Powell River Regional District Growth and Development Analysis – Final Report

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Prepared for:
Powell River Regional District

VANNSTRUTH
CONSULTING GROUP

in association with

Landworks Consultants Inc.
Land Use Planning & Project Management

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EXECUTIVE SUMMARY

The purpose of this report is to provide a realistic assessment of how growth is likely to occur and what land use impacts it will have in the Powell River Regional District (PRRD) over the next 20 years. Anticipating growth is essential to ensure prudent planning of the region's limited land base, ensuring that sufficient land of the right type is available, in the right locations, with appropriate servicing.

The key feature of the analytical approach taken in this study is that all aspects of community development, including population, employment, land use, demographics, and migration, are *integrated* and considered in a comprehensive fashion. The projection methodology is based on the premise that future changes in the PRRD economy will be driven by changes to the region's economic base industries, and these changes have ripple effects on the labour force, population, housing, and commercial and industrial land use.

Projection Scenarios

Two scenarios are developed for projecting future growth in the PRRD. **The key difference between the two scenarios is the nature of migration to the PRRD.** Migration is the key to sustaining and/or expanding the PRRD's population because in the absence of migration, the regional population will fall (due to birth rates substantially below the replacement rate).

BC Stats prepares the most widely-used population projections in the province. If these projections are correct, the PRRD's population will age significantly over the next 20 years and **the PRRD will quickly develop a serious labour shortage**. This labour shortage will negatively affect the PRRD's growth and land use because without sufficient labour, many businesses will be forced to downsize their operations.

Both of the scenarios use projected growth rates for the PRRD's economic base sectors that are supported by extensive background research on each sector and consultation with local industry representatives. These range from a projected doubling of employment in high technology and aquaculture to a projected decline of 40% in pulp and paper employment.

The first scenario is called the "Baseline Scenario" and it assumes that the BC Stats population projections are correct, with the exception of additional retiree migrants that are projected to move to the PRRD and that BC Stats does not appear to recognize. Projected growth rates in the economic base industries are further restricted in this scenario due to shortages of labour.

The second scenario is called the "Worker Migration Scenario" and it assumes that as labour shortages start to appear, additional working-age migrants (and their families) move to the region. This is a more optimistic scenario but British Columbia is already experiencing labour shortages and the PRRD will be in competition with many other parts of the province to attract the workers it needs.

Projection Results

The projection results show that under the Baseline Scenario, the region will experience declining employment and consequently negative growth in all categories of employment floorspace and land demand. The population will age significantly, with senior citizens the only age category showing growth. Housing demand will expand, driven by incoming retirees, shrinking household sizes and sustained demand for recreational housing.

The Worker Migration Scenario will lead to modest growth in most categories of employment floorspace and land. Population will grow by 10% over the next 20 years, although all of the growth will be in the 65+ age group. Housing demand will expand by 17% (1,363 units), the majority of which will be for single family homes, although all housing types are projected to see increased demand.

Distribution of Population and Housing

Projected population growth ranges from a decline of about 600 people under the Baseline Scenario to an increase of nearly 2,100 people under the Worker Migration Scenario. Housing demand grows under both scenarios (due to falling housing sizes associated with an aging population and increased demand for recreational housing), with increases ranging from 800 to 1,800 units.

Consultation with realtors suggests that the housing preferred by most retirees is a single family home, with the highest demand for waterfront access (either ocean or one of the lakes). This type of housing is most common in the rural parts of the region, suggesting stronger demand for new housing in the rural areas compared to the city. This is consistent with the somewhat faster population growth rates in the rural areas over the last 15 years.

Comparison of Land Demand to Land Supply

Comparing projected land demand to vacant land in the city of Powell River shows that even under the most optimistic scenario, there is still projected to be sufficient readily serviceable commercial and industrial land to accommodate future demand. Similarly, aggregate demand for new commercial and industrial land in the rural areas can easily be accommodated by the existing supply of vacant land.

Planning Implications and Recommendations

As stated above, the forecast growth in demand for **Commercial and Industrial Land**, under both the low-growth Baseline Scenario and the high-growth Worker Migration Scenario, can easily be accommodated within the existing vacant land inventory within the PRRD.

For **Residential Land**, the two scenarios give a range of projected housing demand of an additional 40 to 90 units per year, on average. The type of housing that will be in demand under both scenarios is housing for retirees and pre-retirees, many of whom will be looking for single-family lots or homes on the waterfront or with water views. They will probably not want to be too isolated from the goods and services available in Powell River and are therefore likely to find the coastline and lakes within or close to the city most attractive. While there appears to be an adequate supply of land to accommodate even the most optimistic expectation of growth, the density of achievable development will depend on the availability of water and sewer services.

The higher-growth Worker Migration Scenario forecasts more housing demand by younger, working-age adults, many of whom will have families. While some of this housing demand will be located throughout the rural areas, it will be disproportionately focused on the city, closer to jobs, schools, and other services. The key to realizing this scenario, which will have its greatest impact on housing demand in the city, is successfully attracting working-age people and their families (and keeping more working-age PRRD natives who might otherwise move away).

In light of this study's findings and conclusions, it is recommended that the PRRD:

1. Encourage and facilitate the development of housing for seniors in locations of the region that are serviced with water and sewerage.

2. Anticipate and plan for increased growth in the demand for smaller lots on water and sewer systems, particularly in the city and areas of Sliammon lands and electoral areas where partial services exist.

3. Plan for the provision of services within the region that reflect the needs of an aging population, such as public transit, health and wellness services, care facilities and changing recreational needs (e.g. walking paths and more passive activities).

4. Encourage the redevelopment of existing industrial and commercial areas, as well as the infilling of vacant industrial and commercial lands, rather than designating or permitting the development of new or undeveloped sites.

5. Maintain and support the continued use of industrial areas of strategic importance to the region's economic base sectors, such as waterfront forestry operations.

6. Refuse applications to rezone industrial land for residential use without an area-specific impact analysis.

7. Encourage new local or neighbourhood commercial developments that service rural areas to locate within existing neighbourhood nodes or communities (e.g. Black Point, Kelly Creek, etc.). There are existing commercially and industrially-zoned lands within the City that can accommodate larger-scale commercial and industrial development or redevelopment.

8. Encourage the development of mixed-use buildings – such as residential above commercial or industrial – in neighbourhood nodes with appropriate servicing particularly within the city and where commercial and industrial uses locate, as well as in lands currently developed for commercial and industrial use provided adequate servicing can be provided for the increased density.

9. Encourage clustering of new residential lots in appropriate residentially-zoned areas with waterfront access or water views and with communal water and sewer systems where significant community benefits/amenities can be provided such as trail systems, large park space and the preservation of sensitive ecosystems. Clusters should be designed with greenspace between them to break the impact of continuous waterfront development.

10. Ensure that waterfront residential developments provide public access to the water.

11. Avoid locating denser, contiguous residential development within Electoral Areas in close proximity to the City of Powell River boundary and encourage increased densities to locate within the city and avoid creating sprawl in the Electoral Areas.

12. Encourage the City to enter into a Memorandum of Understanding to provide water and sewer services on a user-pay basis with the Sliammon First Nation in order to create balanced development opportunities and potential benefits within the city and on the Sliammon lands. The provision of water could, at some point in the future, become the topic of a regional system feasibility study.

13. Continue to support the holding of regular *Council of Councils* between the PRRD, the City and the Sliammon First Nation (say, quarterly) to discuss the consideration of land use, economic development and servicing issues on a multi-jurisdictional, regional basis.

1. INTRODUCTION

The purpose of this report is to provide a realistic assessment of how growth is likely to occur in the Powell River Regional District (PRRD) over the next 20 years. Dealing effectively with anticipated growth is essential to ensure prudent planning of the region's limited land base, ensuring that sufficient land of the right type is available, in the right locations, with appropriate servicing.

The projections in this report consider the future population of the region and the types of housing that is likely to be in demand, as well as the industries that are likely to grow and change over this time period and their demand for various types of land.

Although projections about the future are inherently uncertain, it is important for the local governments in the area, including the PRRD, the City of Powell River, and the Sliammon First Nation to develop a common understanding of the parameters of future growth, and to adopt a cooperative approach in meeting the region's future land use needs.

Study Process

The study was undertaken by Vann Struth Consulting Group Inc., with input on the planning implications of the analysis (Chapter 7) provided by Landworks Consultants.

The study process involved analysis of the growth and development prospects of the economic base sectors in the PRRD, which included:

- Extensive review of background reports and previous analysis (research sources listed in Appendix A).
- Consultation with industry representatives to capitalize on local insight into the region's growth prospects (the list of consulted individuals is provided in Appendix B).
- Statistical analysis of historic growth patterns and property assessment data.
- Development of a comprehensive spreadsheet-based model of the regional economy used for projecting employment, population, land use, etc.

Principles of Analysis

The key feature of the analytical approach taken in this study is that all aspects of community development are *integrated* and should be considered in a comprehensive fashion. Projections that consider only population, or only land use, or only the economy, or only demographics face the risk that some of the key linkages and interrelationships between these factors will be missed.

The spreadsheet-based model of the PRRD economy that was constructed for this study uses the best available data to incorporate all of these elements and to explore the relationships between each factor. After all, a major change in one of the PRRD's economic base industries has implications not just for that industry, but for supplying industries, for demographics, and for land use.

A detailed explanation of the methodology for developing the projections is contained in Chapter 3.

Structure of Report

The remainder of this report is structured as followed:

- Chapter 2 reviews the history of growth in the region, helping to identify trends that are useful for projecting future growth.
- Chapter 3 explains the projection methodology and discusses the various components of future growth, including an analysis of population projections available from other sources.
- Chapter 4 provides an overview of the employment projections for each economic base sector in the PRRD economy, including the "retirement living" sector.
- Chapter 5 explains the results of two growth scenarios.
- Chapter 6 presents final conclusions and observations on the growth analysis.
- Chapter 7 presents the planning implications of the growth scenarios and recommendations for local governments.
- The Appendices include a list of research sources, a list of individuals who were consulted, and several data tables that underlie the analysis in Chapter 2 and the projection results in Chapter 5.

