	
ADDRESS 2:	
E-MAIL 1:	
E-MAIL 2:	
PHONE #:	
MOBILE #:	
WEBSITE:	

DATA COLLECTION QUESTIONS (to be completed by participant for each tenure type)

1. Organizational details.

Tenure Type (WL, CFA, NRFL, FL, FNWL, SSS, PL, MPL)[28]	**Legal Status** (Sole Proprietor, Partnership, Corporation, Cooperative, Non-profit Society)	**Tenure Licence ID**	**Start Period (Year/Month)**	**End Period (Year/month)**

2. First Nations involvement? Yes or No

If yes, please explain what the involvement entails:

3. Where is your fibre supply located?

Geographic Location	**Timber supply area**	**Property identifier number (PID)**	**Center of Tenure/ Private Holding - Latitude/Longitude**

4. Where is the nearest support center?

Staples (food/fuel/ lodging)	**Forest Management (professional/business)**	**Industrial Supplies & Parts**	**Contractors/ Consultants**
Example: Grand Forks/Castlegar	*Internet*	*Internet/Kelowna*	*Nelson/Castlegar*

[28] **Tenure Type**: WL – Woodlot; CFA – Community Forest Agreement; NRFL – Non-Replaceable Forest Licence; FL – Forest Licence; FNWL – First Nations Woodlands Licence; SSS – Small Scale Salvage; PL – Private Land; MPL – Managed Private Land

5. On average, over one year, what volume of wood are you:

5a. Holding (annual allowable cut or standing tree inventory)		
Associated tenure	**Species** (%) (list the species code followed by percent of each species.)[29]	**Volume** (m^3/yr)
Example: W1770	*FD70; LW25; CW05*	*1470*
5b. Cutting/manufacturing (business or personal use)		
Use	**Description**	**Volume** (m^3/yr)
Example: Business use	*Manufacturing sawlogs*	*1440*
5c. Selling		
Use	**Description**	**Volume** (m^3/yr)
Example: Business Use	*Sawlogs*	*1440*
5d. Clearing for wildfire risk reduction		
Use	**Description**	**Volume** (m^3/yr)
Example: Thinning	*Piling and burning*	*30*

[29] **Species Abbreviations**: FD - Douglas-fir; LW – Larch; PL - Lodgepole Pine; SE – Spruce; BA – Balsam; CW – Cedar; HE – Hemlock; BG - Grand Fir; PW - White Pine; PY - Yellow Pine; MX - Mixed Species; DECID - Deciduous

6. **Each year, on average, what is your available fibre to sell?** ***List the species abbreviation,[30] product and estimated volume.***

Please break down your Annual Allowable Cut or Standing Tree Inventory by species and products sold.

Species Abbreviations: FD - Douglas-fir; LW – Larch; PL - Lodgepole Pine; SE – Spruce; BA – Balsam; CW – Cedar; HE – Hemlock; BG - Grand Fir; PW - White Pine; PY - Yellow Pine; MX - Mixed Species; DECID - Deciduous

Example Product – Sort (sawlog, pulp, peeler, pole, shake, shingle, rail, fencepost, firewood, chips, mulch)

Species	Product (Sort)	Estimate Volume (m^3/yr)
MX	*Pulp*	*150*
FD LW CW	*Saw logs*	*1320*

[30] **Species Abbreviations**: FD - Douglas-fir; LW – Larch; PL - Lodgepole Pine; SE – Spruce; BA – Balsam; CW – Cedar; HE – Hemlock; BG - Grand Fir; PW - White Pine; PY - Yellow Pine; MX - Mixed Species; DECID - Deciduous

7. What current and historic prices have you gotten for your fibre?

Please provide pricing for the past 10 years:

Year	**Species**	**Product** (include top size if applicable)	**Selling Price** (delivered ($/m^3))	**Buyer**
Example: 2021	*FD LW*	*Sawlog-4.5"*	*140*	*Interfor*
Example: 2021	*MX*	*Pulp*	*38*	*Mercer*
Example: 2020	*FD*	*Sawlog – 5"*	*130*	*Kalesnikoff*
Example: 2020	*CW*	*Sawlog – 5"*	*205*	*Porcupine*
Example: 2020	*BL*	*Sawlog*	*105*	*Kalesnikoff*

Year	Species	Product (include top size if applicable)	Selling Price (delivered ($/m^3))	Buyer

Year	Species	Product (include top size if applicable)	Selling Price (delivered ($/m^3))	Buyer

8. a. What is your harvest system profile on your tenure and/or private land?

Method	Percent

Ground	
Cable	
Tether	
Helicopter	
Other (explain)	

b. What silviculture systems are used?

Method	Percent
Clear Cut	
Clear Cut with Reserves	
Single Tree Select	
Seed Tree	
Shelter Wood	
Variable Retention	

9. How many people are employed by the associated tenure and/or private supply?

Employees	Number
Full-time	
Part-time	

10. A. What is your full-time equivalent employment (FTE)?

Type	FTE	% internal hire	% contractor/ consultant
Forest Management Administration			
Harvesting and Roads			
Log Hauling			
Silviculture			

11. Is it easy or difficult to find the right harvesting contractors to achieve your forest management objectives? Please circle your response.

Very Easy **Easy** **Difficult** **Very Difficult** **N/A**

12. Please check the box that best fits your response:

How difficult is it to find consultants or contractors to do your:	**Very Easy**	**Easy**	**Difficult**	**Very Difficult**	**N/A**
a. Forest Management Administration					
b. Harvesting and Roads					
c. Log Hauling					
d. Silviculture					

INTERVIEW QUESTIONS (to be discussed with research lead Tyler Hodgkinson)

13. **Given the historical prices, what correlation exists between log and lumber prices?**
14. **Are there any components of your timber profile that you cannot harvest due to a lack of capacity?**
    a. Contractor capacity?
    b. Market capacity?
15. **Who do you use for harvesting your timber?**
    a. Do you know if they could use support?
    b. What would this support be in the form of?
16. **If you harvest your own timber what is your current capacity to harvest it?**
    a. On average how much volume per year (m^3/yr) do you harvest?
    b. What is your equipment complement and harvest system capability?
    c. Are you willing to travel for other harvesting opportunities?
17. **How can utilization of your fibre be improved? (degree of utilization and barriers to increase utilization)**
18. **Where do you get information on log markets? Who do you talk to? How can we support one another to create connections and cooperation?**
19. **What obstacles affect your ability to increase capacity or volume sold?**
20. **Who are you using to do the work, and are these people readily available?**
21. **Does the availability of contractors hinder your ability to manage your tenure or private land?**
22. **Are you able to harvest to capture market upswings and seasonal requirements of your tenure or private land? Please explain.**
23. **What is your level of readiness to increase capacity?**
24. **Do you know of potential partners and/or supporters of small fibre suppliers/log sellers?**
    - Potential partners for what topic / purpose / goal.
    - Potential partners that might be interested in increasing their capacity.
    - Potential support for what purpose.
25. **Do you have any suggestions for how we can better support small fibre suppliers/log sellers**?
26. **Are you willing to share your contact information with other participants, so you have the ability to increase your network?**

Appendix C: Small Tenure Holder Additional Comments

Q13. Given the historical prices, what correlation exists between log and lumber prices?

- *Well I don't think there is any correlation. There's the price that we got paid for logs has nothing to do with the price of lumber. It's just what the mills can get the logs for…. It's whatever the mills can squeeze, and the mills have cooperated between themselves over the years from time to time to set the price.*
- *It seems to me that the log market prices follow the lumber market prices pretty darn close.*
- *Well the correlation is there's always a lag, right, when lumber – or, yeah, when the price of lumber goes up the price of logs don't go up at that same time the same amount.*
- *Supply and demand…. You know, supply is getting pinched or more and as long as demand meets a certain threshold, prices are going up. Yeah, I don't know.*
- *It's more sensitive to supply and demand than it is to anything.*
- *The lumber prices go up, logs typically go up.*
- *Yeah. There's a strong correlation, it seems when lumber prices go up, all our log prices go along with it.*
- *I know there's a correlation that exists, but in my case, I've sort of seen it as either delayed, or what I'm trying to do and when I'm trying to do it, it's been driven by other factors than that…. I think you would see a correlation but they're not a straight line in my operation at all. I wish they were straighter, but they're not…. Like lumber prices have to stay up for half a year or more before I would see increases in log prices, to me, anyway.*
- *That's the other business of being a small player I find is that I don't get the same prices that somebody who has more volume would get.*
- *They coincide with each other, for sure. I would say that they go up when the lumber prices are up. And they were holding, you know, years ago with the lumber prices as well.*
- *Well, I mean it's all kind of supply and demand right. You know like in the spring, obviously, cedar is a higher valued wood because people are going to be building fences and stuff like that. So you know the cedar prices definitely go up like in the spring and stuff due to that need. Yeah. It's just kind of basically based on the supply and demand right.*
- *Well I think the log prices seem to move a bit when the lumber prices go up, not quite as quickly, but I don't know, I think they seem to do OK.*
- *the higher the log price, the higher the lumber price seems to go, or vice versa, depending how you look at it…. I don't know if that's really a future for us in BC in terms of continuing to make profit for both the tax revenue through the stumpage or contractors, or saw mills. I don't know if that's going to be long-lived, but I see a correlation definitely between rising prices of the logs and rising prices of stumpage, versus rising prices or cost, end point user of the finished product. It goes hand in hand, but it's kind of a burden. Everybody's cutting like mad to get their wood to mill, and mills are going like mad. The Crown's chasing, making the stumpage adjustments, and*

the market's sort of leading us by a pole and a carrot, and when it's good, it's good, when it's bad, it's real bad.

