Market Analysis

Log and Timber Buildings—2012

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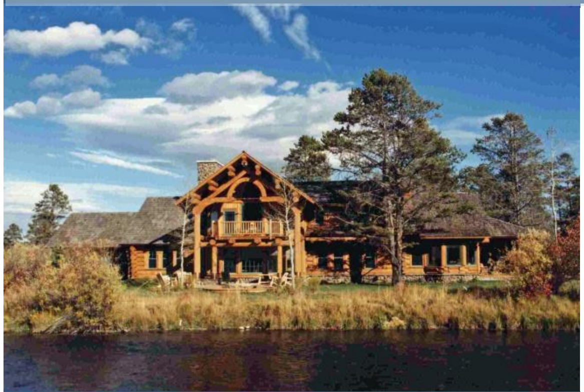
Vernon, BC





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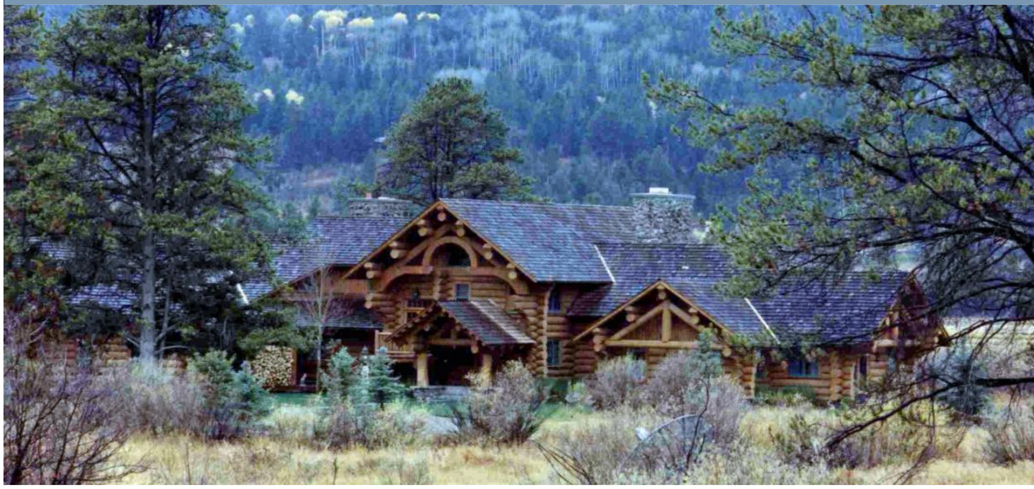
This research would not have been possible without the significant effort by the volunteer coordinating committee, made of key members of the log and timber industry. The combination of commitment to the value added wood industry, the log and timber sub-sector and the people involved in the industry by the Provincial government and its Beetle Action staff has made this research both possible and solidly linked to key provincial, national international issues effecting the industry.

The research team would like to acknowledge the time and effort provided by the owners and managers of log and timber companies in answering our calls, meeting our team, completing the surveys, and engaging in detailed conversations about the industry and its future market trends. Others at First Nations, municipalities and county governments, architectural firms, general contractors, and other interlocking industries provided much of the information presented here.

The synthesis of the information was completed by Westcoast CED Consulting Ltd. and is not the official view of the BCLTBI Association, CCBAC, SIBAC, SIDIT, or the Government of BC.



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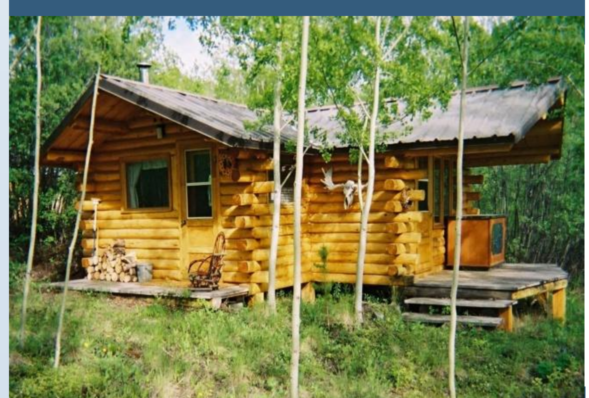

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EXECUTIVE SUMMARY

The log and timber building industry in BC has suffered a significant fall off in business since the rapid collapse of the US housing market in general, and the log home market specifically, in late 2007 and continuing through 2008, 2009, 2010, and 2011, as a majority of their shells/buildings were exported to US customers. The US log and timber building market had grown to almost $2 billion annually. The resulting steep decline in sales required most of the builders in the BC log and timber building industry to rapidly decrease the size of their operations and in many cases either temporarily or permanently close their business.

BC's log and timber building industry is a significant component of BC's value-added wood industry. Historical surveys have indicated that the log and timber building sector employed over 1800 people in BC and generated over $114 million in direct product sales primarily through exports (2006). Those in the industry, those supplying the industry, and many communities where this industry is located are very interested in seeing this subsector expand in terms of sales, employment and profitability.

Current Situation

In December (2011), a comprehensive list of all potential log and timber frame builder enterprises in BC was compiled comprising 102 handcrafted (HC) companies, 19 machine profiled (MP) companies and 48 timber frame (TF) companies. In January and February (2012), through calls, e-mail and networking, the industry list of active companies was pared down and a new list was created which was comprised of 71 HC, 20 MP and 36 TF. Of the 127 active companies, 67 (spread across HC, MP and TF) participated in a brief survey regarding the current state of the industry, as compared to the boom years of pre-2008. Based on this research, plus industry level networking, the Log and Timber Building Industry in BC has an estimated direct employment of approximately 1200 people. There are approximately 650 people directly employed by HC and MP companies, which is estimated to be down about 1/3 from pre US recession levels. No similar 2006 data was available on the TF component in 2006 so a comparison is not possible.

The estimated breakdown of companies by type, by number of employees is as follows:

- 43% of the companies have 1-5 employees
- 32% of the companies have 6-10 employees
- 19% of the companies have 11-19 employees
- 8% of the companies have 20 or more employees

Potential Markets

Over the course of the extensive research conducted, three separate main markets, plus sub-regional markets were reviewed for their possible growth potential. Those markets researched were as follows: Western Canada (BC, Alberta, Saskatchewan, Manitoba, Northern Ontario), Aboriginal (Western Canada), and US Mountain States (by county). For full, large log and timber frame builders, a substantial market still exists in the US Mountain States particularly in specifically identified counties in Montana, Idaho, Wyoming and Colorado. For higher end timber frame companies, the BC and Alberta markets are expected to continue to grow, along with the US Mountain States as the style preference in the US mountain states is moving more toward timber frame buildings, e.g. Montana, Idaho, and Colorado. For more local log builders and timber framers, particularly those with the ability to construct accents and hybrid components, the BC and Alberta markets are expected to continue at the substantially scaled down level from the boom years. The continued financial growth of the Alberta oil industry and the western Canadian mining industry, to pinpoint a few a couple of key sectors, will contribute to creating the incomes that will sustain higher end primary and secondary home construction in BC and Alberta where timber frame components and accents dominate. There will be a continuing market for those log and timber companies who have the ability to build major structural and accent features for institutional and multi-unit buildings, including on Indian reserves, in western Canada, with a slightly softer market in BC for provincially funded institutional buildings.

For those companies willing to create lower cost solid wood construction systems, combined with or connected to, full turn-key services, and pre-set tight pricing, there is a substantial and growing Aboriginal housing market particularly in rural BC, northern Alberta, northern Saskatchewan, and the Yukon. There is also substantial markets in north and east Manitoba and northern Ontario where road access is often limited to winter only and summer access may be by ships originating in Eastern Canada. These Aboriginal housing markets are not for the weak-of-heart or those companies unaccustomed to slow decision making processes and/or the need to develop and maintain close social relationships to their customers. Haven Timber Homes has firmly entered this market demonstrating that using the low cost mountain pine beetle (MPB) affected pine with a timber frame and solid wood infill system can successfully meet the requirements of this market segment.

The fast inclusion of energy codes within building code requirements in Canada and the US Mountain States threatens to eliminate the small profiled log building system (6 x 8, and 8 x 8) as an option even for seasonal second homes. These companies may need to adjust their building system and/or shift to log siding type applications as marketed in BC by Trout Creek International Homes and other companies.

Government Assistance Potentials

There are general government assistance programs available to a variety of manufacturers that are involved in product export which include the log and timber industry. BC Wood, through its programs, can cost share the cost of attendance at export industry shows internationally. There is financial assistance available for apprenticeship training including non-Red Seal programs, e.g. the log building apprenticeship program. The research and development assistance does not directly impact the sector yet there are research and development activity assistance available in specific situations, e.g., the energy efficiency of small diameter machine profiled buildings, where research and development is needed quickly.

General small and medium sized business assistance exists that this sector can tap into. The prime example is the Northern Initiative Development Trust which cost shares business competitiveness consulting on a 50/50 basis and can provide loan guarantees through the Business Development Bank of Canada. There is wood focused export development, building science and education support, e.g. Forest Products Innovation seminars, for the sector within the industry. This needs to be expanded given the employment and economic impact of this sector on wood based communities in the Province and the specific economic opportunities requiring substantial intervention and innovation.

Conclusions

The markets are returning slowly in the US Mountain States and there is a gap in US capacity thus making now the time to explore specific markets in specific counties that match an individual company's capacity. The markets in BC and Alberta and the rest of Western Canada are stable at their current low levels with growth primarily in urban areas, putting the emphasis on opportunities on timber frames for complete buildings, hybrids and accents. There is a substantial potential market in Aboriginal housing in western Canada (exceeding $60 million annually) which requires continued systematic focus on a number of constraints to meet the needs in this market niche. There is also substantial market in building institutional buildings or components for them particularly for on-reserve needs, in other growing centres in western Canada. The industry still directly employs approximately 1,200 people, most of which work in rural areas or smaller communities in BC. It is also internationally competitive and has the elements necessary for growth as each of the market segments rebound. The log and timber industry adds at least seven or eight times the value to the high quality logs they purchase making it a significant contributor to the wood value added industry in BC. Finally, there are a number of key activities where public sector investment, either on its own or jointly with the industry, can contribute substantially to the viability of the industry and growth of this primarily rural, wood value added industry.

MARKET ANALYSIS

1 Introduction

1.1 Log and Timber Building Industry BC

BC's log and timber building industry is a significant component of BC's value-added wood industry. Historical surveys have indicated that the log and timber building sector employed over 1800 people in BC and generated over $114 million in product sales – 83% of which was through exports[1] (2006). BC's log and timber building sector is also an example of an extremely high value-added industry – creating one FTE of employment per 110 cubic metres of wood compared to 2000 cubic metres of wood per one FTE in the traditional dimension lumber sector. The BC provincial government and rural communities are very interested in seeing BC's value-added wood sector and this subsector expand.

Recent studies have confirmed that there is still considerable unmet demand for BC's log and timber building products. Indeed, a 2005 study prepared for the Canadian Forest Service identified prefabricated buildings (including log homes) as having the highest potential for increased revenue growth and market expansion[2]. That report also recommended a more strategic and targeted approach to international market development that would focus on sub-sectors, like log home building, where Canada has a globally competitive advantage. There has been change since 2006 but BC's competitive advantage is still evident in this subsector. It has also been suggested that there are undeveloped log and timber building business supply chain opportunities in BC[3].

The current situation (2011), five years later has the total employment down from 1800 to 1200 with the market having shifted dramatically toward the Canadian market and away from the US market. No specific data is available on 2011 sales but based on this research export sales has probably shrunk down to less than 50% from 83% in 2006.

While there are a few larger operators, the bulk of BC's log and timber building sector is made up of small businesses. As surveys and studies have concluded, most of BC's log and timber building businesses are completely consumed focusing on other elements of their business operations (e.g. fibre supply, current sales, production, etc.) and lack the surplus management staff to spend enough time on broad development strategies including developing and expanding Canadian and international markets for others in the sector. As a result, the BC log and timber building sector is expanding at a much slower rate than market potential analysis would suggest could be supported. Both the federal and provincial governments have invested significant amounts of funding to assist Canadian and BC dimension lumber producers in developing and expanding international markets for their products. Many members of BC's log and timber building sector believe that if their sector were provided similar levels of support they too could significantly expand their markets and sales.

[1] BC Log & Timber Building Industry Association website www.bclogandtimberbuilders.com/2aboutus.html

[2] *"Can Canada be a Global Competitor in the Secondary Wood Manufacturing Sector? A Current Assessment of the Canadian Secondary Wood products Sector in a Global Context."* Report prepared for the Canadian Forest Service. July 1, 2005, David Cohen et al.

[3] Westcoast CED Consulting Ltd., Cariboo-Chilcotin Log Building Sector Strategy, CCBAC, July 2006.

1.2 Project Background

The impetus for this project came from two major related initiatives. The first was the Log Building Sector Strategy project completed by CCBAC in partnership with regional members of the BC Log & Timber Building Industry Association (BCLTBIA) in 2006.[4] The Sector Strategy confirmed the importance of the log and timber building sector to the interior BC economy and identified its significant growth potential. The second came from the desire of all three regional Beetle Action Coalitions in the province to find ways to encourage and facilitate economic growth and expansion – especially in light of the projected economic and employment impacts of the mountain pine beetle epidemic.

In early 2010, representatives from the Pine Beetle Epidemic Response Branch of the Ministry of Jobs, Tourism & Innovation; CCBAC; the Southern Interior Beetle Action Coalition (SIBAC); and, the BCLTBIA Board of Directors agreed to work collaboratively to create a project to assist with expansion of the sector. In September of 2010, the partners met, in a two day workshop, to discuss the potential project and to confirm with industry representatives the priority issues that needed to be addressed to facilitate expansion of the sector in BC. The industry representatives confirmed the following priorities for their industry:

1. Assembling data and conducting testing on the energy rating attributes for log home construction.
2. Developing information and tools that will help promote the environmental advantages of log and timber builiding construction.
3. Developing information and tools that would assist the sector with market expansion and penetration efforts.
4. Developing a new strategic internet marketing presence for the industry.
5. Facilitating access to building logs for the industry.
6. Developing actions to identify and address policy and regulation issues that are hindering expansion of the industry.

Early in the project concept development, CCBAC agreed to be the lead managing partner for the project. Through discussions with the funding partners it was agreed that Gordon Borgstrom (Pine Beetle Epidemic Response Branch) would serve as overall Project Manager.

1.3 Developing Information & Tools to Support Market Expansion –Research Objectives

After a Request for Proposals competition in November 2011, Westcoast CED Consulting Ltd. (see Appendix 1) was selected by the Project Management Team to complete a Market Expansion and Development Action Plan for the sector (point three from above) which would:

- Identify and list all BC companies currently active in producing handcrafted log (HC), machine profiled log (MP) and timber frame (TF) buildings.
- Clarify BC companies' current markets by location.
- Identify growing markets for HC, MP, and TF buildings in BC, Western Canada (Alberta, Saskatchewan, and Manitoba) and Northern Ontario, including Aboriginal communities and resource extraction sites. The intent of the latter is to examine the potential use of log constructed buildings during the construction phase of major projects and then for the relocation of these buildings to neighbouring communities as an additional "legacy" benefit of the resource development.

[4] Ibid.

- Identify the growing markets for HC, MP and TF buildings in the Rocky Mountain US states.
- Provide detailed access points, sales systems, and actual leads for BC log and timber builders.
- Provide a market expansion and development plan for BC log and timber companies. The Action Plan will include specific recommended actions and activities that companies of varying sizes, building types and market/sales systems they can use to increase sales and market share.

This report provides the research results for the first four of the six objectives listed above. Additional research on each of the five above components will continue during the development of the plan to obtain additional specific information where needed.

1.4 Methodology

The process used in gathering the necessary information for this market assessment began with the consulting team meeting with the Project Advisory Team to hone the research and outcomes. Direct contact was then made with BCLTBI Association staff and Work Safe BC to obtain initial lists of BC log and timber frame builders. During the process of calling all of the log builders, other builders were added to the list. All of the websites for log and timber companies in BC were subsequently reviewed and evaluated using a consistent simple score card system. A phone survey of all log and timber frame builders in the Province was conducted, which involved calling all builders at least twice. The survey included obtaining information on buyer's characteristics.

All new log and timber literature available in Canada and the US was obtained, mostly electronically, and reviewed. This review was often followed up by telephone conversations with key staff of BC Wood and others involved in wood buildings marketing in Canada and the US.

Using secondary electronic sources and telephone conversations with data source agencies, single family dwelling (SFD) building permit information was obtained from the US Rocky Mountain states and the four western Canadian provinces plus Northern Ontario for the last 10 years ending with 2011. Aboriginal on-reserve populations, by Band, were obtained through a combination of individual Band's websites and Aboriginal Affairs and North Development Canada (AANDC). Counties and regions, where the number of SFD building permits where growing post the 2008 or 2009 bottom, were targeted with phone calls to county, regional, and major municipalities' planning departments to clarify the trend and to obtain information on the first quarter of 2012. For areas where growth was continuing, through 2010 and 2011 and indications of continuing into 2012, internet searches were conduct to identify prominent architectural firms and general contractors who consistently designed/built log and timber frame buildings in the region and in adjacent regions. Life style and housing magazines and real estate newsletters targeted on these growth regions were reviewed to identify additional designers and general contractors. The targeted firms were then phoned, with an approximate 40% success rate, and engaged in a key informant survey on the current demand for their services, including size and style of buildings and their expectations for the rest of 2012 and into 2013.

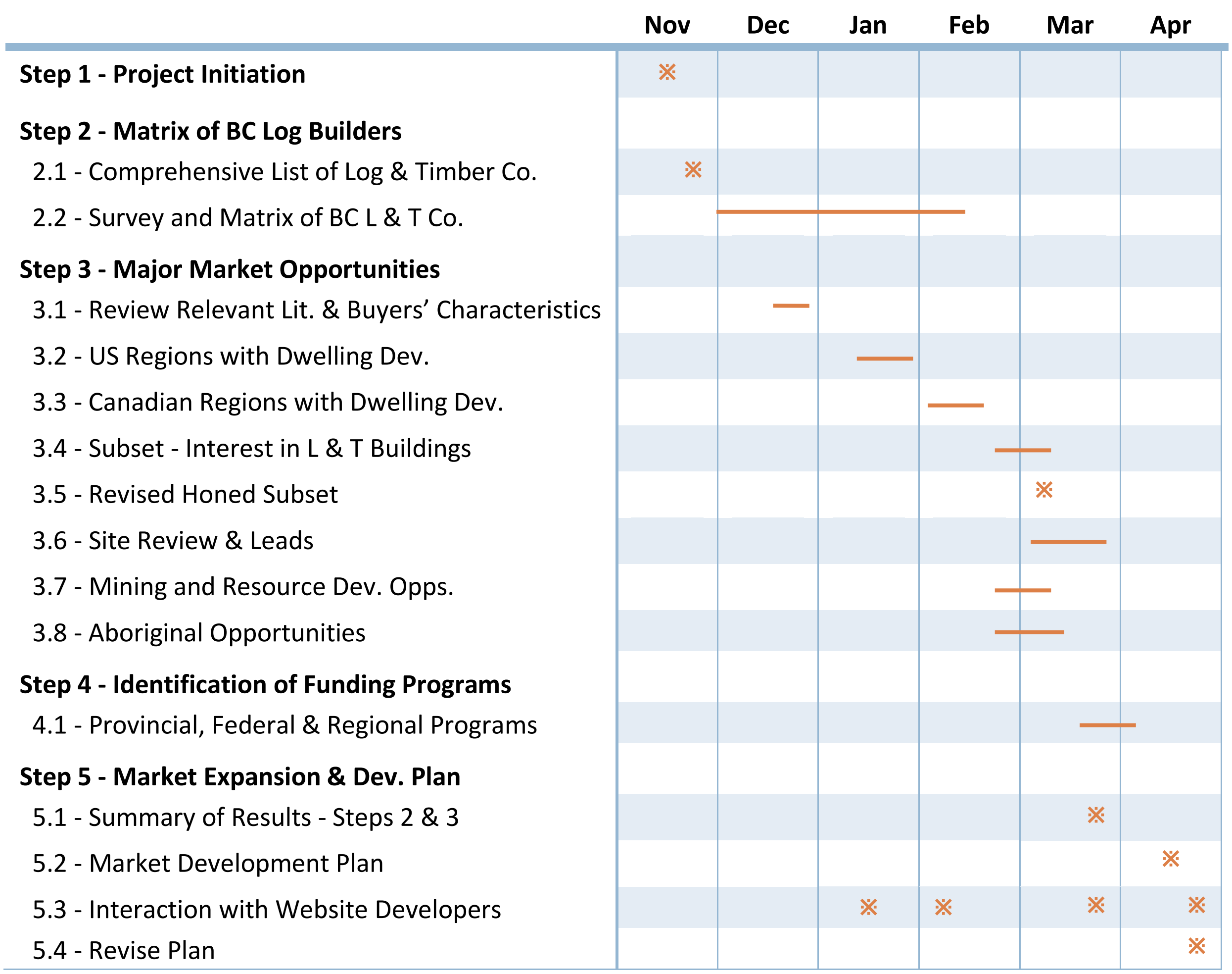
Initially, site visits to the targeted regions were thought to be necessary to obtain solid leads, but the massive shift to electronic communication in the last decade by this, and most industries, made that component unnecessary as county planners, major architects, and large general contractors were quickly willing to discuss the current situation in relative detail with knowledgeable people from the BC industry. Many of those contacted had previous (or current) positive working relationships with BC log and timber companies.

Direct phone and face-to-face contact with First Nations' managers and staff at a few Bands provided quick access to issues related to on-reserve housing, Aboriginal institutional building construction and worker camps in their traditional territory. Direct phone contact was also made to architects involved in designing and constructed on-reserve institutional buildings in BC. Program initiatives were researched on-line, after initial direction was obtained from government staff, and specialists in the field.

The results of the research were presented at the 2012 BCLTBI Association's Annual General Meeting in late March 2012, where formal and informal face-to-face discussions were had with more than 20 BC builders and presentations were heard on relevant complimentary issues. This final step enabled the consulting team to refine their understanding of the context and to polish their understanding of the collected information.

1.5 Project Timing

The research project's timing (November 2011 to April 2012 inclusive) is outlined below.



1.6 Context

The log and timber building industry in BC has suffered a significant fall off in business since the rapid collapse of the US housing market in general, and the log home market specifically, in late 2007 and continuing through 2008, 2009, 2010, and 2011, as a majority (approximately 80%) of their shells/buildings were exported to US customers. The US log and timber building market had grown to almost $2 billion annually. The resulting steep decline in sales required most of the builders in the BC log and timber building industry to rapidly decrease the size of their operations and in many cases either temporarily or permanently close their business. The Canadian housing market in general has experienced far less decline, with a softer landing and a recovery which enabled most BC log and timber builders to survive.

Table 1: US annual housing starts, 2005-2011 (,000)[5]

Year	2005	2006	2007	2008	2009	2010	2011
Total*	2,068	1,801	1,355	906	554	587	609

** Note: includes both single and multi-family dwellings.*

Table 2: Canadian annual housing starts, 2006-2011 (,000)[6]

Year	2005	2006	2007	2008	2009	2010	2011
Total*	225	227	228	211	149	190	194

** Note: includes both single and multi-family dwellings.*

A corresponding dramatic fluctuation in the value of the Canadian-US exchange rates[7] from an average of $.86 US to $.87 US in 1990 and 1991 to a low of $.64 US to the Canadian dollar in 2001 and 2002 to more than par in 2011 (see Chart 1) made operating in BC, to meet US demand, a complex undertaking. These dramatic changes had significant impacts on the BC industry's competitive advantage.