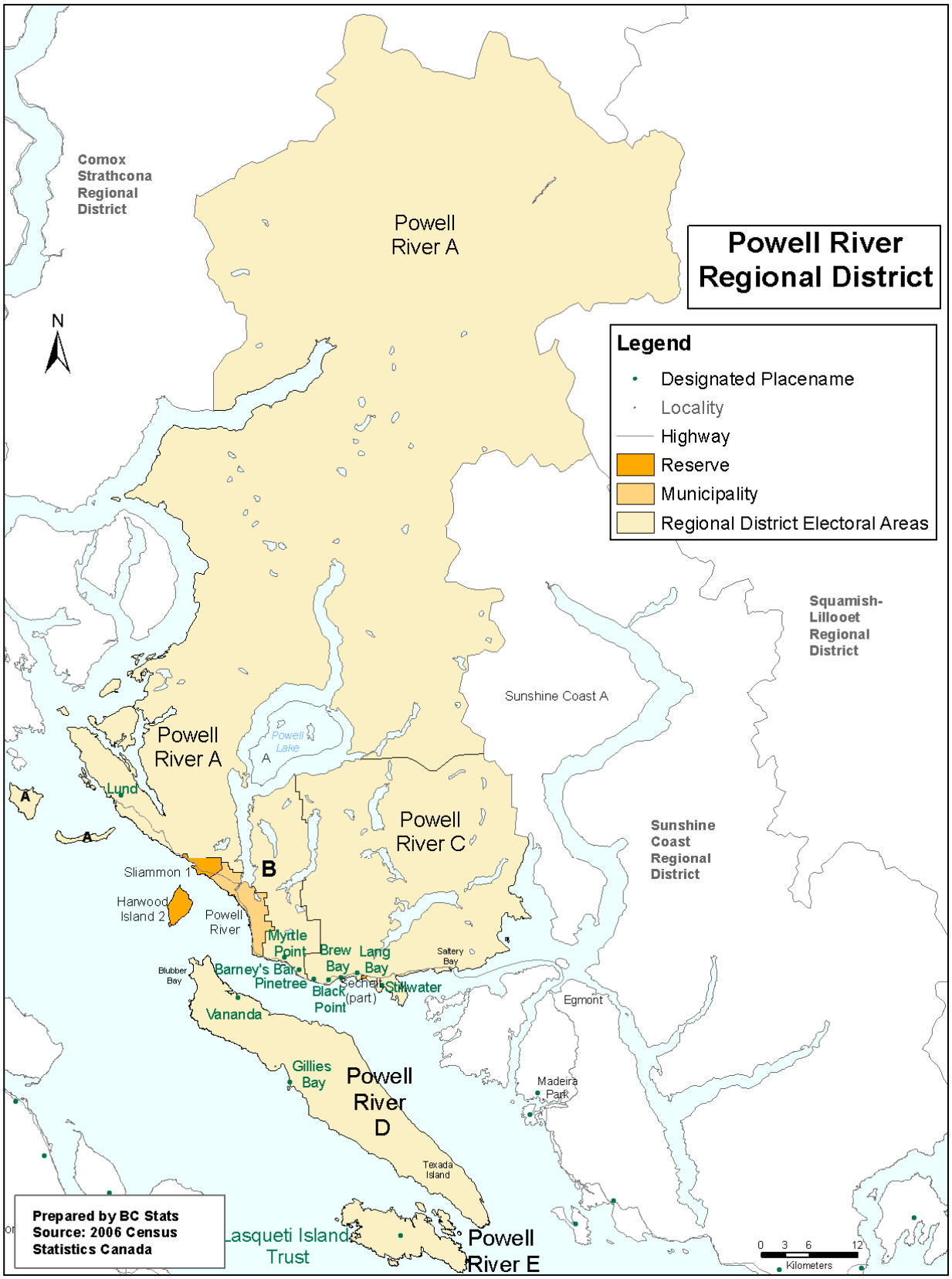
2. GROWTH HISTORY

This chapter describes the history of growth in the PRRD over the last 20 years. The region has been characterized by modest population growth, an evolving economic base that has gradually shifted away from traditional resource industries toward a greater services orientation, the increasing popularity of the area as a retirement and tourist destination, and an aging population caused in part by the out-migration of young adults. These trends set the context for the population and employment projections described later in the report.

2.1. Regional Geography

The geography of the region is shown in the map on the following page, prepared by BC Stats based on statistical boundaries from the 2006 Statistics Canada Census. The only municipality in the region is the City of Powell River, although the Sechelt Indian Government District (which has municipal status) has a small presence of approximately 31 lease properties in Electoral Area C. There are two First Nations Reserves – Sliammon 1 is the main community village for the Sliammon First Nation, while Harwood Island 2 is uninhabited.

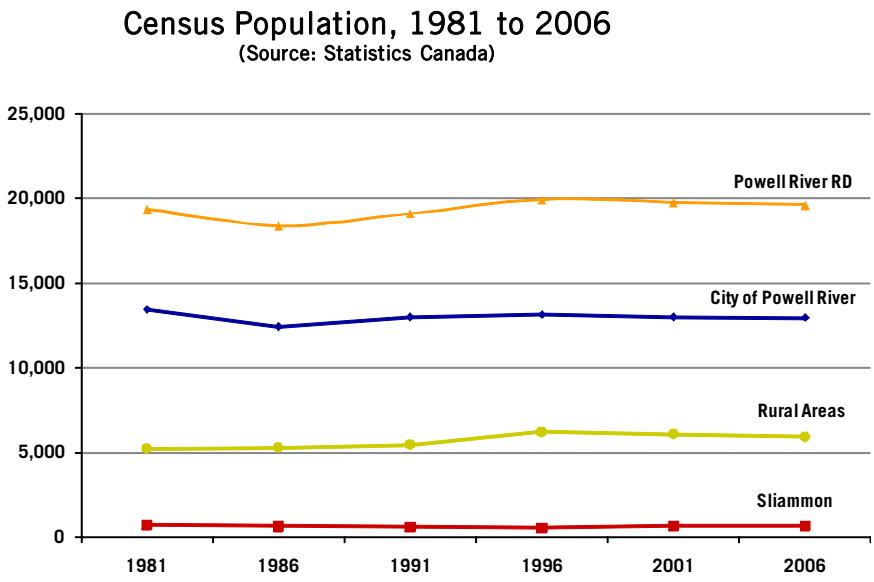
Road access to the region is by ferry, either from the Sunshine Coast Regional District to the south (Egmont to Saltery Bay ferry) or from Vancouver Island to the west (Comox/Little River to Powell River ferry). The Powell River Airport offers air access with multiple scheduled flights each day to and from Vancouver, while many boaters access harbours in Powell River and other parts of the region.


Powell River Regional District
Legend
Designated Placename
Locality
Highway
Reserve
Municipality
Regional District Electoral Areas
N
Comox Strathcona Regional District
Powell River A
Squamish-Lillooet Regional District
Sunshine Coast A
Powell River A
Powell Lake A
Lund
A
A
Powell River C
Sunshine Coast Regional District
Sliammon 1
B
Harwood Island 2
Powell River
Myrtle Point
Brew Bay
Lang Bay
Saltery Bay
Blubber Bay
Barney's Bar
Pinetree
Black Point
Sechelt (part)
Stillwater
Egmont
Vananda
Gillies Bay
Powell River D
Madeira Park
Texada Island
Lasqueti Island
Trust
Powell River E
Prepared by BC Stats
Source: 2006 Census
Statistics Canada
0 3 6 12
Kilometers

2.2. Population Growth

Census Population

The PRRD's population has been virtually unchanged since 1981. Over the 25-year period from 1981 to 2006, the city of Powell River's population declined slightly (average of 0.1% per year), while the rural areas grew by 0.5% per year (although all of this growth was realized by 1996 and the rural populations have declined moderately since then). The Sliammon Reserve also declined in population by an average of 0.2% per year since 1981. By way of comparison, the province of BC grew by an average of 1.6% per year over this time period.



The Census started reporting populations for the individual rural Electoral Areas only in 1996. Since that time the rural areas declined by several hundred residents (mainly in Areas A and C), while Area B showed the strongest growth.

Table 1. Census Population Growth, 1981-2006

	1981	1986	1991	1996	2001	2006	Avg Growth, 81-06
Powell River	13,423	12,440	12,991	13,131	12,983	12,957	-0.1%
Sechelt IGD[1]	-	-	25	33	36	17	-
Area A				1,005	988	914	-
Area B				1,379	1,450	1,489	-
Area C				2,289	2,135	2,074	-
Area D (Texada Island)				1,155	1,129	1,107	-
Area E (Lasqueti Island)				379	367	359	-
...Total Electoral Areas	5,218	5,288	5,461	6,207	6,069	5,943	0.5%
Sliammon Reserve	723	646	600[2]	565	677	682	-0.2%
Total PRRD	**19,364**	**18,374**	**19,077**	**19,936**	**19,765**	**19,599**	**0.0%**
Selected Unincorporated Settlements (data available starting in 1996)							**Avg Growth, 96-06**
Lund (Area A)				286	265	243	-1.6%
Barney's Bar (Area B)				379	352	405	0.7%
Myrtle Point (Area B)				468	544	497	0.6%
Black Point (Area C)				603	594	574	-0.5%
Brew Bay (Area C)				119	110	100	-1.7%
Lang Bay (Area C)				300	283	301	0.0%
Pinetree (Area C)				283	236	258	-0.9%
Stillwater (Area C)				73	146	137	6.5%
Gillies Bay (Area D)				467	413	400	-1.5%
Van Anda (Area D)				327	338	324	-0.1%

Sources: Statistics Canada, Powell River Regional District

Net Census Undercount

The release of the 2006 Census results, which showed a shrinking population in both the PRRD and the City of Powell River, was greeted with local disbelief. There had been a significant upswing in construction activity (the year 2005 had nearly as many housing starts as the previous four years combined) and an apparent influx of new residents, yet this was seemingly not reflected in the Census results. Many other municipalities also felt shortchanged by the Census, particularly in Alberta where many communities have started performing municipal censuses to correct what they feel are incorrect Statistics Canada figures. In 2007, 69 of Alberta's 352 municipalities performed their own Census[3].

While there are valid reasons that population growth does not necessarily keep pace with housing construction (e.g. the population in existing neighbourhoods typically falls over time as children grow up and leave, and because some new housing construction may be for recreational homes or part-time residents), it is also true that the Census simply misses some people.

Several years after each Census, Statistics Canada calculates a "net Census undercount", typically 4-5% of the total population in British Columbia (which usually has the highest undercount in Canada). The net undercount has been rising since 1991 and BC Stats has prepared a preliminary estimate of 4.57% for 2006.

[1] The Sechelt Indian Government District (most of which is located in the Sunshine Coast Regional District) was created in 1986, after the Census taken that year.
[2] The Sliammon First Nation did not participate in the Census in 1991, so the figure of 600 residents is an estimate.
[3] Alberta Municipal Affairs and Housing, Municipal Services Branch (December 2007), *2007 Official Population List*.

Table 2. Net Census Undercount, British Columbia, 1986-2006

	1986	1991	1996	2001	2006 (preliminary BC Stats estimate)
Net Census Undercount, BC	3.25%	2.47%	3.68%	4.04%	4.57%

Source: BC Stats

BC Stats Population Estimates

BC Stats, the provincial government's official statistical agency, produces annual population estimates that take into account the net Census undercount and other factors such as the number of BC Hydro connections and the number of Old Age Security recipients to estimate populations as of July 1 each year. They are produced annually for municipalities, regional districts, local health areas, school districts and other customized areas. They are not produced for unincorporated areas or First Nations reserves.

Table 3 compares BC Stats estimates and the Census population for the period from 1991 to 2006. Whereas the Census shows the city's population falling by 34 people, the BC Stats estimates show an increase of 317 people. Growth in the PRRD as a whole was 522 according to the Census and 952 according to BC Stats. In order for the BC Stats estimate for the PRRD to be correct in 2006 would require a net Census undercount of 5.32%, only slightly higher than the preliminary provincial estimates. For the purposes of this study, it is therefore assumed that the BC Stats population estimates for the PRRD are correct.

Table 3. Comparison of BC Stats Estimates and Census Population, 1991-2007

	City of Powell River		Powell River Regional District	
Year	BC Stats Estimate	Census Population	BC Stats Estimate	Census Population
1991	13,326	12,991	19,689	19,077
1992	13,229		19,671	
1993	13,197		19,728	
1994	13,286		20,038	
1995	13,348		20,255	
1996	13,610	13,131	20,693	19,936
1997	13,882		21,069	
1998	13,737		20,902	
1999	13,667		20,803	
2000	13,558		20,670	
2001	13,550	12,983	20,627	19,765
2002	13,479		20,520	
2003	13,433		20,447	
2004	13,481		20,436	
2005	13,516		20,495	
2006	13,643	12,957	20,641	19,599
2007	13,818		20,820	
Average Growth, 1991-2006	**0.16%**	**-0.02%**	**0.32%**	**0.18%**
Absolute Growth, 1991-2006	**317**	**-34**	**952**	**522**

Sources: BC Stats, Statistics Canada Census

Note that even though BC Stats is showing growth in the PRRD over the 1991 to 2007 period, the regional population peaked in 1997, declined for seven consecutive years through 2004, and then grew again in the last three years.