- *I'd say it's a pretty loose correlation. The mills are reluctant to pay anymore than they have to and there's actually – it's a lot tougher now since there's fewer mills. … now with lumber worth a lot of money and there's fewer mills, there's a smaller marketplace for the person to sell their logs, then finally the price of logs is coming up but the mills aren't passing it on.*
- *I just followed the increased in lumber and that seems to follow the cost of the fibre coming in, as well.*
- *Going back to my historical time from 2006, initially, there's very little correlation. But in the last three to four years there's more correlation but there's, of course, quite a lag between the lumber future prices for 1,000 and the increase in the price of logs.*
- *Typically, well typically what I've seen is as the lumber prices go up the log prices go up and yeah and same thing going down.*
- *Well from my experience lumber prices far exceed log prices.*

Q22: Are you able to capture market upswings and seasonal requirements of your tenure or private land? Please explain.

- *When the prices are up everybody's logging so sometimes it's hard to get a logger so we're working around that…. And so that if the markets were low and it was winter logging, you have to take it the way it is. So yeah, we do have some ground like that that's restricting us. We do have some seasonal ground around recreation trails, like for instance the cross-country ski trails.*
- *If you wait too long it's a gamble, right?*
- *We try to have 25 000 metres always, either permitted or close to permitted. … So, if the markets up, we'll go log the hemlock, if pulp comes up, we'll go hammer the pulp, so that's the only way a market logger can really make it work these days, is to play those up swings in the market.*
- *I would say it's limited – we're not that nimble…. And I can't take advantage of those kinds of opportunities.*
- *Yeah. I mean I can if somebody says, "Hey, you know we need to – you know we want to log cedar" yeah. And I could stand aside and go and log, right. I have enough equipment I could run two sides so I can break away from my normal job because I have two processers, two hoes, a log loader, two skidders. I could run two sides then, yeah.*
- *Yes, I would say generally I can do that. When markets are good I can go out and do some logging myself, if I can't find anybody else around. I usually do it myself anyway, so.*
- *I'd say, you know, kind of a yes, except for seasonal constraints like fire season, could break up in that kind of thing. Sometimes you can log and cold deck the wood and when the road is falling apart and then truck it out in the spring before the bugs get into it. I got a big investment in roads because I've been chasing bugs and disease and that and accessing – having access into the woodlot can – for market, you know, spontaneity and that kind of thing. So I've got a big investment in roads and this whole old growth deferral thing has just totally screwed up my 30-year plan for my woodlot.*

- *Yes, if we have 1CP.*
- *Sometimes. Sometimes. I mean it's hard to judge and try to act fast with the market changes. Seasonal requirements, I mean seasonal requirements are basically what dictates when we can do things.*
- *It'd be nice to plan for an uplift when the market's good but again we're limited by contract, you know it's hard to have a contractor come in for 300 meters of wood or you know even 500 meters of wood so it's almost like you need to do a few years of cut at least each time someone comes in so then maybe you happen to be logging during a time when the market's OK and then the next year it goes up 20 percent.*
- *If we had more permits in our pocket, and we'll get there, it's just the wood lot owners and private land owners, I mean people want to get things done while the market's high. So we get in there and we make sure we help out and get some logs moving.*
- *I'm not able to adjust probably as much as the majors can, but I am doing my best to make sure that permits are small and we can bounce around a little bit based on the seasonality of it, profile of it and perhaps the complexities of the prescription that each one carries.*

Q18. Where do you get information on log markets?

- *Telephone. Bush telegraph and the telephone.*
- *The log buyers themselves.*
- *I have two or three sites that I follow. Madison's gives me the weekly update on where the market is going. I tie that to what's happening. I talk to many, many people throughout the year when I'm trying to sell where things are at with the mills. I talk to all the mill, log purchasers. I talk to the woodlands managers when I need to, to find out where they're at with their mill, where they're going. So most of my information from log markets comes through word of mouth to a wide range of people.*
- *I call around. I've got my own list, as probably you do, everybody who is within hauling distance for whatever species, you talk to them.*
- *Well, word of mouth between wood loggers and then networking with the wood buyers.*
- *I keep in touch with everybody in the industry and fellow woodlot licenses.*
- *I market my own wood. I'm told by the log buyers I'm one of the few woodlot licensees that do. I prefer to build that relationship to the mills, to talk to them and to get to know them, have them come out to the woodlot and have a look. Every time I start marketing, you know, probably three to six months before we'll log, just getting the conversation going.*
- *Yeah. I mostly talk to the log buyers.*
- *I do go online and I look at that log market. There's a site that you can go and see what the general prices are, you know, that they're paying.*
- *Well, I get prices – you know, I just contact up [name] and the other log buyers and get their prices. At the same time that I'm doing that, I'll ask around to other people selling logs who I know, primarily at local community forests, just because I know all those guys and they're in a similar market logger situation. So I talk to other people who are selling logs; it's very informal and unstructured.*

- *Yeah, I just basically phone around to find a lot of the prices. That's all I do – I don't know.*
- *Well, my first step is to call the log buyers themselves. … And I've often tried the cooperation thing where we can pull this profile for one mill and that profile for another. It usually gets shut down.*
- *What I do is I do explain how the system works and I will contact the fibre managers at each specific mill, depending on the species, who's taking what, to find the best cost for them or the best revenue for them.*
- *I follow the futures market, which is the Chicago Mercantile or there's a number of different sources that I've used where I can get the price per thousand on that particular day, just to kind of look at the trends.*
- *OK so I get it usually from the mills and I talk to the log buyers. And just you know, other what do you call, wood lotters like yourself. Yeah.*
- *Log buyers for sure.*
- *No, I don't pay as much attention as I probably should to the log markets. I'm flying by the seat of my pants trying to figure out the … log hauling end of things.*

Capacity Barriers for Timber Harvest

- *I would say there could be more capacity in selling – selling the low value products and maybe by-products. And there could be more capacity in – or develop capacity in selling the highest value products out of our log supply.*
- *I would say no, because other than finding a logger, because it's all on pretty reasonable ground, so almost everybody can reach it with ground skidding, so it's pretty straightforward. … there used to be able to be some loggers around and they would log for you, but now, if you don't sell your timber to say, (large sawmill names), then they won't let you use their logger, or are very reluctant to, unless they just happen to be desperate or something.*
- *there's not many cable yarding contractors around so we can log cable ground when they are available, you know. We can't just sort of log cable ground when we're ready – you know, we have to work around contractor availability.*
- *No, it would just be timing and the contractor side of it. I mean, you got to be networked and there's only so many good loggers. You got to know them and give them a heads up, long time ahead of time. You got to land them in your schedule.*
- *Well, sometimes if you get pushed to the latter part of the season and you want to do yourself silviculture work the same time you do your harvesting it might not be possible.*
- *Well, you know as well as I do that when the log market is hot, contractor availability shrinks to zero. So woodlots always take – are basically at the end of the line because their volumes are small and their work is inconsistent.*
- *Yes. We have a high component of hemlock, balsam and pulp, so markets are low, it's tough to cable log especially. And then if timber prices aren't up again hemlock, its hemlock is down, quite often we lose lots of money on the hemlock, so the first seed year offsets that and quite often it's a breakeven situation.*
- *Contractor capacity, it's been good for conventional sides, but cable harvesting it's been difficult for us, because the local cable contractor is tied up with another licensee.*

- *No. No. I would say no. No. No.*
- *So yeah, so I mean capacity from the trucks, I mean, like I say, we could be utilizing that fibre but without the short loggers we can't move it.*
- *Not really. Like as far as contractors, I mean there's enough guys here that we could*
- *Well I think the only component of my timber profile is the Bull Pine – it's pretty hard to get rid of that and nobody seems to want it unless you want to send it for pulp and it's hardly worth doing that. So it stays, mm-hmm.*
- *Yeah, it's economics. Sometimes your forced to harvest for forest health reasons and then you got to sell it, so you take whatever you can get for it, kind of thing. And generally when your salvage logging you're not making any money. You won't be able to pay to build roads and silviculture and that, it's just too much.*
- *One of the things I found the hardest was dealing with fire season because you can lose – have a real good crew that you put together just goes scattered in four different directions and then when it's time to go back to work it's really hard to get your whole crew back; you might end up with a half or three quarters of them but fire season is – you know, that's a tough one. Spring's not so bad, but fire season, that's, you know, it's prime time of the year to be working.*
- *I haven't had issues from a market capacity standpoint other than I guess with pulp. We have found sometimes if the pulp yard isn't basically accepting pulp then there's no other option, in our area at least, the midway Greenwood area. As far as contractor capacity I would say that there is a profile right now that can't be harvested due to limited harvesting systems in the area or you know, there's not enough, it's just such a small scale project that it would be hard to get the right contract and do it.*
- *Right? Yeah – oh, and yeah, that's the other huge obstacle for us, is finding capable drivers.*

Q15b. Form of Support for Contractors

- *Well I think just access to timber supply, doesn't matter who owns it, they just need to … know who's got wood to log. There should be* [a] *central repository where people can just register and say, I've got some area that needs logging, and this is the kind of logging I'm going to do, or that I'm capable of doing, and then these are the references, and then people could pick and choose from that.*
- *Yeah. So I mean we need more certified scalers. I used to have my scaling ticket one time, but I've let that slip a long time ago.*
- *We could support them financially so that they could increase their technology. You know, some of them have old machines, some of them can't afford a vital piece of equipment to keep them going. They have breakdowns, stuff like that. So we could support them financially in buying stuff. And primarily what that means financially is provide them with a stable volume to cut every year through either a network or a cooperation of harvesters to provide markets – or, to provide volume to people at a reasonable price. And the more volume they have, the more reasonable the price can be for us.*
- *I really think the importance of retaining a well-qualified consultant should be emphasized…. Selling logs is not child's play, not for somebody who doesn't know*

what's happening out there. And even people that are supposedly astute miss things, right.

