Employment Projections for the Squamish-Lillooet Regional District

FINAL REPORT
June 2013

Prepared by:
Vann Struth Consulting Group Inc.
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EXECUTIVE SUMMARY

The projected level of employment in the Squamish-Lillooet Regional District (SLRD) in 2031, broken down by major industry sectors, has been prepared in support of the SLRD's updated Regional Growth Strategy (RGS). The projections are consistent with the population projections contained in the current RGS.

PROJECTING TOTAL EMPLOYMENT

The current SLRD Regional Growth Strategy projects a total regional population of about 68,200 by 2031. Despite the SLRD having among the youngest populations in BC, the 55+ population is projected to grow by almost four times the rate of the under-55 population over the next couple of decades.

This aging of the population will cause the regional labour force to grow at a somewhat lower rate (55%) than the total population (62%) from 2012 to 2031.

Using a projected unemployment rate of 7%, and assuming that the same proportion of residents commute out of the region and have jobs with no fixed place of work, the SLRD’s future labour force has the following composition:

- 28,950 jobs with a fixed place of work in the SLRD
- 6,100 employed residents with no fixed place of work (such as construction workers)
- 950 more employed residents who commute out of the region than external residents who commute into the SLRD
- 2,700 unemployed residents.

The next section shows how the 28,950 jobs in the SLRD might be distributed.

EMPLOYMENT BY SECTOR

The employment projections by sector are based on projected growth rates in the "traded sectors." These are the sectors that are oriented primarily to serving markets outside the local area, such as...
forestry, tourism, high technology and manufacturing. Growth in these sectors will drive employment growth in both local business support services as well as population-serving industries.

For the 2012 to 2031 period, high technology and the public sector are projected to have the highest employment growth rates (+60%). Tech-related growth rates in the broader region remain favourable and there is an emerging cluster of technology-oriented businesses in the Sea to Sky corridor. The public sector as defined for this report includes government as well as the entire education and health sectors, even though they are partly in the private sector. Overall population growth of more than 60% will support expanded government employment, while the aging of the population will lead to even faster growth in health care. Primary and secondary education will grow more slowly, but post-secondary education remains a potential growth sector for the region.

Sectors projected to have strong growth of 40% by 2031 include:

- **Construction**, which is supported by continued strong population growth, but has also had very strong growth in the last decade and is likely to fall back somewhat relative to population growth.
- **Non-resource manufacturing** includes a wide variety of potential manufacturing opportunities, mainly smaller companies created by entrepreneurs throughout the region but also opportunities connected to ocean and rail shipping connections in Squamish.
- **Agriculture and food** is driven by rising consumer interest in locally-growth food as well as entrepreneurial growth in food-related manufacturing, such as wineries and distilleries.
- **Tourism** will be limited somewhat by reaching the development cap in Whistler but will be supported by continued strong interest and growth in a wide variety of tourist attractions throughout the region, including the proposed sea-to-sky gondola and waterfront hotel in Squamish, festivals and events throughout the region, agri-tourism, First Nations tourism and outdoor adventure tourism.

Modest growth of 20% by 2031 is projected for the other wood manufacturing industry, including mostly small to medium-sized producers of high-value, customized wood products. Growth in mining and mineral processing is also conservatively projected at 20%, but it has a wide range of potential outcomes, ranging from a gradual reduction in current activity to significant expansion if exploration and development activities in the northern part of the region are fruitful. Film production still has some growth potential but the BC film industry faces growing competition and future growth will likely to lower than in the past.

Logging and the associated sawmill industry has declined significantly over the last few decades but will likely maintain current activity or show a continued slight decline in the future. Pulp and paper and the fishing industry will remain absent or maintain a very small presence in the region.

Non-employment income, including pensions and investments, will become a much more significant factor as the population ages. An estimated 1,450 jobs in the region in 2012 are supported by non-
employment income. This figure is projected to increase to 4,750 jobs supported by non-employment income by 2031.

The projected growth rates in each of the traded sectors, combined with the estimated local spinoffs in supporting industries and population-serving businesses, yields the estimated SLRD employment summary shown below.

<table>
<thead>
<tr>
<th>Economic Base Industry</th>
<th>Projected SLRD Employment in 2031 (Fixed place of work only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism (including some retail &amp; food services)</td>
<td>8,770</td>
</tr>
<tr>
<td>Government, Health &amp; Education</td>
<td>6,030</td>
</tr>
<tr>
<td>Retail trade (local-serving only)</td>
<td>2,430</td>
</tr>
<tr>
<td>Construction</td>
<td>1,730</td>
</tr>
<tr>
<td>Food &amp; beverage services (local-serving only)</td>
<td>1,635</td>
</tr>
<tr>
<td>Resource Industries and Related Manufacturing</td>
<td>950</td>
</tr>
<tr>
<td>High Technology &amp; Film</td>
<td>625</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>375</td>
</tr>
<tr>
<td>Other</td>
<td>6,410</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28,950</strong></td>
</tr>
</tbody>
</table>
1. INTRODUCTION

The projected level of employment in the Squamish-Lillooet Regional District (SLRD) in 2031, broken down by major industry sectors, has been prepared in support of the SLRD's updated Regional Growth Strategy (RGS).