2.3. Household Size

Average household size has declined over time in all parts of the PRRD. The regional average has declined from 2.6 to 2.2 over the 20-year period to 2006. This is consistent with general societal trends.

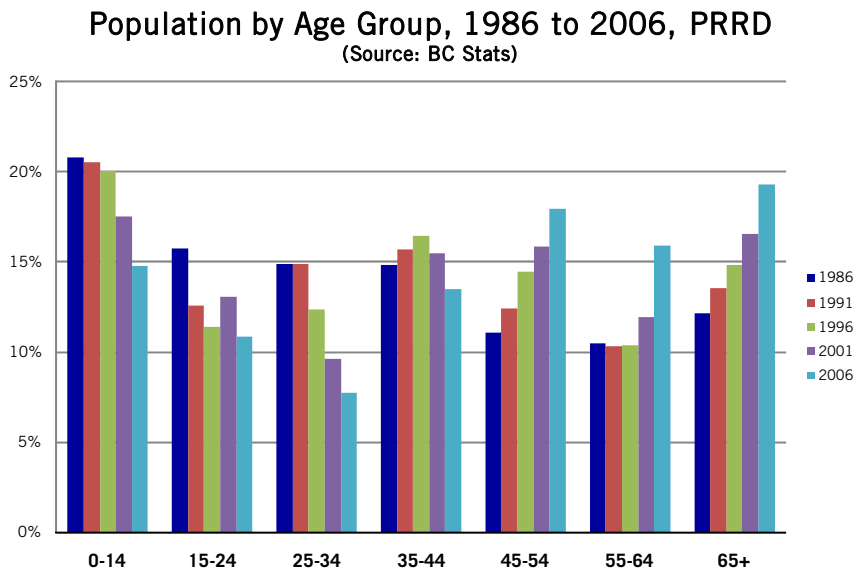
Table 4. Average Household Size, 1986-2006

	1986	1991	1996	2001	2006
PRRD	2.6	2.5	2.4	2.3	2.2
City of PR	2.6	2.5	2.4	2.3	2.2
Sliammon	2.9	n/a	2.4	2.6	n/a*
Rural Areas*	2.5	2.4	2.4		
...Area A				2.1	2.0
...Area B				2.3	2.3
...Area C				2.4	2.2
...Area D				2.1	2.0
...Area E				2.0	1.8

Source: Statistics Canada Census
*Note: 2006 Census profile information provided through the Statistics Canada website is less detailed for Sliammon than for the other PRRD sub-areas. The reason is not readily apparent.

2.4. Age Distribution

The aging of the PRRD's population over the last 20 years is shown in the graph to the right. Each category from age 45 and older has significantly increased as a share of the regional population, while each age category younger than 45 has declined (see actual figures in Table 24 in Appendix C.)



The region's median age increased from 34 to 47 over this time period, which is a significantly faster rate of aging than the province overall. BC's median age increased from 33 to 40 over the same time period, so the PRRD's median age went from only one year greater than the provincial median to seven years greater than the provincial median. As will be discussed later in this report, the PRRD's rapid aging has two main causes – first is its increasing appeal as a retirement destination (both for incoming retirees and for PRRD residents who choose to stay in the area for retirement), and second is the out-migration of young adults in their twenties.

Table 5. Age Distribution by PRRD Sub-Areas, 2006

Age Groups	PRRD	City	Sliammon	Area A	Area B	Area C	Area D	Area E
0-14	2,980 (15%)	2,065 (16%)	145 (21%)	95 (10%)	230 (16%)	265 (13%)	105 (10%)	50 (14%)
15-24	2,025 (10%)	1,350 (10%)	95 (14%)	75 (8%)	150 (10%)	240 (12%)	100 (9%)	15 (4%)
25-34	1,405 (7%)	935 (7%)	50 (7%)	40 (4%)	110 (7%)	150 (7%)	80 (7%)	45 (13%)
35-44	2,540 (13%)	1,740 (13%)	100 (15%)	100 (11%)	180 (12%)	250 (12%)	135 (12%)	40 (11%)
45-54	3,565 (18%)	2,195 (17%)	100 (15%)	230 (25%)	290 (20%)	445 (21%)	225 (20%)	80 (22%)
55-64	3,245 (17%)	1,900 (15%)	105 (15%)	210 (23%)	270 (18%)	405 (19%)	255 (23%)	105 (29%)
65+	3,840 (20%)	2,765 (21%)	90 (13%)	165 (18%)	245 (17%)	330 (16%)	205 (19%)	25 (7%)
Total	19,600 (100%)	12,950 (100%)	685 (100%)	915 (100%)	1,475 (100%)	2,085 (100%)	1,105 (100%)	360 (100%)
Median Age*	47.5	46.8	41.4	51.4	47.0	48.3	51.6	49.6

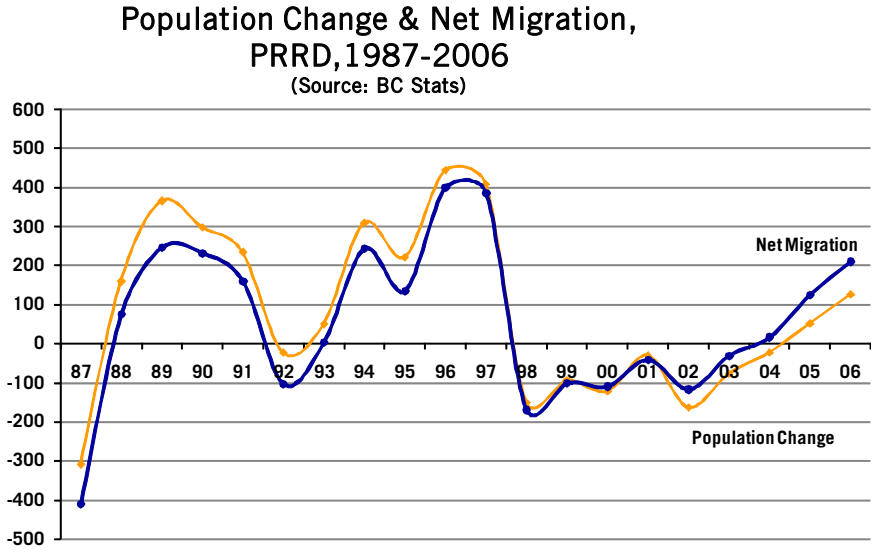
*Note that these figures differ slightly from the BC Stats figures quoted above, which are based on population estimates that take into account the net Census undercount.
Source: Statistics Canada Census

The age distribution in the PRRD varies somewhat across the sub-areas. The most notable difference is the younger age profile for Sliammon, which has a median age of 41.4 (still slightly higher than the BC median) compared to 47.5 for the PRRD overall. The city also has a somewhat different age profile than the rural areas, with a slightly lower median age, yet also the highest percentage of residents who are senior citizens. This suggests that once residents reach an advanced age, they prefer to be closer to health care and other urban services in the city, whereas pre-retirees in the 45 to 64 age categories are more likely to live in the rural areas.

2.5. Migration

As discussed later in this report, the key driver of future population growth in the PRRD is net migration. In the absence of migration, the region's population would fall as the average woman in the PRRD (age 15 to 49) has 1.5 children in her lifetime (much less than the replacement rate of 2.1).

The graph compares annual change in the BC Stats population estimates with estimated net migration to the region. The close relationship between the two



lines clearly shows how the story of population change in the PRRD is almost entirely the story of migration.

2.6. Place of Work

Employment can be measured in a variety of ways, depending on the intended purpose. For the land use focus of this study, the primary employment measurement used is jobs with a "fixed place of work" in the PRRD. These are jobs that are physically located in the PRRD (including home-based jobs) that are held by people who may or may not reside in the PRRD.

This study also considers the local labour market to be a key driver of migration patterns, so all jobs available to local residents must be taken into consideration. This includes jobs with "no fixed place of work" that are not fixed to a particular physical location and are common in industries like construction, transportation, and logging. The income earned from these jobs is also important in supporting local population-serving industries.

Employment data is summarized in Table 6. It shows that the PRRD had just under 7,000 jobs in 2006 with a fixed place of work, yet nearly 8,600 PRRD residents were employed. This discrepancy is explained by several factors – a total of 1,365 residents were employed without a fixed place of work, while 380 residents commuted to a regular job outside the PRRD (including 25 who left Canada).

Table 6. Summary of Employment by Place of Work, PRRD, 2001-2006

PRRD Employment	2001	2006	Growth, 2001-2006
Fixed Place of Work Jobs (includes all jobs physically located in the PRRD, regardless of who holds them)	**7,150**	**6,960**	**-3%**
Fixed Place of Residence Jobs (includes all jobs held by PRRD residents, regardless of where they work)	**8,405**	**8,585**	**2%**
Worked in PRRD	7,205	7,185	0%
…including Work at Home	735	865	18%
Worked outside PRRD	235	380	62%
…including Work outside Canada	10	25	150%
No Fixed Place of Work	1,195	1,365	14%

Source: Statistics Canada

The most important numbers used in this study are the 6,960 jobs that are physically located in the PRRD (because they help determine land demand), as well as the 1,365 jobs with no fixed place of work, most of which are assumed to be tied mainly to the PRRD and therefore comprise an important part of the local labour market.

2.7. Employment Growth

As discussed in the previous section, the analysis for this study considers jobs with a fixed place of work (POW) in the PRRD as well as local jobs with no fixed place of work. The "local" jobs with no fixed POW, such as construction workers and loggers, are important because they are an integral part of the local labour market and draw from the same local pool of labour. This latter category of jobs is estimated based on the types of jobs held by PRRD residents that are not accounted for by the fixed POW statistics.

Table 7. Employment Growth, PRRD, 2001-2006

	2001 Jobs			2006 Jobs			
Sector (with NAICS code)	Fixed POW	No Fixed POW*	Total	Fixed POW	No Fixed POW*	Total	Growth
11 Agriculture, forestry, fishing and hunting	420	265	**685**	420	279	**699**	2%
21 Mining and oil and gas extraction	150	0	**150**	125	0	**125**	-17%
22 Utilities	20	0	**20**	30	0	**30**	50%
23 Construction	240	280	**520**	320	378	**698**	34%
31-33 Manufacturing	1,155	0	**1,155**	895	0	**895**	-23%
41 Wholesale trade	175	16	**191**	75	15	**90**	-53%
44-45 Retail trade	1,100	5	**1,105**	985	45	**1,030**	-7%
48-49 Transportation and warehousing	405	123	**528**	370	131	**501**	-5%
51 Information and cultural industries	90	23	**113**	75	11	**86**	-24%
52 Finance and insurance	170	0	**170**	185	8	**193**	14%
53 Real estate and rental and leasing	80	12	**92**	115	0	**115**	25%
54 Professional, scientific and technical services	225	14	**239**	305	60	**365**	53%
55 Management of companies and enterprises	0	0	**0**	10	0	**10**	#DIV/0!
56 Administrative and support, waste management and remediation services	110	92	**202**	230	101	**331**	64%
61 Educational services	385	30	**415**	565	11	**576**	39%
62 Health care and social assistance	970	47	**1,017**	850	90	**940**	-8%
71 Arts, entertainment and recreation	135	0	**135**	145	9	**154**	14%
72 Accommodation and food services	635	21	**656**	605	13	**618**	-6%
81 Other services (except public administration)	395	47	**442**	285	48	**333**	-25%
91 Public administration	285	46	**331**	380	34	**414**	25%
Total	**7,150**	**1,021**	**8,171**	**6,960**	**1,233**	**8,193**	**0.3%**

*Note: No Fixed POW jobs are estimates.
Source: Statistics Canada, Vann Struth Consulting Group

2.8. Employment by PRRD Sub-Area

Jobs with a fixed place of work in each of the PRRD's main sub-areas are shown in Table 8. Data for Sliammon is not available but is included in the PRRD total.