- *Yeah, the administrative stuff. And another good example was when COVID hit a*
- *Instruction. I would say for a contractor for harvesting it would be instruction and for processing. It would be more instruction.*
- *Mulching has a really, really key role. … if we had an operator that was able to come out and subcontract, I bet you 50 percent of the clients that have opted for pile and burn would pay that increase for mulching. And then, I mean, there's so many other ecological benefits you get from mulching instead of pile and burning, right?*
- *And when they change regulations around and it sort of doesn't make a whole lot of sense and you're kind of grappling with, "Well, how do I deal with this? Because I've got this block laid out and it makes total sense from a lot of different standpoints," but then the forestry says, "No, it doesn't work for our stocking standards," or something ridiculous like that, right? You know darn well it's going to work because the ground is so variable and they just look at it from the bigger picture and not from the microsite level. And it's a little like you're managing it on a really small scale and they're just looking at an air photo at quick glance because then they're busy.*

Q20. Who are you using to do the work and are they readily available?

- *The forest management is done under a contract. A competitively bid – every five years it has to go out to competitive bid…. And then all the other contracts are managed by that forest management contractor.*
- *Yeah, well I do all the management and then I've got [name] and [name] on the harvesting. And then I've got [business name] helping me out with tree planting.*
- *The odd period of years it might be a time issue because it doesn't get done in a timely fashion and you have to keep bugging the professional individuals because they're on overload, but for the most part, whether it's silviculture, construction, harvesting, layout, I mean, for myself I do the bulk and the physical myself for the most part.*
- *You might not get it done exactly when you want it done but in a season you would get it done.*
- *Like say for you and me it's easy, but say for Joe Blow who just buys a woodlot with limited experience if he doesn't line up his planting contract early enough, well then he's going to be SOL.*
- *I have [name] does my permits. He handles that part. My block layout is done by Forestry, [name], and then [name] I just hired last fall. He started working with me and he handled the results reporting and checking some things on the wood line and documents to make sure that everything I have is up to speed, so then if I get checked I'm not going to be dinged for being non--compliant.*
- *For the truckers, we use [name]… they're mostly readily available, there has been a few hiccups the last couple of years with availability, clogging the landings, but in the end all the logs get moved. Silviculture, we've used a company out of [community name], [name] I believe their name is, they're available. We tender out all the planting and brushing and they seem to be the successful contractor each time. I know Sabrina gave*

them extra coins, because they do a good job and they're available. Bookkeeping, admin, we have a local woman who does that parttime work for us, she's available too.

- *I've got – like for all the management, layout, permitting, data, software to process the data and all that sort of thing, I am very, very fortunate in that I've got access to the best stuff in that way. And then also expertise to do anything I need to do. So like most of it I do myself; I've taught myself how to lead with LiDAR and make LiDAR products that are good for layout and things like that.*
- *As long as the volume is large enough, I can – I feel like we can find contractors, at least at this point, to do the work. And usually it's not me looking for the contractor, it's me looking for the buyer of the logs, so the mill, and they are helping me find the contractor – that arrangement. Then I think the other one was Silviculture.*
- *But are they readily available? Not readily available, no. I've waited for a year to get [name], because [name] wanted to do something else – road-building and other stuff, he's working for [company name] right now.*
- *I guess four years ago [name] helped me a bit. Forest, harvesting, what – oh trucking [business name], I use him pretty well, mostly.*
- *Silviculture. I just hire tree planters to plant when I need to.*
- *No, they're not. No, I got to train them and turn them into the operator they can be.*
- *Well, the year before last I had a person do some logging for me and it was just a gong show. I had a grievance with like 25 items long that if it could go wrong, it went wrong. If they could screw it up, they'd screwed it up, and it was really a bad experience. And that was the first time I contracted out logging in my life.*
- *This last year, the adjacent woodlot place, he came in and he did an excellent job, I'm super happy with how it turned out. He was really nice to work with, just a complete opposite experience from the year before. Just so for me it kind of renewed my faith in that, you know, I could keep on going for a few more years before I found someone to*
- *So yeah, I've been pretty fortunate that way. I've had a couple bad apples; it took me a little while to sort out but I finally figured out what was going on but they're no longer working with me, so ...*
- *Not really. And that's why my daughter's been tossing the idea about some sort of training program. Because the kids that are very interested to get into the forest industry, they don't have any opportunity.*
- *And the logging contractors, it's always the same thing, either we change what we're going to do in our cut blocks, change our silviculture system or the scale of our blocks in order to tap into that – the more mechanised type of operation. Or we can continue to struggle to find the people that will go at the pace that we would like them to go at, especially with selective logging.*
- *Yeah. So it's all local contractors. … As far as the operations side goes, it's a hit or miss. Sometimes they're available and sometimes they're not so it does, it can push when operations happen because of availability of contractors. And especially, and not more so that there's not a contractor available but again there's certain ones that you don't want.*
- *Local contractors. Local contractors in trucks and they are readily available, yeah. They look to me to what the next job is and it's probably the most stressful part of my life is recognizing that when they're not working they're not able to make their*

payments and so I work, I work really hard with my logging team to make sure that whether it's community forest or First Nations woodland license or other opportunities that everybody is working at a pace that simply makes the numbers work for them.

Q23. What is your level of readiness to increase capacity?

- *Not.*
- *Yeah, I would be.*
- *What I would say community is the other – community is the other partner or supporter.*
- *Well, if you got more volume, yeah, you could step up to the plate. I don't really see the problem there.*
- *I don't know. I'd think about that one, a second woodlot. I don't think I would. My capacity I could but I don't think I would want to. If they increased the size of the woodlot, absolutely, who wouldn't you know? I have the capacity to do that.*
- *We could have boots on the ground doing more layout right away, so we'd build up the STI. … And we could pound out easily twice the volume per year, so, if not more. Yeah, the cable again, it would a tougher one, but I guess if we had more tenure, other people would lose tenure, so we could, yeah, take that cable contractor. and maybe allocate it for other volume with a different licensee and use them.*
- *So really, I guess, yeah, I could go and find a yarder and get bigger like tomorrow if I wanted. But I kind of just – I don't know the markets just seem to be going up and down and all over the place, like there's no consistency it seems. So, like I say, how far into it does a guy want to get right? I'd like to get some debt paid down and make sure I'm comfortable I guess is what I'm trying to say.*
- *I think generally speaking, our – if we doubled our AAC, it would probably be better for being able to get a logger, right, because then we can promise them more, they can stay longer, whatever, there's more options. In many ways increasing to – if we talked in terms of economies of scale, the fact that we're small is definitely a constraint in and of itself, but even more for wood lots, right, I would presume.*
- *Yes. Yes, we can ramp up, yes.*
- *So if I didn't have – if I had more – I don't want to say trust, that's not the right word, they trust us because they call us, but if we had people more accepting to let me do what I know needs to be done then I could not have to have a two-hour meeting with them every Wednesday, or Monday, or Tuesday, because they want to talk about things, and change things slightly as we go. That would help with production, and the other thing that would help with production and capacity would be more contractors doing the same thing I'm doing. Because more eyes on the ground, more networking can go on, more dealerships will realise that there's more equipment to support, which means … I don't have to fly my stuff from Quebec.*
- *Yeah, I don't have any brain cells for that right now.*
- *I am fine with my present capacity.*
- *I would welcome that.*
- *Absolutely.*
- *Yeah. We'd be ready.*
- *I think we could do – yeah. Incredibly ready.*

Q19. What obstacles affect your ability to increase capacity or volume sold?