The employment projections are consistent with the region's projected population, as expressed in the current RGS. Total population and its distribution by age influences the size of the regional labour market, which in turn affects the total level of employment. Past trends and forward-looking projections from reputable statistical agencies have been utilized to construct a model of regional employment through 2031. The allocation of employment into major industries is similarly based on past growth rates and projections prepared by other agencies, as well as a review of past studies and interviews with local officials in each major community. All of this information is combined into an input-output style analysis that recognizes and incorporates the linkages between traded and local-serving sectors in the region.

The full projection methodology is described in Chapter 2, along with the assumptions underlying each step in the process. Final projection results are contained in Chapter 3 and research sources are listed in the Appendix.
2. STAGE ONE: PROJECTING TOTAL EMPLOYMENT

The first stage in the projection process ensures that the total level of employment is consistent with the population projections in the current SLRD Regional Growth Strategy.

It is also necessary to distinguish between the following measures of employment:

1. Employment for SLRD residents, regardless of where they work.
2. Employment with a fixed place of work in the SLRD, regardless of where the people holding those jobs happen to live.

These two measures of SLRD employment are quite different. As of the 2006 Census, there were 20,650 employed SLRD residents, but only 16,605 jobs with a fixed place of work in the SLRD (including home-based jobs).

The discrepancy is based on two factors. First, 17.0% of employed SLRD residents (about 3,500 people) had no fixed place of work, meaning that they did not report to the same location for work every day. This is common in sectors like construction and transportation where the work site is regularly moving. The second factor is commuting as 8.5% of employed SLRD residents (about 1,750 people) had a regular place of work outside the region. The SLRD attracts a smaller number of commuters from elsewhere, with about 1,200 external residents holding fixed-place jobs in the SLRD. The commuting balance was a net outflow of more than 500 workers.

The detailed projections developed in this report are focused on the fixed-place jobs in the SLRD, but total projections of commuters and no-fixed-place jobs are also provided. There is a five-step methodology for arriving at the total SLRD employment projection for 2031, as explained below.

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1 At the time of this analysis, the 2006 Census provides the most recent available data for employment at the regional district level.
STEP ONE: TOTAL POPULATION PROJECTIONS

Total population for the SLRD is taken from the projections contained in the current Regional Growth Strategy. They are shown for 2006 (the base year for the most recent Census employment estimates), 2012 (the most recent complete year) and 2031 (the final year of the RGS projections).

Note the projections show a population of 41,950 in 2012 compared to a 2011 Census population of 38,171. The Census always slightly undercounts the true population by 3-5% but in any event it appears that actual population growth to date is slightly below the projected level of growth. Over the longer time horizon to 2031 it is certainly possible for growth rates to recover to achieve the projected level.

STEP TWO: PROJECTED POPULATION BY AGE

BC Stats provides annual population estimates and projections for regional districts that are broken down by 5-year age groups.

The percentage breakdown of the population by age from BC Stats was applied to the RGS population figures shown above to produce population projections by age, as shown in the chart to the right.
The age groups are chosen for their relevance to labour force participation. The 25-54 age group is the prime working-age population that is far more likely to be engaged in the labour force than either older or younger residents. The SLRD has one of the youngest populations of any region in BC, but like most of North America will see a significant increase in senior citizens and those in the transition-to-retirement years of 55 to 64 over the next 20 years.

**STEP THREE: AGE-SPECIFIC LABOUR FORCE PARTICIPATION RATES**

The probability that someone will be engaged in the labour force (either through employment or by actively seeking work) is heavily influenced by age.

The chart to the right shows estimated labour force participation rates for men and women in BC in 2012. Just over half of 15-19 year-olds in BC are in the labour force, increasing to at least 80% for each age group from 20 to 54 before declining rapidly into the retirement years.

Participation rates are expected to increase slightly in the next several decades, particularly for women. The overall aging of the population will create shortages of qualified workers in many fields, creating incentives for workers to stay engaged in the labour force for a longer period of time. Employers will be forced to more fully utilize the available population (e.g., women, immigrants, the disabled, First Nations). The baby boom generation is also expected to include a higher percentage of individuals who keep working either by choice or out of financial necessity.
BC Stats has a model for forecasting labour force participation rates, as shown in the chart to the right. The 2012 participation rates are shown in solid lines and the projected 2031 rates are shown as dashed lines.

**STEP FOUR: PROJECTED LABOUR FORCE**

Step Four combines the participation rates from Step Three with the population breakdown from Step Two, producing the projected labour force for the region.

By 2031 the SLRD labour force is projected to be 38,700 people, an increase of 55% over 2012 (compared to a population increase of 62% over the same time period). The regional labour force will grow at a slower rate than population due to the overall aging of the population.