Table 8. Fixed Place of Work Jobs by PRRD Sub-Area, 2006

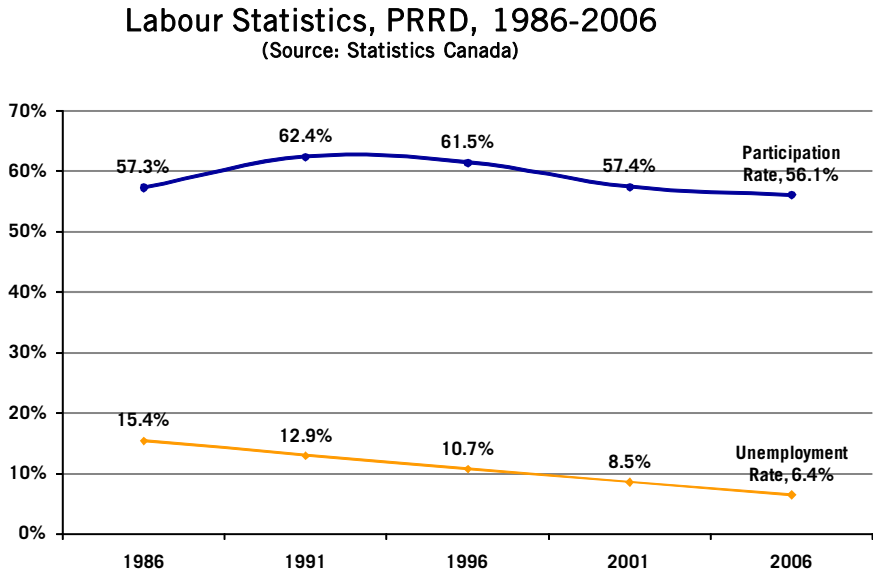
Sector (with NAICS code)	PRRD	City	Area A	Area B	Area C	Area D	Area E
11 Agriculture, forestry, fishing and hunting	420	205	55	15	90	20	10
21 Mining and oil and gas extraction	125	10	10	0	0	110	0
22 Utilities	25	25	0	0	0	0	0
23 Construction	325	205	30	10	30	25	20
31-33 Manufacturing	895	775	35	15	40	15	0
41 Wholesale trade	75	45	10	0	10	10	0
44-45 Retail trade	980	860	25	35	30	20	10
48-49 Transportation and warehousing	365	205	35	10	75	10	30
51 Information and cultural industries	70	65	0	0	0	0	0
52 Finance and insurance	185	170	0	0	0	15	0
53 Real estate and rental and leasing	110	110	0	0	0	0	0
54 Professional, scientific and technical services	300	210	10	30	45	10	0
55 Management of companies and enterprises	0	0	0	0	0	0	0
56 Administrative and support, waste management and remediation services	230	160	15	45	0	10	0
61 Educational services	565	515	0	0	25	0	10
62 Health care and social assistance	850	780	10	15	25	0	0
71 Arts, entertainment and recreation	145	65	10	45	0	20	0
72 Accommodation and food services	605	465	70	10	10	40	0
81 Other services (except public administration)	285	220	0	25	10	10	10
91 Public administration	380	305	10	0	0	10	10
Total	**6,960**	**5,410**	**330**	**260**	**395**	**330**	**105**

Source: Statistics Canada

2.9. Labour Force Statistics

The unemployment rate for PRRD residents has declined consistently since 1986, falling from 15.4% to 6.4% over the 20-year span.

The labour force participation rate, which measures the percentage of the age 15 and over population that is either employed or actively looking for work (i.e. in the labour force) peaked at 62.4% in 1991 and has declined since that time. The declining rate is a reflection of the changing demographics of the area, as older residents are less likely to participate in the labour force.

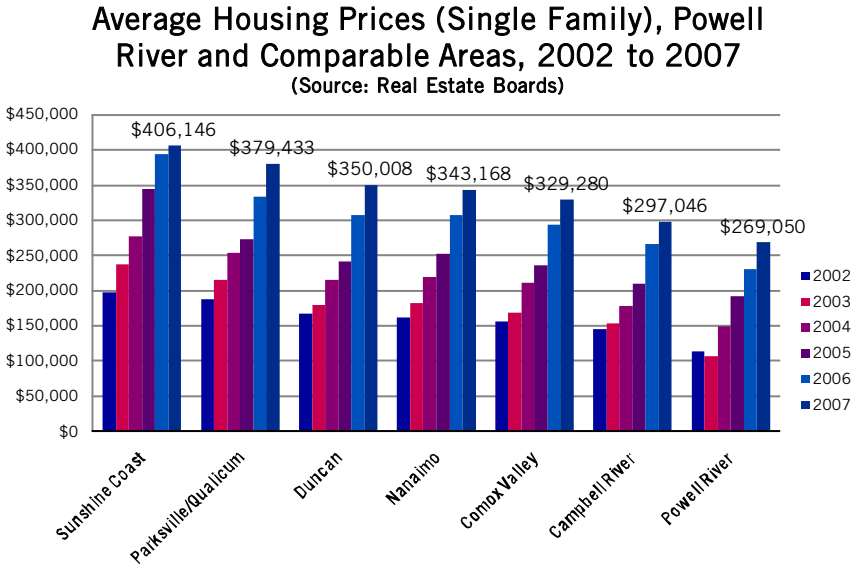


It is also worth noting that the PRRD's participation rate has been consistently lower than the provincial rate, which was 65.6% in 2006.

2.10. Housing Prices

Housing prices are lower in the PRRD than comparable markets on BC's southern coast. The neighbouring Sunshine Coast Regional District had an average single family home price exceeding $400,000 in 2007 compared to just under $270,000 in the PRRD. Markets on the east coast of Vancouver Island are also more expensive than the PRRD.

Prices in all markets more than doubled from 2002 to 2007.



3. PROJECTION METHODOLOGY

The ultimate purpose of the projections developed in this study is to estimate future land use requirements and types of development. This includes demand for various types of land (industrial, commercial, residential) and types of development (single family vs. multi-family residential, office space, retail).

This chapter explains the methodology used to develop these projections. A step-by-step process was developed, starting with population and employment, and incorporating both historical trends and current insight, to produce the desired outputs. As mentioned in the Introduction, the projection methodology integrates each of the main variables (population, employment, demographics, migration) so that changes in one variable impact all other variables.

For example, projecting growth in a sector like wood products manufacturing creates increased demand for industrial floorspace and land, and may increase migration to fill the extra jobs that are created, which then creates demand for additional housing appropriate to working-age adults and their families, which creates increased demand for public services and retail shops, which creates more jobs, which may require more migration, and so on.

3.1. Economic Base Theory

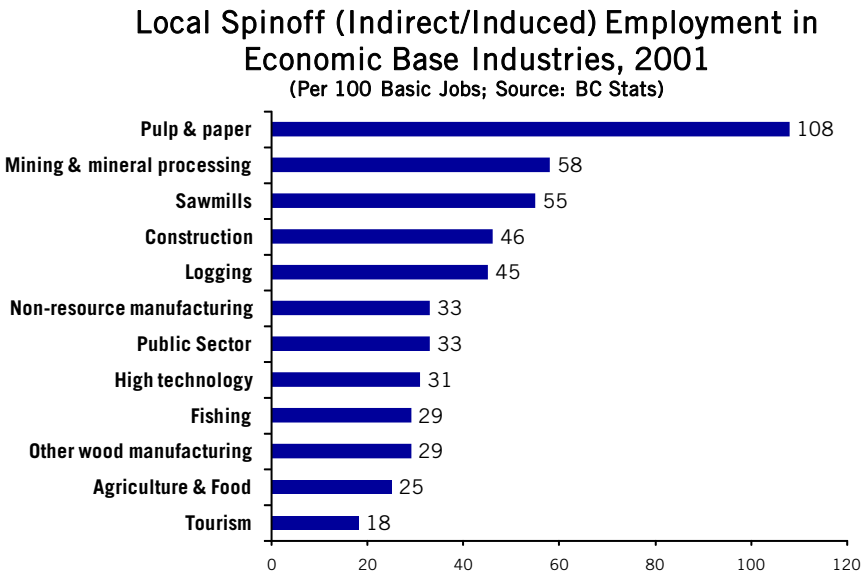
The fundamental premise of the projection methodology is that future changes in the PRRD will be driven by changes in the region's economic base. The economic base is defined as those industries that serve markets beyond the local area, while non-basic (or population-serving) industries serve the local market. Manufacturing, high technology, many types of advanced professional services, and primary industries like agriculture, fishing, and forestry are typical economic base industries. Non-basic industries include most retail services, personal services like hairdressers and dry cleaners, repair shops, and local recreational and community facilities.

The economic base includes several other activities that may not immediately be obvious. Tourism is part of the economic base because its market is also external to the local community. Tourism is not an "industry" per se, but rather a collection of parts of industries that rely on spending by outsiders, such as hotels, restaurants, transportation, retail, and entertainment industries, most of which also serve the local community to some degree. Large parts of the public sector are also part of the economic base if they are supported by the federal or provincial government (i.e. non-local sources). And finally retirees are part of the economic base because their income is not derived from local employment – it is based on savings and pension and investment income that is injected into the local economy.[4]

Economic base theory says that community prosperity is mainly reliant on economic base industries. Whereas the growth of non-basic industries is constrained by the size of the local market, basic industries serve the broader world and through their success will drive increases in local employment and investment. The success of economic base industries is then shared with the local community when these companies purchase local supplies and services and when workers spend their wages locally. If economic base industries are successful, the non-basic industries that serve local demand will also be successful.

[4] It is technically not just retirees that contribute to this non-employment income effect. Income from welfare payments, disability payments, child tax benefits and other forms of government support are also part of the economic base.

The division between basic and non-basic industries is not always clear-cut. In reality, almost all industries have a mixture of sales to the local market and external markets. BC Stats has addressed this issue through the development of a series of employment multipliers for the standard economic base industries.[5] These multipliers show the amount of local indirect and induced employment that is reliant on each economic base industry.



The graph shows the industries that BC Stats includes in the local economic base, as well as the number of local jobs that are supported by every 100 economic base jobs. The greatest impact is from the pulp and paper industry, which for every 100 jobs supports a further 108 jobs in the community. These spinoff jobs are in industries that supply goods and services to the mill (the indirect effect), as well as the population-serving jobs that provide goods and services to mill employees and the employees of mill suppliers (the induced effect).

So the first step in the projection methodology is to forecast the employment change in the economic base industries. Multiplying the forecasted employment in each economic base industry by its multiplier provides the spinoff employment in other sectors of the economy.

Retirees and Non-Employment Income

Retirees and other sources of non-employment income are not shown on the graph above because they do not create direct employment. But non-employment income is still part of the economic base because it helps to support population-serving industries like retail trade, financial services, food and beverage services, recreation and entertainment, and various personal services like hairdressers, dry cleaners and repair shops.

BC Stats estimates the "economic dependencies" of a variety of local areas, including the PRRD. This is a measurement of how much of a community's total income is reliant on each economic base industry and on non-employment income. In 2001, residents of the PRRD received 38% of their total income from non-employment sources such as pensions, investments, and government assistance programs.

How will the PRRD's reliance on non-employment income change in the future? Based on further analysis of the PRRD's recent history and comparisons to other coastal communities that currently have a greater reliance on retirement income (e.g. Parksville/Qualicum), it was determined that the best indicator of a

[5] BC Stats (January 2004), British Columbia's Heartland at the Dawn of the 21st Century: 2001 Economic Dependencies and Impact Ratios for 63 Local Areas. Data in the graph is the combined indirect and induced employment impact for the "migration, no safety net" scenario, which is the best approximation of the long-run impact.

community's non-employment income reliance is the share of its population age 55 and over.[6] Based on this measurement, as the PRRD's population ages, an increasing share of total income will come from non-employment sources.