- *I would say my personal obstacles are age and motivational.*
- *We're being driven towards being able to operate on a smaller – efficiently on a smaller scale. … And there's a huge capacity issue because nobody works like that, nobody wants to work like that. It's not supported with adequate pricing.*
- *I think the species mark as limitations that we've already talked about is one. I sell all of my volume, I understand that not always do I achieve the best value for a certain species or a small percentage of what I do. But I try and cut the profile as much as possible so that we're leaving something for my kid who's taking over the business. And that we're managing properly.*
- *Constraints on the land base, right. Like legal constraints on the community forest particularly, and this came out of the TSR, are pretty high. A lot of our charts in the front country. Visuals are the most constraining. We have some other sensitive areas. So because of the nature of the land base and the cut and the type of cut, we are heavily.*
- *Well, forest health, I guess I took my Cut Control Exemption to deal with mountain pine beetle and now my AAC is reduced after doing that. So if I have further forest health problems, lower my AAC again, I don't want that.*
- *If you're not into a multitude of things rather than just cutting down trees and putting them on a truck you're going to suffer more than somebody who runs a diversified operation. So if you're not doing silviculture work, if you're not doing construction work, if you're not working for other clients other than licensees, I would say that you're going to have trouble.*
- *I find in this area it's really hard with contractors being a woman. They're happy to come work for you but, you know, if you bark a little bit they won't come back so you've got to be careful.*
- *Obstacles could be your timing, for sure, of when to start felling. That's a big, big obstacle of, you know, the timing to or weather is dependent and stuff like that, you know, like, to get your volume out like, you know, you might get stuck with it and then it sits out there and it gets dry. That happens to me. Fire season comes. You got a bunch of wood deck too far ahead.*
- *Yeah. Well I guess it would be finding financing, and you know ensuring that the work is there to support the purchases right.*
- *You know, and again, markets can dictate that as well. You know, again, [large sawmill] only wants so much wood in the water, so when they meet that target then things slow right down.*
- *Well, I guess for the small guy it's always trying to you know be competitive, right. You get a big corporation it's kind of hard to compete for pricing or whatever, right.*
- *Oh well, of course, yes. In our case it's an area-based tenure, it's small, it's highly, highly constrained by water and visuals, and, I don't know, caribou habitat still up top the steep ground. We've got lots of constraints.*
- *So we've definitely been in the situation where we have been writing, requesting alternative results and strategies, and with rationale and all that stuff, and we're going in such a headache and a lot of work, we've been able to get approval, just from*

retention to partial retention. We haven't tried to get past partial retention. I don't know if we need to right now.

- *Basically AAC I would say.*
- *Yeah, that's – yes, somebody's got to say something, because we all agree we need more wild, like really wild places, and we need to preserve a lot of these ecosystems that get put up for deferrals. There's warrant to do that, but in the same token you basically said here's your operating area, and people are paying rent on it, developing it, blah, blah, blah, for decades in some cases, and then you basically just said you know what, you're not good enough to manage this anymore. And instead of incentivising it, they've made it – they've penalised them. And that's the scary timber constraint I was talking about, not pests and fire.*
- *For me to even think expansion is not even on my radar at this point in time.*
- *The other thing kind of going with that is there's a cost involved of doing good work and we see fuel prices going through the roof now and insurance going through the rood. There's just a whole bunch of things that they cost the contractor a ton of money, you know?*
- *I mean, the only thing that would probably save you is probably volume. If you had a ton of volume coming into your landing. But with selective logging, you don't – you can't have a whole bunch of volume coming into the landing because it all takes more time.*
- *It's frustrating when you're dealing with different phases that are kind of independent, whereas if you deal with stump to dump, and especially if you're dealing with a mill that – or sorry, a contractor that's working directly for the mill, everybody is incentivised to do it right and do it right the first time.*
- *Well, the AAC. Yeah the cut. I mean sometimes there's, we have run into situations where we didn't meet the cut so I don't know if there's limitations in terms of delivering all the cut but you know, we're getting prolonged shut downs for weather you know, three times a year basically now that you know that kind of puts a limit on flexibility for getting the permits through and getting completed and like the timelines always seem to shrink a little bit with the seasons we're getting now.*
- *And I think the relatively small size of woodlots in general and this one I think is comparable to lots of them is again they're fairly small so sometimes it's hard to, you know there's not economy scale there for maybe the right logger to come in and do work.*
- *I guess the obstacle is, let me just think about that. The obstacle would probably just be fibre availability you know? We have two tenures that I'm speaking of here. The west boundary community force is 23,000 cubic meters and the Woodland license is 22,000 meters and we all know that those numbers, we can do wonderful things with them from fuel management, forest health to have all kinds of different values in there, but that's not a lot of wood. So we try to definitely find the value as best we can within it. Having more fibre availability, larger tenure to be able to simply manage somewhere would definitely increase our capacity for contractors and of course would allow us to sell more logs.*

Q17. How can your utilization of fibre be improved?

- *I think the biggest on the low end is just – the low end is pricing plus logistics of hauling, and configuration. Like hauling configuration. We need to be able to haul short logs basically from this area where it's more of a long log – it's a – all the contractors are set up for long logs here.*
- *The economics of both of those are horrible, as know. So, if you're going to subsidize us for pulp or subsidize us to come and get slash off of our landings that's a government decision. That's not something that they can put on us to increase our utilization because the economics just aren't there or it would be being done in the major industry at a much higher scale*
- *The big barriers to increasing utilisation is these log specs that the companies have. It was all over five-inch tops, or five-inch tops or four-and-a-half-inch tops, and the short logs – the only shortest they'll take is two point five metres. You know, they won't take one longer than that.*
- *And then I guess the other point there, a barrier is for the community forest anyway, what we have – you know, we have quite a few interfaced stands or pieces of chart that have been logged in the past and what hasn't been. But, you know, that where the profile maybe doesn't fit that major contractor equipment and it would be better to have some sort of a smaller complement of equipment in there to be able to, you know, work in sensitive areas or wildfire risk reduction areas is a good example. But that is a barrier because nobody around here has that equipment.*
- *Yeah, well, the mills need to improve their utilization…. Smaller tops. Accept smaller tops.*
- *The only other improvement you could probably pick up on and I'm thinking of is to think of specific product in log form that you can create, whether it's guitar wood, carving wood, float logs, you know, all those little things that you might have to keep your wood on deck for a while but it's such a small part of your volume but it can add a fairly good revenue stream.*
- *Well, it might be that if you can put these minor forest products on a website and advertise but locally you can probably do it on Marketplace. But somewhere else might work as well.*
- *I have such a problem with contractors who waste on my woodlot it's not funny.*
- *Yeah. We've had really good utilisation, even with sunshine a couple of years ago, we got 1 000 square metres and expected to split the pulp utilisation. But a cool thing would be to try to use some of that pulp out here or some other centre to produce biochar or something or else it would be nice to sell logs to more local smaller mills. That's the biggest struggle I guess, since the pulp market and the fibre, we have good loggers for utilisation, I think that's the way the industry is going. So, everyone seems to be doing better with using stuff or getting stuff from the block to some type of processing facility.*
- *A smarter processor.*
- *And again, I mean utilizing those small tops, like if we could move them in a timely manner we could be cutting it right down to a rat's tail and taking that to like the pulp mill or whatever.*

- *Well I could increase a little bit utilisation if I was shifting pulp. But there's not much of it and it's hard to get anybody to take it, especially the short stuff.*
- *So I only learned this from fiddling with my machine and realising, hey, [local mill] can use that part but we can send this part over here, and the client makes more, [local mill] gets the profile, and the other mill gets the profile. But nobody ever wanted to play that way, and I don't blame them, because it's a conflict of interest, we're all competing for the same log. But that would definitely be something to look at in terms of utilisation and what the hurdles are to make that more realisable.*
- *So the landing is spotless when we leave. Last year, because of the problems we were having with trucking, especially for the pulp wood, I ended up getting myself a truck with short rigging. So we emphasize on taking every thing out, if we can. So that was a key addition to our operation was able to get rid of the tops, any decaying fibre, to the pulp mill. So that really helped with our operation and kind of went hand-in-hand.*
- *I'll mention the pulp situation again, and that's – it's in the past, that market has not always been available to us smaller tenure holders. If the price drops, they're reluctant to receive one to two loads. And that's one of the many reasons why I use a stump to dump contractor that's affiliated with the mill because they – the mill has a lot more negotiating power as to when they deal with [the pulp mill] as to whether they'll accept the pulp when the market is on the low end.*
- *Now what we're going to have to find out is whether or not delivering short wood is going to be an option for us. And that might help us out to reduce some of the volume that's out there that currently – because it may be more usable as a saw log, a small saw log, then necessarily go into the pulp pile or the debris pile. Those are the kinds of things I think will help us improve our utilization.*
- *Again, just if there were maybe more biomass facilities then again we wouldn't be stuck in situations where basically the taps are turned off hopefully.*
- *Back in the day there used to be little mills around that used to do the timber framers and stuff like this. And they appreciated the volume that they gave. And you know, there was just one more guy in the logging industry supporting it. And now we have this big guy who's gulping up all our wood and it's constraining our market right instead of being price setters, we're price takers right? We take whatever the mill says and that's what it is right? We take what they give us.*
- *I'm going to say probably that utilization of fibre. I'm going to talk about the bio mass. I think the saw log value, the small log for sure is working well. The pulp is working well. I would say the price obviously makes it very challenging. That obviously, as we all know. The low price of a pulp price forces the money to go back and subsidize the saw log which is just the way it is.*
- *But there's still a lot of bio mass left out there and we're venturing into, from the [medium-large sawmill] side of things, some opportunities to utilize that fibre that is in the brush piles that couldn't be safely transported and perhaps is in a fuel mitigation permit where there's just simply so much of it and so rotten that we pile it and burn it.*

Q24. Do you know of potential partners and/or supporters of small fibre suppliers/log sellers?