**STEP FIVE: PROJECTED EMPLOYMENT AND UNEMPLOYMENT**

Creating an accurate projection of the regional unemployment rate for a specific year nearly 20 years in the future is simply not possible for even the most sophisticated economic models. Yet recent history and emerging trends provide some indication of future conditions.
Until the 2008-09 recession, unemployment rates had been trending downward in the SLRD and throughout BC for an extended period of time. The Census unemployment rate in the SLRD was 10.1% in 1996, then 7.9% in 2001 and finally 7.0% in 2006. More recent figures are not available for the SLRD, but can be estimated based on data from Statistics Canada’s Labour Force Survey for the combined non-metropolitan parts of the Lower Mainland/Southwest development region (including the SLRD, the Sunshine Coast Regional District and the Fraser Valley Regional District, not including Abbotsford and Mission). The estimated SLRD unemployment rate for 2012 is 9.7%.

Unemployment rates are fairly volatile over the course of the business cycle so the safest assumption for 2031 is that the unemployment rate will be generally consistent with past evidence. It is therefore estimated that the region's long-term unemployment rate will trend downward over time to return to the 7% level achieved in 2006. The improvement from the current situation is due partly to the shrinking size of the labour force relative to total population. These larger demographic trends imply that demand for labour will remain high in order to support an aging and increasingly non-working population.

The percentage of the employed who are commuting into and out of the region, and the percentage with no fixed place of work, are assumed to remain constant for the purposes of this analysis. The resulting employment estimates are shown in the chart to the right.

The total number of jobs with a fixed place of work in the region is projected to increase from about 18,200 currently to nearly 29,000 by 2031, an increase of 59%. The number of employed SLRD residents with no fixed place of work and the net number of commuters out of the region will increase in proportion to overall employment. The number of unemployed, however, grows only slightly from the current 2,400 to 2,700 as a result of the falling unemployment rate over time.
3. **STAGE TWO: PROJECTING EMPLOYMENT BY SECTOR**

The next step in the process is to allocate the projected number of jobs by sector.

3.1. **ECONOMIC BASE APPROACH**

The methodology used to develop the projections relies on "economic base" theory, which classifies each industry as either basic or non-basic. Basic sectors (also called traded sectors) are those that are oriented primarily to serving markets outside the local area. Most traditional resource industries (forestry, mining, agriculture) are basic industries, as well as tourism (because its customers are non-locals), the public sector (because it is mainly financed by external government agencies) and certain other specialized industries that are export-oriented (e.g., high technology, non-resource manufacturing, film production).

Non-basic sectors (also called population-serving sectors) are those that are oriented primarily to serving local residents and providing support services and supplies to other local businesses. Much of the retail trade sector, various personal and business services, local recreation and transportation providers and many others fall into this category.

The theory is that the economic base sectors are the main drivers of community growth. As they expand they create their own new jobs as well as increased demand for locally-sourced supplies and support services, creating new jobs in those industries as well as all of the population-serving industries that cater to the new workers. Jobs created in the supplier businesses are called the *indirect effect* while those created to service increased household spending are called the *induced effect*.

BC Stats produces indirect and induced employment multipliers for 63 local market areas in the province, including two in the SLRD. These multipliers show the relationship between employment changes in the basic sectors and the resulting employment changes in the non-basic sectors. The latest multipliers are based on detailed regional employment data from the 2006 Census, but tend to evolve relatively slowly over time so are still valid for purposes of this report.

For the SLRD-level analysis in this report, the multipliers were combined from the Squamish/Whistler area (including Pemberton, the surrounding Electoral Areas C and D, and the First Nations communities within these areas) and the Lillooet area (including Areas A and B and the First Nations communities). The multipliers were weighted according to total employment in each area (roughly 90% in the Squamish/Whistler area and 10% in the Lillooet area).

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2 BC Stats (March 2009), *British Columbia Local Area Economic Dependencies: 2006*. 
The regional multipliers are shown in the chart to the right. They show, for example, that an additional 100 jobs in non-resource manufacturing would generate 46 additional jobs in the SLRD. Note the size of the multiplier has nothing to do with the size of the sector in the SLRD. For example, there are almost no fishing or fish processing jobs in the SLRD (just 10 as of the 2006 Census) but the estimated spinoff benefits from the sector are very high. Pulp and paper has the highest employment multiplier, but the sector is no longer present in the region since the closure of the mill at Woodfibre. Tourism is the largest component of the SLRD economic base in terms of total employment, but generates relatively smaller spinoff employment on a per-job basis.

The other factor not accounted for above is the influence of non-employment income from sources like pensions, investments and government transfers. These income sources also help to support employment in the population-serving sectors and will be explained in further detail in the following discussion on each sector.