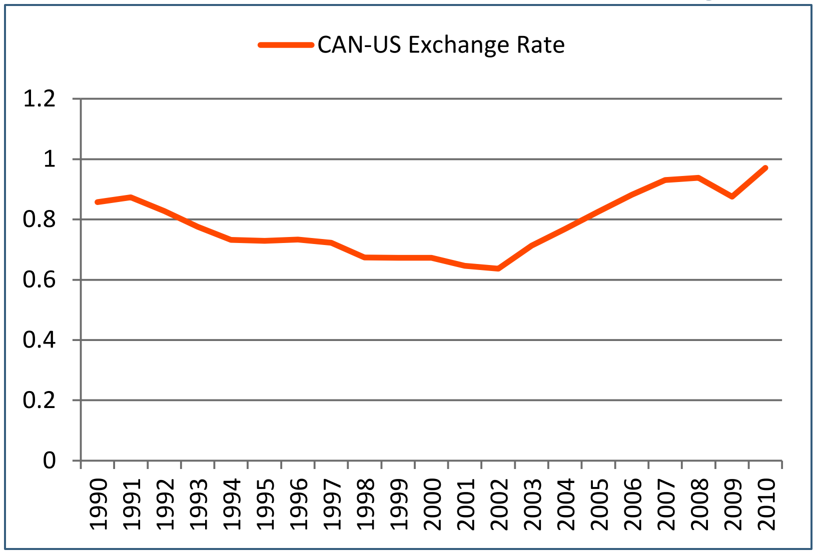
Historically, the primary purchasers of new log buildings in North America (dominated by US sales) have been couples in the 45 to 60 year old category for which this is a second home or future retirement home. This age group has been growing dramatically over the last decade and is expected to peak over the next decade. Another major purchasing group has been resorts; primarily in the ski, golf, ranch, and fishing segments for residential, commercial, and public facilities.

With these factors as a background, many builders in the BC log and timber building industry have been able to continue to operate at a scaled down level, with access to traditional and/or new or enhanced markets primarily in Canada. Many companies have re-invented what they do to match what the active market segments are seeking; including building components for hybrid buildings (stick frame combined with timber frame) and shifting more heavily to timber frame or partial timber frame buildings. It is clear that finding additional sales is critical to the temporarily closed operations and the operations that have been able to survive in whatever way possible at a much reduced level. Marketing and sales have moved

[5] http://www.nahb.org/generic.aspx?sectionid=819&genericcontentid=554&channelID=311
[6] http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/manuf05-eng.htm
[7] http://www.bankofcanada.ca/rates/exchange/exchange-rates-in-pdf/

from being a significant component of management and owner's focus to being the primary focus for most management and owners.

Chart 1 – Canada/US Exchange Rates



Source: Bank of Canda: Exchange Rates

In the US market, the north eastern and southern US markets have traditionally been serviced by eastern Canadian and eastern US companies that have a substantial location cost advantage over BC producers. That is not to say BC builders have not been able to successfully market and sell into these markets but their relative success has been significantly lower and the success was usually at a time of much lower Canadian dollar exchange rate. BC builders have historically exported primarily to the western US (the Rockies region) with smaller sales to other regions of the US, Europe, Asia, and western Canada.

In western Canada, resource extraction, primarily mining and energy (oil, gas and hydroelectricity), are expanding rapidly and are expected to continue to do so for the foreseeable future. These activities require semi permanent buildings on site. These buildings must be able to withstand coastal or northern rural climates and conditions. At present, most buildings are trailer units shipped in on trucks and/or lifted in by helicopters. On sites where snow loads exceed the trailers' capacity, additional roof structures are constructed over the trailers. These trailers are often used for four to five years during exploration phases and may be used for up to 25 years in mining situations. Once their need is fulfilled, the trailers are usually removed to be either used again at other sites or dismantled. Rural communities, in the vicinity of these camps, maybe able to gain some quality buildings once the buildings have served their initial use, if the buildings were made of logs, timbers or solid wood and are designed to be movable or dismantled and reassembled easily. The substantial market for this type of temporary accommodation, combined with the long term demand for housing and community buildings in rural Aboriginal communities may open opportunities particularly for machine profiled log builders.

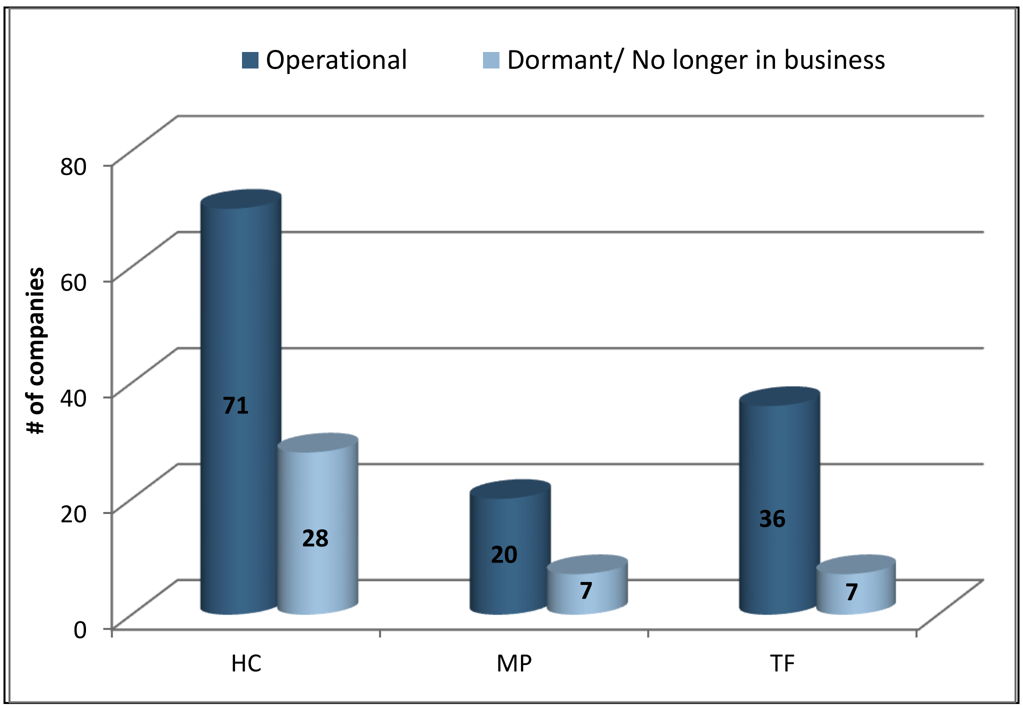
Aboriginal communities in western Canada are experiencing housing shortages as their populations grow. Access to housing is limited by internal systems, external funding, and a community's capacity to provide quality housing for rural situations. The same increased demand holds true for on reserve public buildings. The mix of issues has created significant demand if solutions to the often complex mix of community by community issues can be found. In many of these rural Aboriginal communities, there is more than the average appetite for log and timber buildings. There are barriers to log housing (e.g. increased insurance, increased maintenance, and perceived higher initial costs, etc.) that need clarification.

2 Log and Timber Companies – BC – Current Situation

In December (2011), and January and February (2012), the HC, MP and TF companies in BC were contacted by telephone and e-mail to develop a comprehensive list of all log and timber frame builders in BC. The telephone conversations included the completion of a brief survey to gather an understanding of the industry and the changes since the boom years pre-2008.

By reviewing WorkSafeBC and various associations' records, an extensive list was generated as a starting point to contacting all those companies in the industry. The original list was comprised of 102 HC companies, 19 MP companies, and 48 TF companies. Having phoned all of the companies on the master list, a new list was generated. Table 1 shows the known operational companies and the companies which are assumed to be no longer in business or dormant. Appendix 2 provides a list of the 127 companies that are known to be in operation.

Figure 1 – Log & Timber Building Companies in BC



Of the 71 HC companies that are operational, 38 participated in the survey (see Appendix 3 – Log and Timber Building Industry Survey). The other 33 were left a message but did not return the phone call. 24 of these 33 companies have an answering machine and their message does have their company name indicating that they are in business or looking to generate new sales. The remaining nine companies have been assumed to be operational as a result of recent contact or known operating information. Almost two-thirds of the HC companies contacted indicated that they also crossover into timber frame and timber accents.

Of the 20 MP companies that are operational, 15 participated in the survey. The other five were left a message but did not return the phone call. Three of those five companies have an answering machine that reflects their company name again indicating that they are in business and looking to generate new sales. The other two do not but are known to be operational.

Of the 36 TF companies that are operational, 14 participated in the survey. The remainder had an answering machine that gave the company name (save two) and short discussions were had with several and an email with the survey was sent. However, they did not return a completed survey.

2.1 Employees in the Log and Timber Building Industry

Figure 2 shows the number of HC/MP/TF companies by number of employees. These numbers were estimated, based on website data and known industry contact, where a survey was not completed.

Figure 2 – No. of Companies by Type by No. of Employees, 2011 (Estimated)

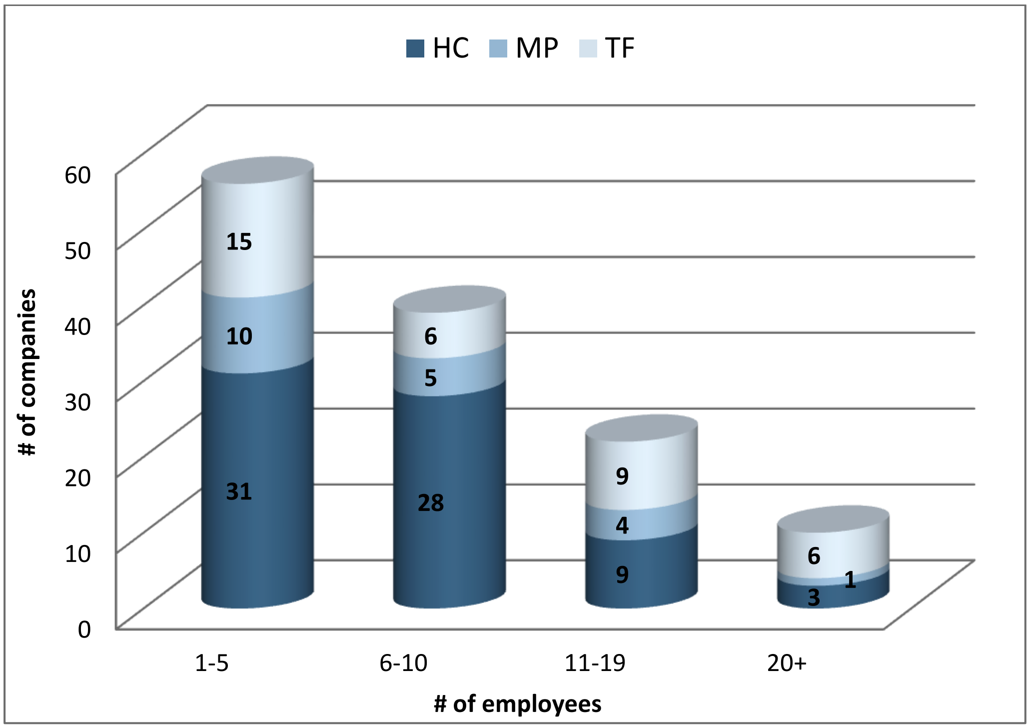


Figure 3 shows the same data as Figure 2; however, the data is limited to only those companies who completed the survey and compares this information to data the industry provided for 2006 (shown in Figure 4).

Figure 3 – No. of Companies by Type by No. of Employees, 2011

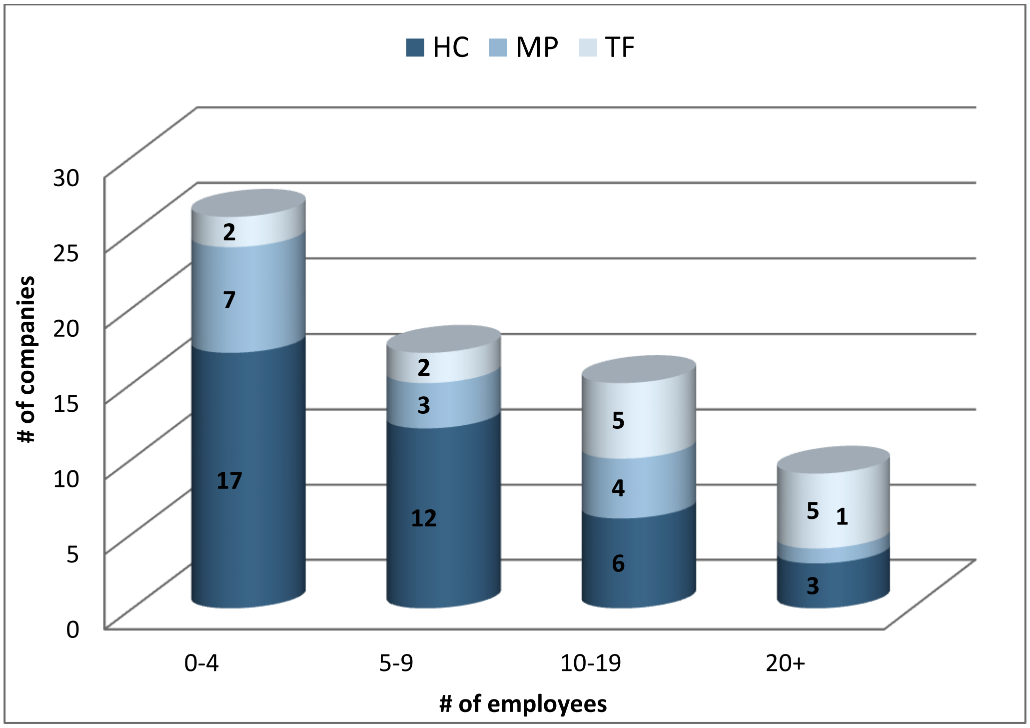
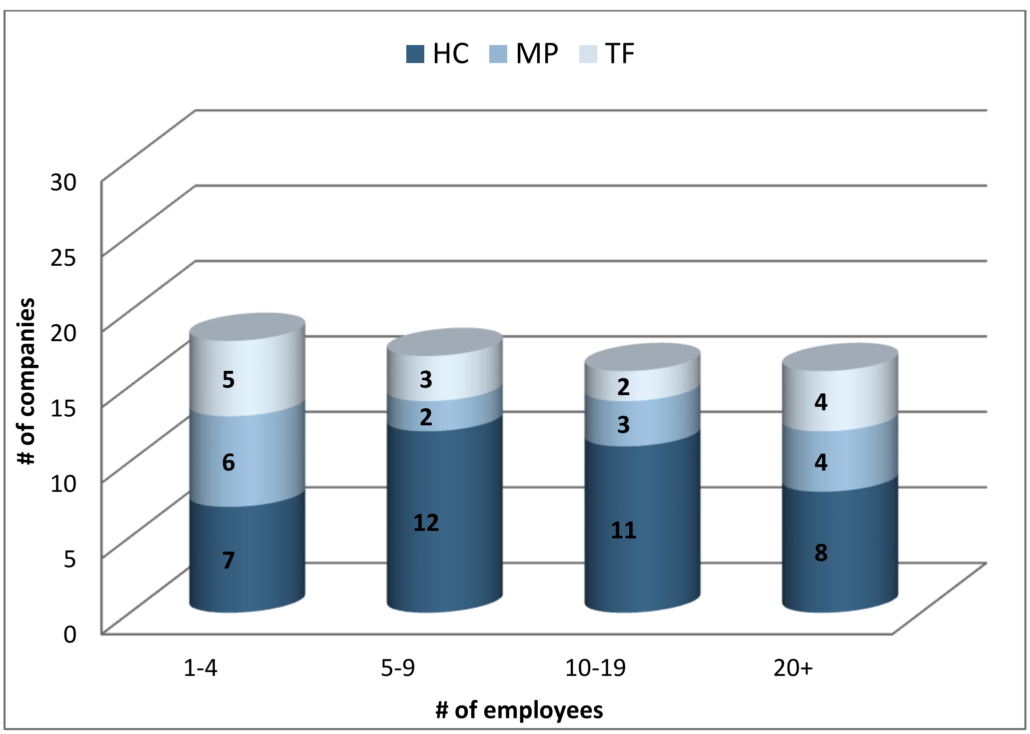


Figure 4 – No. of Companies by Type by No. of Employees, 2006



Based on this research, plus industry level networking, the Log and Timber Building Industry in BC has an estimated direct employment of approximately 1200 people. There are approximately 650 people directly employed by HC and MP companies which is estimated to be down about 1/3 from pre US recession levels. No similar 2006 data was available on the TF component in 2006 so a comparison is not possible.

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- 43% of the companies have 1-5 employees
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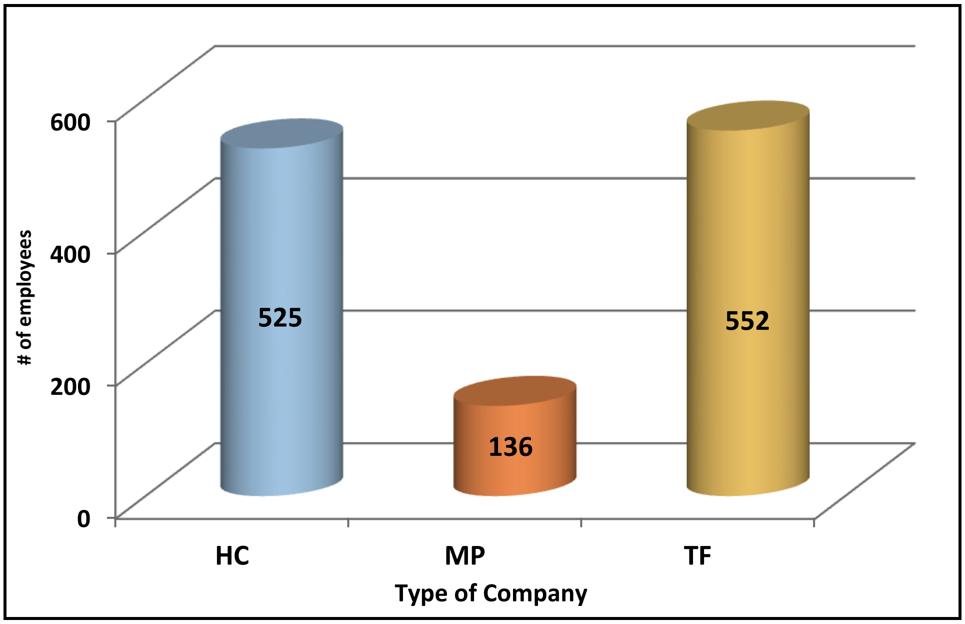
Figure 5 – Estimated # of Employees by type of company – 2011



2.2 Location of Sales

The majority of the companies surveyed, in all three industries, sell primarily to the local (BC) market, a significant shift from 2006.

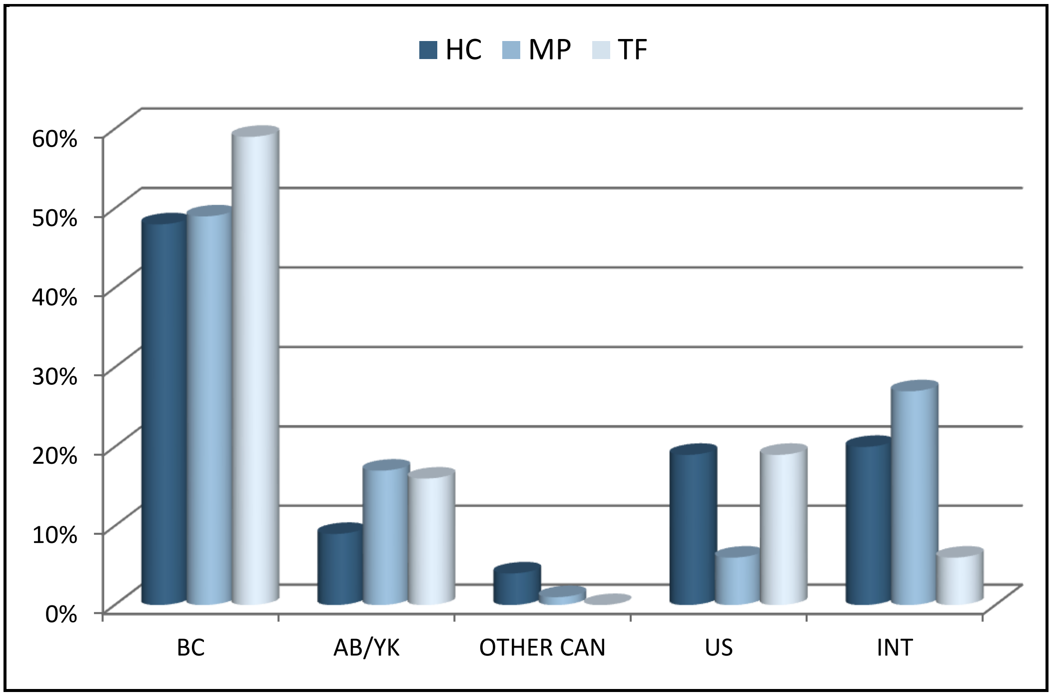
The majority of the sales into the US are going to the Rockies States with some to the Pacific Northwest States and a small amount to other regions.

Those companies that are selling internationally are selling to Japan, European Union, Germany, Scandinavia, and Russia.

Sales

In the HC field, the majority of companies surveyed deal in direct sales (22) while a number use some combination of dealers, sales staff, direct sales, and even sub-contracts (8). The remaining companies either have a sales staff (4) dealing with their sales, a dealer or dealer network (1), or sub-contract (1) from another company. With the MP companies, five of the 15 surveyed have direct sales only, two companies have a sales staff and one utilizes a dealer network. The remaining companies (6) have a combination of sales strategies employed. In the TF industry, seven of the 14 companies utilize a sales staff, while three of the companies have direct sales only and the remaining four companies have a combination of sales strategies.

Figure 6 – Sales by Location



Appendix 4 gives a breakdown of information that was asked as part of the survey. It provides a comparison of 2011 and 2006 for the number of employees; a quick review of each company's website; whether the company uses its name on their answering machine; breakdown of the percentage of sales estimated to each location; and a percentage of how sales are made for each company.

2.3 Customer Characteristics

The log and timber industry in general attracts wealthier clients who are in their mid 40's to mid 60's. However, that being said, there were a number of companies that do deal with a large range of clientele. Typically, those looking to build a log home are more set in their life, they have bought and sold or built and sold a couple of homes and are now looking to build their final home and retire. Some are building their recreational home that they will retire to and/or for others it has been their lifelong dream, to own a log home. These people "can definitely afford it", as many of the builders interviewed stated. In general, these are family couples, with annual incomes in $150,000-250,000 (lower end) up to into the millions (high end). They have had successful financial lives and are usually attracted to the outdoors and its lifestyles. Increasingly they are concerned about environmental sustainability of the structure. Many of these buildings are for resorts, both mountain and other locations, as the main structure and as they surrounding accommodation and housing. Others are the signature buildings in a resort community, e.g. the pub, restaurant, or club house. In these cases, the owners of the facilities (or development) through their design team, are the customers. There are also institutions, e.g., schools, health facilities, recreation centres, and education centres, that have selected these types of buildings and their Boards, Councils and management teams become the customers.