In 2006, the estimated share of PRRD income from non-employment sources is 42% (based on the formula shown in footnote 6). By applying the 42% ratio to the PRRD's estimated 2006 population of 20,641, there is the equivalent of about 8,700 people who are reliant on non-employment income.

In order to calculate the non-employment income multiplier, it is necessary to determine how many jobs are supported by this non-employment income. After applying economic impact multipliers to each economic base industry (explained below in Section 3.3), there are 975 jobs that are "unaccounted for", meaning they are not tied to any of the economic base industries. It is assumed that these jobs are supported by non-employment income.

The non-employment income multiplier can then be calculated. There are 975 "unaccounted-for" jobs that are assumed to be supported by non-employment income, and there is the equivalent of 8,700 people reliant on non-employment income. Dividing 975 by 8,700 and multiplying by 1,000 produces a ratio of 112 jobs supported for every 1,000 residents who are reliant on non-employment income.

3.2. Population Projections

Population projections are the second main component of the projection methodology. BC Stats projections[7] are the most widely-used in the province, including by other government ministries such as Education and Health. They are based mainly on historic patterns of growth, with some consideration given to major developments that are expected in the future (e.g. ski resorts, new mines, major housing developments).

Occasionally population projections are produced for specific communities or regions by private consultants or local planning departments, but no other comprehensive projections of PRRD population were identified in this study.

Population projections, including projections by specific age categories, are used in the projection model for three purposes:

1. Determining the size of the resident labour force. As discussed in Section 2.9, labour force participation rates vary based on age, so as the population changes and becomes older, the number of available workers also changes.

2. Determining housing demand, both in terms of the overall number of housing units that are required and the type of units that are required by people at different stages of life.

3. Determining the PRRD's reliance on non-employment income, as discussed in the previous section.

The BC Stats projections are used as a baseline for how the demographics of the PRRD will evolve over the next 20 years. The projections developed in this report deviate from BC Stats in two ways:

[6] The actual calculation for estimating non-employment income dependency is the percentage of population age 55 and over, multiplied by 1.2. This was determined through regression analysis of historic data in the PRRD and several comparable communities.

[7] BC Stats (August 2007), *Population Extrapolation for Organizational Planning with Less Error (P.E.O.P.L.E.) Run 32: Powell River Regional District 27.*

1. Retiree migrants. As discussed in greater detail in section 4.13, the BC Stats projections do not account for significant future growth in the number of retirees moving to the region.

2. Worker migrants. One of the key implications of the BC Stats projections is that due to the aging of the population, the PRRD's labour force will decline significantly. A shortage of workers would therefore restrict growth and cause job losses in other sectors. An alternative Worker Migration scenario is therefore developed that assumes that whenever the PRRD experiences worker shortages that additional workers (and their families) will migrate to the region (ignoring, for the purposes of analysis, that the PRRD will be in competition with other areas for scarce workers).

3.3. Step-by-Step Projection Process

The projections that are outlined in detail in Chapter 5 are developed through the following step-by-step process. Each calculation occurs each year from 2009 to 2028.

1. Calculate growth in economic base industries, including retirement living.

The rationale for the growth rates in each economic base sector is provided in Chapter 4.

2. Calculate indirect and induced employment that is driven by the economic base growth in Step 1, and convert this job growth to standard industries.

This step is an automatic calculation of indirect and induced employment, based upon employment in the economic base industries and the employment multipliers discussed in Section 3.1.[8]

3. Calculate the size of the resident labour force, based on the region's demographics and the age-specific labour force participation rates.

Labour force participation varies significantly depending on age. Table 9 shows participation rates for both the PRRD and BC for several broad age categories from the 2006 Census. The PRRD has historically had lower participation rates than the rest of BC, perhaps due to high-paying mill jobs allowing families to be supported on a single income.

Table 9. Labour Force Participation Rates by Age, 2006

Age Group	PRRD	BC	PRRD in 2028 (projected)
15-24	60.9%	64.6%	62.7%
25-54	81.4%	84.6%	83.0%
55+	27.1%	34.5%	
...55-59*	60.0%	69.2%	64.6%
...60-64*	40.0%	45.0%	42.5%
...65-69*	15.0%	17.3%	16.2%
...70-74*	5.0%	6.4%	5.7%
...75-79*	2.0%	2.5%	2.3%

Sources: Statistics Canada Census
*Note that rates for specific age groups in the 55+ category are estimates.

[8] Note that in order to "fit" the employment multipliers to the actual 2006 employment figures, the multipliers shown in the graph on page 21 were modified slightly. None of the changes are significant.

Forecasting how participation rates might change in the future is a timely issue in BC given the removal of the legislated retirement age and speculation about how the baby boom generation may use modern technology to continue working in their retirement years in greater numbers than previous generations. Pending labour shortages in industries across BC may also create incentives for baby boomers to stay working for a longer period of time.
Analysis by BC Stats[9] forecasts moderate increases in labour force participation in each age group by 2031, driven mainly by continuing increases in the participation of women in the labour force (the participation rate of men is projected to decline slightly in most age groups).

For this study, it was assumed that participation rates in the PRRD will gradually increase across all age categories, reaching halfway to BC's 2006 rates by 2028. These figures are shown in the right hand column in Table 9.

4. **Compare the number of jobs to the resident labour force; if there are not enough workers to fill all jobs plus a minimum 5% unemployment rate, trigger migration of workers (to be realized the following year). Note that this step is used only for the "Worker Migration Scenario" in Chapter 5.**

The number of local jobs is calculated in step 2 above. The number of local workers is calculated in step 3 above. It is assumed that if the unemployment rate falls below 5%, demand for more workers is triggered and enough workers move to the PRRD to fill the gap the following year.

Note also that the additional workers that are attracted to the region create demand for more housing and more population-serving industries, which in turn create demand for even more workers the next year. This is an example of the interactions and feedback loops that are built into the projection model.

5. **Convert the number of jobs by industry sector into demand for employment space and employment land by applying appropriate job density and development density ratios.**

In order to convert the number of jobs into demand for employment space and ultimately employment land, custom reports were obtained from BC Assessment showing building floorspace and lot size for all non-residential properties in the PRRD.

The descriptive categories used by BC Assessment include "Actual Use" (which refers to the type of activity on the property) and "Manual Use" (which refers to the type and condition of any buildings on the site). Each property is also sorted into one or more of British Columbia's standard property classes. Many properties have multiple property classes, such as Residential combined with Business, and some PRRD properties have up to four property classes.

All of these systems are designed for the property assessment process and none is a perfect match for the detailed industry employment data used elsewhere in this study. It is not possible to know exactly which industries are located on exactly which properties, so various assumptions and generalizations are required[10]. Further complicating the analysis is that floor area data is apparently not collected for industrial properties, as none of the properties in the industrial Actual Use categories or in the Major Industry or Light Industry classes showed floor area data. The data also appears incomplete for certain types of institutional uses (e.g. schools, health care facilities).

[9] BC Stats and Ministry of Advanced Education (June 2007), *British Columbia Labour Force Participation Rate Projections to 2031.*

[10] The type of floor area data reported by BC Assessment is also not uniform across all properties. Depending on the property, data may be provided on gross building area (GBA), gross leasable area (GLA), net leasable area (NLA), or strata lease area (SLA), and some properties show more than one figure. The approach taken in this study is to use whichever figure is shown for "leasable area", and if only the building area is shown, to use 90% of the figure (to account for the loss of usable space due to wall partitions, mechanical rooms, etc.).

In order to assure a reasonable calculation of Floor Area Ratios (FARs), which measure the ratio of built floorspace to the size of the lot, additional properties are excluded from the calculations. These are mainly properties with very large land areas and small buildings, including parks and playing fields, marinas, recreational areas, educational facilities and golf courses. These are considered to be special cases and not representative of the general pattern of commercial development in the region. Many of the business uses within residential properties are also removed because the primary use of the land is residential and are similarly not representative of typical commercial development densities.

The remaining properties with usable data were analyzed with the following results:

- The average job occupies 462 square feet (sf) of usable building space[11].
- The average Floor Area Ratio (FAR) is 0.20, which means that each acre of developed land contains, on average, about 8,700 sf of usable building space.

This analysis of assessment data is supplemented by land use research in other jurisdictions to produce the estimated job densities and FARs for the PRRD shown in Table 10. For example, the assessment analysis and supplementary research both support that offices are typically developed to a higher density than other forms of commercial development, while industrial development typically has the lowest density.

Table 10. Estimated Job Densities and Floor Area Ratios, by Land Use Type, 2008

Land Use Type	Job Density (sf per job)	Floor Area Ratio (FAR)
Commercial – Retail/Service (inc. retail, restaurants, various services)	450	0.25
Commercial – Accommodation	750	0.25
Commercial – Offices	350	0.30
Industrial	600	0.10
Institutional (inc. hospital, schools, government facilities)	450	0.20

Source: BC Assessment (data), Vann Struth Consulting Group (analysis), additional insight into relative ratios from work by Cushman & Wakefield LePage Inc. for the City of Surrey and by Harris Consulting and Vann Struth Consulting Group for the City of Richmond (recognizing that development densities are lower in the PRRD than in larger cities).

Employment by industry is then translated into floorspace and land use requirements using the relationships shown in the next two tables. Table 11 shows the percentage of employment in each sector that is based at home (as of the 2006 Census).

[11] The Assessment data also includes vacant space, so the 462 sf per job figures includes some vacant space. Assuming commercial and industrial vacancy rates stay constant into the future, there is no distortion to the analysis.

Table 11. Home-based Employment by Sector, 2006

Sector	% Jobs at Home
11 Agriculture, forestry, fishing and hunting	21.4%
21 Mining and oil and gas extraction	0.0%
22 Utilities	0.0%
23 Construction	31.3%
31-33 Manufacturing	7.2%
41 Wholesale trade	27.4%
44-45 Retail trade	6.1%
48-49 Transportation and warehousing	10.8%
51 Information and cultural industries	20.0%
52 Finance and insurance	0.0%
53 Real estate and rental and leasing	0.0%
54 Professional, scientific and technical services	56.1%
55 Management of companies and enterprises	100.0%
56 Administrative and support, waste management and remediation services	23.3%
61 Educational services	5.3%
62 Health care and social assistance	6.4%
71 Arts, entertainment and recreation	41.4%
72 Accommodation and food services	7.4%
81 Other services (except public administration)	10.6%
91 Public administration	2.6%
Total	**12.4%**

Source: Statistics Canada Census

The PRRD already has a healthy 12% of employment based at home. The share of home-based employment in each sector is projected to expand by 10% over the next 20 years (e.g. from 12% to 13.6%), based upon technology improvements that enable a wider variety of home-based employment and a greater number of incoming retirees who will bring a home-based job with them.

For jobs located outside the home, Table 12 shows their estimated distribution across different land use types, based in part on research in other jurisdictions.