Using the multipliers shown above, the projected change in employment in each economic base sector can be translated into a total employment impact. Growth rates for each basic sector are described in the next two sections of the report and rely on a mix of past growth rates, available projections from other reputable sources, and input from knowledgeable representatives of each of the major communities in the region. The exact projection method for each sector varies slightly and is explained first for the period from 2006 to 2012, followed by the projection period from 2012 to 2031.
### 3.2. ESTIMATED EMPLOYMENT GROWTH, 2006 TO 2012

#### Table 1. Fixed Workplace Employment in SLRD in Economic Base Industries, 2006 (Census) and 2012 (Estimated)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>230</td>
<td>-5%</td>
<td>219</td>
</tr>
<tr>
<td>Pulp &amp; paper</td>
<td>55</td>
<td>-100%</td>
<td>0</td>
</tr>
<tr>
<td>Sawmills</td>
<td>80</td>
<td>0%</td>
<td>80</td>
</tr>
<tr>
<td>Other wood manufacturing</td>
<td>165</td>
<td>0%</td>
<td>165</td>
</tr>
<tr>
<td>Mining &amp; mineral processing</td>
<td>100</td>
<td>5%</td>
<td>105</td>
</tr>
<tr>
<td>High technology (BC Stats definition)</td>
<td>278</td>
<td>21%</td>
<td>336</td>
</tr>
<tr>
<td>Agriculture &amp; Food</td>
<td>215</td>
<td>10%</td>
<td>237</td>
</tr>
<tr>
<td>Tourism</td>
<td>6,433</td>
<td>-2.6%</td>
<td>6,264</td>
</tr>
<tr>
<td>Public Sector</td>
<td>3,015</td>
<td>25%</td>
<td>3,769</td>
</tr>
<tr>
<td>Construction</td>
<td>1,030</td>
<td>20%</td>
<td>1,236</td>
</tr>
<tr>
<td>Fishing</td>
<td>10</td>
<td>0%</td>
<td>10</td>
</tr>
<tr>
<td>Non-resource manufacturing</td>
<td>232</td>
<td>15%</td>
<td>267</td>
</tr>
<tr>
<td>Film production</td>
<td>60</td>
<td>21%</td>
<td>73</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>11,903</strong></td>
<td></td>
<td><strong>12,759</strong></td>
</tr>
</tbody>
</table>

#### Components of Tourism Sector:

- **Accommodation Services - Squamish/Whistler Area**: 2,375 -3% 2,304
- **Accommodation Services - Lillooet Area**: 45 14% 51

Source: Statistics Canada Census (for 2006 employment)

The rationale for the growth estimates shown in Table 1 are explained below.

**LOGGING**

Provincial employment declined 17% from 2006 to 2012, but conditions have not deteriorated as much in the SLRD compared to some parts of the coastal sector (e.g. Vancouver Island) or the mountain pine beetle-inflicted Interior. **Assumed 5% decline regionally.**

**PULP AND PAPER**

Regional employment has declined to 0 jobs with the closure of the Woodfibre mill.
SAWMILLS AND OTHER WOOD MANUFACTURING

Wood manufacturing employment declined by nearly 40% in BC from 2006 to 2012, but community feedback suggests there has been little net change (e.g., loss of specialty mill in Lillooet, but growth in other small manufacturers). This is consistent with total manufacturing employment in the combined SLRD, Sunshine Coast and rural Fraser Valley area increasing by 3%. **A 0% change is assumed.**

MINING AND MINERAL PROCESSING

Mining and related processing is not a significant sector in the SLRD, other than the lime plant at Pavilion. Provincial employment has increased by 37% since 2006 but is assumed to have **modest 5% growth in the SLRD.**

HIGH TECHNOLOGY

"High technology" is not a standard sector, but rather a collection of parts of other sectors that either produce "high-tech" goods and services or have a "high-tech" production process. The estimates in this report are based on a BC Stats formula for estimating high tech employment at 278 jobs in the SLRD as of 2006.

BC Stats provides data on the number of high technology business establishments by regional district. The most recent data is from 2009 and shows growth only since 2007. In that span the number of high tech establishments in the region increased from 52 to 63, a 21% increase. Most new businesses are very small so employment growth is likely smaller, however. **But over the entire 2006 to 2012 period the 21% figure is considered a reasonable estimate of employment growth.**

AGRICULTURE AND FOOD

Employment in agriculture and food processing (not including seafood) dropped by 2% in BC from 2006 to 2012 but community feedback suggests it has been expanding modestly in the SLRD, including through value-added operations like wineries. **Growth of 10% since 2006 is assumed.**

TOURISM

Tourism is a non-standard economic sector that includes the parts of various other sectors that are reliant on tourist spending. Almost all of the accommodation services industry, for example, is part of tourism, but a much smaller fraction of food services and retail trade are tourism-reliant because they also serve local residents and businesses.

BC Stats allows total tourism-reliant employment to be calculated based on the number of jobs in accommodation services in each local area. In the Squamish/Whistler area there are an **additional 1.65**
tourism jobs for every job in accommodation services while in the Lillooet area there are an additional 2.10 tourism jobs per accommodation services job.

Employment in accommodation services in the combined SLRD, Sunshine Coast and non-metro Fraser Valley increased by 14% from 2006 to 2012, but other evidence, particularly from Whistler, is that tourism has declined regionally over that time frame. Total estimated full-time employment in Whistler, as estimated through community surveys and reported in the Whistler 2020 initiative, has declined from 14,200 jobs in 2006 to 12,000 jobs in 2012. This 15% decline includes all sectors, not just accommodation services, and covers only Whistler whereas Squamish and Lillooet, at least anecdotally, are maintaining or showing modest growth.