2.4 Issues Raised – Log and Timber Building Companies

The key issues raised by the industry companies during the survey were:

- Building and Energy codes and the effect on the industry
- Needing more industry information available for potential buyers
- Impact of HST on sales
- Needing a benchmark for understanding costs in each of the regions (construction costs, journeyman wages, and concrete costs, etc.)
- Construction manual
- Fire rating for log homes
- Government should be utilizing log home structures throughout BC to augment the look of wood (i.e. Information Centres, picnic shelters)
- Financing options for homeowners
- Market in China – information requested on the potential

2.5 Tools/Information Helpful to Marketing Products

The follow are a list of tools and information that companies thought would be helpful for their marketing efforts:

- Web site (up to date, quality) – Industry Site
- Home Shows – support
- EU Certified help with market barriers – more information on how to access the EU market, what are the barriers to entry and how to overcome them. Have a good handle on accessing the US market but not as much has been done for the EU market.
- Lobbying Canadian Code Officials to deal with energy codes/building codes (concern as to the impact of changes in the building/energy codes – how to keep log and timber frame buildings within the codes)
- Marketing/sales seminars
- More dealers
- Financing options
- Access to logs
- Links for those looking for information on logs
- Independent study for log finishes, stains, chinking (finished details not widely known by clients looking to build)
- Wood First and support for Wood First
- BC Wood – clarifying what BC Wood can offer builders, BC Wood shows, sources of funding information
- Helping company owners understand the impact of social media and how to utilize it more
- More market use of beetle killed wood
- Cost sharing upon entering a new market (previously a Federal program)
- TF apprenticeship program and other training

3 Markets Reviewed for Opportunities

3.1 Western Canada (non-Aboriginal Communities)

British Columbia

In BC[8], for single family housing starts (shown in Chart 2), the Mainland Southwest (see Map 1) which includes the complete Fraser Valley dominates followed by Vancouver Island/Coast and the Thompson Okanagan. All of the other regions are lightly represented. This is not news for the log and timber industry in BC. What is important is the significant growth in second homes in the East Kootenay and Cariboo during the last decade (particularly from 2004 to 2008). This growth in the non-urban market has provided a subsistance market for many log and timber companies and even though the total numbers were dwarfed by the other three more active development regions, the log home construction in these other areas was still considerable for the industry. Much of the housing growth in the top three development areas was made up of standard stick frame homes. However, there were pockets of log and timber frame buildings growth accented by timber frame and hybrid homes particularly on the Gulf Islands, the Sunshine Coast, the Whistler-Howe Sound corridor, and resorts in the Thompson/Okanagan.

Photo: Predator Ridge, Vernon, BC

The steep drop off in 2007, 2008, and 2009 followed by a much lower plateau in building permits (60% of the peak for Mainland Southwest), and resulting residential construction (as shown in Chart 2) is expected to continue in 2012 and for a few years following 2012. There are bright spots in the Lower Mainland and lower Vancouver Island at a much reduced level from 2004-07. Log and timber companies with local markets on the Sunshine Coast, Gulf Islands, and Vancouver Island are expected to continue to experience modest growth from Lower Mainland residents relocating (retiring to their dream home) or building a substantial second home.

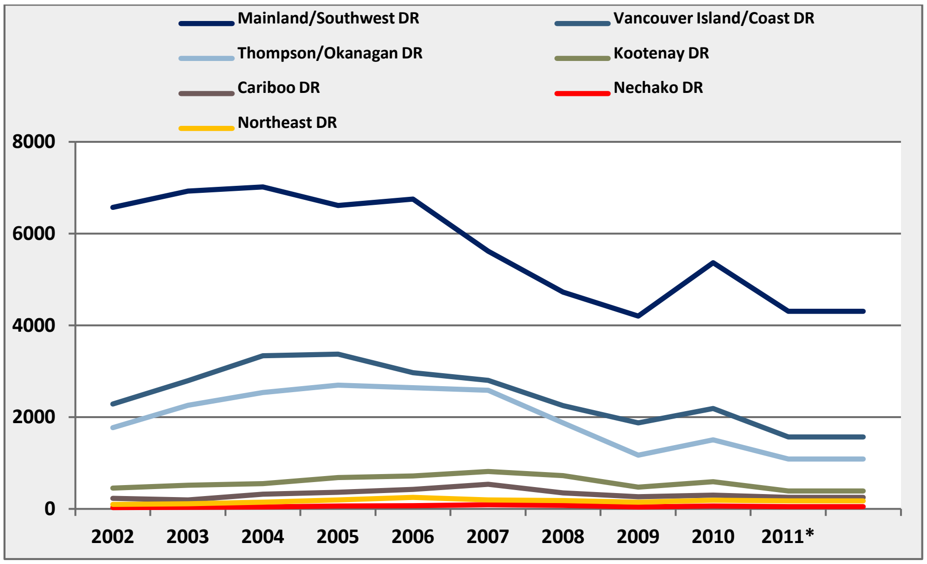
The Shuswap and Okanagan high priced log and timber markets, which are mainly dependent on people relocating from major cities or building high end second homes again from urban dwellers, are expected to stay stable or rise slightly with the increased price of oil and its positive financial impact on Alberta based workers. The Cariboo continues to offer sites for second homes – often log or hybrid – with water access at much lower price points than other locations much closer to population centers. The

[8] "British Columbia Building Permits for Development Regions, Regional Districts, and Communities, by Type 2002 – 2010" Published by BC Stats, December 6, 2011, http://www.bcstats.gov.bc.ca/StatisticsBySubject/Economy/BuildingPermitsHousingStartsandSales.aspx

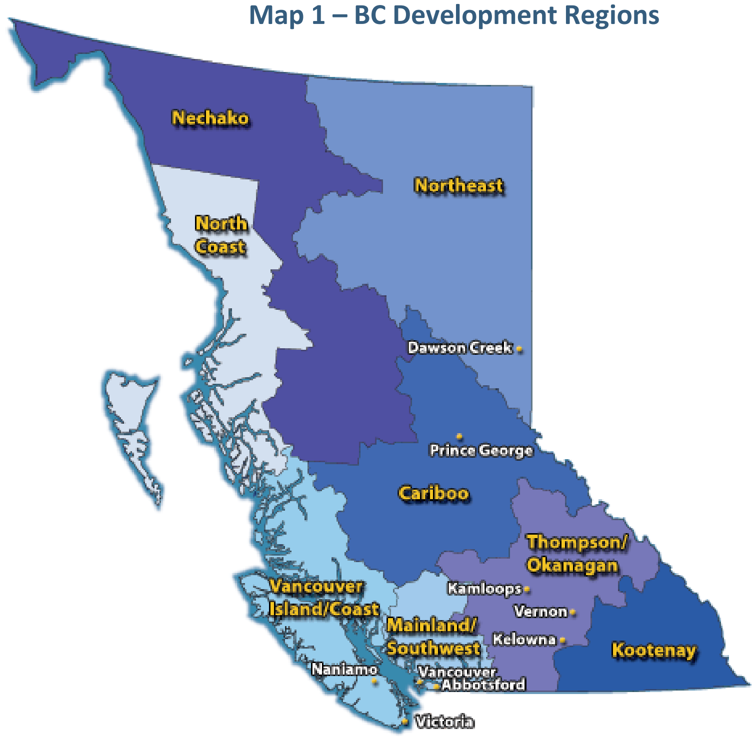
continued high housing prices in major western Canadian urban centers makes much lower cost, open spaced second home sites attractive particularly to urban dwellers living on small footprint sites.

Second home sites, within a three hour drive, establish the usual economic limit for seond homes. Recreation based locations, the three hour isobar around growing urban areas are prime market areas for the log and timber industry (e.g., water access, mountain/backcountry access, and open range land).

Chart 2: BC Single Family Housing Starts



Map 1 – BC Development Regions



Alberta

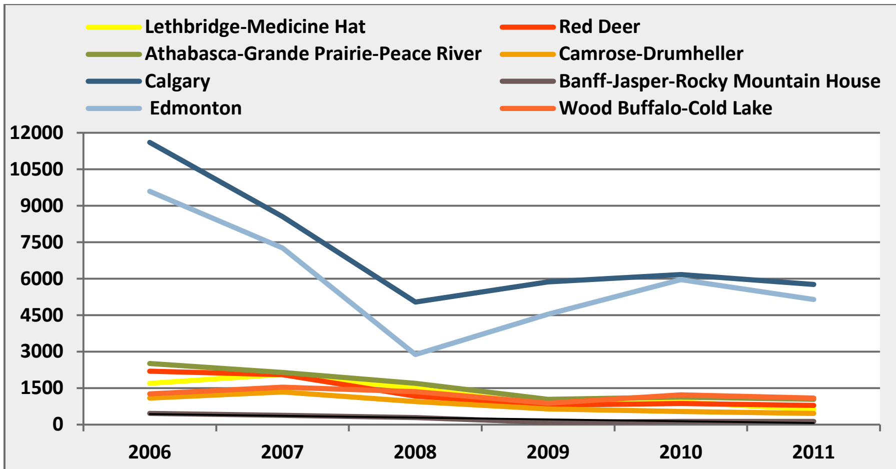
In Alberta[9], the pattern of new single family housing mirrors BC (see Chart 3), with Calgary and Edmonton regions dominating housing starts. Also, there was a steep drop off in 2007 and 2008 followed by a much lower plateau at about 50% of the peak. All of the other regions (see Map 2) are again dwarfed by the major cities. The northern and western mountain regions, even though the numbers are much smaller, did provide substantial markets in the last decade for homes and second homes. The foothills and mountain regions particularly provided markets for log, timber frame and hybrid homes and condominiums over the last decade. Smaller communities, west of Calgary particularly, did see large timber frame and hybrid homes constructed. This taste for mountain style architecture was heavily used in multi-family and resort/commercial in mountain communities, e.g. Banff, Lake Louise, Canmore, and Jasper. In addition, there is a thriving cottage community particularly along the lakes west of Red Deer and Edmonton, most notably Pigeon Lake and Sylvan Lake but also further north up to Alberta Beach and Lac la Nonne. In these cottage communities it is fairly common to find log and timber frame cabins as well as stick frame and timber hybrids.

Photo: Spring Creek Mountain Village, Canmore, AB

Alberta's economy is expected to grow based on the oil sands investment and production and be only slightly outpaced by Saskatchewan. Housing and job growth are expected to be strong in 2012 and 2013. For BC log and timber builders this will have a combined impact of creating demand for generally expensive second homes and condos in Alberta's mountain and foothills regions and maintain the demand for expensive second homes in their traditional second home markets of the East Kootenay, Shuswap and the Okanagan in BC.

[9] Stats Can CANSIM Table 026-0007
http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=0260007

Chart 3: Alberta Single Family Housing Starts (2002 – 2011)



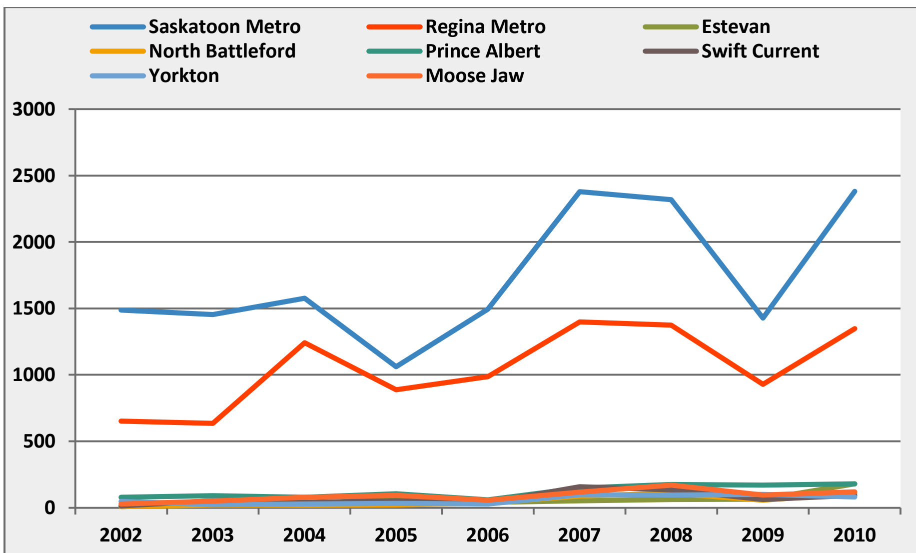
Map 2 – Alberta Development Regions

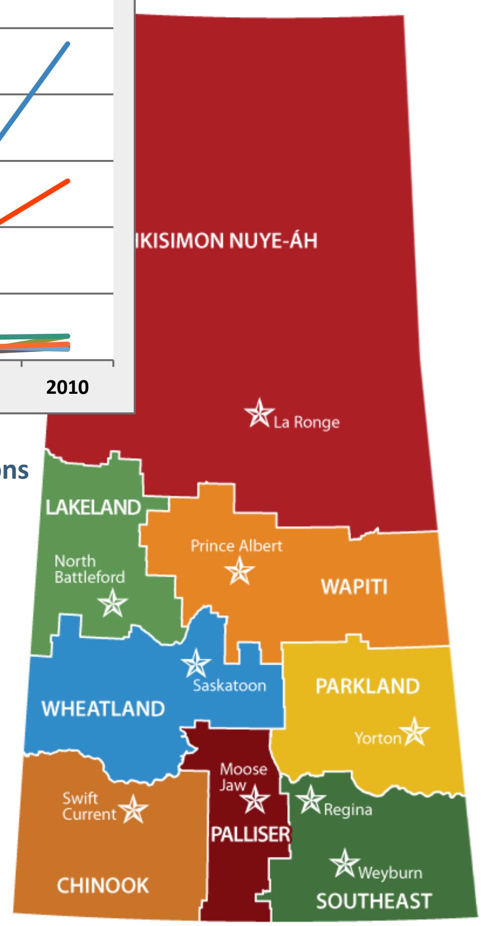
Saskatchewan

In Saskatchewan[10], similar to BC and Alberta, the pattern of new single family housing has the two main urban areas, Saskatoon and Regina, dominating housing starts (see Chart 4). There was a significant drop in 2009 but a complete recovery in 2010 unlike BC and Alberta. All the other regions (see Map 3) have had minor but slightly growing single family housing starts. The future for Saskatchewan is suppose to be continued growth over the next few years leading all provinces based on resource extraction growth and strong markets for agriculture products.[11] This provincial growth is expected to include housing through 2012 and 2013.

For BC log and timber companies the substantial continued economic and housing growth in Saskatchewan and the historical predisposition to wood buildings in northern parts of the Province (Lakeland, Wapiti and) points to an expanding market that needs further investigation. If trends hold, much of the housing growth will be in the two main cities pointing to the potential for hybrid buildings and full log second homes on recreational properties in Northern Saskatchewan within the three hour isobar surrounding Saskatoon and Regina. The key areas for these second homes are just north of Regina, including Regina Beach and Last Mountain Lake, and near Fort Qu'appelle, including Sandy Beach, Katepwa Beach and Pasqua Lake.

Chart 4 – Saskatchewan Single Family Housing Starts (2002-2010)





Map 3 – Alberta Development Regions

[10] Bureau of Statistics
http://www.stats.gov.sk.ca/Default.aspx?DN=09c8e38b-eef8-4dbf-a601-5eb989469dd1

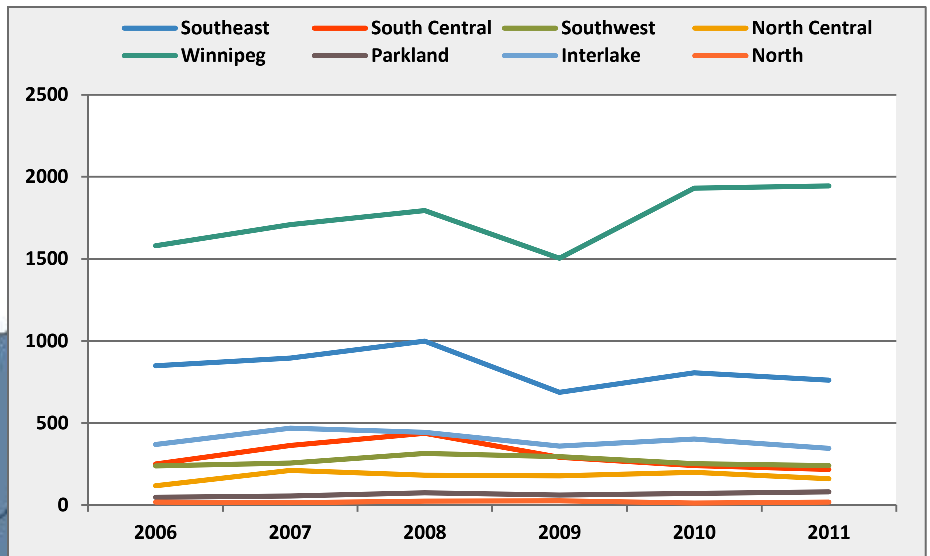
[11] http://www.rbc.com/economics/market/pdf/provfcst.pdf

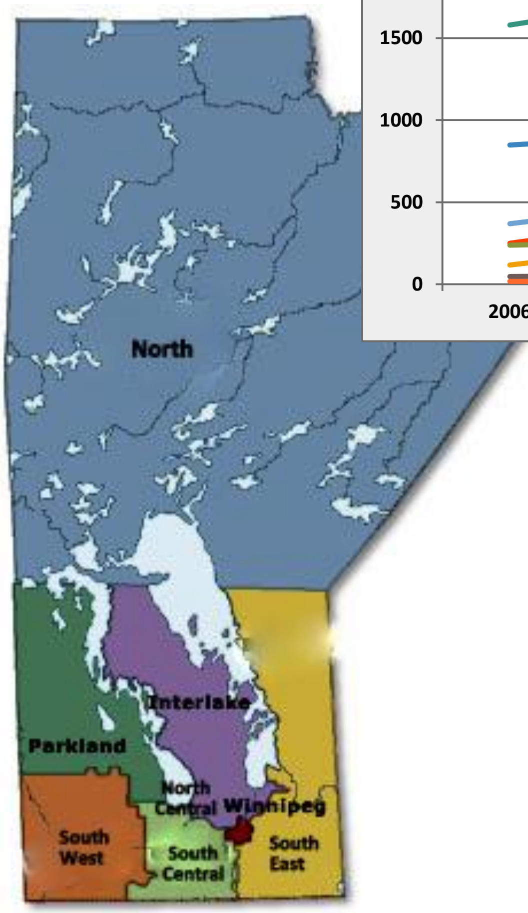
Manitoba

In Manitoba[12], similar to BC, Alberta and Saskatchewan the pattern of new single family housing has Winnipeg and the region southeast of Winnipeg dominating housing starts (see Chart 5). Like the major cities in Saskatchewan, there was dip in 2009 and then a full recovery for Winnipeg in 2010. The other regions (see Map 4) have all declined since their peaks around 2007 and 2008 but have continued to be rather stable.

The lack of predisposition to log and timber buildings in the populated southern part of the province limits the market potential in Manitoba for log and timber building manufactures. Also, small, local log and timber frame builders have a distinct competitive advantage in this market because distance and lower margins on fewer smaller buildings prevents larger companies, from further away, accessing the market.

Chart 5 – Manitoba Single Family Housing Starts (2006-2011)





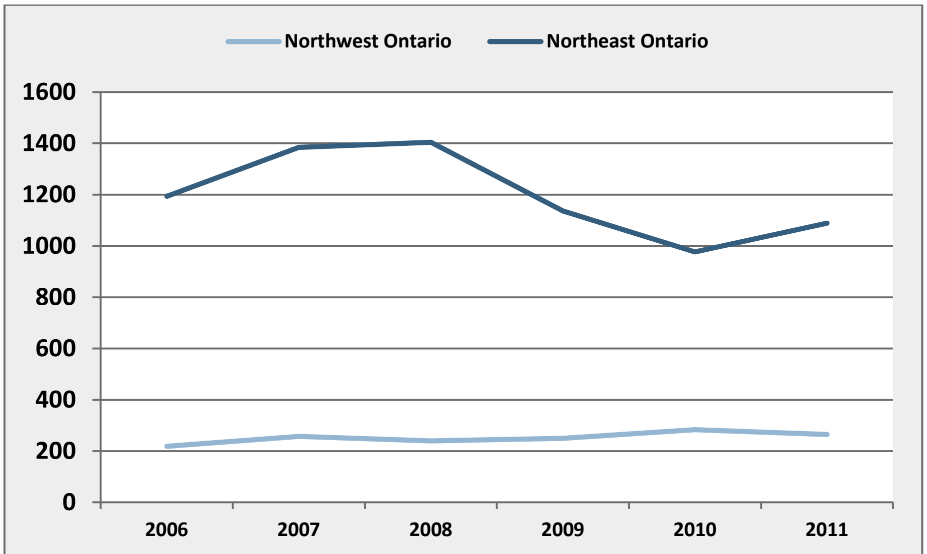
Map 4– Manitoba Development Regions

[12] Stats Can CANSIM Table 026-0007 http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=0260007

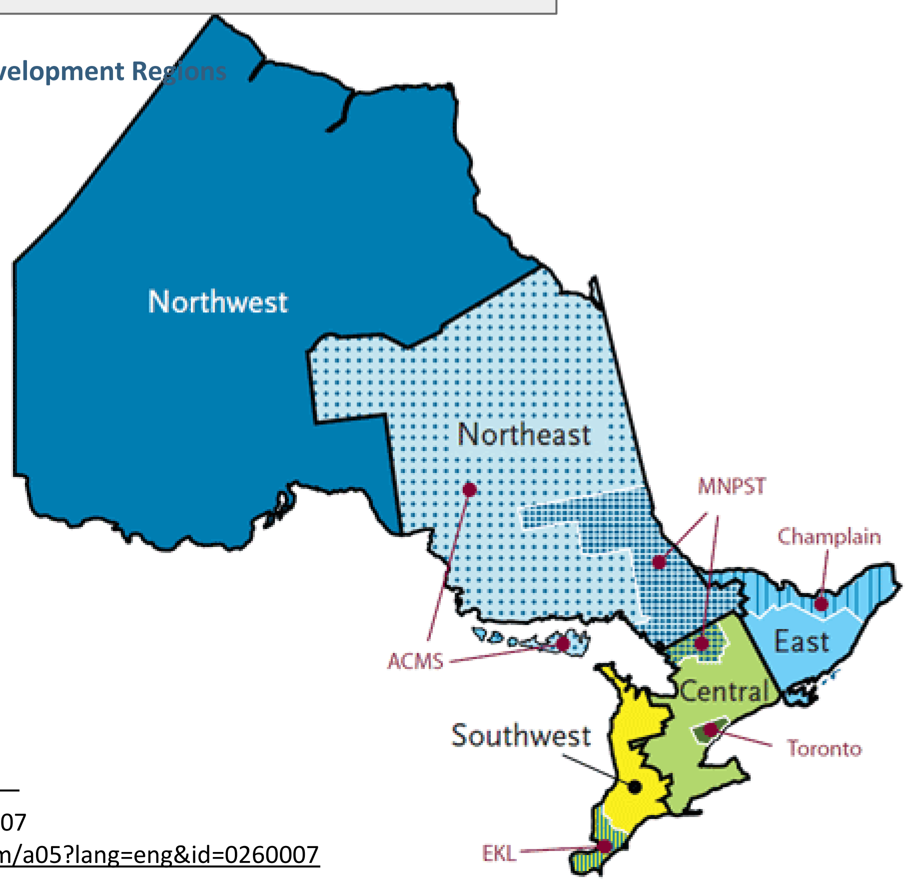
Northern Ontario

Northwestern Ontario[13] has seen only very limited growth over the last decade and the future is expected to hold the same trend (see Chart 6 and Map 5). Northeastern Ontario is growing based on growth in the mining industry. The growth in the Northeast is expected to continue with the strong mineral commodity prices. Even with this growth, the combination of the domination of stick frame building in towns and the number of log and timber builders in Ontario serving the second home market, means that the northeastern Ontario market is not expected to be a solid source of sales in the next few years for BC builders.