Table 12. Estimated Land Use by Sector, 2008

Sector	Distribution of Floorspace for Jobs Located Outside the Home			
	Commercial – Retail/Service	Commercial – Office	Industrial	Institutional
11 Agriculture, forestry, fishing and hunting			100% (includes agricultural land)	
21 Mining and oil and gas extraction			100%	
22 Utilities		25%	75%	
23 Construction		25%	75%	
31-33 Manufacturing	5%		95%	
41 Wholesale trade			100%	
44-45 Retail trade	95%		5%	
48-49 Transportation and warehousing	25%		75%	
51 Information and cultural industries		80%	20%	
52 Finance and insurance	50%	50%		
53 Real estate and rental and leasing	50%	50%		
54 Professional, scientific and technical services		75%	25%	
55 Management of companies and enterprises		100%		
56 Administrative and support, waste management and remediation services		90%	10%	
61 Educational services		15%		85%
62 Health care and social assistance	10%	20%		70%
71 Arts, entertainment and recreation	70%	10%		20%
72 Accommodation and food services	95%		5%	
81 Other services (except public administration)	70%	20%	10%	
91 Public administration		20%	5%	75%

Source: Vann Struth Consulting Group

6. Assume that development will become slightly more dense over the next 20 years in response to rising land values, increased construction costs, and efficiency improvements intended to lower energy and other operational costs.

Increased development densities are expected to gradually increase over the next 20 years. The average Floor Area Ratio is projected to increase by 10% over the next 20 years until reaching the projected FARs shown in Table 13.

Table 13. Projected Floor Area Ratios, by Land Use Type, 2028

Land Use Type	Floor Area Ratio (FAR)
Commercial – Retail/Service (inc. retail, restaurants, various services)	0.275
Commercial – Accommodation	0.275
Commercial – Offices	0.33
Industrial	0.11
Institutional (inc. hospital, schools, government facilities)	0.22

7. Calculate demand for various types of housing types based on the size and age profile of the PRRD population.

Over the time period from 2008 to 2028, the projection model adds new retirees and new worker migrants (and their families). Each of these people is added to the baseline demographics contained in the BC Stats projections and grows older along with the rest of the area's population.

As people age, their demand for housing changes. Table 14 shows household maintainer rates for various age categories of PRRD residents. These statistics show the percentage of people in each age group that are "household maintainers", which is defined by Statistics Canada as: "First person in the household identified as the one who pays the rent or the mortgage, or the taxes, or the electricity bill, and so on, for the dwelling." For young adults age 15-24, only 10% are household maintainers, while 67% of residents age 65-74 are household maintainers.

The type of housing demand also evolves over time. Apartments are almost as common as single family homes for young adults (age 15 to 24), then become increasingly less popular as people age into their primary family-rearing years, and then become more popular again in old age.

Table 14. Household Maintainer Rates by Age Group, PRRD, 2006

Housing Type	Total	15-24	25-34	35-44	45-54	55-64	65-74	75+
Single family home	35.9%	4.9%	41.6%	42.1%	49.2%	49.9%	51.6%	46.6%
Apartment	5.7%	4.7%	8.2%	5.9%	5.3%	4.2%	9.2%	13.7%
Townhouse/Rowhouse/Other Semi-detached	1.8%	0.5%	3.2%	2.0%	1.8%	2.5%	2.7%	2.5%
Mobile home	1.4%	0.0%	1.4%	0.8%	1.8%	1.8%	3.6%	1.4%
Total	**44.7%**	**10.1%**	**54.4%**	**50.8%**	**58.2%**	**58.4%**	**67.2%**	**64.2%**

Source: Statistics Canada

Applying these rates to the PRRD's evolving demographics over time produces estimates of specific types of housing demand. Note that the community consultation also provided insight into the types of private housing demanded by various groups, especially retirees[12].

How might these household maintainer rates change over time? One way to consider this issue is to examine the pattern of household maintenance in a community or region with current demographics similar to what the PRRD's demographics will be in 20 years.

Analysis of several coastal communities and regions[13] suggests that the PRRD's demographics in 20 years will most closely resemble the current demographics of the Sunshine Coast Regional District (SCRD). Household maintainer rates in the SCRD are nearly identical to the PRRD's rates, even with a more elderly population, so no adjustment is made to the household maintainer rates shown in Table 14 when projecting 20 years into the future.

Finally, not all housing is used for permanent residents. The PRRD has a number of recreational property owners who are only seasonal or periodic residents of the area. The number of recreational homes is estimated using recent Multiple Listing Service (MLS) sales data. Data provided by the local Real Estate Board is shown in Table 15.

[12] This analysis estimates future demand for private housing only. It is also safe to assume that due to an aging population, there will also be increased demand for seniors housing and care homes.
[13] The other areas that were considered were the Duncan area, Comox Valley, Campbell River area, and Parksville/Qualicum area. The Sunshine Coast RD is the best fit for the PRRD's projected demographics in 20 years.

Table 15. Recreational Home Sales, 2004-2007

	2004	2005	2006	2007
Recreational buyers	37	45	29	31*
Total sales	676	654	468	489
% Recreational sales	**5.5%**	**6.9%**	**6.2%**	**6.3%**

Source: Powell River & Sunshine Coast Real Estate Board
*Includes an estimated 5 local buyers of recreational property. Local purchasers of recreational homes are shown separately for the years 2004 to 2006 and account for less than 10 per year.

It is assumed that in addition to the number of residences required to house the PRRD's population, an additional 6% of homes are used for recreational purposes, and the number of recreational homes will grow at the same rate as the number of retiree migrants moving to the region (addressed in Section 4.13).

Demand for recreational homes is focused primarily on single family homes, so it is further assumed that 95% of all recreational homes will be single family, with the remaining 5% in the townhouse/rowhouse category.

8. Allocate demand for each land use category and housing type to the PRRD sub-areas based on historic patterns of development.

The allocation of projected growth to each of the PRRD's sub-areas will depend on a variety of factors, including land availability and cost, level of servicing, feasibility for business purposes, and varying regulatory controls in the City relative to the rural areas.

The initial allocation of development is done by the projection model using the current allocation of employment and population across the sub-areas. The concluding chapter 6 of the report provides additional commentary on how development is likely to occur in different parts of the PRRD.

4. EMPLOYMENT PROJECTIONS FOR ECONOMIC BASE INDUSTRIES

This chapter explains the employment projections for each economic base industry (including retirement living). The projections are based on discussions with local industry participants in the PRRD, analysis from prior studies (local and provincial), and statistical trends.

Estimated employment changes from the 2006 Census to 2008 are also explained.

4.1. Logging

There is currently tremendous upheaval in the Coastal forest sector due to a perfect storm of poor market conditions, a high Canadian dollar, and structural challenges in the Coastal industry that have restricted the necessary investment in modernizing mills to make them more efficient and competitive in today's market. Multiple sawmills and pulp mills have been closed, resulting in job losses for many forestry workers, including loggers. The challenge in this study is to see beyond the current problems to understand the fundamental conditions that will affect employment over the next 20 years.

Factors affecting employment projections for logging include:

- The area's timber supply will not be constrained in the next 20 years. In fact, annual allowable cuts may increase in the future due to the utilization of better forestry data that is expected to show greater quantities of available timber than is currently estimated.
- The actual amount of future harvesting will be determined by market conditions, especially the US housing market. Despite current problems, market conditions will improve over time.
- The Coastal forest sector may inadvertently benefit from the mountain pine beetle that is ravaging forests in BC's Interior. Once the beetle-killed wood has been salvaged and the Interior faces lower annual cuts, the Coastal industry may replace some of the Interior production (although with different species Coastal wood is not a perfect substitute for Interior wood).
- As the timber supply continues to evolve toward more second growth timber, harvesting becomes easier. Second growth trees are usually closer to existing roads and waterways and are easier to move by water as old logs are more likely to sink.
- Employment by large companies is expected to continue to decline over time, but there may be opportunities for employment growth through small logging companies and companies focused on wood salvage.
- On a smaller scale, forestry activities (logging and silviculture) on Texada Island are expected to maintain current employment levels. The unique conditions on the Island require more labour-intensive techniques, including for silviculture in order to protect young trees from the large native deer population.
- Improvements in harvesting technology mean that over time the same volume of wood harvest can be achieved with fewer and fewer workers.
- Transporting logs by water remains the most cost-effective means to move timber, so maintaining industrially-zoned waterfront properties will be essential to continue to support forestry activities.

Waterfront industrial land may be threatened by its desirability for residential and commercial development and by the fact that some residents in the area would prefer not to have industrial activities "despoiling the pristine natural waterfront".

- There is some concern in the industry about the future availability of loggers given the aging workforce.

Ignoring the significant curtailment in logging activity this year, it is assumed that logging employment in the PRRD has declined by 10% since 2006 in reflection of the overall harsh conditions in the Coastal sector.

Looking over the longer-term, efficiency gains (including the greater ease of harvesting second-growth timber) will gradually reduce the number of logging jobs even if the total harvest remains constant or even grows marginally. The estimated decline is 20% (83 jobs) over the next 20 years.

4.2. Pulp & Paper

Pulp and paper employment in the PRRD is based entirely on the Catalyst mill. According to manning data released by Catalyst in mid-2007, employment has steadily declined from a peak of more than 2,300 jobs in 1981 to just over 600 jobs in May 2007.

Further reductions have occurred in the last year and employment is now estimated at 520 jobs. The viability of pulp mills in the Coastal region is somewhat questionable without the resumption of sawmilling activity that provides wood chips and sawdust. Catalyst recently closed its pulp mill at Elk Falls due in part to losing its sawdust suppliers.

In the case of Powell River, it is assumed that the mill will remain operational over the next 20 years, but that employment will continue to decline due to ongoing efficiency improvements and competitive challenges. The decline is estimated at 40% (208 jobs) over the next 20 years, reducing employment to an estimated 312 jobs.

4.3. Sawmills

Given the quality of the timber supply in the area, the long-term prognosis for the sawmill sector is positive. Productivity improvements, however, will continue to require fewer workers to achieve the same output.

The PRRD's sawmill sector is characterized by small operators as there are no large sawmills owned by one of the major forest companies. Logs harvested by the major companies are generally transported to Vancouver Island for milling.

The recently-created Powell River Community Forest is committed, in part, to the support of smaller-scale wood processors and manufacturers, so as their harvesting increases in the next few years there may be increased opportunities for small local sawmills.

The Census showed 50 sawmill jobs in 2006, a number that is assumed to have dropped by 10% in the last two years with the upheaval in the industry. Looking to the future, modest growth of 20% (9 jobs) is projected over the next 20 years.

4.4. Other Wood Manufacturing

There are a variety of wood products manufacturers in the PRRD and they are generally quite optimistic about the prospects for continued growth in their companies, based upon the quality of local wood and their ability to fashion products that are highly desired in markets across North America.

The advent of the Community Forest will also benefit this sector over time. One of the critical issues often faced by smaller manufacturers is securing a reliable supply of high-quality fibre, which should theoretically be easier with the assistance of the Community Forest.

Growth is estimated at 5% in the last two years since the 2006 Census, while future growth is projected at 60% (38 jobs) over the next 20 years.

4.5. Mining and Mineral Processing

Mining activity in the PRRD is nearly all contained on Texada Island, with its three limestone quarries. Factors influencing future employment in this sector include:

- The overall demand projection for Texada Island quarry products is very positive. The Island is a key supplier of limestone to cement plants as far south as California. Increased demand is expected for construction aggregates as natural gravel deposits are being exhausted and closed in the heavily populated Lower Mainland, and because crushed rock is increasingly recognized as a superior product relative to natural gravel.
- There are sufficient ore reserves on the Island for several hundred years of production.
- Increased production does not necessarily imply increased staffing, as technology improvements, such as larger trucks, continually allow greater production with fewer workers. Looking back to the 1970s, for example, there were several hundred more workers involved in the industry.
- Exploration for gold and other minerals (e.g. copper) has taken place on Texada in the past, but no new mines are anticipated in the next 20 years.

There has been estimated growth of 10% in employment in the last two years due to the strong market for construction materials. Projected growth is a further modest 10% (14 jobs) over the next 20 years.