Taken together, the combined change in accommodation services employment in the Squamish and Whistler area is assumed to be a modest decline of 3%. Growth in the combined SLRD, Sunshine Coast and non-metro Fraser Valley is 14% since 2006. This is the assumed growth rate for the Lillooet area's accommodation services.

After applying the ratios noted above, total tourism employment in the region is assumed to have declined by 2.6%, or about 170 jobs.

PUBLIC SECTOR

The public sector is defined to include government as well as the entire health care and education sectors, even the parts in the private sector.

Growth since 2006 in the broader region (SLRD, Sunshine Coast, non-metro Fraser Valley) is 13%, but this sector has been identified as a key source of employment growth in the region (e.g., university growth in Squamish). The SLRD growth rate is assumed to be significantly higher at 25%.

CONSTRUCTION

Construction is measured directly by the Labour Force Survey and growth in the non-metro Lower Mainland growth is 28% since 2006 (although still lower in 2012 than the pre-recession, pre-Olympics peak in 2008). Anecdotal evidence, particularly from Whistler, is that construction activity has slowed in recent years (while the Fraser Valley has continued to show strong growth). Construction employment growth in SLRD is more conservatively estimated at 20%.

FISHING AND SEAFOOD PROCESSING

Sector is very small in the region and no change is assumed.
NON-RESOURCE MANUFACTURING

Manufacturing that is not related to traditional resource industries has been growing in the region in locations like the Squamish Industrial Park. Total manufacturing employment in the broader region is 3% since 2006, but after accounting for the employment decline in sectors like pulp and paper, the assumed growth rate in non-resource manufacturing is 15%.

FILM PRODUCTION

Film production is often classified with the high technology sector and is therefore assumed to have the same growth rate of 21% since 2006.

NON-EMPLOYMENT INCOME

Using the same BC Stats analysis that provided the industry employment multipliers shown earlier, an estimated 23% of SLRD income is derived from non-employment sources, including pensions, investment income and various government transfer payments (employment insurance, BC Benefits, Canada Pension Plan, etc.). This $178.5 million in income (as of 2006) supports about 1,060 local population-serving jobs in sectors like retail trade, personal services and local transportation.

People of any age can have non-employment income, but it is most associated with retirees. For purposes of this analysis, the number of local jobs supported by non-employment income is assumed to be proportional to the number of senior citizens in the population. In 2006 this worked out to 405 jobs for every 1,000 senior citizens.

The demographic estimates calculated earlier show the number of SLRD senior citizens increasing by 945 between 2006 and 2012 (+24.6%). The number of jobs supported by non-employment income is also assumed to increase by 24.6% to 1,445 jobs.

INDIRECT AND INDUCED EMPLOYMENT

Applying the appropriate multipliers to each of the basic industries discussed above yields the estimated total employment impacts shown in Table 2. Note the total employment estimate of 18,165 jobs is consistent with the estimated 2012 employment figure of 18,172 calculated earlier in the report (shown in the table on page 6).
Table 2. Estimated Direct, Indirect and Induced Employment in SLRD, 2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>219</td>
<td>93</td>
<td>312</td>
</tr>
<tr>
<td>Pulp &amp; paper</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sawmills</td>
<td>80</td>
<td>45</td>
<td>125</td>
</tr>
<tr>
<td>Other wood manufacturing</td>
<td>165</td>
<td>86</td>
<td>251</td>
</tr>
<tr>
<td>Mining &amp; mineral processing</td>
<td>105</td>
<td>74</td>
<td>179</td>
</tr>
<tr>
<td>High technology</td>
<td>336</td>
<td>74</td>
<td>410</td>
</tr>
<tr>
<td>Agriculture &amp; Food</td>
<td>237</td>
<td>59</td>
<td>295</td>
</tr>
<tr>
<td>Tourism</td>
<td>6,264</td>
<td>1,384</td>
<td>7,648</td>
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<tr>
<td>Public Sector</td>
<td>3,769</td>
<td>1,323</td>
<td>5,092</td>
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<tr>
<td>Construction</td>
<td>1,236</td>
<td>651</td>
<td>1,887</td>
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<tr>
<td>Fishing</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Non-resource manufacturing</td>
<td>267</td>
<td>122</td>
<td>389</td>
</tr>
<tr>
<td>Film production</td>
<td>73</td>
<td>39</td>
<td>112</td>
</tr>
<tr>
<td>Non-employment income</td>
<td></td>
<td>1,445</td>
<td>1,445</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12,759</strong></td>
<td><strong>5,406</strong></td>
<td><strong>18,165</strong></td>
</tr>
</tbody>
</table>

**Selected Industry Components (included in figures above):**
- Accommodation Services: 2,355
- Retail trade: 2,069
- Food services and drinking places: 2,137
- Assorted other support services: 2,910

The bottom few rows in the table above show employment estimates for several additional key industries. Accommodation services, retail trade, and food & beverage services are all partly included in tourism, but particularly for retail trade and food/drinking places are also key population-serving industries. The “assorted other support services” is a catch-all category that includes all of the other local business-supporting and population-serving industries not identified elsewhere in the table.