- *Well, community forests. I mean, I'm directly involved with [community] and then indirectly involved in the [different community] community forest.*
- *Well, the only way that works is if somebody grabs the bull by the horn and is just willing to, you know, have the cash out laid to basically put this wood in one spot because you have to have the cumulative volume whether it's on paper, whether it's physically possible on a landing or a sort yard, so I think the only way that you can do it is, like I say, working collaboration with other woodlot owners. Because everybody seemed to almost be a stand alone – if you were doing cooperative marketing approach you might come out better.*
- *Well, like I say, other woodlot owners, I talk with them.*
- *In our case, I report to the board, and the board is selected as volunteers from the community. So definitely the community, it's more the – yes, sure, the support of individuals within the community, but the community as a whole are – they aren't partners or supporters, they're the owners.*
- *Yes. So, all of the regional – all of the – so Creston, Kaslo, Slocan, Nakusp and also Midway, we sort of have an informal grouping, like, we meet every once in a while, the managers of the five West Kootenay Central, Kootenay-Boundary community forests, and just chat about common issue and stuff. Whether it's some of the stuff that you and I are talking about or other things.*
- *I can't really think of anybody offhand.*
- *Well, I'd say there's any kind of younger guys out there between 35 and 55 years old that looking for work to do, if they want to stay alive, and if they're a woodlot licensee they'd probably be one to have a little bit more woodlot.*
- *Well, I think it all boils down, like I say, to workmanship. I do have licensees that like the work we're doing so if they've – they have private landowners that come forward they turn them on to me and then we'll go have a look at the property and see if it's viable. Some of them have the contractors, the bigger contractors, and they know they're not going to go in there and take the time; they're just going to go in there and grab and get the hell out. So that's why – yeah, developing the relationship with some of the licensees.*
- *No, to all of those.*
- *I thought about this a little bit and I don't think I can – other than maybe being aware of more potential markets for the wood.*

Q24d. What would that support look like?

- *He needs financial support, he needs log supply. So financial and really the financial support can come from two places, it can come from the brokers that he sells the product to, or it can come from some kind of program in Canada that helps him get up and going and stay going.*
- *So I think the fact that we have a relationship definitely means that I'm going to talk to them first, and they'll be more likely to take wood from us first, right. And then that*

benefits both of us, I think, because there's times when wood's scarce and there's times when it's not. It can change from month to month. Yes, so that would make [local mill] a supporter, and I think that also the story that the community forest has, and the type of management that we do and the community involvement, is something that there's a bit of a tie-in there informally with some marketing staff that [local mill] does. And maybe if they want to bring someone out to look at some stuff, maybe they'll come out to our community forest, or whatever.

- *And so as far as learning opportunities or connecting managers with each other who have – sharing contract templates or expertise or whatever, there's quite a bit of that among community forests.*
- *Because of the nature of these tenures and the nature of the fact that private land goes up the mountain in a lot of places, like, we kind of need to work with private landowners to access parts of our tenure, like many licensees around here. And we could, you know, build them some road, if need be, or whatever, you know, make it work for them.*
- *You know, other potential, you know, it would be great if other fibre users – I'm thinking non-saw log fibre users for potential partners, like people of who could make use of the lower-grade stuff, like, be a potential partner.*

Q18b. How can we support one another to create connections and cooperation?

- *Well that would go back to that central repository where you could put log prices in there. But, having said that, sometimes these mills will give you a better price if you don't tell everybody else what you're getting. So that's a fly in the ointment there that may not work.*
- *I've been dealing with different people, … and the log buyers will give different prices to different people. So if you know that information, it gives you a lot of bargaining [power]. … So that's where we can help each other is if we can share that information. Sometimes, you know, you can make a lot of money if you just know what your neighbour's getting compared to you, or vice versa.*
- *Building up the network and just being able to provide log sellers with more sources, more buyers. Connecting people I think is how we can support it and, you know, like I mean sharing information is huge. Collaborating, communicating, all that.*
- *I think and we sort of touched on it at the beginning here, but like is there going to be a gap, an operator gap or an owner or a log seller, a log buyer gap when a lot of these people are sort of probably in the, I don't know, the last 10 years before retirement kind of place. And so is there going to be a gap between those connections and those relationships when those people retire and the gap gets filled.*
- *Well, you've talked about it before, you know, like a master list for everybody of who's who in the zoo…. You got to make them work for it. They got to compete for it. That's what an open market is.*
- *If it was something that was more related to sort of a website I could look like at for Woodlots or something like that…. I'd be surprised if they'd be interested in giving that up to sort of a group, like the Woodlot Association or something like that.*

- *I guess if it was more of a once – like a website or something like that where we could find out who's paying what. You know, sometimes there are markets that you don't know about until it's too late.*
- *The first one, I believe creation of a log market database with monthly prices, conversion rate, cycle time, bucking specs, if we had some sort of database in this regard because the log market is roughly changing. You see the fuel prices just sky rocketing. Find the man. We have now a war happening so for any stability in the market it would have to be current right? You can't just rely on old prices, you have to be cutting edge if you're going to survive in this because that could have been last month's price and now for whatever reason it went up or down….*

Q25. Do you have any suggestions for how we can better support small fibre suppliers/log sellers?

- *So it would be nice if we could get one or two smaller contractors; that would help.*
- *I guess, you know, you could help, if you made a list of forestry consultants available. Most everybody kind of knows who they are, but a master list of the ones who are working for the area and the type of work they do, would still be helpful for everybody. … and log buyers too.*
- *Community forests could go into that database and post what products they had on the market at that time based on a permit, I guess.*
- *We all support each other and have each other's back against the majors…. You know, if we want to move to a more social forestry model to support the growth then tertiary industry, the fibre suppliers have to play a role in that. Can't have the majors controlling such a high percentage of the land base and sending it all to their mills and just spitting out two-by-fours.*
- *Well, that's where I go back to where I was talking about a website where you can sell your product and then a cooperative approach selling so your paper wouldn't kind of have the jive so that you could have one contractor come and maybe it or three woodlots, that's almost sustainable on a five-year basis, you know, have one contractor get it all done in one or two years, depending whether it's capable or conventional or whatever your system was.*
- *Just the marketing piece.*
- *I think the other part for me would be the sylviculture aspect of it because I've never dealt with that side of it, and you know maybe a workshop and telling people what they can and should be doing on their woodlots. That's where I haven't taken time to learn about and invest in.*
- *Well I do like the idea of having sort of better access to log market information. If there was some way that that could be available, that would be great. And then I would have to say that, from the Woodlot Association perspective, having access to someone like [name], who really has got his finger on policy changes and interpretations of those changes, is incredibly welcome and effective. Like he finds things that I just don't know – that I think I would be missing a lot if I wasn't just reading his emails and information to me.*

- *Yes. Well, you know, there's the discussion of the smaller tenure managers and private land folks working together to either negotiate better prices or get a contractor going – better prices from the mill – or being able to guarantee a certain amount of volume to a major licensee that would make the more interested in us, or something like that.*
- *Sharing information informally. Maybe formalising that or just encouraging it more.*
- *Give them more volume…. It would help small – like Woodlotters like me – you know 1000 metres, that's not very much. If you had double that, or triple that, it would definitely make it more worthwhile.*
- *We could use community forests and private wood, private wood or public wood lot owners, we could use them as hotbeds for trial and error process. By eliminating their stumpage, by helping them scientifically, and with, you know, if we need, foreign collaboration, like Swedes or Germans, or Swiss or Finland, or Norway or Denmark, or – the list is long. Where they've mastered these tricky areas to harvest in, and they've got equipment to do it. Why wouldn't we accentuate that by creating small markets but bringing fibre to the market and going at it robust? Like I'm talking all in on these restoration and thinning treatment, and do the whole goddamn province expect parks and areas that are just way back in the woods and they don't matter….*
- *So I think we have a golden opportunity to use that wood lot owners. And I mean use in the sense of incentivise them to think different, and our community forests to showcase actually the ingenuity and forest management that we all roundabout way know needs to happen.*
- *I do believe community forests try. Not all of them but a lot of them. I also know that they're trained by – industry isn't the right word, but we're trained to think a certain way, and it yields profitability, and it's proven by their balance sheets. I don't need to tell you. They're all pulling in two, three million a year after everything. Good, that's great. The reality is if we can develop a different way of doing things that's socially and economically responsible, but also ecologically responsible, and builds capacity into our industries, we're going to succeed even more.*
- *So there needs to be more area for small operators, you know? … here in B.C. the mills just have a strangle hold on the tenure and there's just no room for – you know, the small business program has been trashing around for years trying to solve that problem...*
- *So I'd say that there's strength in numbers, and so if we pull together and speak what's on our mind then we can support each other in that way.*
- *I would like to say if there was a generic group that you could go to as far as mapping … You can go to and say, "Look, hey, I need some mapping here," you know? … You got to know and your crew has got to know where the elevation changes are, where you got to implement steep slope, you know, that is critical to the operation because that's one of the first things they ask now. And it's really hard to find that information because being a contractor, you just want to get there, you want to get the fibre moving as quick as you can. You don't get paid until the wood's through the scale of the sawmill, so you want to make things efficient.*
- *I think just awareness of smaller contractors, whose out there, whose doing stuff, other than the large contractors, fully mechanized, because I think those guys, we need to*

support the small operator even though it may cost more but I think in the long run I end up with a better product.