LNG Terminal

The proposed liquefied natural gas (LNG) terminal and power generation facility on Texada Island is not factored into the analysis for this study. If constructed, it would create additional land use demands that would be entirely accommodated in the Blubber Bay area of Texada Island. Direct employment is estimated at 100 jobs[14], which would have a substantial impact on the local labour market and generate significant spinoff employment as well, but the project's viability is questionable. There are substantial regulatory hurdles that the project must clear and significant opposition by some members of the local and regional population. There are also questions about the feasibility of gas-fired power generation in a future with growing carbon taxation.

[14] Figure provided by WestPac LNG Corporation.

Due to these uncertainties, the project is not included in the region's 20-year growth projections at this time.

4.6. High Technology

What is commonly called the "high technology industry" is technically not a single industry at all. It is actually an amalgamation of parts of other industries that produce high-tech goods or services. BC Stats has developed a custom definition of the high technology sector[15] that includes manufacturing industries such as computers and computer components, telecommunications equipment, medical devices, aerospace products, pharmaceuticals, and audio and video equipment. Examples of high technology services include software, motion picture production, wired and wireless telecommunications services, data processing, engineering, computer systems and environmental consulting, and research and development activities.

The PRRD had an estimated 142 high tech jobs in the 2006 Census, all of them in high tech services. This includes the following detailed industries:

- Computer systems design and related services (70 jobs).
- Architectural, engineering and related services (57 jobs, based on the BC Stats definition that allocates only 50% of employment in this industry to the "high tech" sector).
- Cable and other program distribution (10 jobs).
- Management, scientific and technical consulting services (5 jobs, based on the 20% of employment in this sector that is allocated to "high tech").

Due to the strong growth potential of such industries throughout BC, growth since 2006 in the PRRD is estimated at 10%. Employment is projected to double over the next 20 years, adding 156 jobs.

Jobs in these high-knowledge sectors will grow in part through pre-retirees who move to the PRRD and continue to work from a distance or as consultants.

4.7. Agriculture & Food

The agriculture and food sector, as classified by BC Stats, includes primary agricultural production as well as food-related manufacturing, including meat, dairy and beverage products manufacturing (but not seafood products manufacturing). The agriculture sector also includes aquaculture (which is discussed below in greater detail).

The 2006 Census showed about 150 jobs in agriculture and food, nearly all in farming (including aquaculture). Most processing of agricultural products is small-scale, on-farm activities for sale to the local market, either directly to consumers through farm-gate sales or through local farmers markets and retail outlets.

The biggest factor currently affecting the industry is the introduction of new provincial regulations that require animals to be slaughtered in a certified abattoir, one of which does not exist in the PRRD. It is not economical to raise animals locally, ship them elsewhere for slaughter, and then ship them back to the PRRD for sale. These regulations have, at least temporarily, seriously affected the viability of local animal farming.

[15] See BC Stats (September 2007), Profile of the British Columbia High Technology Sector: 2007 Edition for the latest provincial-level analysis.

Factors influencing agriculture and food employment over the next 20 years include:

- There is currently significant under-utilization of agricultural land in the PRRD. Many farms are not being actively farmed, or perhaps farmed just enough to qualify as a Farm under BC Assessment rules and therefore qualify for a lower property tax rate.

- There is significant interest in the local farming community to expand production and to undertake more processing activities through the use of a community kitchen, for example. Discussions are also ongoing to find a solution to the meat slaughter issue, which affects all types of farm animals (e.g. poultry, pigs, cattle).

- Regardless, there is reason to believe that agricultural employment will grow moderately with increased interest in food security and eating locally, which may lead to more intense uses of agricultural land. The economics of farming may also change if higher fuel prices make it less economic to transport food over long distances.

- Even with a significant increase in local agricultural production, there is unlikely to be significant new demand for off-farm industrial space for food processing operations. Local industry representatives suggested that most processing opportunities would still be focused on serving the local market rather than exporting to other areas. That scale of operation can typically be accommodated on-farm, as Agricultural Land Reserve regulations permit basic processing of a farm's products. (ALR regulations do not permit larger-scale processing of food inputs brought in from elsewhere, but this is unlikely to be the focus of PRRD farmers).

Due mainly to reductions in animal farming, agricultural employment is assumed to have fallen by 20% since the 2006 Census. The future looks more promising, however, based on a renewed interest in eating locally and possibly an improved competitive environment for locally-grown food. Growth of 40% (36 jobs) is projected over the next 20 years, all of which can be accommodated on the existing agricultural land base.

Aquaculture

Aquaculture is classified for statistical purposes as part of the agriculture sector. There are aquaculture operators in several locations in the region, including Okeover Inlet and Lois Lake. Considerations for future growth include:

- Industry representatives believe there is solid growth potential for the sector with continuing world demand for seafood, the depletion of natural fish stocks, and a favourable natural environment for aquaculture production.

- There are cyclical issues currently facing some parts of the sector, such as shortage of oyster seed and low prices for some products, but these are not considered to be long-term impediments to growth.

- There are several clear opportunities for aquaculture growth in the next 20 years. The Sliammon Band has several aquaculture tenures on Okeover Inlet that are currently under-utilized, while some of the other operators see potential to substantially increase production, particularly in Okeover.

- The shellfish aquaculture that is favoured in the PRRD is not subject to the same environmental controversies as salmon farming and may therefore face fewer environmental and community obstacles to expansion.

- Aquaculture operations have relatively minor land use requirements – most of their operations occur on the water so increases in employment have minimal impact on the need for new buildings.

Of the roughly 150 agriculture jobs in the PRRD cited above from the 2006 Census, an estimated 40 of those jobs were in aquaculture operations. This figure is assumed to be static since 2006, but the strong growth prospects for the region suggest a doubling of employment to 80 jobs over the next 20 years is reasonable.

4.8. Tourism

The "tourism industry" is similar to high technology in that it is technically a combination of other industries that receive part of their revenue from tourists. BC Stats has developed a tourism definition that includes percentages of industries in transportation, food and accommodation services, recreation and entertainment, retail, etc.

Even though the BC Stats definition may not be entirely valid when applied at a local level, it does provide an indication of changes in tourism employment in the PRRD. From 2001 to 2006 the tourism sector declined by an estimated 22%, losing about 120 jobs in transportation, accommodation and food services, and retail trade.

This decline is consistent with the one-third drop in recorded visitors by the Powell River Visitor Information Centre (VIC) from 2004 to 2007, from 23,311 recorded visitors to 16,543 recorded visitors (although it is recognized that these records do not account for all visitors and may not be collected in a consistent fashion from year to year due to differences in staffing and work procedures, while the VIC also moved its physical location in this time period, which may affect visitor counts).

Factors that affect future projections of tourism growth include:

- Tourism remains one of the most important economic activities in British Columbia. Despite a series of negative events affecting world travel in the last 5-7 years, including the SARS virus, terrorist attacks, and a rapidly depreciating US dollar, the BC tourism industry has continued to show steady growth in value and employment.

- The PRRD has a multitude of attractive tourist opportunities, particularly in outdoor recreational activities like hiking, fishing and boating.

- There is a general feeling in the region that the PRRD's tourism attributes have yet to be discovered by most of the BC population, so there is potential for significant growth in the future. There are a variety of initiatives that recognize this potential, such as the expansion of the South Harbour to attract more recreational boaters.

- It is possible that permanently higher transportation costs may dampen lengthy tourist trips, but this will not necessarily damage the PRRD as residents of BC and other nearby areas (e.g. Alberta, Washington) may be more likely to vacation closer to home in areas such as the PRRD.

- Continued influx of outsiders into the region for retirement and other purposes will continue to make the region better known for tourism purposes as well.

After the job losses from 2001 to 2006 explained above, tourism employment is assumed to have grown by 5% since 2006. This is due to the generally positive view of local tourism officials and is consistent with the longer-run pattern of tourism growth at the provincial level. Provincial tourism employment grew by an average of 2.5% per year from 2002 to 2006 and it is assumed that the PRRD will grow at least as fast as the provincial average, so growth is projected to be 60% (270 jobs) over the next 20 years[16].

Air Transportation and Related Services

One of the economic opportunities for the region that does not neatly fit into any of the economic base sectors profiled here is the attraction of air transportation companies and support services that would locate at the Powell River Airport. Companies manufacturing aerospace products are classified under high technology or non-resource manufacturing, but companies providing air transportation services or support services fit best under the tourism category for the purposes of this study.

Due to the potential to expand air transportation related services, a further 10% is added to the projected growth in tourism shown above, so the total tourism growth projection is 70% (315 jobs) over the next 20 years.

4.9. Public Sector

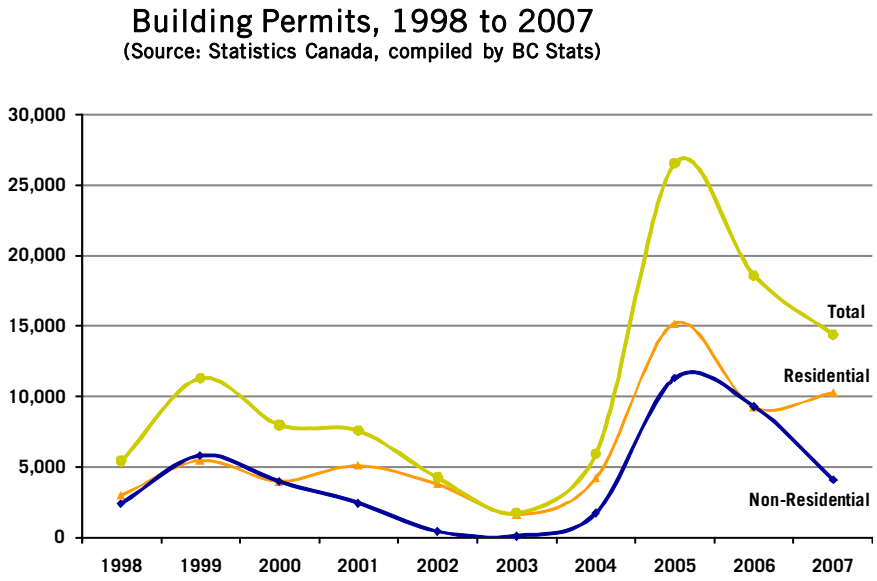
The public sector definition used by BC Stats for their employment multipliers includes government employment (federal, provincial and local), plus education and health care. Growth in this sector from 2001 to 2006 was about 160 jobs, concentrated mainly in education with some growth in government services and a decline in health care employment.

Growth in public sector employment in the future will be a function primarily of the local population. The aging population will increase demand for health care services, while fewer children will cause a decline in elementary and secondary school employment[17]. For purposes of this study, public sector employment is assumed to exactly follow population. This means that employment rose marginally (0.3%) from 2006 to 2008, while projected growth from 2008 to 2028 will vary depending on the projection scenario.

[16] Of course, many jobs in the tourism sector are low-paying and seasonal, so despite projections of growth these jobs are not effective replacements for lost forestry and mill jobs.
[17] The Provincial Ministry of Education projects a decline of about 20% in public school enrollment from 2006 to 2016. Their projections are based on the same BC Stats population projections that are examined elsewhere in this report.

4.10. Construction

Construction has been one of the fastest-growing sectors throughout BC in recent years with significant housing expansion and multiple major construction projects, many of them fueled by the 2010 Winter Olympic Games. Building permit data for the City of Powell River[18] shows a similar pattern, with far more construction activity in the period from 2005 to 2007 than the previous seven years.



According to Census employment data (shown on page 11), construction accounted for 6.4% of the region's employment in 2001, rising to 8.5% in 2006. The long-run trend in both BC and the Vancouver Island/Coast region is for construction to account for roughly 7% of total employment. It is clear that construction's share of total employment is currently above its long-run trend and it will recede as a share of the region's economy in the future.