RETAIL TRADE

Retail outlets in the SLRD provide goods to both area residents and tourists. Local-serving retail employment in the SLRD is estimated using the following steps:
1. Total retail employment in BC in 2006 was about 226,000 jobs for a population of just over 4.1 million people. According to BC Stats estimates,\(^3\) about 7% of all retail employment at a provincial level is reliant on tourism. After removing these tourism-reliant jobs, about 211,000 local-serving retail jobs remain, an average of 51 jobs per 1,000 residents.

2. If British Columbia can be viewed as a mostly self-contained retail market entity, it is well known that retail leakage occurs from the SLRD to surrounding areas, most notably Metro Vancouver. Retail leakage from Whistler residents was estimated at 27% in a 2006 study\(^4\) and at 43% in Squamish in a separate study.\(^5\) The Whistler study identified leakage to Squamish as a significant issue, but this is not leakage from a regional SLRD perspective. Similarly some leakage from Squamish will be to other communities in the region.

One-third of the retail leakage from Whistler and 10% of the retail leakage from Squamish is assumed to stay in the SLRD. The weighted average leakage out of the SLRD from these two markets is therefore estimated at 31%.

Specific studies estimating retail leakage for other parts of the region have not been identified, but the combined Squamish/Whistler estimate is a reasonable estimate for the region as a whole. Even though individual smaller communities may have higher leakage, at least some of that leakage will be to the larger centres in the region.

3. The provincial average of 51 local-serving retail jobs per 1,000 residents is reduced by 31% for the SLRD to account for retail leakage, yielding an estimated 36 local-serving retail jobs per 1,000 residents in the SLRD.

4. Total population-serving retail employment is therefore estimated at 1,305 jobs in 2006, increasing to 1,495 jobs by 2012. Total retail employment in the 2006 Census was 1,895 jobs, implying that 590 retail jobs were reliant on tourism.

5. The 590 tourism-reliant retail jobs in 2006 was 9.2% of total estimated tourism employment in the region. This ratio can be used to project tourism-reliant retail employment into the future. In 2012, the estimated number of tourism-reliant retail jobs in the region is 574.

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\(^3\) BC Stats (March 2009), *Measuring the Size of British Columbia’s Tourism Sector.*

\(^4\) Thomas Consultants Inc. (December 2006), *Whistler Sustainable Retail Study Background Report*, prepared for Resort Municipality of Whistler.

\(^5\) Urbanics Consultants Ltd. (January 2007), *Squamish Business Park Retail Market & Impact Study (Draft)*, prepared for District of Squamish with funding from Parallax Investment Corp.
FOOD AND BEVERAGE SERVICES

The process for estimating the number of food and beverage services jobs that are reliant on tourists and those that serve the local population is the exact same as the retail process described above.

First, BC Stats estimates that 22% of food services employment at a provincial level is reliant on tourists, meaning there are an average of 24 local-serving food services jobs per 1,000 residents. The SLRD is assumed to have the same ratio as the rest of the province (even though some modest amount of leakage likely occurs, there are no estimates of this effect and it is assumed to be small enough to be safely ignored).

There were an estimated 880 population-serving food services jobs in the region in 2006, growing to just over 1,000 jobs by 2012. The remaining 1,160 food services jobs in 2006 are assumed to be tourism-reliant, accounting for 18% of all regional tourism jobs. This ratio can be used for future estimates, meaning that as tourism overall declined slightly by 2012, the number of tourism-reliant food services jobs fell to 1,130.

ASSORTED OTHER SUPPORT SERVICES

This category simply captures the remaining local business-supporting and population-serving employment that is not shown elsewhere in Table 2. It includes all or most of the following sectors:

- Wholesale trade
- Transportation and warehousing
- Finance, insurance, real estate and leasing
- Professional, scientific and technical services (some of this sector is counted under high technology)
- Business, building and other support services
- Information, culture and recreation (some parts of this sector are part of tourism or high technology)
- Other services, which includes repair and maintenance, personal and laundry services, non-profit organizations and private households
3.3. PROJECTED EMPLOYMENT GROWTH, 2012 TO 2031

The final step in the analysis is the projection of employment in each economic base sector as of 2031. The projected growth from 2012 to 2031 is based on a combination of growth trends over the last decade in both the non-metro Lower Mainland region (including the SLRD, Sunshine Coast and non-metro Fraser Valley), BC Stats projections of growth rates in the entire Lower Mainland/Southwest region for the relatively near-term period of 2010 to 2015, and input from community representatives in the economic development or local government fields.

By their nature, growth projections over a period of nearly 20 years are subject to considerable uncertainty. The projections shown in Table 3 are therefore grouped into generally higher and lower growth sectors rather than attempting to pinpoint exact growth rates for each sector.