Chart 6 – Northern Ontario Single Family Housing Starts (2006-2011)



Map 5 – Northern Ontario Development Regions



[13] Stats Can CANSIM Table 026-0007
http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=0260007

3.2 Aboriginal Communities – Western Canada

Aboriginal communities, primarily on-reserves, in Western Canada are growing. The growth trend has been in place for at least the last three decades and the Aboriginal baby boom is expected to continue to add to the rate of family formation for the next few decades. The highest growth in Aboriginal population has been in urban areas near substantial Aboriginal populations in all three western provinces and two of the three territories (Yukon and NWT). Solid examples of the growth in Aboriginal populations in urban areas are Vancouver, Prince George, Whitehorse, Edmonton, Yellowknife, Saskatoon, and Winnipeg. The complexity of the land development process on Indian reserves adjacent to urban areas has in some cases been overcome and in those situations (e.g. Westbank First Nation, Tk'emlúps Indian Band) the on-reserve population of members from other First Nations has grown significantly as well. Many rural and remote communities have experienced population growth but in most cases, the combination of poor economic opportunities and the structural issues related to increasing the housing stock, infrastructure and community services has significantly dampened population growth. It has also created substantial waiting lists for houses on-reserve.

Market Size and Community Growth

The on-reserve Aboriginal population in rural and remote communities with a history of using wood for structures, as shown in Table 3, is small (less than 215,000) but, as indicated above, isgrowing. As First Nations deal successfully with the structural issues related to community infrastructure (water, waste water, roads, and community facilities), and housing then population growth is expected to increase as many rural and remote Aboriginal communities have substantial waiting lists for on-reserve housing. Appendix 5 provides a complete listing of Aboriginal populations on and off reserve by Band in regions in western Canada where log and timber buildings have been historically used and also shows that the off-reserve status Aboriginals for most First Nations outstrips the on-reserve population.

Table 3: On-reserve Aboriginal Populations[14], February 2012

BC		Alberta		Saskatchewan		Manitoba	
North East	2484	Northern	17277	Northern	40818	Northern	34922
North West	11187	Mountain	1028	West Central	6081	Eastern	7897
Central Interior	18669	Central	21521	East Central	11431	Interlake	11495
West Coast	13203					Parkland	9913
Fraser Canyon	4417						
Total	**49960**		**39826**		**58330**		**64227**

Interest in Log and Timber Buildings

Rural and remote Aboriginal communities in western Canada that are located within areas that have trees (and historically had trees) have a predisposition to wood buildings both as housing and as institutional buildings. This predisposition has been actualized in many communities where handcrafted and then machine profiled log buildings were quickly adopted for housing and larger buildings after contact. The larger institutional buildings were often a combination of timber frame and siding – common on the BC west coast.

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[14] http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/SearchFN.aspx?lang=eng. Registered Population as of February, 2012.

Over the last five or six decades, stick frame housing has dominated in these communities that for many decades before had solid wood buildings. One could argue that the combination of restricting access to adjacent timber, urban style regulations (graded, certified lumber), teaching of urban construction skill sets, and the predisposition of those responsible for Aboriginal on-reserve housing has almost completely replaced solid wood housing with stick frame housing. The result is a strong regulatory and attitudinal bias against solid wood housing for First Nations communities. Also, in many communities, residents see the old solid wood housing as sub-standard, and/or less progressive than urban style stick frame homes. The current argument, backed up by regulations (CMHC and embraced by AANDC) is that solid wood housing is more prone to fires (thus have higher fire insurance premiums), is more costly to maintain, is more costly to heat and is more costly to build. There is significant argument (both pro and con) about these issues that need systematic research, analysis, and communication to either support or refute these arguements.

Photo from Quaaout Lodge website

Another hurdle specifically related to handcrafted log homes for the on-reserve housing is the number of times training programs (or self-help initiatives) have been attached to construction of log shells that have resulting in either the home not being completed (e.g., funding is there for the shell but not the other ¾ of the cost to complete the house), or the quality of the finished building is so poor (e.g., starting with those who have never built a log home and/or with poor quality logs and timber, or both), that the building does not match any of the required standards including those for financing. Another major hurdle for First Nations' housing is that the price point acceptable to AANDC and CMHC is low. This low price point creates the need for FNs to obtain the lowest cost house, usually with the maximum footprint for a family (often six or more people). As a result, many features that transform a low cost southern urban home into a functional rural or remote or northern house have to be eliminated including a bootroom, extended roof overhangs and arctic entrances.

Also, in most cases, it is the Band that has to deal with the consistent issues of changing costs and price overruns caused by the usual issues related to constructing a $200,000 home with the uncertainty of funding commitments, weather and construction in rural and remote areas. All of this adds pressure to purchase complete, all-in, turnkey houses.

Photo from: Iredale Group Architecture website

For institutional buildings, there is a predisposition for wood constructed architectural features, clearly shown in recent design and construction of schools, Band offices, health facilities, and even some on-reserve commercial buildings. All of these buildings are designed to take advantage of the rural setting and modern use of wood including laminated beams. These institutional buildings are often under less price point sensitivity and are seen by community members to be signature structures requiring artistic and intrinsic features. These buildings are most often designed by urban modern architects wanting to bring out cultural heritage and modern open space feeling. Examples can be quickly seen in at the wealthier First Nation communities, e.g. Osoyoos Band (commercial), Westbank First Nation (school, social service and recreation buildings), Kamloops (pow-wow grounds), Cowichan (visitor centre) but they are found equally in rural and remote communities as well, e.g. Massett (health facility), Iskut (health facility), Moricetown (commercial building), Quatsino (health facility), Seabird Island (School), Little Shuswap (hotel), Atlin (Band office), Teslin (resort), and Stellat'en (School and Band office) to name just a few in BC and the Yukon. In Alberta, Saskatchewan and Manitoba some of the examples are: Heart Lake FN (Kohls School, Lac La Biche, AB), Big River FN (administration building, Debden, SK), Nisichawayasihk Cree Nation (education centre, MB), Sagkeeng FN (Turtle Lodge, MB).

For housing there are substantial price point, institutional and preference barriers that dramatically dampen the demand for solid wood and timber frame homes for on-reserve communities. The opposite is the situation with institutional buildings on-reserve where a low price point is not usually involved, combined with both a demand for a signature building and architects that consistently encompass significant wood and timber features in each building.

Financing System – Housing Price point, Turn Key, Local Labour, Energy Code

The financing and, therefore, the paying for Aboriginal on-reserve housing is often misunderstood by the general Canadian public. Many decades ago, Aboriginal housing was 100% paid for by the federal government's Department of Indian Affairs (operated under many different names over time). The houses built under this system were often very low cost with a short life expectancy. It has in most communities been at least three decades since 100% AANDC funded housing cost homes have been constructed. The situation today is most housing on-reserve is partially funded by AANDC, think of it as the 20-25% down payment, and the remainder is financed through CMHC. The catch is that in almost all cases the Band government must guarantee the loan. Where there is very little economy in the region surrounding the reserve, many individuals without a steady, livable income stop paying their required mortgage payments. This quickly places the Chief and Council in a position of having to evict one of their members from their housing or have the Band Council pay the mortgage. In some communities, this has spiraled downward where almost no one pays their mortgage, creating a financial crisis for the Band's government.

A second component with obtaining CMHC financing is significant control by CMHC and AANDC over what type of house can be built and its "all in" price point. CMHC has a strong bias (many would say urban as well) toward stick frame urban homes that match the new and always improving building and energy codes. These homes, usually without boot rooms, arctic doors, porches (screened in), or substantial overhangs are not well suited for rural life. They also often require recently acquired skill sets to build, repair and maintain which are often in very short supply in rural and remote communities. The situation is somewhat different in communities where there is a sustained, significant cash economy. In these communities some individuals build and finance their own homes without Band guarantees, or use their own money for the down payment and obtain CMHC or now bank financing with Band guarantees, or acceptable credit risk. Under these situations the home owner makes all the decisions usually within a preset limit. For institutional buildings, there is usually an external funding source that provides 100% of the cost and a professional design and construction process that holds all designers, contractors and sub-contractors to pre-existing budgets and bids. Often, there is no debt financing required for institutional buildings.

3.3 Recommendations – Markets Aboriginal Housing and Institutional Buildings

Aboriginal Housing – Is there light in this tunnel?

Clearly, there is a pent-up demand and all projections show an ever growing demand for on-reserve housing. The current system requires housing completely built – turn-key - within a low price point. Some individuals and communities still have a predisposition for solid wood housing yet there are significant institutional barriers related to preconceived notions regarding potential for actual completion, cost of construction, cost of maintenance, cost of heating and fire risk that need to be addressed if support for solid wood buildings is going to be obtained from AANDC and CMHC.

Interesting enough there is light in this tunnel as Haven Timber Homes (HTH) of Whitehorse (YT) and Lac La Hache (BC) have successfully designed and built on-reserve Aboriginal housing that to date has successfully been constructed – full turn-key - at a cost equal to or below stick frame housing. The owners of this housing firmly believe it is much better suited to the rural lifestyle than a drywall and stick frame building. The inside and outside are far less susceptible to damage and, equally as important, vapour barrier damage. The HTH building system lends itself well to significant participation by lower skilled labour, usually readily available in rural and remote Aboriginal communities. The individuals and communities that have built these houses have been able to substantially lower the financial leakage of the capital cost related to labour for constructing the houses. Their latest design adjustments even include the “arctic” version that met the newly developed Canadian energy code expected to be adopted in BC in 2012.

In conclusion, there is a substantial market for the construction of lower cost housing on-reserves in Western Canada. There is in many rural and remote communities a predisposition for solid wood homes. These houses have to be full turn-key for the quoted and accepted price. Until full life cycle analysis is included in the building code evaluation criteria these homes will have to match the nationally set energy code requirements.

Institutional Buildings – Aboriginal Communities

Clearly, there is growing market for institutional buildings in Aboriginal communities based on their growing needs for public and commercial services. These buildings are usually designed by urban based architects with keen eyes for culturally appropriate wood features. Also, as some rural Aboriginal communities prosper during the current mineral resource boom, the demand for signature institutional and commercial buildings will grow as well. Most rural and remote communities in western Canada, particularly those in regions identified earlier in this section, have a significant appetite for wood and timber features or complete wood buildings. The combination of population growth in rural and remote Aboriginal communities and wealth growth in some of these communities, placed on top of the significant predisposition for wood buildings and significant wood features, is expected to create a steady demand for quality log and timber buildings and features incorporated in on-reserve institutional buildings.

3.4 Rural and Remote Worker Camps for Resource Construction & Extraction

The rise in global mineral commodity prices and the concern about potential rises in energy costs (experienced by oil and in some cases electricity to date), has increased the exploration for minerals, pre-mine development of mineralized sites, and exploration and development of energy extraction sites. It has also created the dramatic expansion of the Alberta oil sands related projects. These developments in Western Canada combined with provincial policies to not develop new town sites adjacent to these developments, has created the needs for remote camps in rural and northern situations. The potential development of the Mackenzie Gas Pipeline is a good example.[15] These remote camps are a combination of prefabricated trailers linked together on site. The camps are able to be stationary or fully mobile as each unit is built on a steel frame that is able to be lifted onto a flat bed truck and shifted to a new location. These units come fully equipped to meet their designated role – bedroom, bathroom, kitchen, dining area, games room, etc. – and are purchased as complete turn-key operations including set-up in remote areas. Large national and international companies, e.g. ATCO, Northern Trailer, PRITAB, and many others, have specialized in building, erecting and decommissioning these worker camps. Other companies specialize in operating camps, e.g. Sodexo, Calethon, RA Global, North Star Frontier, OIC Services and many more. The industry is massive and the spending is considerable with many projects costing $10 million or more to set-up and be ready to operate. Small worker camps (48 person) fully erected on road accessible sites cost about $2.5 million, and have annual operating costs exceeding $1.2 million.

The mobile units are of minimum quality compared to a house, have a relatively short life expectancy (less than 20 years), and are not particularly comfortable to live in (low quality air, poor energy efficiency, and plastic and wall board surfaces). In heavy snow areas, full peaked roofed systems are built over the trailers to handle the snow loads. The capital cost of purchasing, setting up and decommissioning are depreciated across the life of the project usually leaving little or no value to the rural and remote communities adjacent to the projects. There is a substantial opportunity for rural and remote communities to require these operations to bring more energy efficient, longer lasting buildings to these sites that can be left behind or disassembled and moved to nearby locations for rural and remote communities' use when the project is completed. The communities, using whatever leverage they have, would need to negotiate with the project owners to adjust the camp buildings requirements and be prepared to deal with the buildings (may mean purchasing the buildings at their predetermined residual value) when the project is completed.

Advancements in lower cost profiled log and solid wood infill systems may bring the cost of constructing higher quality mobile buildings closer to the construction cost of the trailers. In northern and heavy snow sites, the log and/or log infill buildings could significantly lower the heating costs and remove the need for additional site construction costs related to the additional roof erected on site. There are real size and set-up cost limitations that these log or solid wood infill buildings would have to meet plus in many cases be designed to be disassembled, relocated and reassembled relatively easily.

Clearly, there is a substantial Canadian market for rural and remote site buildings. Log and solid wood infill buildings are currently not being used for this application. To have the buildings considered will require substantial design, and marketing investment plus identifying a community or communities that are prepared to seriously enter in the negotiations with the project proponents to add this to the overall project plan and capital cost. Similar to Aboriginal on-reserve housing, these projects will require turn-key prices, and adhering to strict, timely implementation schedules. At this point, a successful

[15] http://www.mackenziegasproject.com/moreInformation/publications/documents/Camps.pdf

demonstration project with accompanying third party evaluation research would add substantially to the industry's trust of this type of application for profiled log or solid wood infill buildings.

3.5 USA – Mountain States[16]

The US Mountain States have been selected for targeted investigation for a number of historical and current reasons. Mostly importantly, the area has a long and active history of building and using logs and timbers. Over the last four decades, the construction of log and timber buildings has grown significantly. This established significant stock of log and timber buildings has reinforced a style that has impacted most others when it comes to erecting new buildings in the mountain areas of these states. This stock of similar style buildings has created a mountain building type culture that is now recognized and copied in other mountain regions in North America.

Within many of these States are national level mountain resorts, catering to national and international visitors that far exceed the largest mountain resort areas in Canada. These large mountain resort areas attract large numbers of people some of which build or purchase mostly high end (demand creates the high prices) second homes. It is this critical mass of visitors, residents and part-time residents, that creates the demand for and supply (far exceeding BC's) of log and timber buildings. Following this demand have been skilled contractors, trades, and design professionals who choose to live near these high end, high quality areas to service the demand. This mix of people creates relatively heavily populated areas. These areas also have a long history of purchasing buildings from BC builders who have access to high quality (often large) wood, skilled log and timber builders, and an appreciation for the mountain culture where these finished buildings will be located.

So, it is the mix of the large scale demand in a relatively small area, the interest in large log and timber buildings readily available from BC, the many decades of history of purchasing buildings from BC builders, the established transportation links for shipping finished products and site visits, and the availability of the higher end part of the log and timber market that has focused this US market research on the Mountain States. This density of mountain culture building has also attracted many architects and specialist contractors who provide services and recommendations for similar style buildings in many other states. Also, marketing is expensive and these areas, with their density of demand, enable building companies to focus their market effort (and investment) thus maximizing their benefit/cost ratio.

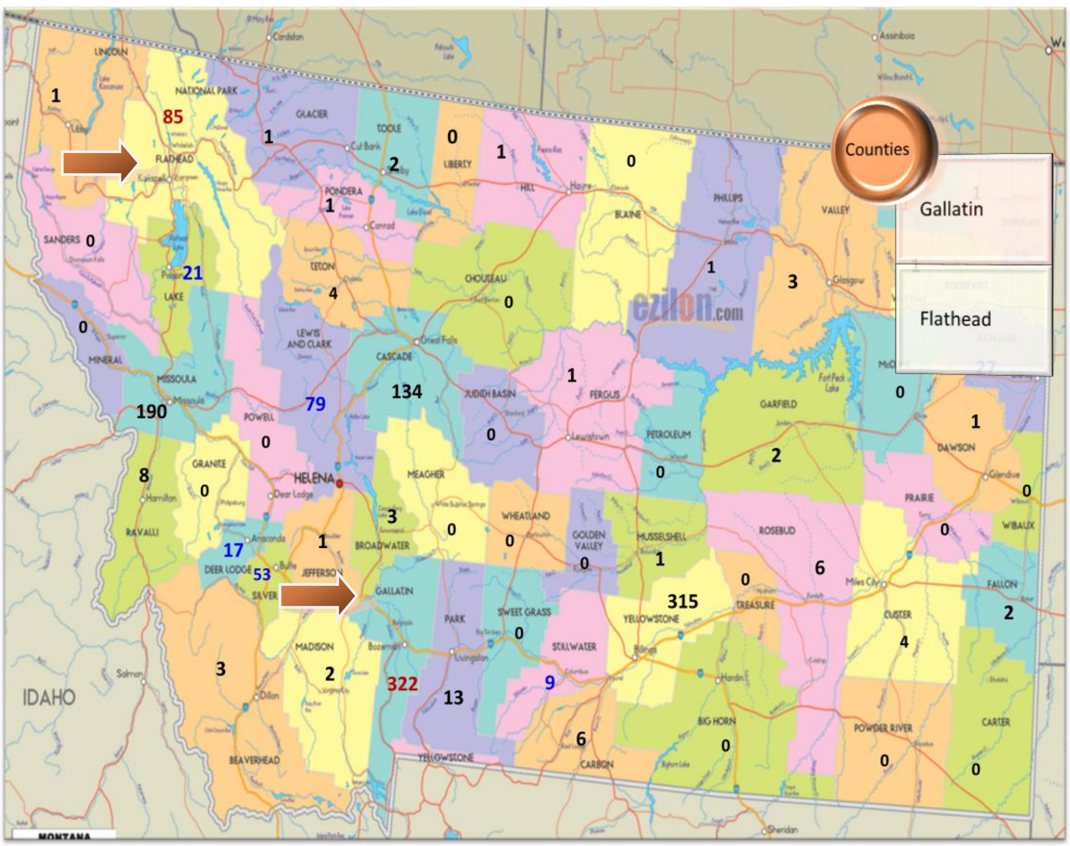
[16] US Census Bureau - http://censtats.census.gov/bldg/bldgprmt.shtml?

Appendix 6 provides a list of local and regional governments and companies contacted in the US Mountain States markets during this research.

Montana

After reviewing single family residential building permit trends for 2006 to 2010[17] for all of the counties in Montana, Flathead, Gallatin and Yellowstone counties were identified as potential target areas based on the relatively large numbers of residential building permits and the upward trend in 2010 (see Map 6). The residential building permit data was accessed from the US Census Bureau which compiles the data from all municipalities that issue building permits and the county that issues permits to the rural areas and in some cases smaller cities. However, the State of Montana does not require a building permit for single family residences with the exception of specific instances such as construction on the floodplain. Therefore, the data that has been examined for the counties in Montana is not comparable to the information obtained from the other states.

Map 6 – State of Montana



[17] http://censtats.census.gov/bldg/bldgprmt.shtml?

Gallatin & Flathead Counties

Another important consideration was the suitability and historical preference to log homes and mountain culture. Flathead and Gallatin are mountainous areas, have a history of log and timber homes, and a pioneering mentality as expressed in many ways including their lack of permit requirements. Both counties include several large ski hills and other mountain resorts, such as Whitefish in Flathead and Big Sky in Gallatin, that have made them common second home locations.

Figure 7 – Gallatin & Flathead Counties Single Family Building Permits

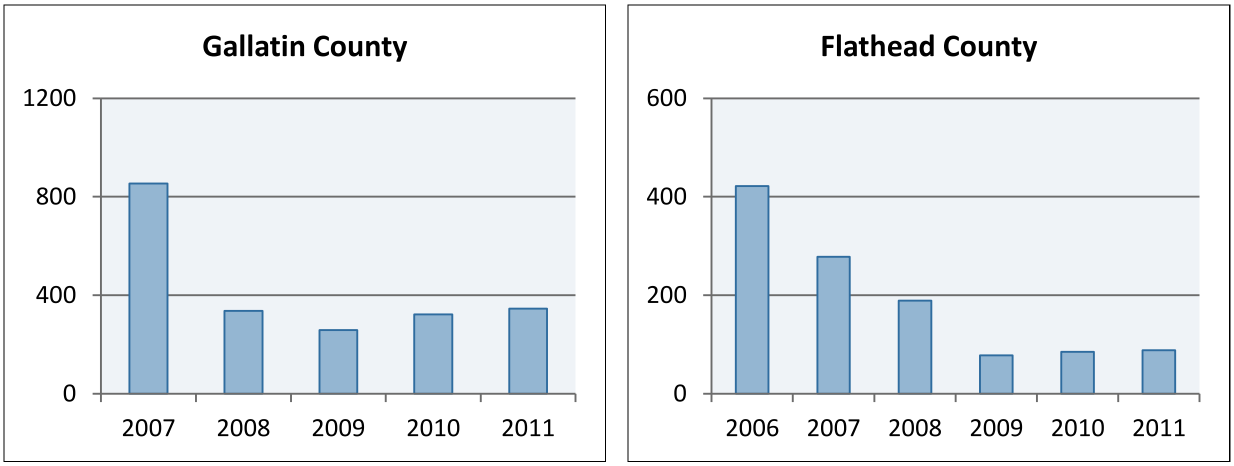
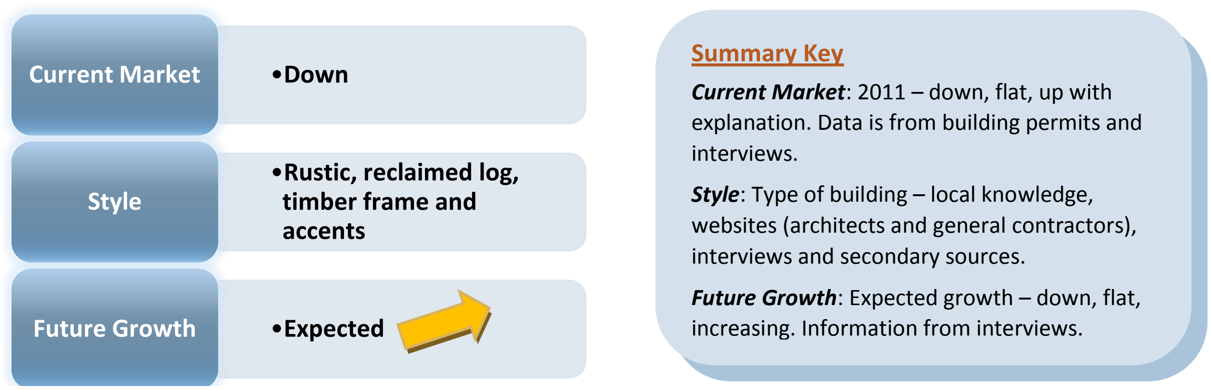


Figure 8: Gallatin & Flathead Counties Market Summary

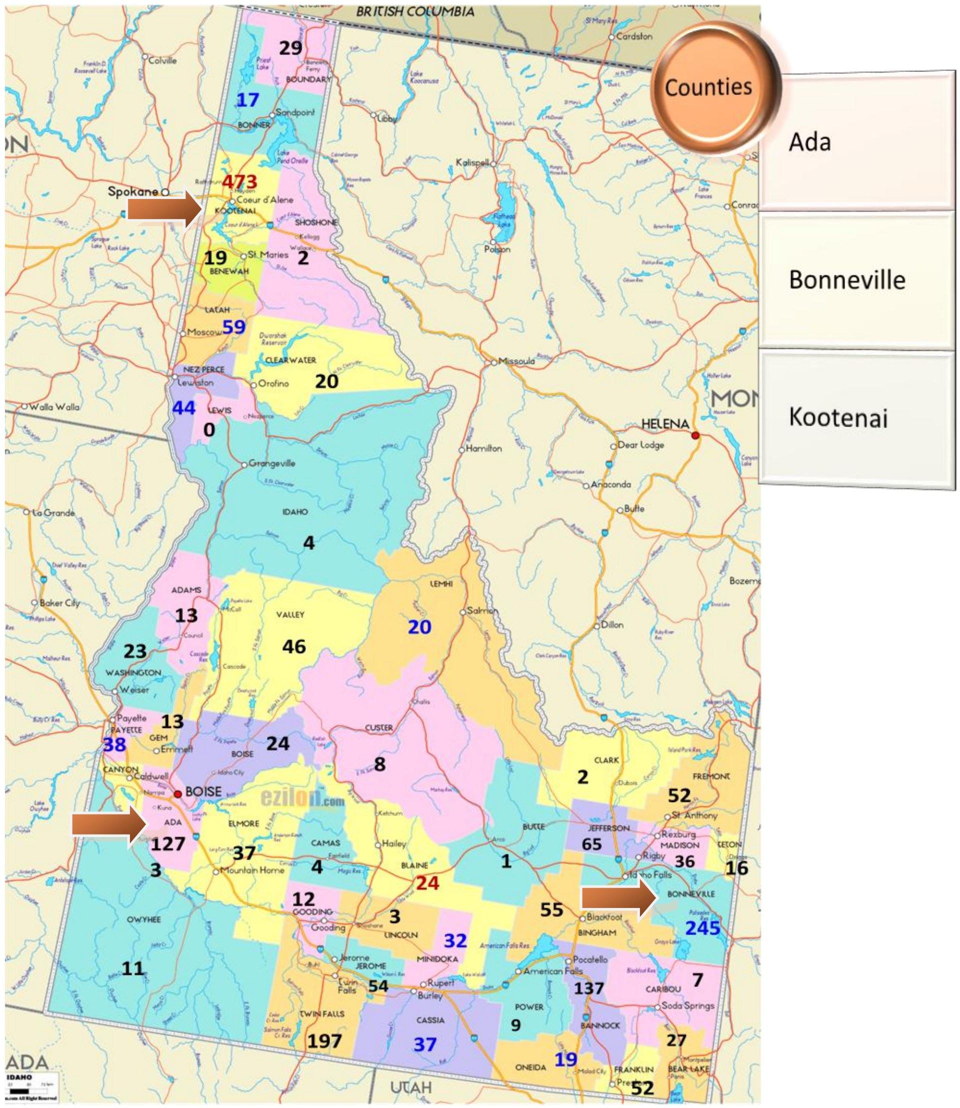


Prior to the recent recession, these areas in Montana were rapidly growing as they were seen as an alternative to the old money in traditionally popular mountain resort areas such as Sun Valley in Idaho and Aspen in Colorado. Overall, this market is starting to move slowly back (see Figure 7 & 8) with some major resort areas recommencing construction on higher end mountain homes such as the case with the Yellowstone Club in Gallatin. An architect based in Flathead noted that he was starting to see more people who had prepared partial plans a few years ago coming back. Rustic style wood homes dominate throughout the state and access to reclaimed timber is vital to any log or timber frame builder marketing in Montana. There is still an active interest in log homes but the demand for timber frame is outgrowing it. An increasingly large part of this demand is for timber frame accents in residential and urban commercial applications. Although there are many local suppliers, product needs are not necessarily filled locally and many builders are familiar with BC products.