- *And more information or better information on who's buying and what they're buying.*
- *It would be good if there was a bit of a, yeah I guess to have some sort of network of who, like what are the smaller millers and what is their preferred products? What species they're looking for? … If there was a bit of a I don't know, like a list or some sort of document or maybe it's a non lined thing that can be updated, but something that can provide sellers a bit of information on who is looking to buy and potentially what they're willing to buy for and contact information so that there's not a reliance on OK this is what the dimension and species of my log is.*
- *Yeah and like you know, photos. You know, their photos are great because the imagine in a lot of the public's eye when they hear forestry or logging they just see clear cut right? They see a big clear cut on the side of the health side and they see the articles coming out from all the different activist groups or whatever. And there's definitely bad forestry out there but you know, woodlots aren't group typically during bad forestry.*
- *I'd just like to throw in, maybe the government could provide an incentive to these guys right? To these small guys to get them up and running. I'm talking about small mills.*
- *I think the management component of it is important. The great job that wood lot owners do on all of their prescriptions and their approach to forestry, the special care they take, the longevity is important. We do that same kind of thing on the community forest and woodland license. Essentially those two things are very big wood lots themselves. We try to do something a little bit special, something a little different.*
- *Yeah. Yeah. Well, yeah, rate increases would help for sure. Then we could pay guys more. And, well, to deal with inflation and rising fuel prices, again.*

Appendix D: Small Wood Manufacturers Data Questionnaires and Interview Questions

SMALL MANUFACTURERS CAPACITY BUILDING PROJECT

Thank you for agreeing to participate in this project. We hope that the results will strengthen the capacity of small fibre manufacturers in the region and enhance economic value and employment within their local communities.

Please read the instructions below before completing any part of this packet.

Participants should:

1. Respond to the ***Data Collection Questions***[31] for **EACH** forest tenure holding or private land management in which they are engaged;
2. Complete all responses to the best of their knowledge;
3. Contact Research Lead Tyler Hodgkinson, RPF, about any questions concerning the data collection process;
4. Review the Interview Questions at the end of this document prior to meeting with Tyler for the interview.

Participants can rest assured that:

1. All data will be anonymized and coded before use in any reports.
2. Individual responses will remain confidential unless you agree to share specific information.
3. Interview data will be aggregated and generalized to greatest degree possible.

[31] Data sheet includes pp. 2-9.

LEGAL NAME:	
PRIMARY CONTACT (TITLE):	
SECONDARY CONTACT (TITLE):	
ADDRESS 1:	
ADDRESS 2:	
E-MAIL 1:	
E-MAIL 2:	
PHONE #:	
MOBILE #:	
WEBSITE:	

DATA COLLECTION QUESTIONS (to be completed by manufacturer)

27. Organizational details.

Type of Facility (Primary breakdown: building logs, lumber treatment, windows/doors, posts, poles, mouldings, cabinets, furniture, etc.)	**Ownership Details** (sole proprietor, partnership, corporation, cooperative, Non-profit Society)	**Facility Location**	**Scale Site ID**	**Business Start Date**

28. First Nations involvement? Yes or No

If yes, what is the involvement, please explain:

29. Where is the nearest support center?

Staples (food/fuel/ lodging)	**Business Management (professional/business)**	**Industrial Supplies & Parts**	**Contractors/ Consultants**
Example: Grand Forks/Castlegar	*Internet*	*Internet/Kelowna*	*Nelson/Castlegar*

30. What is your average annual fibre consumption?

Species Fibre[32]	Annual Consumed volume (m^3/yr)

[32] **Species Abbreviations**: **FD** - Douglas-fir; **LW** – Larch; **PL** - Lodgepole Pine; **SE** – Spruce; **BA** – Balsam; **CW** – Cedar; **HE** – Hemlock; **BG** - Grand Fir; **PW** - White Pine; **PY** - Yellow Pine; **MX** - Mixed Species; **DECID** - Deciduous

31. What are the historic (up to 10 yrs) costs of your annual fibre consumption?

Year	Species Fibre[33]	Purchase Price ($/m^3)

[33] **Species Abbreviations: FD** - Douglas-fir; **LW** – Larch; **PL** - Lodgepole Pine; **SE** – Spruce; **BA** – Balsam; **CW** – Cedar; **HE** – Hemlock; **BG** - Grand Fir; **PW** - White Pine; **PY** - Yellow Pine; **MX** - Mixed Species; **DECID** - Deciduous

32. What is your current manufacturing capacity?

Species Fibre[34]	Primary Product Type (mfbm/yr or ???/yr)	Secondary Product Type (mfbm/yr or ???/yr)

[34] **Species Abbreviations**: **FD** - Douglas-fir; **LW** – Larch; **PL** - Lodgepole Pine; **SE** – Spruce; **BA** – Balsam; **CW** – Cedar; **HE** – Hemlock; **BG** - Grand Fir; **PW** - White Pine; **PY** - Yellow Pine; **MX** - Mixed Species; **DECID** - Deciduous

33. What other products are you making from wood fibre?

Species Fibre[35]	Product Type

[35] **Species Abbreviations**: **FD** - Douglas-fir; **LW** – Larch; **PL** - Lodgepole Pine; **SE** – Spruce; **BA** – Balsam; **CW** – Cedar; **HE** – Hemlock; **BG** - Grand Fir; **PW** - White Pine; **PY** - Yellow Pine; **MX** - Mixed Species; **DECID** - Deciduous

34. What are the historic (up to 10 yrs) selling prices for your products?

Year	Primary Product Type		Secondary Product Type	
	Product Type	Selling Price/Unit	Product Type	Selling Price/Unit

35. How many employees do you have?

Employees	Number
Full-time	
Part-time	

36. How is your full time equivalent employment (FTE) broken down?

Job Type	FTE

INTERVIEW QUESTIONS (to be discussed with research lead Tyler Hodgkinson

37. What is your facilities level of integration; essentially what happens to wood fibre you purchase? Adding value and manufacturing to what?

38. Who are the typical buyers of your products? Are you reaching all your potential buyers? Do you need support? What would support look like?

39. Do you have any other ideas to add value to wood fibre and/or reduce waste? Do you need support? What would support look like?

40. How can utilization of your purchased fibre be improved? (degree of utilization and barriers to increase utilization)

41. Where do you go to get info on log markets? Who do you talk to?

- How we can support one another to create connections and cooperation.

42. What are the obstacles facing you and/or other small wood manufacturers to increase capacity or grow your business?

43. What is your level of readiness to increase capacity?

44. Do you know of potential partners and/or supporters of small manufacturers who might be interested in increasing the capacity of small wood manufacturers?

- Potential partners for what topic / purpose / goal.
- Potential partners that might be interested in increasing thier capacity.
- Potential support for what purpose.

45. Do you have any suggestions for how we can better support small wood manufacturers? What types of support and/or resources do you think are needed?

46. Are you willing to have your contact information shared with other participants, so you have the ability to increase your network?

Appendix E: Small Wood Manufacturers Additional Comments

Q11. What is your facility's level of integration; essentially what happens to wood fibre you purchase?

- *Yeah, so we're buying raw logs. Cedar is manufactured. Because we're running a circle saw for the Cedar breakdown portion of it, our saw curve is pretty heavy…. We limit the length of our Cedar because it's an inland Cedar down to 12 feet, so we're heavy 12s and then trimming back to eight. And then our small top log we cut at eight foot.*
- *We basically buy a low-grade as well as a super-high cedar… and we split that and make it into split rail fencing.*
- *Whatever doesn't make a pole becomes saw log or it becomes waste. So anything that doesn't become a pole that is the length of eight and a half feet or greater can be sold at saw log or to local mills. Anything less than that unfortunately gets put into a pile and basically burnt once or twice a year.*
- *And then we have our peeling, our peeling residue so our hog and that gets piled and that mostly goes to, it either actually goes to Celgar or across the line to different pulp and paper facilities.*

Q11b. Adding value and manufacturing to what?

- *Sure. Really we've got two things going on that are all interested in the same goal, which is producing utility poles that can be sent to a trading plant, so our operation essentially takes poles from the wood, so we have two resource departments really.*
- *Over the years that's all I've ever cut, because that's where the biggest – either you can sell whenever you want and fir is the custom cut thing. People – like timber frames and stuff like that one. So I don't cut my fir, my fir sits there and it could sit there for two years and I just – when I pick up an order or somebody phones me up and says they want eight-by-eight, 10-by-10s, six-by-sixes, I rarely cut for lumber. Like I cut beams and stuff like that and so that's what the fir usually does. And when it ends up getting too old, you know, stained and everything else, I cut it into firewood if it gets to that point.*
- *So just getting back to the Cedar story; Cedar goes two different directions. The timbers go down to the coast right now and one inch and two inch go to Ontario. I mean I'd like everything to go to Ontario. They probably will once the springtime picks up and their market picks up, but they pay a lot better numbers. When you're going down to the coast, of course you're in that market where all the big oversized Western Red is, right?*
- *It's actually landscaping. So some of it is able to sell to the same people that would use – some of the same landscapers who would be using our split rail fencing, would also at times, they'll order part fencing, part bails of bark mulch or bagged bark mulch, or bagged wood ships or baled wood chips. And all used in the landscape industry.*

Q12. Who are the typical buyers of your products?