Table 3. Fixed Workplace Employment in SLRD in Economic Base Industries, 2006 (Census) and 2012 (Estimated)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Estimated 2012 Employment</th>
<th>Projected 2012-2031 Growth</th>
<th>Projected 2031 Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>219</td>
<td>-5%</td>
<td>208</td>
</tr>
<tr>
<td>Pulp &amp; paper</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sawmills</td>
<td>80</td>
<td>-5%</td>
<td>76</td>
</tr>
<tr>
<td>Other wood manufacturing</td>
<td>165</td>
<td>20%</td>
<td>198</td>
</tr>
<tr>
<td>Mining &amp; mineral processing</td>
<td>105</td>
<td>20%</td>
<td>126</td>
</tr>
<tr>
<td>High technology (BC Stats definition)</td>
<td>336</td>
<td>60%</td>
<td>538</td>
</tr>
<tr>
<td>Agriculture &amp; Food</td>
<td>237</td>
<td>40%</td>
<td>331</td>
</tr>
<tr>
<td>Tourism</td>
<td>6,264</td>
<td>40%</td>
<td>8,770</td>
</tr>
<tr>
<td>Public Sector</td>
<td>3,769</td>
<td>60%</td>
<td>6,030</td>
</tr>
<tr>
<td>Construction</td>
<td>1,236</td>
<td>40%</td>
<td>1,730</td>
</tr>
<tr>
<td>Fishing</td>
<td>10</td>
<td>0%</td>
<td>10</td>
</tr>
<tr>
<td>Non-resource manufacturing</td>
<td>267</td>
<td>40%</td>
<td>374</td>
</tr>
<tr>
<td>Film production</td>
<td>73</td>
<td>20%</td>
<td>87</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12,759</strong></td>
<td></td>
<td><strong>18,477</strong></td>
</tr>
</tbody>
</table>

Components of Tourism Sector:

| Accommodation Services - Squamish/Whistler Area | 2,304 | 40% | 3,225 |
| Accommodation Services - Lillooet Area         | 51    | 40% | 72    |
HIGHEST GROWTH SECTORS

The highest growth rates for 2012 to 2031 are projected for high technology and the public sector. Both are projected to expand by 60%, or 2.5% per year.

Combined employment in computer and electronic manufacturing and professional computer systems services (used as a proxy for the high technology sector) is projected to grow by 11% in the Lower Mainland/Southwest region from 2010 to 2015. Taking into account the longer time frame, as well as the smaller initial number of high tech jobs in the SLRD (which causes growth rates to be higher in percentage terms), and the emerging cluster of technology-oriented businesses in the Sea to Sky corridor and the projected growth is defensible. Community feedback also supports the notion that an increasing number of skilled professional and technical workers are residing in the region, often attracted by the lifestyle amenities.

The "public sector" as defined in this report includes the entirety of the education and health care sectors as well as government, even though some of the growth will be in private educational and health businesses. With projected population growth of over 60% for the 2012 to 2031 period, the local government sector can be expected to grow at a similar rate. And despite being one of the youngest regions in the province, the SLRD population will age over time and demand for health care services will therefore significantly outpace overall population growth. Primary and secondary education will grow at a slower rate due to the lower rates of growth for children and youth, but post-secondary education is still a strong growth sector for the region.

HIGH GROWTH SECTORS

The high growth sectors are assumed to grow by 40% in total, or roughly 2% per year through 2031. These include construction (based on the projected 62% increase in population from 2012 to 2031, while recognizing that construction has already experienced significant growth in the last decade and
continuing very high growth rates are unlikely), **non-resource manufacturing** (based on interest in a variety of manufacturing opportunities in Squamish and the intersection of ocean and rail shipping that it offers, as well as the continued attractiveness of the region for younger, lifestyle-oriented residents who will start a wide variety of businesses, including small manufacturing businesses), **agriculture and food** (based on the high level of public interest in producing more locally-grown food, as well as entrepreneurial interest in small food-related manufacturing businesses, such as wineries and distilleries), and accommodation services, which is a proxy for **tourism**.

Future tourism growth will be limited in Whistler by the caps on development that are in place but continued interest and growth of a wide variety of tourist attractions throughout the entire region will support a strong resumption of tourism growth. Examples include the proposed sea-to-sky gondola and waterfront hotel in Squamish, growth of festivals and events through the region and expansion of activities like agri-tourism, First Nations tourism, outdoor adventure experiences and so on.

**MODEST GROWTH SECTORS**

The modest growth sectors are assumed to grow by 20% by 2031, or roughly 1% per year. These include the **other wood manufacturing** industry, which includes mostly small to medium-size producers of high-value, customized wood products. Even if the forest sector overall has limited growth potential in the region, the best growth opportunities are in more customized products.

**Mining and mineral processing** has a wide range of potential outcomes as current activity could diminish over time, or significant new mining activity could begin if current exploration and development activities in the northern part of the region are fruitful. The projected growth of 20% is a conservative estimate of what might be possible.

**Film production** is typically classified with the high technology sector but growing competition for the BC film industry may depress future growth rates to a level below the past several decades.

**MAINTAINING OR DECLINING SECTORS**

The **pulp and paper** industry is assumed to stay at 0 jobs into the future. The very small **fishing** industry is also assumed to have no growth. **Logging** and the associated **sawmill** industry has declined significantly over the last few decades but will likely maintain current activity or continue to decline as a slower rate in the future. A 5% decline is projected by 2031.