Idaho

After examining the residential building permit trends[18] across all of the counties in Idaho, the target areas selected for further investigation were Kootenai County in northern Idaho, Ada County around the City of Boise and Bonneville County in southwest Idaho. Blaine County was also looked at because of the past importance of Sun Valley Ski Resort in large scale log and timber residences, however the number of new residences constructed were quite low and continuing to decline. See Map 7.

Map 7 – Idaho State Map



Given the historic desire for log and timber buildings in Sun Valley and its many architects with extensive experience in mountain living design, one can anticipate opportunities for building relationships with architects and general contractors who service the area. The architects and contractors in Blaine County generally have expertise in log and timber buildings and, as in all cases, usually serve a wider region than the one county.

[18] http://censtats.census.gov/bldg/bldgprmt.shtml?

Kootenai, Ada & Bonneville Counties

Kootenai County has shown significant but declining numbers of new residences over the last five years but the results for the first quarter of 2012 are up from 2011. Kootenai County also includes several ski hills and resorts, most notably Silver Mountain, and full log homes are common. Ada County was targeted largely due to its large numbers of new residences constructed each year though most of those are conventional stick-frame houses in Boise. Bonneville County is located on the border with Wyoming close to Jackson Hole Resort and includes Driggs, the site of a great deep powder ski hill. Bonneville exhibited an increase in housing starts in 2010 compared to 2009, though 2011 and early 2012 have shown slight decreases. See Figure 9.

Figure 9 – Kootenai, Ada, Bonneville Counties Single Family Building Permits

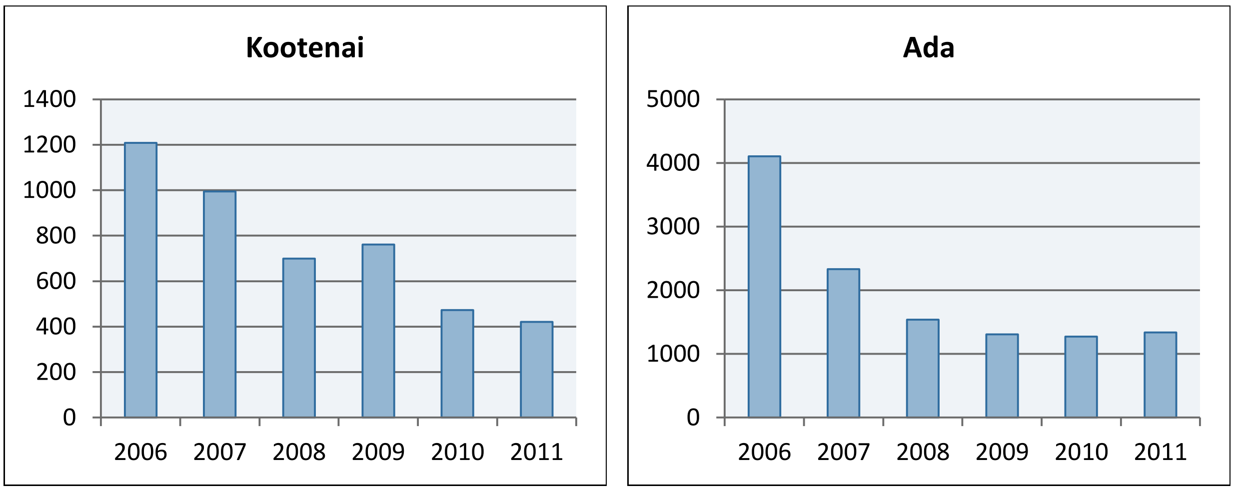
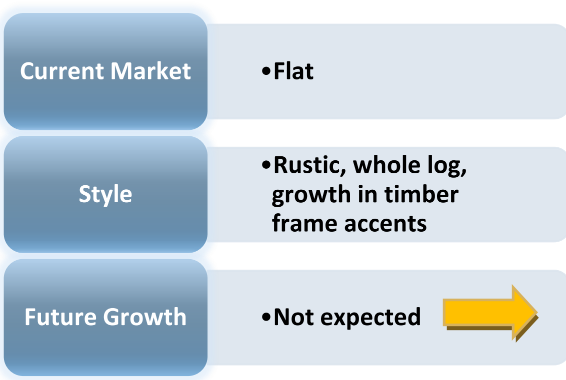
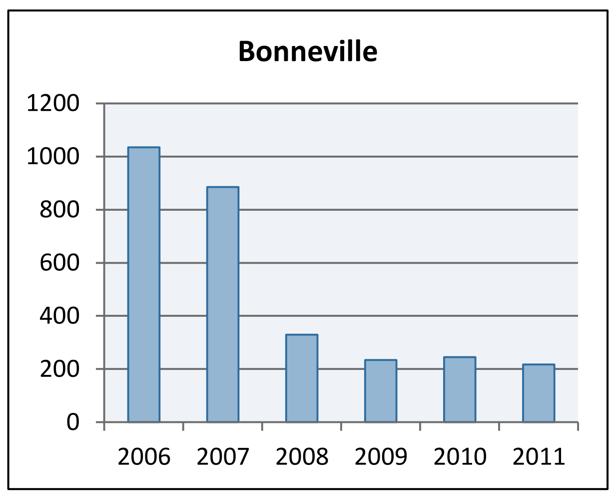


Figure 10 Market Summary



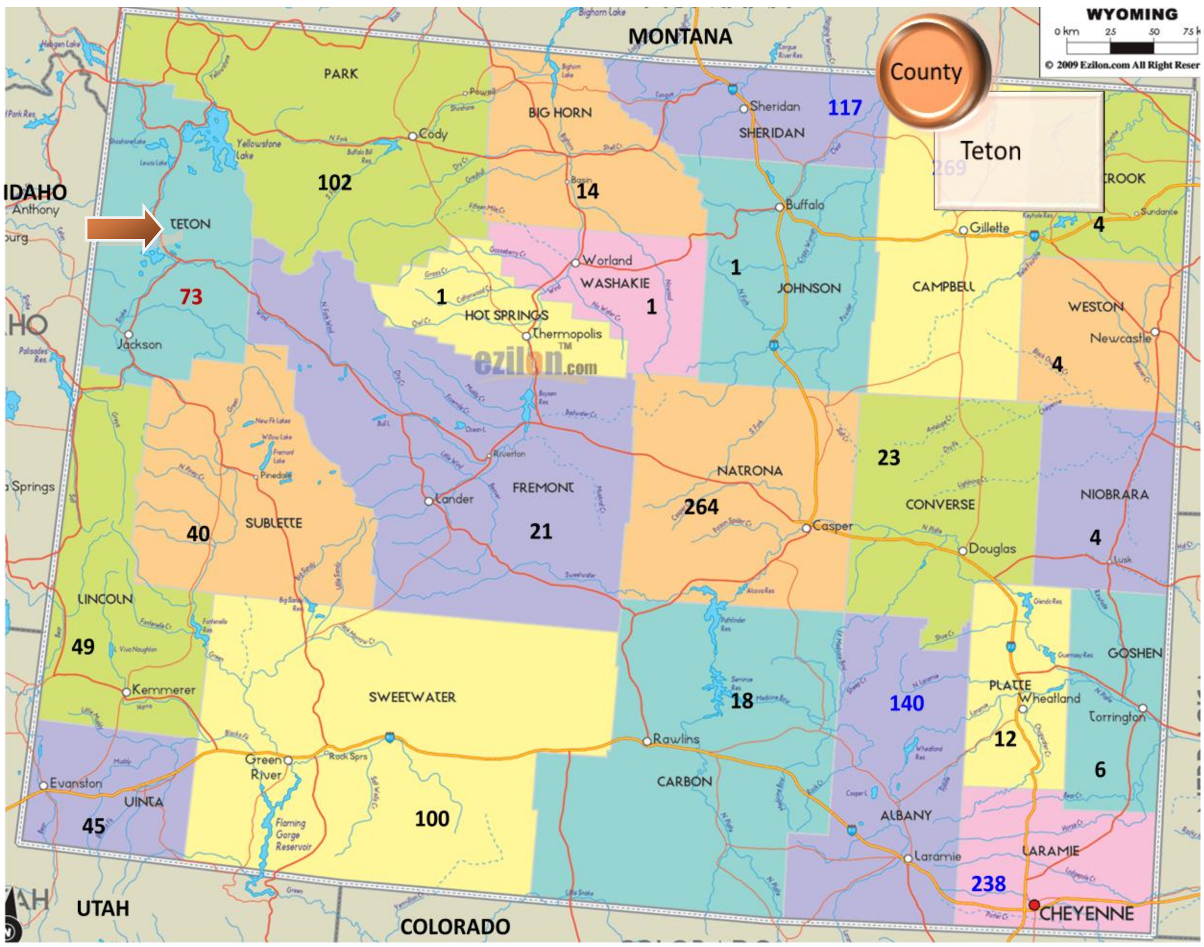


Bonneville County is in a mountainous region and solid wood homes and cabins are common, particularly in popular fishing and outdoor recreation areas such as Swan Valley and Island Park but also around the main city of Idaho Falls. It is important to note that most of the designs for the area are done by architects and general contractors in Jackson, Wyoming, a mere 40 minute drive away. There is still some activity in large log homes, particularly for fishing cabins in Bonneville County, but the demand is increasingly for timber frame hybrid homes or conventional construction with timber frame accents. Generally speaking, Idaho is not as promising of a market for custom built log and timber frame homes as some of the other mountain states, but there are some areas where the demand is increasing.

Wyoming

The key area of interest in Wyoming is the region around Jackson Hole Resort and the city of Jackson both located in Teton County (see Map 8). There were other areas showing larger numbers of housing starts in 2010, however, none were located in mountainous areas and all lacked the historical prevalence towards large custom built log and timber frame homes and all wood subdivisions that are an important characteristic of Jackson. This county has shown a slight increase in housing starts in 2010, though the numbers are still down considerably from the average over the last 20 years. The market for custom built residences in this area was very strong before the recent recession and has long been seen as a hipper, younger alternative to the traditional mountain resorts such as Aspen and was very popular with the newly rich.

Map 8 – Wyoming State



Teton County

Overall, the market is down significantly but is now starting to improve slightly and should continue to do so over the next few years[19] (see Figure 11). A key mountain architecture firm based in Jackson had 20 employees before the recession hit, when the housing crash hit they had to cut to a mere four employees but are now growing with eight full time staff. This comment is consistent with other architectural firms interviewed in the region.

The style around Jackson Hole is somewhere between the rustic reclaimed homes in Montana and the sophisticated, modern timber frame designs in Aspen. Full log homes are still very common and the trend towards increases in timber frame hybrids is also apparent. Not all products are provided locally and many architects and contractors seem to be familiar with BC products.

Figure 11 – Teton County Single Family Building Permits

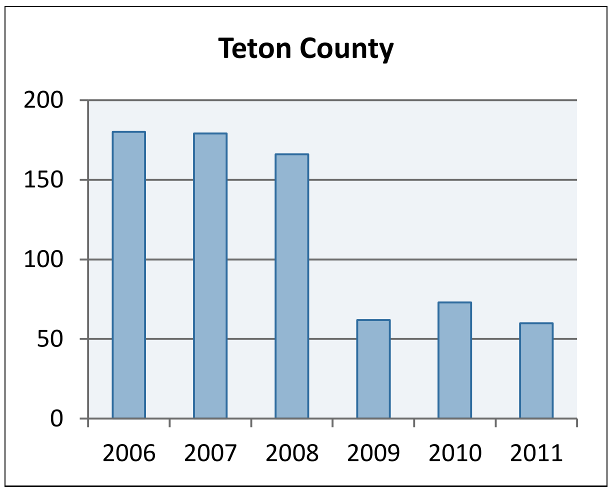
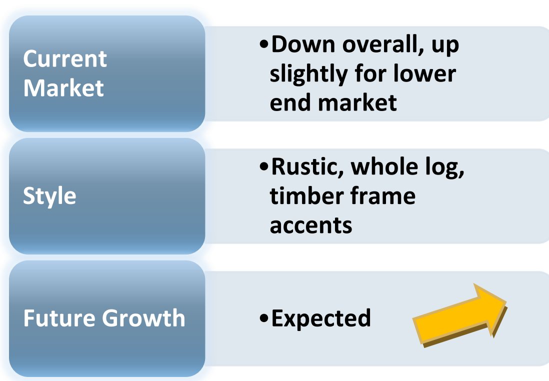


Figure 12 – Teton County Market Summary

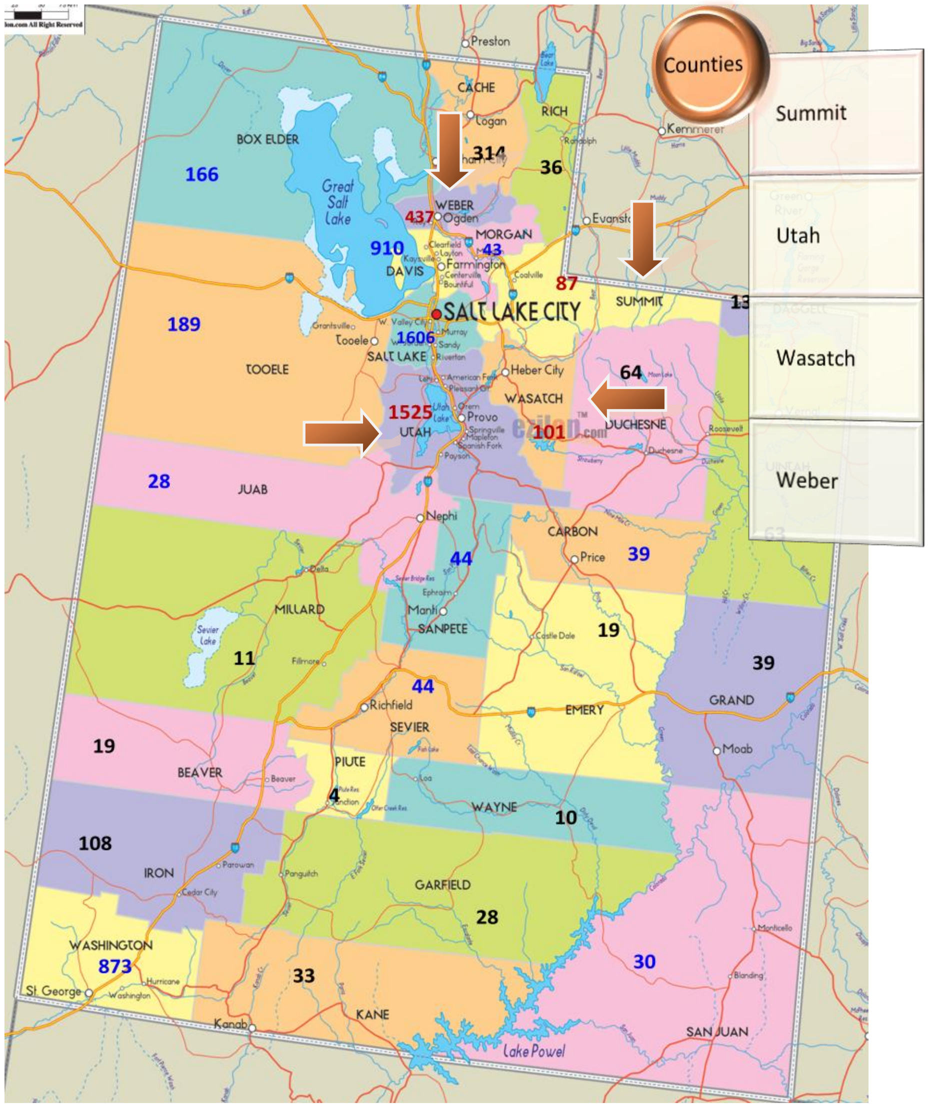


[19] http://www.jacksonholereport.com/

Utah

The target areas in Utah were primarily areas surrounding Salt Lake City, but excluding the city itself, that exhibited large numbers of new housing starts over the last five years, and include Weber, Utah, Wasatch, and Summit Counties (see Map 9).

Map 9 – Utah State

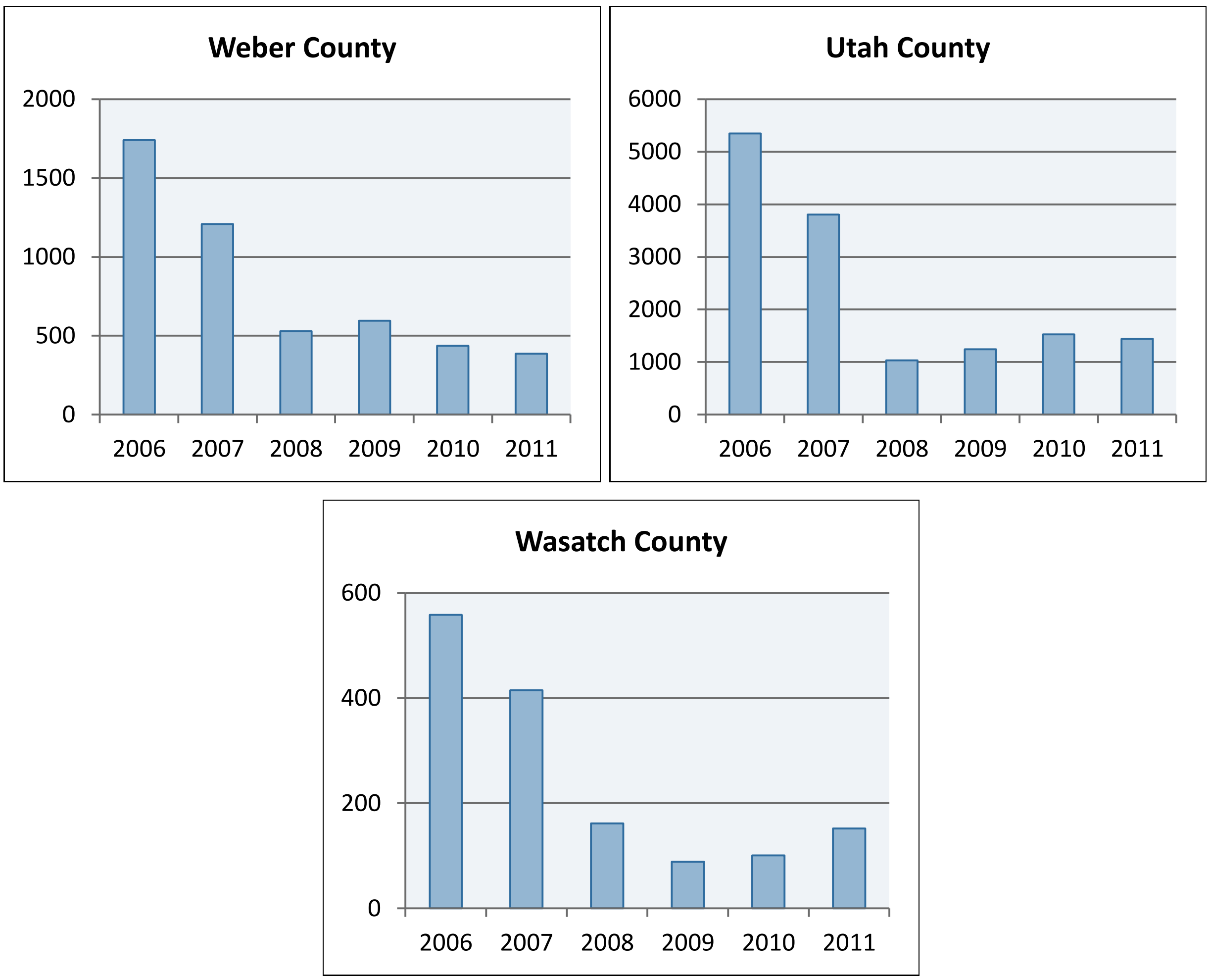


All of these counties are in close proximity to Salt Lake City and there are several specific advantages to that area including a large local population base and easy access to a major international airport. The region is also still riding on the hype created by the 2006 Winter Olympics. There are a large number of resorts within Utah that are within commuting distance for architects and general contractors. There is also much less local log and timber building competition and most of the wood products are sourced from outside the state. The style in Utah is more contemporary and thus there is an increasing demand for timber frame homes and hybrid homes with more sophisticated design. In particular in urban areas, timber accents are common. One general contractor stressed the importance of furniture quality timbers as the majority of the timber framing is high quality wood for higher end homes.