- *Local. Everybody local.*
- *We sell this stuff all over North America. We have a large sales department that does that and really it's – we know all of the customers. They're all utilities. I mean we can look them all up and they all know us so it's not – there aren't a whole lot of new markets that we could reach within North America.*
- *Our deal pole, they do get sold to sometimes other pole companies that will treat them and fell them, or we have companies that we work with that treat them on our behalf and then we settle them to our buyers which would be companies like Saskpower or different companies that we deal with in the states. We actually don't sell to BC Hydro, we're not on their list.*

Q12F. If so, what would that support look like?

- *So there was another option, you know, we just need marketing to get these things into – if I can get enough of them, I'll open up a store of my own. If I get 60 pieces here, that's what I'm shooting for, get 60 pieces then we can open up a store. Get a space, rent a space and just have people actually come and look at them because pictures just don't do justice on these things, eh?*

Q15. Where do you go to get information on log markets?

- *I don't really talk to anybody because I know there's only four big operators left in our area, right? And I think there's five big contractors left; there's no small guys left anymore. There are no small market loggers or whatever you want to call it left.*
- *I try and buy from the majors that I'm aware of, that are in about a hundred-mile radius of our mill. So that's about the furthest distance I go, and on occasion I have gone further than that, but as a general rule, I try and stay within a hundred-mile radius, due to the cost of freight.*
- *I think we just talk to all the local suppliers. I mean we've got – we're fairly connected. We've been around for a while. We talk to all the log buyers for the large and small licensees. We do some work at the coast and we get – you know it's a little more of an advertised log market down there.*
- *A lot of the information that I get on log markets, like I would say formally is probably from that industry trader newsletter.*

Q15a. Who do you talk to?

- *And then besides that, like on current log market, being a log buyer I'm always in close contact with other buyers and we have industry partners that we work with and grade partners. So just basically through conversation you can get a really good idea of where markets are at.*
- *I usually phone a trucker.*

Q13. Do you have any other ideas to add value to wood fibre and/or reduce waste?

- *So I've had people come in my yard and ask me if I make garden stakes or fence posts, organic garden stakes or fence posts, so I've had this thought that, well, I could take that four inch top in and buck that thing back to, you know eight or ten feet and build a lathe and spin them and then market them as organic fence posts because there has been a big shift in peoples' mindsets, especially in Kootenays where they don't want to put the tree posts in the ground.*
- *And then we make a lot of sawdust with that head saw so I'm not too sure what to do with that yet. I've got to look into whether or not we can use it as animal bedding or not; you know it's got a high content of Cedar in it.*
- *I firewood all my slabs. I take home the premium ones and I sell off all the junky ones.*
- *Sawdust? There ain't a whole lot sawdust. I usually give it away.*
- *Locally here there's so much bug-kill for bug kill and I know they just went through this not wanting to touch old growth or large wood. But … it's just sad to not be able to touch it, and just to watch it rot and fall to the ground or burn.*
- *Yeah. So definitely those short chunks that I was talking about that we have. Like we've been in contact with like split rail companies. You know, they're super interested in those pieces because they can take a five foot and a six foot piece and use that for split rail. The only problem is trucking, it basically eats up all the potential for it being a viable option right?*

Q17. What is your level of readiness to increase capacity?

- *I'm buying the equipment. I've already got it secured and we're moving forward with that, so it's kind of like putting the cart before the horse, right? So getting the land secured is the horse.*
- *I'm ready to go any time. I've got money on hand to buy timber if I need to. I've got my new motor on my mill.*
- *Well, if we could get the fibre we'd be all over that.*
- *Yeah it wouldn't be that hard because we basically, we have trouble keeping up with our peeler on a regular basis than really to consume more capacity. It wouldn't be that hard to add shifts or to put in or work a longer day or anything like that. It wouldn't be that difficult, it's just the same thing that I probably would be saying to the whole thing. It's just access to fibre.*

Q18. Do you know of potential partners and/or supporters of small manufacturers who might be interested in increasing the capacity of small wood manufacturers?

- *Yeah, well, what I found over the years is you can't get along with anybody.*
- *I can think that First Nations are probably fairly interested in the idea of joint ventures in some of these locations…. They may have timber holdings and we may have the ability to build manufacturing capacity, right, so that's the kinds of things that, you know are mutually beneficial arrangements.*
- *I would say the only kind of supporter that we have is probably from the trading facility that we deal with because in Canada we don't have our own trading facility. So*

there is other companies like Bristol pole, which is actually a competitor to us, but we do sell them, the old poles that they then treat themselves right?

Q16. What are the obstacles facing you and/or other small wood manufacturers to increase capacity or grow your business?

- *In order to turn a profit, I have to– you know, I want $400 a thousand for sawing, that's kind of my cut-off, so I got to make $2,000 or more on the wood or else it's not worth my time cutting it, right? And the same with fir, goes same with fir. Fir's going for 150 bucks a metre, I'm looking at about four metres to a thousand, so I'm looking at $600 a thousand, I can't sell it for $700 a thousand; I have to sell it for $1,500, $1,600, $1,800…. I have to triple my money because I have to turn it around, this is what I've always said to all the guys who were starting. You got your purchase price, you got your cutting price, and then you have to re-purchase, right?*
- *It's just like, you know, you're not allowed to touch a log. We're staying out of these certain zones but that zone, if you come and take a look, it is being hammered by fir beetle and we should be able to access [it].*
- *Make a product – yeah, make a product that's an end use product that we can start making a lot of money on and the same with the – you know later on you can go on Google, Vintage Woods and Metals and you'll see the finished products on these homes and that's wood that I've shipped down to him in those pictures.*
- *Yes, so as a mill, we're actually looking at trying to figure out where we're going to move forward, realising we've lost at least half of the wood volume that our mill's going to need to survive. And literally, the wood we have in our yard, we have little drips and drabs coming in right now, but realistically, four months from now it's going to look pretty bleak, and I don't know a solution.*
- *I've spent millions of dollars for the government building roads. I've used those roads to put out fires. In fact, I used one of the roads that I built just last year to put out a forest fire that, had that road not been there, more wood would have burned from that fire alone, if that road had not been there that I built, than our mill would use in the next fifteen years…. So if all of a sudden, they're not going to put timber sales, those roads, before long, are not going to be functional. And that wood that they're trying to save, is going to burn out, not maybe, not possibly, guaranteed 100 percent, and I think they are more than happy, because maybe that's nature's natural way for it to just burn out…. But [if] there's more slides, it's way worse for the environment than going in and selectively [cutting] a block here, a block there, continue looking after the roads and make fireguards. Every time you log a little block, you're creating a natural fireguard and you're creating access to the forest.*
- *We've all seen a shrinking timber harvest base over the last couple of years but this recent old growth deferral process…. there's a whole lot of uncertainty around what that is going to make the business or the industry look like over the next couple of years. And it has, in a very short time decreased the availability of open market fibre.*
- *Well, it's really taken a bunch of these licensees' available STI and put it on the back burner, right, and then it's prevented access to areas adjacent in some cases. I don't know that anybody thinks it's just temporary, but yes, on paper it is just temporary*

now but it has decreased the available STI and the availability of small business sales, right?

- *We are actively talking to Nations. I think what I'm hearing, and I don't want to put words in anybody's mouth, but everybody is uncertain as to how this is going to work and what it's going to look like and First Nations are no different… certain First Nations have said no thank you, and others have embraced it….*
- *I need a very specific tree to make into a pole whereas the millers, they can take just about anything, they can take my poles and saw it up into boards and they can take a saw log and saw it up into boards. But I can't take a lower grade saw log and make a pole out of it right? That's definitely an obstacle.*
- *And also too I would say like the, just the constant erosion of the timber harvest land base that seems to be happening…. like the tree that I'm interested in is also a very, you know Cedar in general is pretty special to First Nations in some areas. It's also just where they grow is usually, can be on a bit more of a sensitive site which could be difficult for the public protection and stuff too…. So it's kind of just like a shrinking timber harvest land base and then the competition for that Cedar log.*

Q14. How can utilization of your purchased fibre be improved?

- *When you buy wood on the open market, like logs…. they're sending you something and in order to get it from them you have to pay 10 bucks a meter over what they got it for, right? And also, they changed the conversion to make it even better for them, right? So if you're paying a 1.12 conversion, they'll charge you 1.2, 1.3 for something like that, you know?*
- *If I do 10 loads in a month, and … on seven of those loads, I average $3,000 a load [sold], clear after trucking and everything else like that. So I made $21,000 that month doing that and I got three loads, I consider them, home for $3,000…. So I got my wage. I got my wage out of it for that month, I got my fuel, I got all my stuff. So now I got these logs sitting there, these three loads of logs, that basically I got for free, just the logging and the shipping to whoever has paid for those logs. So I got those logs pretty cheap, but I don't treat them like that; I treat them that I paid 150 bucks a metre for them and it's going to take me four metres to take a 1,000, so I treat them that they're worth $6,000 a thousand still…. so if I got three loads of logs for free, I can go buy one from them sort yard for $5,000. So now I spread those three logs, those four loads now, I spread over the cost over all those logs. So I've gotten them for fairly cheap but my cost of fibre is way down.*
- *Yeah, and getting into values in terms of – what I would like to do is take – I had been talking with the community, of course, about buying their Hemlock because they've got a lot of it and bringing it down to our mill and doing boxed heart or free of heart timbers, like a 4 x 6 or 6 x 6 and then setting up a plant, or creating jobs with some carpenters that could do timber frame garage packages.*
- *And then a small planer line just so that we can retain our jacket board and tongue and groove it instead of sending it to Ontario and having him make more money on it when we could do it here. Then a stack with a couple of guys who are expert carpenters who can finish those timbers, right, and do pre-packaged stuff. So you're*

- *taking it right from the log all the way down to the very end at that point, right, and export it down to Colorado. Let him stain it up the way he wants it and sell it to his customer.*
- *There's like so little that is being wasted right? It's just ensuring that the hog makes it out and that the saw logs are sold before they check and dry out pretty much where they can't be milled right*

Q19. Do you have any suggestions for how we can better support small wood manufacturers?