**NON-EMPLOYMENT INCOME**

As explained on page 12, the employment impact of non-employment income in the SLRD is assumed to be proportional to the number of senior citizens. Based on the calculated ratio of 405 population-serving
jobs per 1,000 senior citizens, about 4,750 jobs in the region in 2031 will be supported by non-employment income.

INDIRECT AND INDUCED EMPLOYMENT

Table 4 shows all of the economic base industries from Table 3 and applies the local employment multipliers to arrive at a total employment projection of 28,956 jobs for the region in 2031. This is consistent with the total employment projection shown on page 6.

These are the jobs with a fixed place of work in the SLRD, meaning they do not include jobs held by SLRD residents who commute out of the region or jobs with no fixed place of work.

Table 4. Estimated Direct, Indirect and Induced Employment in SLRD, 2031

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>208</td>
<td>88</td>
<td>296</td>
</tr>
<tr>
<td>Pulp &amp; paper</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sawmills</td>
<td>76</td>
<td>43</td>
<td>119</td>
</tr>
<tr>
<td>Other wood manufacturing</td>
<td>198</td>
<td>104</td>
<td>302</td>
</tr>
<tr>
<td>Mining &amp; mineral processing</td>
<td>126</td>
<td>88</td>
<td>214</td>
</tr>
<tr>
<td>High technology</td>
<td>538</td>
<td>118</td>
<td>657</td>
</tr>
<tr>
<td>Agriculture &amp; Food</td>
<td>331</td>
<td>82</td>
<td>413</td>
</tr>
<tr>
<td>Tourism</td>
<td>8,770</td>
<td>1,938</td>
<td>10,708</td>
</tr>
<tr>
<td>Public Sector</td>
<td>6,030</td>
<td>2,117</td>
<td>8,147</td>
</tr>
<tr>
<td>Construction</td>
<td>1,730</td>
<td>912</td>
<td>2,642</td>
</tr>
<tr>
<td>Fishing</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Non-resource manufacturing</td>
<td>374</td>
<td>171</td>
<td>544</td>
</tr>
<tr>
<td>Film production</td>
<td>87</td>
<td>47</td>
<td>134</td>
</tr>
<tr>
<td>Non-employment income</td>
<td></td>
<td></td>
<td>4,761</td>
</tr>
<tr>
<td>TOTAL</td>
<td><strong>18,477</strong></td>
<td><strong>10,479</strong></td>
<td><strong>28,956</strong></td>
</tr>
</tbody>
</table>

Selected Industry Components (included in figures above):

- Accommodation Services: 3,297
- Retail trade: 3,233
- Food services and drinking places: 3,219
- Assorted other support services: 6,409
The projected 3,200+ retail trade jobs includes about 2,400 population-serving retail jobs and 800 tourist-serving retail jobs. The 3,200 food and beverage services jobs includes just over 1,600 population-serving jobs and just under 1,600 tourist-serving jobs.

EMPLOYMENT SUMMARY FOR STANDARD SECTORS

Table 4 above shows a mix of direct, indirect and induced employment while Table 5 below simplifies these total employment projections into more typical economic sectors.

Table 5. Estimated SLRD Employment Summary, 2031 (Fixed Place of Work jobs only)

<table>
<thead>
<tr>
<th>Economic Base Industry</th>
<th>Projected SLRD Employment in 2031 (Fixed place of work only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism (including some retail &amp; food services)</td>
<td>8,770</td>
</tr>
<tr>
<td>Government, Health &amp; Education</td>
<td>6,030</td>
</tr>
<tr>
<td>Retail trade (local-serving only)</td>
<td>2,430</td>
</tr>
<tr>
<td>Construction</td>
<td>1,730</td>
</tr>
<tr>
<td>Food &amp; beverage services (local-serving only)</td>
<td>1,635</td>
</tr>
<tr>
<td>Resource Industries and Related Manufacturing</td>
<td>950</td>
</tr>
<tr>
<td>High Technology &amp; Film</td>
<td>625</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>375</td>
</tr>
<tr>
<td>Other</td>
<td>6,410</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28,950</strong></td>
</tr>
</tbody>
</table>

Note that in addition to these fixed place of work jobs, an estimated 6,100 residents will be employed in jobs with no fixed place of work and there will be net commuting out of the region of nearly 1,000 additional employed residents (as shown in the chart on page 6).
APPENDIX: RESEARCH SOURCES

BACKGROUND REPORTS

BC Stats (March 2009), *British Columbia Local Area Economic Dependencies: 2006*.

BC Stats (March 2009), *Measuring the Size of British Columbia’s Tourism Sector*.


BC Stats (December 2011), *Regional Labour Force Participation Rate Projections*.

BC Stats (undated), *British Columbia Regional Employment Projections: Lower Mainland College Region, 2010 to 2015*.


Urbanics Consultants Ltd. (January 2007), *Squamish Business Park Retail Market & Impact Study (Draft)*, prepared for District of Squamish with funding from Parallax Investment Corp.

CONSULTATION

In addition to the documents cited above, further input on regional trends and relevant information sources was provided by representatives of the District of Squamish, District of Lillooet, the Resort Municipality of Whistler and the Whistler Centre for Sustainability.