Weber, Utah, Wasatch, and Summit Counties

Weber County, located north of Salt Lake City, exhibited strong though decreasing numbers of new residences in 2010 and 2011 but is expected to have stable or slight increases in housing starts in 2012. This area includes several ski hills and mountain resorts in the northwestern part of the county in the Eden and Liberty Valley areas, such as Powder Mountain, and custom built log and timber homes are common. Utah County is a highly urban area just south of Salt Lake City with increasingly high numbers of new housing starts. These numbers are mainly due to conventional housing in urban areas with only the occasional log or timber home in the western, mountainous area of the county. Wasatch County is located west of Utah County and is highly mountainous however most of the major mountain resorts are further north in Summit County and as a result large log developments are not as common. (See Figure 13.)

Figure 13 – Weber, Utah, & Wasatch Counties Single Family Building Permits



Summit County

Summit County has shown smaller numbers in terms of overall new housing starts (see Figure 14) but did experience increases from 2010 to 2011. Additionally, Summit County does not have larger urban centres and the main population centre is Coalville which has a population of less than 1,500 people; therefore, the majority of their 110 new single family residences in 2011 can be attributed to the large mountain resorts in the area such as Deer Valley and Park City. A Park City architect said that while there is interest, they are currently still doing a number of remodelling projects when, five years ago, it was all new construction.

Figure 14 – Summit County Single Family Building Permits & Market Summary

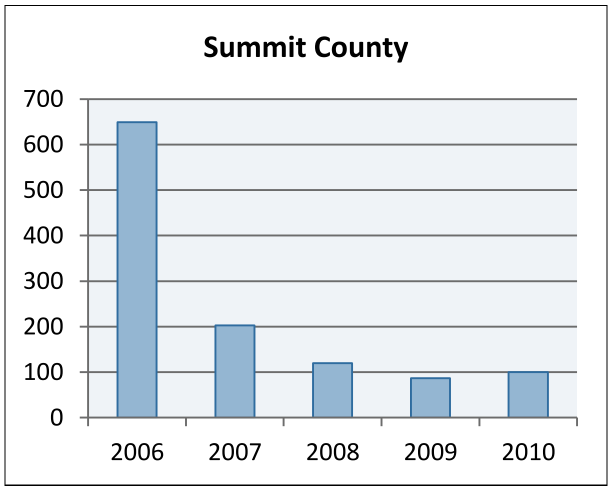
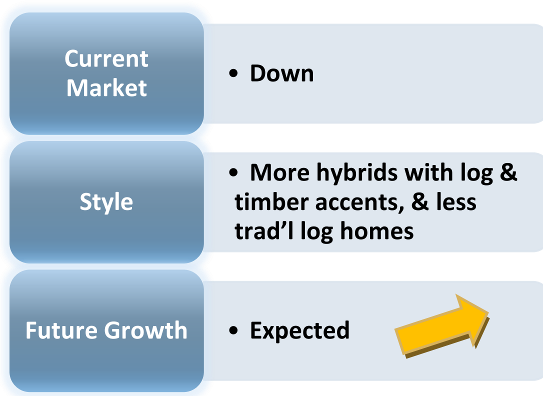


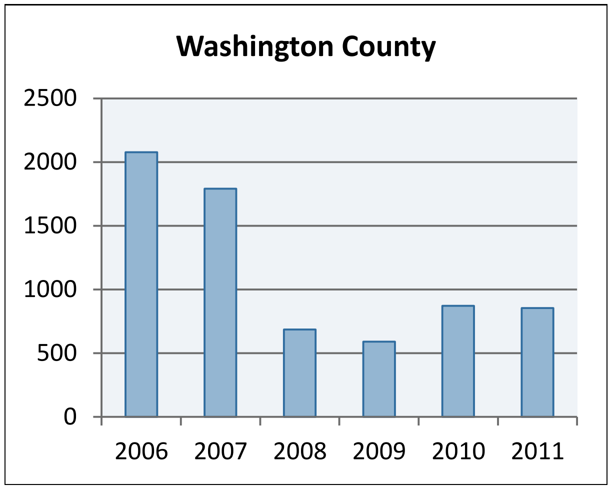
Figure 15 – Summit County Market Summary



Washington County

Washington County, located in the southwest corner of Utah, was also examined further because of its significant and increasing numbers of new single family residences and though the majority of these are due to urban housing in the main city of St. George, there are currently 3-4 log cabins constructed annually in the mountains north of St. George (see Figure 16).

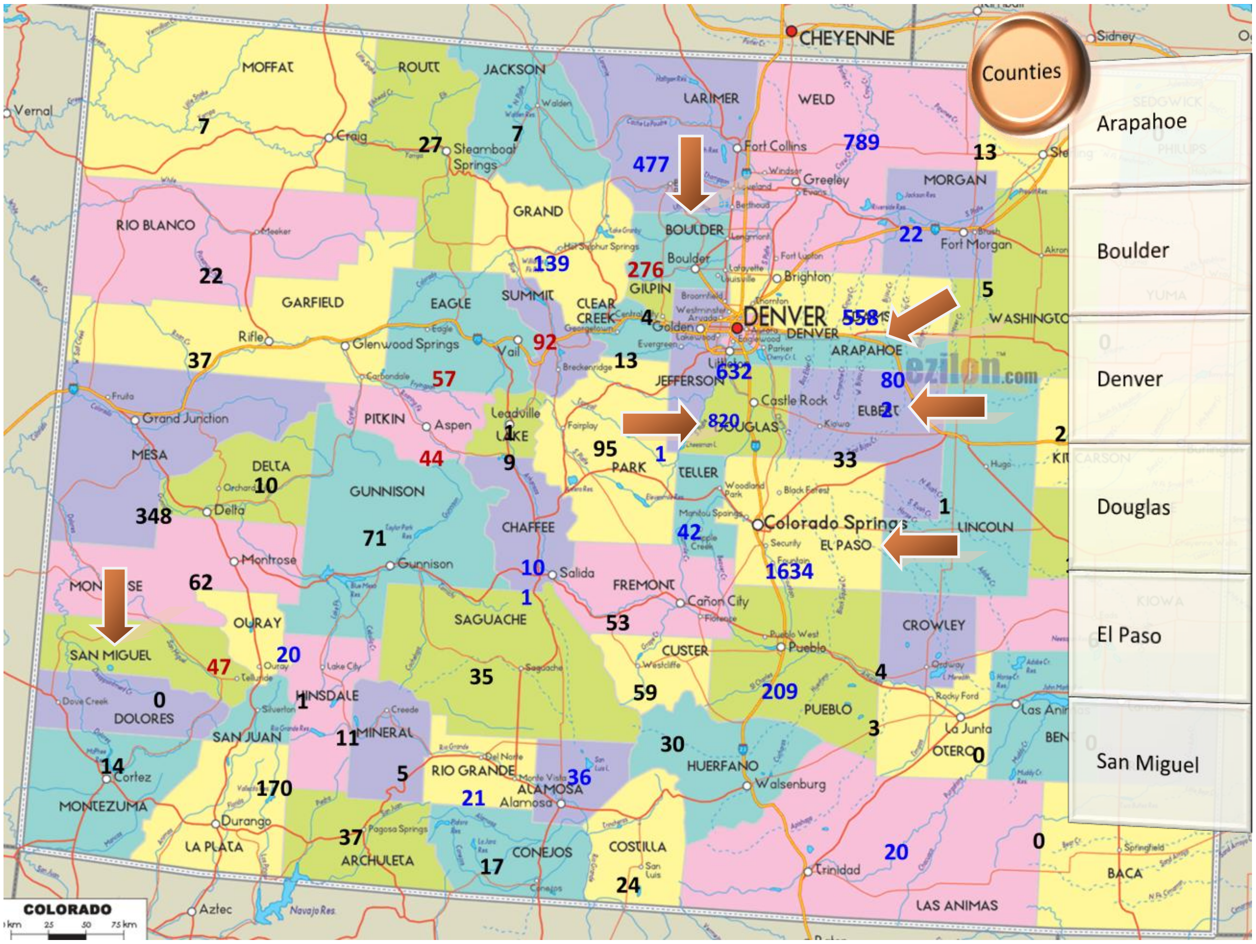
Figure 16 – Washington County Single Family Building Permits



Colorado

Several areas surrounding the main city of Denver were targeted because of their considerable and increasing number of new housing starts including Douglas, Arapahoe and El Paso Counties as well as the area around the city of Boulder including Boulder and Larimer Counties (see Map 10).

Map 10 – Colorado State



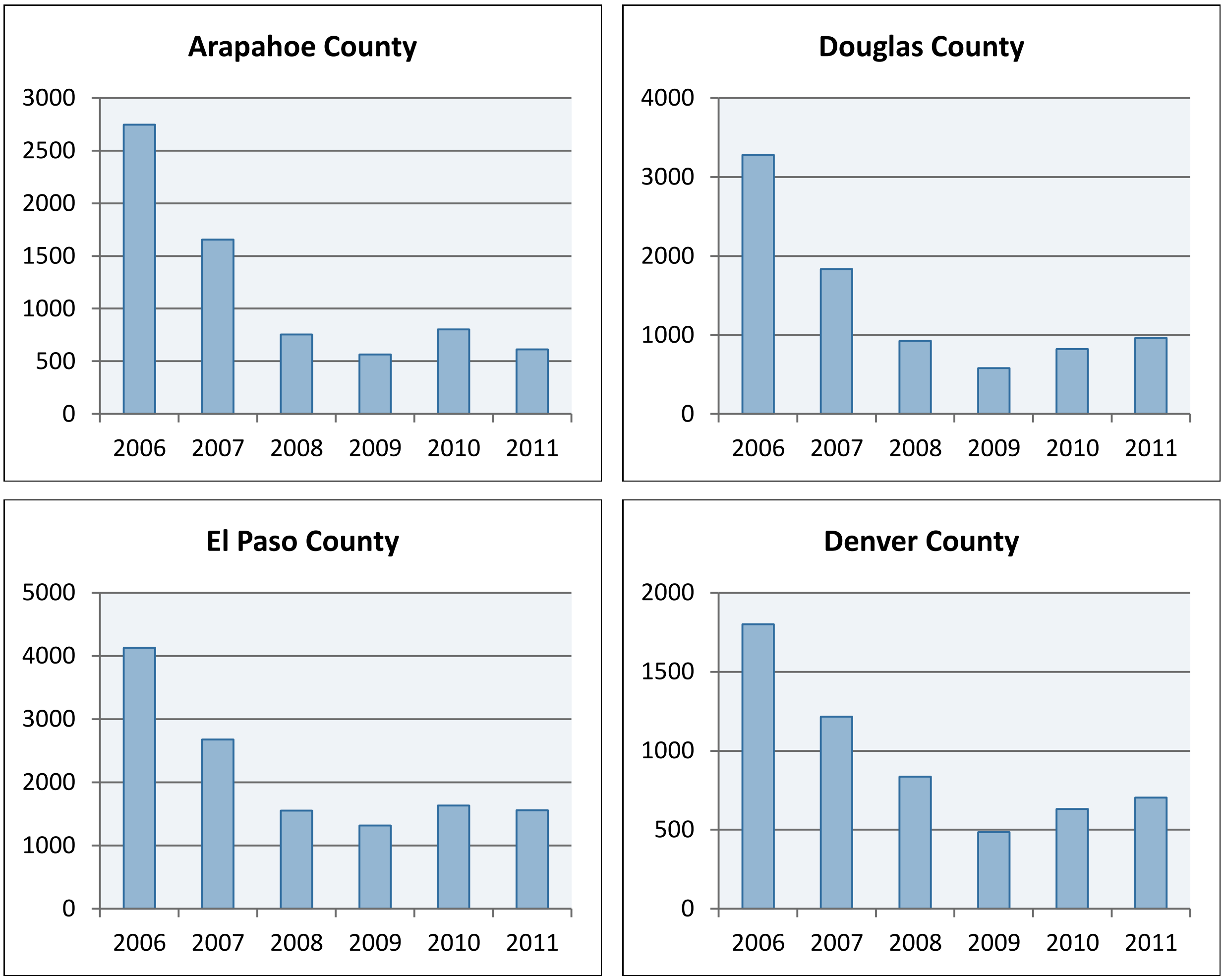
The market throughout Colorado is expected to start coming back in the next 2-3 years and therefore a marketing plan in this area will not pay major dividends for several years but it still constitutes a critical potential. Traditional suppliers have reduced contact with architects and general contractors and they will take time to greet new entrants but the market in Colorado has been very strong in the past, has a large number of resorts in close proximity and has Denver as a hub city. Many of the architects and general contractors work all of these resorts and now, when there are very few log and timber builders in contact with them, is the time to take advantage of the future opportunities here.

The dominant trend in this area is for more sophisticated design and log and timber frame hybrids. Any marketing plan focusing on Colorado should include both log and timber. Architects indicated that they do occasionally get requests for mountain pine beetle killed pine because it’s seen as a sustainable, eco-friendly option.

Denver, Arapahoe, Douglas & El Paso Counties

In Arapahoe, Douglas and El Paso the new residences are limited to stick frame construction as solid wood residences are not common in urban areas though there does exist a demand for timber accents and hybrid homes. The city of Boulder itself is much the same, full log or timber houses are less common in the city but they are more prevalent further north in the mountainous regions. Additionally, the growth in housing starts in Boulder County from 2009 to 2010 was a result of a large fire after which 76 homes were rebuilt. See building permits in Figure 17.

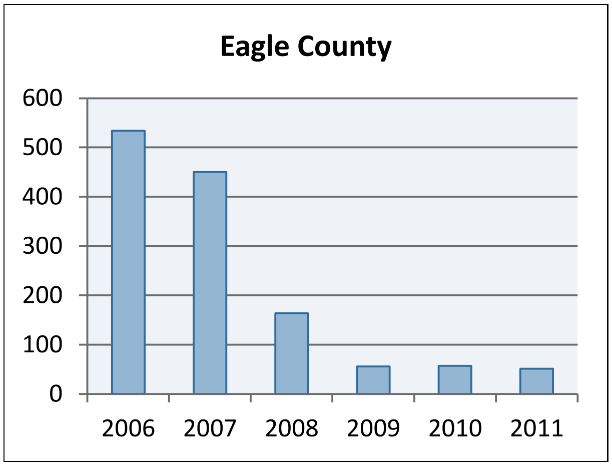
Figure 17 – Arapahoe, Douglas, El Paso, Denver Counties Single Family Building Permits



Eagle County

The traditionally significant areas for log and timber homes in Colorado are surrounding the major mountain resorts of Aspen, Vail, Breckenridge and Telluride. Located west of Denver, Vail is in Eagle County and Breckenridge in Summit County, Colorado. Both counties have shown drastically fewer number of new residences over the last five years though the housing industry in Summit County, Colorado did experience some growth in 2010 (see Figure 18). A Denver based architect noted that things had really slowed down in the mountains and while there is talk of an increase in the housing market, she claimed that there still wasn't any real change in the market.

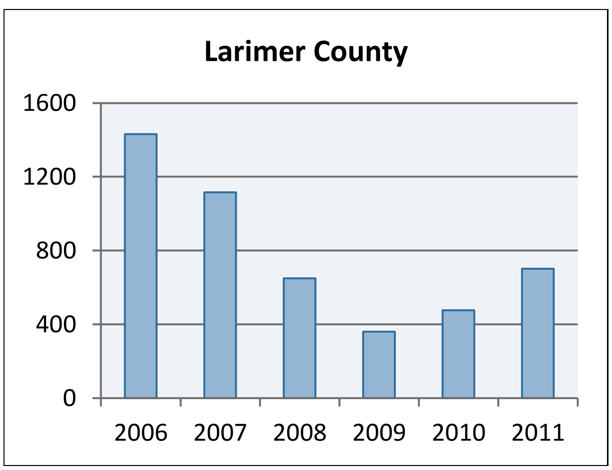
Figure 18 – Eagle County Single Family Building Permits



Larimer & Boulder Counties

Larimer County is a mainly mountainous area located directly north of Boulder County where the new housing market grew in 2010 and does contain some smaller ski hills and mountain resort areas. There is a stable demand for lower end custom built log and timber homes in the $1-2 million range but not for the higher end residences (see Figure 19). However, there are new projects in the area and one architect is working on the preliminary stages of a resort set to be built in the next three years.

Figure 19 – Larimer & Boulder Counties Single Family Building Permits



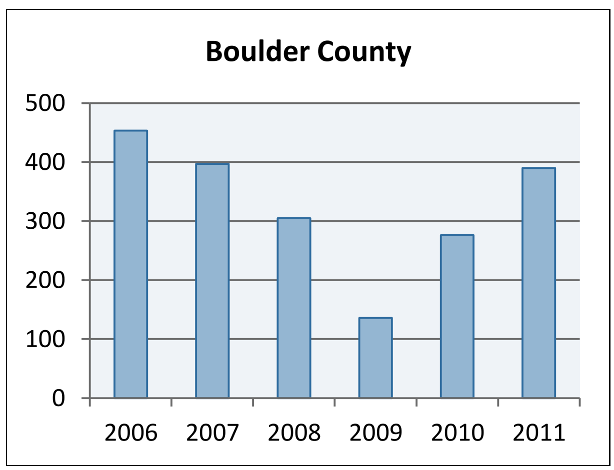
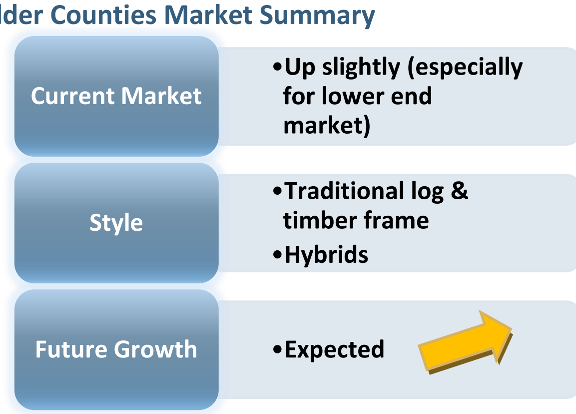


Figure 20 – Larimer & Boulder Counties Market Summary



3.6 Summary – Market Opportunities

Western Canada (non-Aboriginal communities)

BC – The main single family housing growth in BC is expected to take place in the lower mainland and will be dominated by stick frame homes. Vancouver Island/Coast and Thompson Okanagan housing construction rates are expected to continue to stay flat. Timber frame and hybrid (stick frame with timber components) buildings dominate the log and timber type homes in these regions. The same style preference emerged in the large subdivisions in the East Kootenays during the last decade and has remained the dominate style of log and timber building in the region. The more rural regions of the province, with minor housing growth, are the areas where full log is the preferred style. In conclusion, the BC market for log and timber buildings is going to grow with the dominate styles being timber frame, hybrid, and stick frame with timber accents. The full horizontal log will continue to be in vogue in rural and northern regions of the province where stable yet limited growth is expected.

Alberta – Like in BC, the main single family housing growth in Alberta will be in the Edmonton and Calgary regions. Other regions will grow much slower than in the last decade. The substantial increase in wealth, expected to be generated in the oil sands region, will maintain the demand for second homes and condominiums in the foothills and mountain regions. For BC log and timber builders, this will have a combined impact of creating a demand for generally expensive second homes and condos in Alberta's foothills and mountain regions and maintaining the demand for expensive second homes in the traditional second home markets of the East Kootenay, Shuswap and the Okanagan.

Saskatchewan – Like BC and Alberta, the main single family housing growth in Saskatchewan will be in the urban Saskatoon and Regina regions which will be dominated by stick frame houses. Small markets for full log buildings, both HC and MP, in Northern and lakes regions of the province are expected based on historical style preferences and traditional use of round logs as a building material.

Manitoba – Like BC, Alberta and Saskatchewan, housing growth in Manitoba will be in the urban Winnipeg region which will be dominated by stick frame houses. Very small markets are expected for non-stick frame buildings in Manitoba.

Northwestern Ontario markets for log and timber builders are expected to continue to be very small and serviced primarily by Ontario based builders. The **Northeastern Ontario** market for second homes is expected to grow with the added mineral wealth in the region. It is expected that the northeast region will be well served by Ontario based builders.

Aboriginal – Western Canada

Housing – There is a substantial demand for the construction of low cost housing on Indian reserves in Western Canada. There is, in many rural and remote communities, a predisposition for solid wood homes. These houses have to be full turn-key for the quoted and accepted price. They also have to meet current building and energy use codes which are set nationally. There are significant institutional barriers related to preconceived notions regarding the potential for actual completion, cost of construction, cost of maintenance, cost of heating, and fire risk that need to be addressed if real support for solid wood buildings is going to be obtained from AANDC and CMHC.

Institutional Buildings – Clearly, there is a growing market for institutional and commercial buildings in Aboriginal communities based on their growing needs for public and commercial services. The combination of population grow in rural and remote Aboriginal communities and wealth growth in some of these rural communities, placed on top of a significant predisposition for wood buildings and buildings with significant wood features, is expected to create a steady demand for quality log and timber buildings and features imbedded in institutional buildings on reserves. Institutional buildings usually have external funding source that provides 100% of the cost and a professional design and construction process that holds all designers, contractors, and sub-contractors to pre-existing budgets and bids.

Rural and Remote Workers Camps – Clearly, there is a substantial Canadian market for rural and remote site buildings. Log and log infill buildings are currently not being considered for this application. To have the buildings considered will require substantial design, and marketing investment plus identifying a community or communities that are prepared to seriously enter in the negotiations with the project proponents to add this to the overall project plan and capital cost.

US Mountain States

The five mountain states were selected for the market review because historically (many decades) they have dominated the Western US demand for log and timber buildings. Also, BC builders have less of a competitive transport disadvantage in servicing these markets as compared to Western US companies.

Montana – In the mountain areas of Montana, particularly Gallatin and Flathead Counties, there is a historical strong demand for log and timber buildings and mountain culture related to the large ski areas and mountain resorts. Overall, this market is starting to move slowly back with some major resort areas recommencing construction on higher end mountain homes such as the case with the Yellowstone Club in Gallatin. Rustic style wood homes dominate throughout the state. Increasingly, a large part of the market is for timber frame buildings. Many builders are familiar with BC products.

Idaho – In the mountain areas of Idaho, like Montana, there is a also a historical strong demand for log and timber buildings and mountain culture related to the large ski areas and mountain resorts including international resorts like Sun Valley. The counties where log and timber building growth is expected are Kootenai (near Spokane), and Bonneville near Jackson Hole Wyoming. There is some demand for traditional log buildings but the demand is increasingly for timber frame and hybrid homes. It is important to note that most of the builders and architects operating in Bonneville are from Jackson Hole, Wyoming.

Wyoming – The key area in Wyoming for log and timber buildings is the county of Teton which includes the Jackson Hole Resort, and the city of Jackson. The amount of building is down dramatically from the peak years but is now starting to improve slightly. The area has attracted architects and builders with mountain architecture speciality servicing a much wider area including Idaho and Montana. They are familiar with BC products. The style in Teton is somewhere in between the rustic in Montana and the sophisticated timber frames in Aspen.

Utah – The primary target areas are Weber and Summit Counties. This is where the major resorts are located. New, single family construction in these areas is currently low and stable and is expected to experience slight growth. In Utah, there is much less local competition and most wood products are sourced from outside the state. The style is more contemporary leading to an increased demand for timber frame and hybrid buildings.

Colorado – The key counties to focus on are Larimer and Boulder. New housing construction has begun to return with substantial growth expected in the next two to three years. The dominate style trend is for a more sophisticated design as well as log and timber frame hybrids. Colorado focused marketing plans should include both log and timber.