- *It's happened to me a couple of times where I've had to go back to the customer and say I can't cut this. You know I've gone through 15 cubic meters of log trying to chase one timber, you know, so it's got to be the right wood, and you're not going to know that unless you understand my business.*
- *So opening up that dialogue would help a lot I think.*
- *The fibre suppliers understanding our business, like come in the mill and actually seeing what we're doing. If you understand how we cut you'd look at the log completely differently. If you'd look at it through my eyes, you'd see a whole different log than probably what you're looking at right now.*
- *Because I'm going through the challenge of it right now, accessing wood fibre…, knowing how much wood I've lost… I could probably use some assistance from that perspective, because I really wouldn't even know where to begin looking, or knowing how to go about, when I did find it, how do you even try and apply for a salvage on something like that. But I do see it as a wood supply.*
- *Somehow to get your market price for your product.*
- *I think supplying markets I think between – the big four, the big guys – I wish there was a premium they had for, "Oh, you're selectively logging your" – no, and have a little bit of incentive for the logging practices that we typically take on, right?... I just think that when it comes down to supporting your local small forest tenures, that they kind of see a little bit of a benefit over the mass destruction logging.*
- *So like a log home builder that consumes 600 meters a year, they can't bid on anything over 1,000 meters right? And even us, where we consume 10,000, any sale that is over that amount for a year, so if you had a 22,000 cubed sale on an 18 month term, we don't even qualify right to bid on it.*

Appendix F: Additional Log Pricing Figures

Figure T: Douglas Fir/Larch Sawlog: Interior Log Market vs. Participant Pricing Data

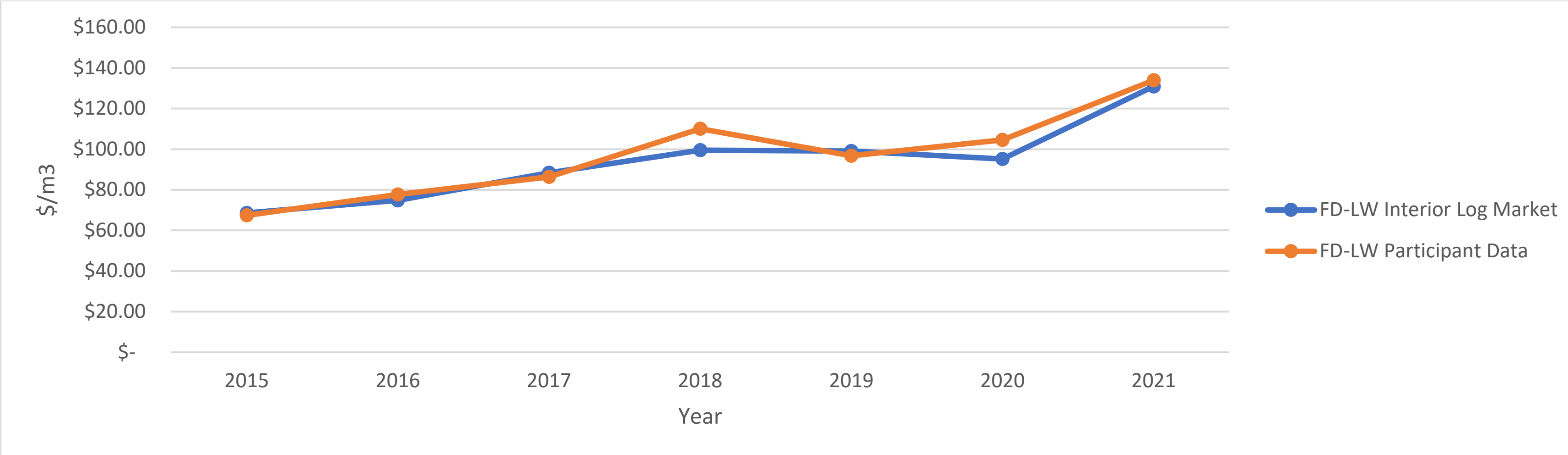


Figure U: Hemlock/Grand Fir Sawlog: Interior Log Market vs. Participant Pricing Data

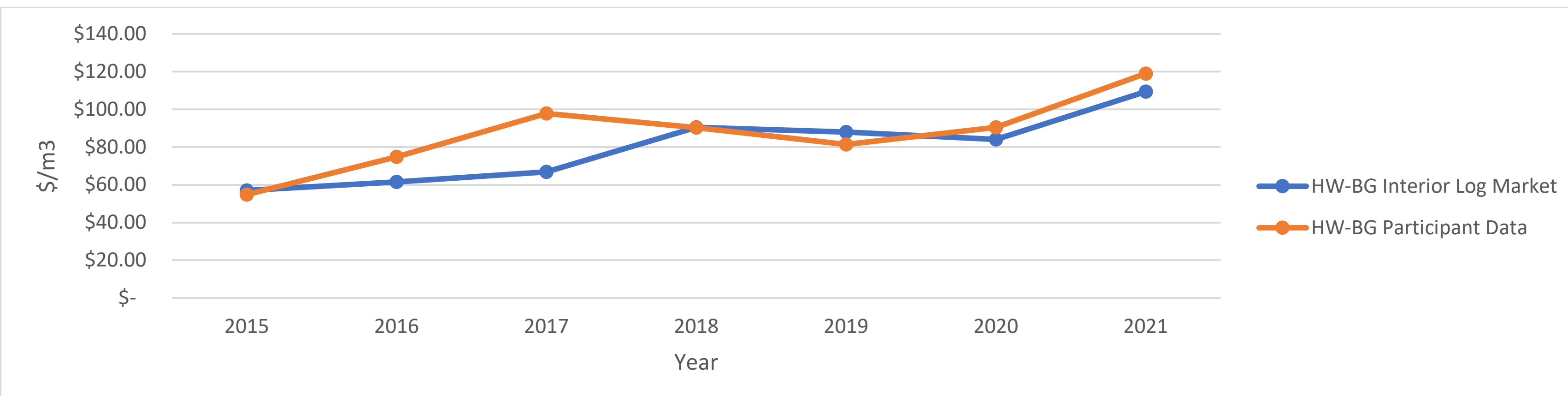


Figure V: Hemlock/Grand Fir Sawlog: Interior Log Market vs. Participant Pricing Data

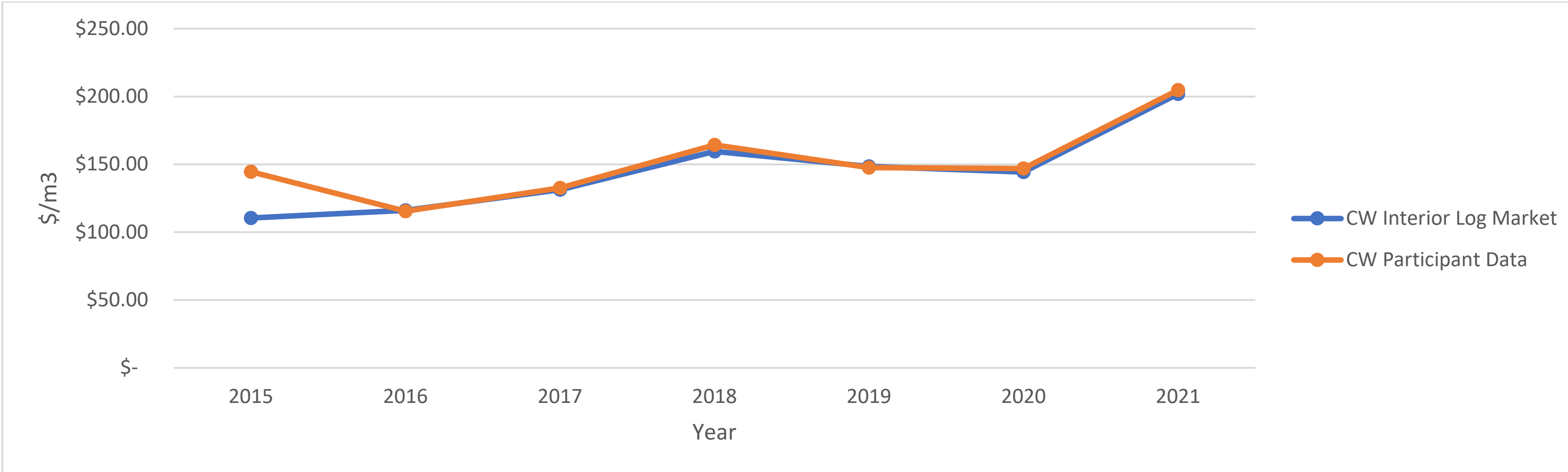


Figure W: Peeler Interior Log Market vs. Participant Pricing Data