US Market States Summary – All five states have areas that are worth further investigation and target marketing. It is critical to remember that the log and timber industry in these states use to be quite large. The massive downturn (see Eagle County, Colorado, where construction went from more than 500 homes/year to around 50, a 90% drop) have eliminated much of the competition and removed the "rift raft" as some have termed it. As the market returns, there are opportunities for successful BC companies, who have survived the down turn, to be consistent suppliers in these growing markets.

Market Summary

For high end full log builders, a substantial market still exists in the US Mountain States particularly in the specifically identified counties in Montana, Idaho, Wyoming and Colorado. For higher end timber frame companies the BC and Alberta markets are expected to continue to grow, as is the demand in the US mountain states that are moving more toward timber frame buildings, e.g. Montana, Idaho, and Colorado. For more local log builders and timber framers, particularly those with the ability to construct accents and hybrid components, the BC and Alberta markets are expected to continue at a substantially scaled down level from the boom years. The continued financial growth of the Alberta oil industry and the western Canadian mining industry will create the incomes that will sustain higher end primary and secondary home construction in BC and Alberta where timber frame components and accents dominate. There will be a continuing market for those log and timber companies who have the ability to build major structural and accent features for institutional and multi-unit buildings, including on Indian reserves, in western Canada.

For those companies willing to create lower cost solid wood construction systems, combined with full turn-key services, and pre-set tight pricing, there is a substantial and growing Aboriginal housing market particularly in rural BC, northern Alberta, northern Saskatchewan, and the Yukon. There is also substantial markets in north and east Manitoba and northern Ontario where road access is often limited to winter only and summer access is by ships originating in Eastern Canada. These Aboriginal housing markets are not for the weak-of-heart or those companies unaccustomed to slow decision making processes and/or the need to develop and maintain close social relationships to their customers. Haven Timber Homes has firmly entered this market demonstrating that using the low cost MPB affected pine with a timber frame and solid wood infill system can successfully meet the requirements of this market segment.

The fast inclusion of energy codes within building code requirements in Canada and the US Mountain States threatens to eliminate the small profiled log building system (6 x 8, and 8 x 8) as an option even for seasonal second homes. These companies may need to adjust their building system and/or shift to log siding type applications as marketed in BC by Trout Creek International Homes and other companies.

4 Government Assistance Potentials

4.1 Exports

There are sources of funding and support for companies currently exporting and for companies who wish to start exporting their products. Most programs apply to companies who export to any foreign country but there are additional programs that are specific to those exporting or who would like to export to the United States.

Export Development Canada http://www.edc.ca/en/Pages/default.aspx

- Express Credit: Provides unsecured small business loans to help companies market internationally (i.e. attend trade shows in new markets, etc.)
- Export Guarantee program
- Supplier financing arrangements

Export Bank of Canada (small and mid-sized businesses) http://www.exportbank.ca/

- Funding program designed for small businesses or first time exporters to prevent cash flow problems
- For companies with less than $1 million in exports
- Funds receivables based on the quality of the receivable
- Includes products, services, intellectual property, royalties and arts and culture

Brome Financial Corporation (small and mid-sized businesses): Independent financial corporation that can complement or replace the services offered by traditional financial institutions for small and mid-sized enterprises. http://www.bromecapital.com/en/default.idigit

- Single invoice discounting
- Asset-based lending
- Accounts receivable management

Export USA: Programs for Canadian Exporters to the United States that provide educational workshops on exporting to the US including government support programs, technical procedures, information guide and contacts within the industry. This program does not provide funding.

- NEBS (New Exporters to Border States): a program designed for companies who are not yet exporting to the US but would like to start.
- EXTUS: a program designed for companies that are already exporting to the US but have annual sales of less than $2.3 million.

Trade Commissioner Service: Government funded program with trade officers all around the world to support Canadian exporters and investigate potential market opportunities. This program does not provide funding. http://www.tradecommissioner.gc.ca/eng/home.jsp

- Market prospecting to help Canadian companies assess the potential in a target market
- Searching for key contacts in a target market to help implement a market entry strategy
- Export market based business advice

4.2 Training

There are sources of funding to subsidize wages for companies who take on apprentices and train new employees. The log building apprenticeship is 'Industry Training Authority' certified but does not qualify as a Red Seal program and the timber frame program is not certified in either case. If an apprentice is following the carpentry program or another Red Seal certified trade, the apprentice and the company are eligible for more funding to assist in training.

Industry Training Authority http://www.itabc.ca/site3.aspx

- BC Training Tax Credits: Refundable income tax credits for employers who are engaged in apprenticeship programs certified by ITA. Max of $4,000 per year over two years for non-Red Seal programs.
- New Tradesperson tool deduction

Skills Link: Human Resources Canada funded program to encourage hiring.
http://www.servicecanada.gc.ca/eng/epb/yi/yep/newprog/skillslink.shtml

- Provide funds to hire and train young Canadians between the ages of 15 and 30 (inclusive) who are registered with the Skills Link program.
- The youth must be at risk of not finding work for one of the following reasons: They didn't finish high school; they live in a remote area; they have a disability; they are Aboriginal; they are from a visible minority; or, they face other barriers.
- Service Canada provides up to $25,000 to cover the salary of an employee for up to 52 weeks, based on the minimum wage rate in the province or territory.

Apprenticeship Job Creation Tax Credit http://www.cra-arc.gc.ca/tx/ndvdls/tpcs/ncm-tx/rtrn/cmpltng/ddctns/lns409-485/412/jctc-eng.html

- For Red Seal certified trade apprentices
- 10% of the eligible salaries and wages payable to apprentices with a maximum of $2,000 per year, per apprentice.

4.3 Research and Development

Sources of funding that are limited to those conducting their own experimental product research. This does not generally include testing of existing materials but rather the development of new products and building techniques.

Scientific Research and Experimental Development Tax Initiative Program http://www.cra-arc.gc.ca/txcrdt/sred-rsde/menu-eng.html

- Tax refund or tax credit of up to 35% of what is spent on Industrial R&D. Companies can apply for tax credits for expenses like wages, materials, machinery, equipment, some overhead and contracts related to: experimental development, applied research, basic scientific research, and certain types of technical support work.
- Companies can apply for the tax credit as part of their tax return by completing the required forms.
- A business qualifies if: they are involved in basic or applied research, developing new or improved products or processes.
- Ineligible: quality control or routine product testing, routine data collection.

Industrial Research Assistance Program – National Research Council Canada: Offers financial assistance for small and mid-sized firms for the development and commercialization of innovative new or improved products, services, or processes. http://www.nrc-cnrc.gc.ca/eng/ibp/irap/about/bc-yukon.html

- Work with an Industry Technology Advisor to develop a proposal

4.4 Small Business

There are sources of funding for start-up and existing small enterprises. The criteria for a small business differ depending on the individual program, some by number of employees and some by amount of total sales. In addition to these, there are also several tax credits for small businesses that should be taken advantage of.

Van City Self-Reliance Loan Program: Private financial institution https://www.vancity.com/MyCommunity/OurChangeProductsAndServices/FinancialLiteracyAndBasicBanking/CreditAndDebt/

- Provides small business loans. Must be a VanCity Member, enrolled in Self-Employment Benefits Program and operating in Greater Vancouver, Fraser Valley or Greater Victoria.

Community Futures Development Corporations : http://www.communityfutures.ca/index.html

- Loans to new and start-up businesses in rural areas. Up to $150,000.
- Business Advisors.

Industry Canada – Canada Small Business Financing Program: A government funded program to increase the availability of funding for small businesses through risk sharing with local financial institutions. http://www.ic.gc.ca/eic/site/csbfp-pfpec.nsf/eng/Home

- The program can help firms secure up to $500,000 from their financial institution by backing a loan with a government guarantee.
- The loans can cover 90% of the costs to: purchase or improve land or property, purchase leasehold improvements or improve leased property, purchase new equipment or improve used equipment.
- Eligible small businesses must have annual gross revenues below $5 million. Applications through financial institutions – list of lenders online.

Business Development Bank of Canada: The BDC is a Government of Canada financial institution that offers a range of services and support for small and mid-sized businesses. They offer primarily consulting and financing services http://www.bdc.ca/ on a cost recovery basis at commercial rates.

- Refinancing
- Vehicle and Equipment Financing Partnership
- Canadian Secured Credit Facility – for financing of vehicles and equipment.
- Market Xpansion Loan: for participate in prospecting initiatives (overseas tradeshows, etc), develop export plans, Scientific Research and Experimental Development, product development or purchasing additional inventory for export.
- Financing for market research and distribution plans
- For production planning
- New or used equipment purchases
- Transition financing
- Purchase of land or buildings
- Building Construction
- Exporting

- Acquisition of a business or starting a business
- HR Management
- Working Capital
- Innovation projects

Northern Development Initiative Trust: http://www.northerndevelopment.bc.ca/

- Northern Industry Expansion Program: provides loan guarantees for up to 25% of BDC's loan amount for small and medium sized businesses in resource, manufacturing and supply sectors in central and northern British Columbia.
- Capital investment and training rebate: job creation incentive that provides funding support to expanding small and medium size manufacturing and logistics businesses based on direct capital and training costs – up to $5,000 per new job.
- Competitiveness Consulting Rebate: provides a rebate of 50% of costs, with an annual maximum of $30,000, for small and medium sized enterprises engaged in manufacturing, innovative technologies, resource processing, transportation, distribution and their first line suppliers for external business consulting. Enterprises must be located in the Northern Development Initiative Trust region

4.5 Support for Small Businesses

Sources of support for small and mid-sized enterprises that do not provide funding but in some cases do help attract investors and act as a link between funding providers and companies. Also includes important sources of support in the form of business advisors, materials and often courses on finance and management.

Small Business BC: Provide products and services to assist a wide range of entrepreneurs. http://www.smallbusinessbc.ca/

- Courses and seminars
- Advisory services
- Market research
- Conference room rentals

BC Venture Capital Program:

- Attract investors by providing them with a 30% refundable tax credit.
- To be eligible, enterprises must be engaged in manufacturing, processing, or the export of value-added goods produced in British Columbia, development of proprietary technology, and community diversification. The enterprise must also be located outside of the Lower Mainland or Greater Victoria.

4.6 Support for the Wood Industry

There are sources of support for those in the wood industry specifically but they do not provide any funding. These can be very valuable sources of information on current markets, new techniques and industry specific advisors.

Value to Wood:

- Industry advisors, workshops and seminars, research and development, new technologies

BC Wood: A partnership between the government and members of the industry, BC Wood provides programs and initiatives to market BC value-added wood products and to increase productivity. http://www.bcwood.com/

- Networking events and tradeshows to introduce BC producers to foreign buyers
- International marketing services and contacts
- Market information and research

Solutions for Wood – FP Innovations: Partially government funded institution specializing in forest research, technology development and knowledge transfer http://www.solutionsforwood.ca/about_us/about_fpinnovations.html

- Industry Advisors – including on site expertise
- Technical and product development assessments
- Information on new technologies and processes

Business Innovation Partnership: A program that provides business development and expansion services to the Value Added wood products industry in British Columbia. This program is a partnership between BC Wood and FP Innovations (Forintek) along with associate partner CAWP (Centre for Advanced Wood Processing) and will combine the expertise of all three organizations. The overall goal of the Business Innovation Partnership is to engage the value-added industry into undertaking activities that will improve their entrepreneurial skills in areas that have been identified as critical factors for success in global markets. The Business Innovation Partnership will help BC companies implement these success factors through: assessments, workshops, sector specific services, and company specific projects.

5 Conclusions

Log and Timber Companies

The substantial collapse of the housing market in the US has eliminated many US log and timber builders and it has also had a similar but less severe impact on BC with many individuals and companies leaving the industry or putting their operations in dormancy. Of all the BC companies in operation, only one large log builder and three large timber frame companies reported having fully recovered from the bottom of the collapse in 2009. For the remaining BC companies, they are still surviving on a scaled down level serving a broad and diverse market. Many of the larger BC companies have been able to maintain, at a lower level of sales, their international markets in US, Europe, and Asia, which provides a strong indication of the quality for price, large diameter wood, species of choice (cedar, spruce and fir) and successful marketing by these BC companies. In general, there has also been a shift towards timber framing in both round log and squared timbers matching the shift in customers' preferences. Timber framing has expanded with the increased desire for timber frame accents and design/cost preference of hybrid buildings.

Major Markets

The current market for single family dwellings and multi-family units as well are located primarily in urban areas all across western Canada. The large urban centres – Greater Vancouver, Calgary, Edmonton, Saskatoon, Regina and Winnipeg continue to experience significant growth The markets for single family dwellings in rural and secondary regions, outside the shadow of major centres, are down substantially including those former high growth second homes and resorts areas that were very strong through the mid 2000s. The demand for second homes in resort areas in western Canada is substantially reduced but still active. The same can be stated for wood features (accents and structure) on multi-family dwellings, commercial buildings and institutional buildings, based on a scaling back on construction of all these types of buildings and not a reduction in the style preferences.

A large market exists for Aboriginal housing in western Canada in rural and remote communities that have a strong pre-disposition to solid wood and timber frame type housing and institutional buildings. The housing component has substantial financial barriers and institutional constraints that need to be either operated within or overcome.

In the US Mountain States, the number of new single family home buildings constructed has experienced steep declines in 2007, 2008, and then bottoming out in 2009 in counties with a strong presence of resorts and log and timber frame homes. 2010 saw the market slowly increasing in many counties with similar growth being experienced again in 2011. Activity in the first quarter of 2012, indicates that in most cases the trend toward slight increases is continuing. The combination of the survival of BC companies, the demise of many US companies, and the recovering market creates a void that can be filled by BC companies if they move into the gap quickly.

Government Assistance

There are general government assistance programs available to a variety of manufactures that are involved in product export which include the log and timber industry. BC Wood, through its programs, can cost share the cost of attendance at export industry shows internationally. There is financial assistance available for apprenticeship training including non-Red Seal programs, e.g. the log building apprenticeship program. The research and development assistance does not directly impact the sector yet there are research and development activity assistance available in specific situations, e.g., the energy efficiency of small diameter machine profiled buildings, where research and development is needed quickly. General small and medium sized business assistance exists that this sector can tap into.

The prime example is the Northern Initiative Development Trust which cost shares business competitiveness consulting on a 50/50 basis and can provide loan guarantees through the Business Development Bank of Canada. There is wood focused export development, building science and education support, e.g. Forest Products Innovation seminars, for the sector within the industry. This needs to be expanded given the employment and economic impact of this sector on wood based communities in the Province and the specific economic opportunities requiring substantial intervention and innovation.

So What?

The BC log and timber industry is still alive and directly employing approximately 1200 people in BC at a very low time in overall market demand both nationally and internationally. Furthermore, the industry still purchases a solid chunk of the high quality logs sold in the province thus supporting those in forest management, harvesting and wood processing sectors. There is also market potential for BC companies to expand their operations. This sector of the wood industry deserves focused, systematic, and enhanced public sector investment in western Canadian market development, export market development, Aboriginal housing, and building science testing, innovation and improvements given that:

- the high value that is added (primarily translated into employment income) to BC's high quality wood resource component purchased by this sector;
- the predominance of product export;
- the industry's ability to still stay internationally competitive; and
- the predominately rural and small town location of the industry.

The outcome of the increased investment will be a sustained internationally competitive industry adjusted to the new energy code, growth in sales of BC log and timber and associated products, and growth in direct and indirect employment primarily in wood industry dependent BC communities. In addition, it will grow the contribution that this industry makes to Provincial and municipal revenue collected through resource rents, local taxes, corporate taxes and income taxes.

Appendices

Appendix 1 – Westcoast CED Consulting Ltd.

The project team includes Victor Cumming, Project Manager (Regional Economist); Brian Lloyd (Industry Expert); Karol Hansma (Project Coordinator and Researcher); and, Kate Cumming (Research Assistant). Westcoast CED staff has participated on log and timber frame building projects' design and implementation teams providing project management, input on design, building method and cost estimating. The company has also assisted First Nations to assess the potential of operating their own log building companies to meet primarily the on-reserve housing needs, including design and construction of a pilot project. Westcoast CED prepared the first public global market assessment for log buildings internationally, funded by Forest Renewal BC. The foundational research has been subsequently used by a number of existing and new log home building companies and cant (dead and dry) producers. Relationships established with log building companies and their managers transitioned into feasibility and business planning for whole log and timber kiln operators resulting in successful financing of two new BC operations.

Victor Cumming is foremost a community economic development practitioner with 35 years of experience—more than 300 projects on three continents. He has worked with provinces, regions, municipalities, community organizations, First Nations (coast to coast to coast in Canada), and individual enterprises. Victor is a trainer, a facilitator, and business and regional economic development strategist. He has lead and participated in a variety of log and timber industry/business investigations over the last two decades.

Brian Lloyd has been a consultant to architects, structural engineers, government agencies, log building owners, log building firms, and sector insurance companies and attorneys for the past 20 years. He has been very active in the log building industry since 1971, as founder of Highland Log Builders. Brian has also been actively involved in the industry as a director and past vice president of the International Log Builders Association, director of the Mackie School of Log Building, and chairman and organizer of the industry 's most successful meeting – "Yellowstone International Log Builders' Conference, 1993". Brian has contributed as a team member to the International Log Builders Association – Log Building Standards document and the Association's Log Building Draft Contract, the BC log building curriculum for apprenticeship in BC, and the Draft Health and Safety Program Manual for BC builders. Brian developed and carried out the base line log building industry survey in 1997. He is currently a consultant for the BC Log and Timber Building Industry Association and continues to serve on the Best Practices Committee of the International Log Building Association.

Karol Hansma has over 15 years experience in project and office management, primary and secondary research, and entrepreneur development. Karol will assist with the research and industry consultation necessary to fulfill the project deliverables. She has extensive experience in report layout, editing, and design of written materials. She has assisted with log and timber conferences starting in 1997, business and market assessments and preparing sector strategies including the CCBAC Log and Timber Sector Strategy in 2007.

Kate Cumming has experience in primary and secondary research, business plan preparation and technical report writing. Kate assisted with desk top investigation of the US housing market in target areas, remote camp needs of resource companies, Aboriginal housing and funding programs.

Appendix 2—Log and Timber Building Industry Contacts

Handcrafted Companies

1. Alpha Log and Timber 2010
2. Amarok Timber and Log Ltd.
3. Artisan Custom Log Construction
4. BC Log Cabins Inc.
5. Bearpaw Mountain Homes Ltd.
6. Brian Moore Log Homes Ltd.
7. Canada's Log People
8. Chinook Log Homes
9. Continental Log Homes Ltd.
10. Custom Log Homes Ltd.
11. D & V Log Works
12. DBD Contracting Ltd.
13. Driftwood Creek Log Homes
14. Hogan Log Homes
15. Jim Pownall & Co
16. Kingfisher Log Homes
17. Log & Timber Works
18. Morgan Log Homes Ltd.
19. Mountain High Log Homes Ltd.
20. Norse Log Homes Ltd.
21. Pacific Log Homes Ltd.
22. Pioneer Log Homes of BC Ltd.
23. Poulin Timber Works Ltd.
24. PT Riser
25. Ram Creek Log Homes
26. Roundwood Log Homes Ltd.
27. Sitka Log Homes Inc.
28. Slokana Log Homes
29. Sperlich Log Construction Inc.
30. Sunset Log Homes Ltd.
31. Surelog Homes ltd.
32. Tall Timber Log Builders
33. Top Notch Log Construction
34. Traditional Log Homes Ltd.
35. Westcoast Log Homes Ltd.
36. Whitevalley Log Homes Ltd.
37. Wildwest Furniture/Nicola Log Works
38. Wild West Log Homes
39. A Fine Log Building Co Ltd.
40. Calija Log Homes
41. Cascade Handcrafted Log Homes Ltd.
42. Coast Mountain HC Log Homes Inc.
43. Creative Log Homes
44. Damstrom Log & Timber Homes
45. Dogtooth Log and Timber Products
46. Durfeld Log & Timber
47. Eco Log Homes
48. Finlayson Log Homes
49. Harrison Log Homes
50. Kawdy Mountain Homes Inc
51. Kerkoff Engineering Ltd.
52. Khita Log Builders Ltd.
53. Island Log Homes
54. Kootenay Lake Log Structures Ltd.
55. Leatherwood Log Homes Ltd.
56. Log Homes Canada
57. Maurer Log Homes
58. Mile High Log Homes International
59. Natures Best Log Homes Ltd.
60. Nithi Mountain Log Homes
61. Nolte Log Homes
62. Nordik Log Homes
63. North American Log Crafters Ltd
64. Odermatt Log Homes
65. Old Yale Log Homes
66. Peco Log Homes
67. Radomske Log Homes Ltd.
68. Surefit Log Homes Ltd.
69. The Log Connection
70. Tyee Log Homes
71. Whistler Log Homes Ltd.

Timberframe Companies

1. Canadian Timberframes Ltd.
2. Daizen Joinery Ltd.
3. Hamill Creek Timber Homes
4. International Timberframes
5. Island School of Building Arts
6. Island Timber Frame
7. Purcell Timberframes
8. Spearhead Timberworks
9. Structurecraft Builders Inc.
10. Structurlam Products Ltd.
11. SW Coastal Builders Ltd.
12. Timberwright Construction Ltd.
13. Wine Country Timber Craft
14. Zirnhelt Timber Frames Ltd,
15. Alpine Timberframe & Design
16. Beere Timber Company
17. BC Timberframe Co Ltd.
18. Craftsman Timberframe
19. Creation Homes
20. Durfeld Log Construction Ltd,
21. European Timberframe Corp.
22. Frontier Timbercraft
23. Granby Post & Beam Homes
24. HR Pacific Construction Mgmt
25. Kettle River Timberworks Ltd.
26. MacDonald & Lawrence Timber Framing Ltd.
27. MacLeod Timber Framing
28. Nest Timberhome & Design
29. Okanagan Timber Frame
30. Pacific Timber Frame
31. Swiss Timber Construction
32. The Timbersmith Log Construction
33. The Whistler Timber Frame Co.
34. Tidewater Timber Frames
35. Traditional Timber Framing Co.
36. Westcoast Timberframe Ltd.

Machine Profiled Companies

1. BC Custom Timber Products
2. Big Foot Log and Timber Homes
3. Country Cabin Log Homes Ltd.
4. Dovetail Timber Homes
5. Easy Build Cabins
6. G.D. Contracting
7. Haven Timberhomes
8. Honka
9. Lake Country Log Homes 2009 Ltd.
10. Onward Log Homes
11. Panabode International Ltd.
12. Reko Log Homes
13. Rouck Bros Sawmill Ltd.
14. Rustic Log Structures
15. Trout Creek International Homes
16. Buff Lumber Ltd.
17. Northern Log and Timber
18. OT Timberframe
19. Tamlin International Homes Co Ltd.
20. Whisper Creek Log Homes

Appendix 3—Log and Timber Building Industry Survey

Company Name: ______________________ Contact: ______________________

Company Address: ____

In Business Since: ______________________ Phone #: ______________________

1. What type of log & timber frame buildings do you produce? Please mark all that apply.

HC ___ P&B ___ TF ___ MP ___ Log Accessories ___ Hybrid ___

1 b) If Hybrid, what mixture of building? (i.e., H/C & P/B, H/C & T/F, conventional, general contracting)

____

2. To get a sense of the size of your company currently, could you please tell us how many employees:

		TOTAL	Yard	Admin	Management
You currently have	2011				
You had in	2006				

3. Could you provide us with an estimate of where your sales were made in 2011?

	BC	AB/Yukon	Rest of Canada	US (see 3b)	International: ____________
Yes/No					
%					

3b) If you sold within the US Region, please indicate what region and what % of your **US sales only** were in that region.

US Region (Yes/No)	% US Sales
PNW	
Rockies	
Other: ______________________	

4. How did you make the sales and what %?

	Yes/No	%
Through Sales Staff	y	
Dealer	y	
Direct Sales		
Sub-contract		
Word-of-mouth		

5. Customer characteristics:
What is the approximate age of your clientele? ________ (i.e., range 30-39, 40-49, 50-59, 60-69, 70+)

6. What types of tools and/or information would be helpful for you to market your products?

____

Appendix 4—Survey Summary

This table gives a breakdown of information that was asked as part of the survey. It provides a comparison of 2011 and 2006 for the number of employees; a quick review of each company's website; whether the company uses its name on their answering machine; breakdown of the percentage of sales estimated to each location; and a percentage of how sales are made for each company.

Co. Size 2011	Co Size 2006	Website	Message	% Sales BC	% Sales AB/Yk	% Sales CDA	% Sales US	% Sales Inter	% US Sales PNW	% US Sales Rock	$ US Sales Other	% Intl	% Sales Staff	% Sales Deal	% Sales Direct	$ Sales Sub
3	8	okay	good	70			30		100					90	10	
27	85	good	good					100				Jap 90 Rus 10		10	90	
4	12	good	good	5			95		40	40	20			75	25	
1	1	working on	good	100												
12	n/a	good	no name	100											100	
2	2	basic	good	100											10	90
5	n/a	good	good	90	10										100	
4		good	not sure	30	30	40								100		
12	40	good	not sure	30	25		15	30	25	25	50		8	3		
8	13	good	good	10	85		5								100	
18		good	good	90				10					100			
4	8	poor	poor	50	50								100			
6	12	good	good	50	50										100	
2	2	none	not sure	50	50										100	
12	24	good	good	75	25								80	20		
17	22	good	good	50	20		30		100				25	25	50	
8	5	good	good	100									100			
35	45	Good	good	30	30		40			25	75		100			
12	12	good	good	50	50										100	
3	3	good	Okay	100											100	

Co. Size 2011	Co Size 2006	Website	Message	% Sales BC	% Sales AB/Yk	% Sales CDA	% Sales US	% Sales Inter	% US Sales PNW	% US Sales Rock	$ US Sales Other	% Intl	% Sales Staff	% Sales Deal	% Sales Direct	$ Sales Sub
20		good	good	100									100			
10	15	Excellent	good	80	10		10			100			100			
35	35	upgrading	good	15	15		70		50	50			50			50
50		good	good	50												
140	60	good	good	50	20		15	15					60	20		20
16	3	okay	good	100											100	
15	5	okay	good	100									100			
2		poor	good	100									100			
8	8	good	good	80	20								100			
4	4	good	good	25		25		50				Japan			100	
6	6	good	good	100											100	
5	22	Great	good	100									20		60	20
4	6	Great	good	80	20										100	
6	6	basic	good	100											100	
12	12	Great	good	10		10	40	40		100			33	33		33
13	25	good	good	28	8	10	34	20	20	28	52			28	72	
8	10	good	no name		50	50									100	
6	6	basic but interesting	good	15		80		5				Japan			10	90
18	1	Good	good	50	15		25	10								
2	4	none	good	100											100	
6	12	Good	good	40	20	10	40						50	50		
2	2	Good	good	100											100	
3	8	none	great guy	100											100	
8	5	basic	good	90	10										100	
4	2	good	good	100											100	
1	8	good	good	50			50			100					100	

Co. Size 2011	Co Size 2006	Website	Message	% Sales BC	% Sales AB/Yk	% Sales CDA	% Sales US	% Sales Inter	% US Sales PNW	% US Sales Rock	$ US Sales Other	% Intl	% Sales Staff	% Sales Deal	% Sales Direct	$ Sales Sub
2	6	okay	good	100											100	
4	10	very good	good	100											100	
12	40	good but outdated	good	100											100	
6	25	basic	good	5			95			30	70		40	60		
88	86	good	good	15	15		45	25		100			50	50		
2	8	good	good	100									100			
2	10	basic	good	100												100
7	7	okay	good	100									100			
5	7	very good		100											100	
15	25	very good	good	30	30	10	30			100					100	
3	12	okay	no	20				80				EU		10	90	
25	10	okay	good	10				90				EU-80 Japan		90	10	
3	3	basic	no					100				Germ			100	
5	14	okay	good					100				Japan		100		
4	20	basic	good	75	20			5				Japan			100	
3	6	needs work	no	100									100			
3	10	okay	good	100											100	
35	35	okay	good	100									100			
3	12	good	good				100			80	20				100	
15	15	needs work	good	80			5	15	100			Scand			100	
8	8	none	no	80	20										100	
849	**928**															

Appendix 5—Aboriginal Market[20]

British Columbia

First Nation	Community	Pop On Reserve	Pop Total
North East		**2484**	**5730**
Daylu Dena Council (Kaska Nation)	Lower Post	110	300
Dease River Band (Kaska Nation)	Good Hope	55	173
Kwadacha	Prince George	270	445
Fort Nelson FN	Fort Nelson	430	834
Prophet River FN	Fort Nelson	113	253
Tsay Keh Dene Band	Prince George	83	434
Doig River FN	Rose Prairie	143	277
Blueberry River FN	Buick Creek	236	456
Halfway River FN	Wonowon	159	251
Saulteau FN	Chetwynd	303	877
West Moberly FN	Moberly Lake	87	234
McLeod Lake IB	McLeod lake	91	491
Takla Lake FN	Takla Landing	404	705
North West		**11187**	**30783**
Taku River Tlingit	Atlin	87	385
Tahltan Band	Telegraph Creek	334	1744
Nisga’a Village of New Aiyansh	New Aiyansh	905	1812
Nisga'a Village of Gitwinksihlkw	Gitwinksihlkw	212	394
Nisga'a Village of Gingolx	Kincolith	464	1953
Nisga'a Village of Laxgalt’sap	Greenville	615	1719
Gitanmaax Band	Hazelton	1423	2234
Gitsegukla Band	Gitsegukla	434	939
Gitwangak FN	Kitwanga	440	1194
Glen Vowell IB	Hazelton	191	400
Kispiox Band	Kispiox	700	1566
Gitanyow Band	Kitwanga	416	798
Hagwilget Village	New Hazelton	225	733
Wet'suwet'en FN	Smithers	100	213
Moricetown FN	Smithers	693	1921
Gitga’at FN	Hartley Bay	148	715
Kitasoo FN	Klemtu	320	512
Kitsumkalum FN	Terrace	218	683
Kitselas FN	Terrace	276	572

[20] Aboriginal Communities in Canada, Government of Canada. http://www.aboriginalcanada.gc.ca/acp/community/site.nsf/eng/bc-all-b.html

First Nation	Community	Pop On Reserve	Pop Total
Metlakatla FN	Prince Rupert	94	838
Lax-kw'alaams FN	Port Simpson	729	3424
Haisla Nation	Haisla	676	1708
Old Massett Village Council	Old Massett	754	2798
Skidegate	Haida Gwaii	733	1528
Interior		**18669**	**36632**
Yekooche FN	Prince George	96	215
Burns Lake Band	Burns Lake	46	110
Nadleh Whut'en FN	Fort Fraser	230	484
Nak'azdli Band	Fort St. James	915	1695
Saik'uz FN	Vanderhoof	430	914
Stellat'en FN	Fraser Lake	218	466
Tl'azt'en Nation	Fort St. James	661	1673
Lake Babine Nation	Burns Lake	1453	2339
Cheslatta Carrier Nation	Burns Lake	164	332
Lheidli T'enneh	Prince George	101	342
Nee-Tahi-Buhn	Burns Lake	57	140
Skin Tyee	Southbank	59	166
Nazko FN	Quesnel	168	362
Kluskus/ Lhoosk'uz Dene Nation	Quesnel	51	209
Lhatko Dene Nation	Quesnel	74	161
Toosey IB	Riske Creek	166	312
Ulkatchot'en FN	Anahim Lake	700	998
?Esdilagh (Alexandria) FN	Quesnel	70	178
Tŝi Deldel (Alexis Creek) FN	Chilanko Forks	347	639
Yunesit'in Government	Hanceville	200	406
Tl'etinqox-t'in Government Office	Alexix Creek	598	1503
Xeni Gwet'in FN	Nemiah Valley	253	416
Heiltsuk Nation	Bella Bella	1157	2192
Tsq'escenemc (Canim Lake Band)	100 Mile House	441	585
Stswecem'c Xgat'tem FN	Dog Creek	390	698
Williams Lake IB	Williams Lake	263	688
Xat'sull (Soda Creek FN)	Williams Lake	183	395
Adams Lake IB	Chase	421	742
Bonaparte IB	Cache Creek	236	852
High Bar IB	Clinton	1	93
Kamloops IB	Kamloops	537	1050
Neskonlith IB	Chase	325	621
Simpcw FN	Barriere	249	664

First Nation	Community	Pop On Reserve	Pop Total
Skeetchestn IB	Savona	246	509
Whispering Pines / Clinton IB	Kamloops	64	148
Little Shuswap Lake	Chase	235	326
Shuswap IB	Invermere	115	249
Splatsin FN	Enderby	391	813
Esketemc FN	Williams Lake	465	835
Da'naxda'xw FN	Alert Bay	35	185
Gwa'Sala-Nakwaxda'xw Nation	Port Hardy	528	902
Quatsino FN	Coal Harbour	260	450
Tlatlasikwala Band	Port Hardy	25	49
Oweekeno/Wuikinuxv Nation	Port Hardy	60	281
Lower Similkameen IB	Keremeos	285	466
Okanagan IB	Vernon	910	1862
Osoyoos IB	Oliver	372	490
Penticton IB	Penticton	609	992
Upper Similkameen IB	Hedley	63	77
Westbank FN	Westbank	421	732
Upper Nicola Band	Merritt	476	883
Lower Nicola Band	Merritt	546	1057
Coldwater IB	Merritt	372	762
Cook's Ferry IB	Spences Bridge	79	310
Nicomen	Lytton	70	133
Nooaitch	Merritt	118	206
Shackan	Merritt	83	121
Siska IB	Lytton	104	308
Columbia Lake/ ?Akisq'nuk FN	Windermere	154	268
Lower Kootenay IB	Creston	108	214
St Mary's IB	Cranbrook	215	364
Tobacco Plains IB	Grasmere		
(Rural) West Coast		**4369**	**8899**
Tlowitsis Tribe	Campbell River	0	385
Homalco IB	Campbell River	248	459
Klahoose FN	Squirrel Cove	74	333
Sliammon FN	Powell River	584	990
Nanoose FN	Lantzville	170	239
Malahat FN	Mill Bay	161	288
Halalt FN	Chemainus	109	216
Gwawaenuk Tribe	Port McNeil	17	38
Kwicksutaineuk-ah-kwaw-ah-mish	Alert Bay	71	290

First Nation	Community	Pop On Reserve	Pop Total
Namgis FN	Alert Bay	988	1710
Tsawataineuk	Kingcome Inlet	155	514
Douglas FN	Mount Currie	90	251
Skatin Nations	Pemberton	131	390
N'Quatqua	D'Arcy	207	314
Yale FN	Hope	67	155
Chawathil FN	Hope	380	550
Cheam	Rosedale	259	495
Sechelt FN	Sechelt	658	1282
Fraser Canyon		**4417**	**8542**
Bridge River IB	Lillooet	218	432
Cayoose Creek Band	Lillooet	86	194
Lil'wat Nation	Mount Currie	1484	2085
Tsal'alh/Seton Lake Band	Shalalth	346	643
T'it'q'et Administration	Lillooet	198	394
Ts'kw'aylaxw FN	Lillooet	275	543
Ashcroft IB	Ashcroft	79	255
Boothroyd IB	Boston Bar	93	267
Boston Bar FN	Boston Bar	98	246
Kanaka Bar IB	Lytton	78	215
Lytton FN	Lytton	937	1892
Oregon Jack Creek Band	Ashcroft	20	63
Skuppah IB	Lytton	67	106
Spuzzum FN	Yale	47	226
Xaxli'p FN	Lillooet	391	981

Alberta

First Nation	Community	Pop On Reserve	Pop Total
Northern Region		**17277**	**37244**
Athabasca Chipewyan FN	Fort Chipewyan	25	979
Beaver FN	High Level	429	915
Bigstone Cree Nation	Desmarais	2794	6934
Chipewyan Prairie FN	Chard	360	757
Dene Tha' FN	Chateh	1983	2795
Driftpile FN	Driftpile	899	2465
Duncans FN	Brownvale	139	257
Fort McKay FN	Fort McMurray	366	714
Fort McMurray FN	Fort McMurray	266	637
Horse Lake FN	Hythe	453	985
Kapawe'no FN	Grouard	113	340
Little Red River Cree Nation	John d'Or Prairie	3801	4763
Loon River Cree	Red Earth Creek	422	527
Mikisew Cree First Nation	Fort Chipewyan	200	2711
Sawridge Band	Slave Lake		
Sucker Creek	Enilda	730	2550
Swan River FN	Kinusco	387	1174
Smith's Landing FN	Fort Smith	0	324
Sturgeon Lake Cree Nation	Valleyview	1417	2880
Tallcree FN	Fort Vermilion	528	1163
Whitefish Lake FN	Atikameg	1222	2344
Woodland Cree FN	Cadotte Lake	743	1030
Mountain Region		**1028**	**1763**
Alexis Nakota Sioux FN	Glenevis	1028	1763
Central Region		**21521**	**33227**
Beaver Lake Cree Nation	Lac La Biche	371	987
Cold Lake FN	Cold Lake	1296	2534
Frog Lake FN	Frog Lake	1843	2860
Heart Lake FN	Lac La Biche	199	311
Kehewin Cree Nation	Kehewin	1109	1933
Saddle Lake FN	Saddle Lake	6228	9574
Blood Tribe	Standoff	8077	11448
Piikani Nation	Brocket	2398	3580
Stoney Tribe (Nakoda)	Morley		

Saskatchewan

First Nation	Community	Pop On Reserve	Pop Total
Northern Region		**40818**	**67266**
Fond du Lac Denesuline FN	Fond Du Lac	1046	1827
Black Lake Denesuline FN	Black Lake	1592	2028
Hatchet Lake Denesuline FN	Wollaston Lake	1280	1642
Clearwater River Dene Nation	Clearwater River	774	1722
Birch Narrows Dene Nation	Turnor Lake	404	681
Buffalo River Dene Nation	Dillon	676	1251
English River FN	Patuanak	774	1432
Canoe Lake Cree Nation	Canoe Narrows	967	2100
Lac la Ronge IB	La Ronge	5730	9408
Peter Ballantyne Cree Nation	Pelican Narrows	4814	9154
Big Island Lake Cree Nation	Pierceland	875	1082
Waterhen Lake FN	Waterhen Lake	946	1869
Island Lake FN	Island Lake	1014	1244
Makwa Sahgaiehcan FN	Loon Lake	1034	1418
Flying Dust FN	Meadow Lake	516	1209
Onion Lake FN	Onion Lake	3341	5169
Thunderchild FN	Turtleford	1248	2683
Pelican Lake	Leoville	1094	1444
Witchekan Lake	Spiritwood	491	691
Big River FN	Debden	2388	3181
Montreal Lake Cree Nation	Montreal Lake	1988	3545
Cumberland House Cree Nation	Cumberland House	672	1226
Shoal Lake Cree Nation	Pakwaw	768	892
Red Earth Cree Nation	Red Earth	1354	1557
Wahpeton Dakota FN	Prince Albert	315	481
Sturgeon Lake FN	Shellbrook	1827	2684
Ahtahkakoop FN	Shell Lake	1720	3165
Mistawasis FN	Leask	1170	2481
West Central Region		**6081**	
Salteaux FN	Cochin	656	1213
Moosomin FN	Cochin	1122	1627
Little Pine FN	Paynton	842	1796
Poundmaker Cree Nation	Cutknife	897	1594
Sweetgrass FN	Gallivan	746	1786
Mosquito, Grizzly Bear's Head, Lean Man FN	Cando	710	1260
Red Pheasant FN	Cando	816	2250

First Nation	Community	Pop On Reserve	Pop Total
Lucky Man Cree Nation	Saskatoon	7	111
Muskeg Lake Cree Nation	Marcelin		
Whitecap Dakota FN	Whitecap	285	583
East Central Region		**11431**	**30326**
Muskoday FN	Muskoday	602	1671
James Smith Cree Nation	Melfort	1949	3135
Beardy's and Okemasis	Duck Lake	1201	3100
One Arrow FN	Bellevue	624	1627
Kinistin Salteaux Nation	Tisdale	392	963
Yellow Quill FN	Yellow Quill	951	2750
Fishing Lake FN	Wadena	521	1639
The Key FN	Norquay	305	1185
Keeseekoose FN	Kamsack	731	2248
Day Star FN	Punnichy	150	471
Kawacatoose FN	Raymore	1196	2894
Muskowekwan FN	Lestock	488	1606
George Gordon FN	Punnichy	1145	3293
Little Black Bear FN	Goodeve		
Star Blanket Cree Nation	Balcarres	259	612
Peepeekisis	Balcarres	639	2491
Okanese FN	Balcarres	278	641
Southeast Region		**6378**	**21031**
Standing Buffalo Dakota Nation	Fort Qu'Appelle	462	1196
Pasqua FN	Pasqua	589	1886
Muscowpetung	Fort Qu'Appelle	346	1258
Piapot FN	Zehner	630	2161
Sakimay FN	Grenfell	242	1482
Cowessess FN	Cowessess	872	3861
Kahkewistahaw	Broadview	588	1825
Ochapowace	Whitewood	594	1542
Carry the Kettle FN	Sintaluta	871	2541
White Bear FN	Carlyle	874	2421
Pheasant Rump Nakota Nation	Kisbey	162	388
Ocean Man FN	Stoughton	148	470

Manitoba

First Nation	Community	Pop On Reserve	Pop Total
Northern Region		**34922**	**50060**
Northlands Dene	Lac Brochet	865	1017
Sayisi Dene FN	Tadoule Lake	311	744
Barren Lands FN	Brochet	413	1044
Marcel Colomb FN	Lynn Lake	19	376
O-Pipon-Na-Piwin Cree Nation	South Indian Lake	1030	1449
Nisichawayasihk Cree Nation	Nelson House	2799	4597
Mathias Colomb FN	Pukatawagan		
Tataskweyak Cree Nation	Split Lake	2338	3491
Fox Lake FN	Gillam	164	1106
York Factory FN	York Landing	447	1158
War Lake FN	Ilford	87	280
Shamattawa FN	Shamattawa	1324	1455
Cross Lake FN	Cross Lake	5483	7549
Bunibonibee Cree Nation	Oxford House	2305	2770
Manto Sipi Cree Nation	God's River	684	801
God's Lake FN	God's Lake	1367	2517
Opaskwayak Cree Nation	Opaskwayak	3158	5399
Norway House Cree Nation	Norway House		
Red Sucker Lake FN	Red Sucker Lake	889	1009
Wasagamack FN	Wasagamack	1711	1886
Garden Hill FN	Island Lake	3595	4253
St Theresa Point FN	St Theresa Point	3500	3751
Grand Rapids FN	Grand Rapids	1030	1703
Chemawawin FN	Easterville	1403	1705
Eastern Region		**7897**	**11253**
Poplar River FN	Negginan	1262	1625
Berens River	Berens River	1870	2962
Pauingassi FN	Pauingassi	556	595
Little Grand Rapids FN	Little Grand Rapids	1227	1524
Bloodvein FN	Bloodvein	1031	1634
Hollow Water	Wanipigow	1086	1751
Little Black River	O'Hanley	865	1162
Sagkeeng/Fort Alexander	Fort Alexander		
Interlake Region		**11495**	**24013**
Skownan FN	Skownan	720	1319
Dauphin River	Gypsumville	207	304
Lake St Martin	Gypsumville	1418	2334

First Nation	Community	Pop On Reserve	Pop Total
Little Saskatchewan	Gypsumville	645	1104
Pinaymootang FN	Fairford	1310	2977
Kinonjeoshtegon FN	Dallas	339	702
O-Chi-Chak-Ko-Sipi FN	Crane River	567	980
Fisher River FN	Koostatak	1806	3392
Peguis FN	Pequis Rererve	3489	9009
Lake Manitoba	Lake Manitoba	994	1892
Parkland Region		**9913**	**18508**
Mosakahiken Cree Nation	Moose Lake	1438	1931
Sapotaweyak Cree Nation	Pelican Rapids	1003	2209
Wuskwi Sipihk FN	Birch River	221	617
Pine Creek	Camperville	1050	3036
Waywayseecappo FN	Waywayseecappo	1450	2499
Gamblers	Binscarth	69	188
Keeseekoowenin	Elphinstone	477	1121
Rolling River	Erickson	517	988
Sandy Bay	Marius	3688	5919

Yukon

First Nation	Community	Pop in SC	Pop Total
Yukon		**3565**	**7818**
Carcross/Tagish FN	Carcross	200	626
Champagne and Aishihik FN	Haines Junction	210	0
Dease River	Good Hope		173
First Nation of Nacho Nyak Dun	Mayo	180	504
Kluane FN	Burwash Landing	55	144
Kwanlin Dun FN	Whitehorse	550	971
Liard FN	Watson Lake	405	1142
Little Salmon/Carmacks FN	Carmacks	280	616
Ross River FN	Ross River	255	508
Selkirk FN	Pelly Crossing	235	532
Ta'an Kwach'an	Whitehorse	210	244
Taku River Tlingit	Atlin	205	385
Teslin Tlingit	Teslin	205	588
Tr'ondëk Hwëch'in	Dawson City	315	716
Vuntut Gwitchin First Nation	Old Crow	200	526
White River First Nation	Beaver Creek	60	143

Appendix 6—US Market – Contacts

State	County	Contact	Company
ID	Bonneville	Keith Kennedy	Keith Kennedy Architects
ID	Bonneville	Heather	B and B Builders
ID	Bonneville		Building dept
ID	Ada	Jim Young	Mtn Architects (PrecisionCraft & Riverbend TF)
ID	Ada	Mark	Building dept
ID	Kootenai	Bob Ingrishman	Building dept
MT	Gallatin	Todd Thesing	Highline Partners
MT	Gallatin	Barbara	Building dept
MT	Flathead	Dustin Hinyong	Gibson Architects
MT	Flathead	Brad Reedstrom	Bigofork Builders
MT	Flathead	BJ Grieve	Planning dept
WY	Teton	Chris Lee	Design Associates Architects
WY	Teton	Jolene Moulder	Debbie Moulder Architects
WY	Teton	Kurt Mitchell	With the Grain Contracting
UT	Summit	Garrett Strong	Tall Pine Construction
UT	Summit	Richard Jaffa	Jaffa Design Group
UT	Wasatch	Melissa	Building dept
UT	Weber	Craig Brown	Building dept
UT	Utah	Steve Kitchen	Building dept
UT	Washington	Kurt Gardner	Building dept
CO	Boulder	Matt Potter	MQ Architects
CO	Boulder	Garry Goodell	Building dept
CO	Larimer	Bob Iwanicki	Westover Construction
CO	Larimer	Roger Thorp	Thorp Associates
CO	Denver (& mtn comm.)	Elizabeth Salvione	Architect
CO	El Paso	Mark Nelson	Mark J Nelson Architect
CO	Eagle	Melissa - Designer	Vag Architects
CO	Eagle	Jack Snow	RKD Architects
CO	Eagle	Tiffany	George Schaeffer Builders