The decline in building permits from 2006 to 2007 suggests that construction activity may already be slowing somewhat in the region. It is therefore assumed that construction employment has fallen to 8% of the regional total in 2008 (from 8.5% in 2006).

Looking ahead, it is assumed that construction employment will decline to 7% of the region's employment over the next five years and will remain at that level until 2028. In reality, construction employment will continue to be more volatile than most other industries. It will rise significantly whenever large projects are being constructed (e.g. Plutonic power run-of-river power plants, proposed WestPac LNG terminal, large housing or institutional projects). In the absence of large projects, construction's share of total employment will fall below 7%, but this figure remains a reasonable long-run average for the region.

4.11. Fishing

The BC Stats definition of the fishing sector includes commercial fishing as well as seafood products manufacturing. The sector showed strong growth from 2001 to 2006, despite the challenges facing the coastal fishing industry, particularly the salmon fishery.

The research material consulted for this study suggests that the long-term decline in the commercial fishery has now stabilized and while change will continue, the ability of the commercial fishery to adapt and pursue new species and sources of income is likely to sustain employment for the foreseeable future. Like many other industries, however, continued technological improvements are likely to reduce the

[18] Building permits are not required in the unincorporated areas of the PRRD, so comparable data for those areas is not available.

number of workers required to catch a given quantity of fish. BC Stats, in its projections of employment for the Malaspina College Region from 2006 to 2011, estimates an average annual decline of 2.6% in fishing employment[19].

There are currently several small fish processing operations in the region, but no large-scale plant. Taylor Shellfish, the largest aquaculture operator, transports shellfish to its processing plant on Vancouver Island. The Sliammon Band has a fish processing plant on Okeover Inlet with the potential to expand employment along with the Band's aquaculture operations.

Employment is assumed to have held steady from 2006 to 2008, and due to the potential to increase local processing activity, is projected to expand by 40% (49 jobs) through 2028.

4.12. Non-Resource Manufacturing

Non-resource manufacturing includes all manufacturing activity that is not related to wood, mining, fishing, or agriculture. This is a relatively minor sector in the PRRD, with fewer than 100 jobs in 2006, a decline of 20 jobs from 2001. A marine business park is currently being developed that will provide space for companies involved in marine-related activities, including manufacturing.

While the PRRD overall is not well-suited to major non-resource manufacturing operations due to its remoteness from major markets, there is potential for smaller, specialized manufacturers. Employment is assumed to have grown by 10% since 2006, with further growth of 50% (57 jobs) by 2028 (given the economic development focus on this sector, including the development of the marine business park.

Run of River Power

One other emerging industry included in this sector is run-of-river power production, most notably through the projects ongoing and planned by Plutonic Power Corporation (these types of operations are technically part of the Utilities sector, but Utilities is not one of the sectors for which BC Stats has calculated employment impact ratios). Although the actual location for Plutonic's planned operations will be several hundred kilometres away off Toba Inlet, Powell River will function as the closest service centre.

There is a lot of uncertainty regarding the ultimate scale of Plutonic's operations as much depends on their ability to secure new power supply contracts with BC Hydro. The first two projects are under development, but many additional projects are possible if power contracts and environmental permits are successfully obtained.

It is conservatively assumed that run-of-river power similar projects will support 40 local jobs by 2028, which would require several sites to be developed in addition to the two sites currently under construction.

4.13. Retirement Living

Retirees are an important part of the economic base of coastal British Columbia because of the substantial non-employment income they bring to a community (i.e. pensions, investment income). There is no direct employment associated with retirement living – rather, it produces induced employment in population-serving industries.

[19] BC Stats (2007), *Industry and Occupation Projections: 2006 to 2011 – Malaspina College Region*.

Research and local consultation suggest there is significant potential to expand the number of retirees moving to the PRRD.

- The aging of the baby boom generation will substantially increase the number of retirees throughout the developed world in the next 10-15 years. The oldest baby boomers (those born in 1946) are reaching the average Canadian retirement age of 62 this year.

- Vancouver Island and surrounding areas are known throughout Canada as a prime retirement destination due to the mild climate, natural beauty, and variety of recreational opportunities.

- The marketing of real estate through the internet has significantly increased the potential market for properties, which can be easily identified by purchasers around the world.

- Over the last 20+ years, as housing prices increased in Victoria and southern Vancouver Island, smaller and more northern communities have become increasingly popular with retirees. This process is continuing as communities like the Comox Valley, Campbell River and Powell River offer a more affordable alternative to areas to the south. The average housing price in the PRRD at the end of 2007 was only two-thirds the level in the Sunshine Coast and was 20-30% lower than Duncan, Nanaimo, and Parksville/Qualicum (see graph on page 13 and Table 25 on page 53).

- The establishment and subsequent expansion of WestJet service to Calgary and Edmonton from the Comox Airport has opened the region to Alberta tourists, recreational homeowners, and retirees. The Powell River area is a more affordable alternative to the Comox Valley located a short ferry ride away.

- In every year from 2004 to 2007, the majority of real estate purchases in the PRRD were by out-of town purchasers. Not all of these are yet new residents in the area, as some properties are purchased for investment purposes, for recreation, or for later retirement.

- There is some concern that the potential growth in retirees is being constrained in the short term by a shortage of supply of available land, particularly of desirable acreages and waterfront properties. Over the longer term, new projects currently planned in the city as well as the rural areas are expected to help alleviate this shortage.

The evidence clearly suggests that an increasing number of retirees will continue to move to the PRRD. But how many more?

Sales data collected by the Powell River Sunshine Coast Real Estate Board for the 2004 to 2007 period shows the following sales information for sellers and purchasers who identified themselves as retirees. On average, 20 more retiree households moved to the PRRD than moved away.

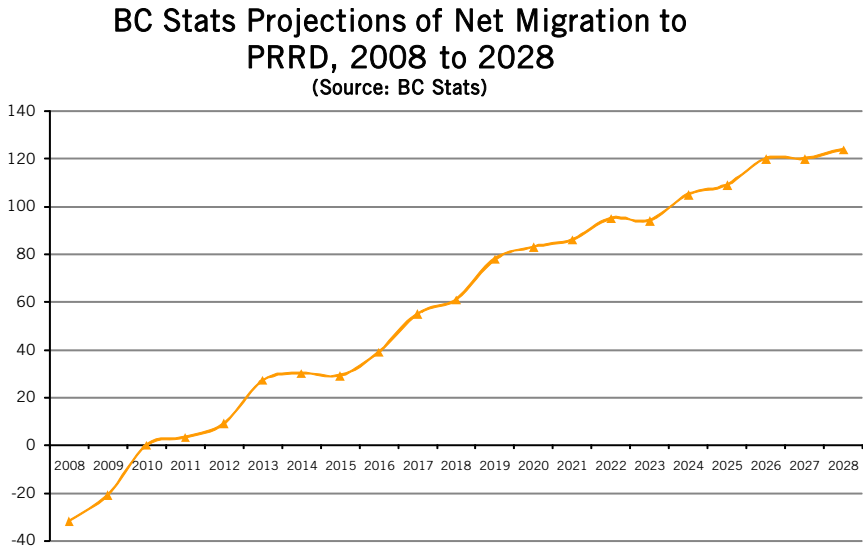
Table 16. Real Estate Activity by Retirees, 2004 to 2007

	2004	2005	2006	2007	Average
Buyers retiring to PRRD from elsewhere	82	56	30	44	53
Sellers retiring from PRRD to elsewhere	29	43	22	38	33
Net inflow of retiree households	53	13	8	6	20

Source: Powell River Sunshine Coast Real Estate Board

While the average is skewed upward by the large number of inward retirees in 2004 and the net figures are much lower for 2005 to 2007, this may be due in part to supply shortages. These figures may also understate the true inward migration of retirees who may have previously purchased vacant land or recreational or investment homes and subsequently move to the region.

The BC Stats population projections show net migration for the PRRD turning positive in 2011 and increasing gradually through 2028 (when about 120 more people will move to the PRRD than move away). The majority of the new migrants are expected to be in the 30-49 age group (i.e. too young to be retirees).[20] These migrants include people moving from elsewhere in BC and from other parts of Canada, as well as international immigrants.



It is therefore safe to conclude that BC Stats is not fully recognizing the potential for increased migration of retirees to boost the PRRD's long-term population. For purposes of this study, it is assumed that 2008 will have a new in-migration of 15 retiree households (none of which is incorporated into the BC Stats projections). The average household size in the PRRD is 2.2, although retiree households are less likely to include children and therefore the average retiree household is assumed to include 2.0 people.

Anecdotal evidence from local realtors suggests that typical new retirees are in their 50s and many of them continue to work to some degree (either on a part-time basis in the community or by bringing their job with them). This is consistent with the estimated labour force participation rate of 60% for residents aged 55-59 and 40% for residents aged 60-64 (see discussion of Table 9 on page 17).

Growth in the retirement market is projected by relating it to provincial demographics. The current average age of retirement in BC is 61 years (slightly lower than the Canadian average of 62). So growth in the BC population in the 60-64 age group is used as a proxy for growth in net retiree migration to the PRRD.

Table 17. Growth in Retirement-age Population, BC, 2009 to 2028

Year	BC Population Age 60-64 (000s) (000s)	Annual Growth	Projected Net Retirees to PRRD
2009	261.9	5.6%	32
2010	277.5	6.0%	34
2011	291.0	4.9%	35
2012	296.1	1.8%	36
2013	302.6	2.2%	37
2014	311.6	3.0%	38
2015	321.1	3.0%	39
2016	330.5	2.9%	40
2017	339.9	2.8%	41
2018	349.1	2.7%	42
2019	356.0	2.0%	43
2020	362.3	1.8%	44
2021	368.2	1.6%	45
2022	372.8	1.2%	45
2023	378.9	1.6%	46
2024	383.7	1.3%	46
2025	383.2	-0.1%	46
2026	378.9	-1.1%	46
2027	372.5	-1.7%	45
2028	364.5	-2.1%	44

Source: BC Stats, Vann Struth Consulting Group

[20] It is interesting to note that BC Stats projects consistent out-migration of residents age 15-29 through about 2023, after which the net migration of young adults is essentially zero.

One final point of emphasis on the retirement market is that growth is shown on a *net* basis. This means that not all of the growth is from new retirees moving to the PRRD, but also from some PRRD residents choosing to retire at home rather than moving elsewhere. Increased housing prices elsewhere in the province will not only encourage demand from retirees outside the PRRD, but also make it more likely that PRRD residents will choose to retire at home[21].

4.14. Summary of Direct Employment in Economic Base Sectors

The foregoing discussion of estimated and projected employment in each economic base sector is summarized below. For two sectors – construction and the public sector – the future projections depend on growth in total employment and total population, respectively. The figures shown in this table are for the "Worker Migration Scenario" explained in Section 5.2.

Incidentally, the fact that total economic base employment is the exact same number for 2001 and 2006 (4,923 jobs) is nothing more than a fluke.

Table 18. Direct Employment in Economic Base Sectors, "Worker Migration Scenario", 2001-2028

Economic Base Sector	2001 Jobs (Census)	Growth 01-06	2006 Jobs (Census)	Estimated Growth 06-08	Estimated 2008 Jobs	Projected Growth 08-28	Projected 2028 Jobs
Logging	433	6%	459	-10%	413	-20%	330
Pulp & paper	860	-24%	650	-20%	520	-40%	312
Sawmills	110	-55%	50	-10%	45	20%	54
Other wood manufacturing	10	500%	60	5%	63	60%	101
Mining & mineral processing	155	-16%	130	10%	143	10%	157
High technology	101	41%	142	10%	156	100%	312
Agriculture & Food (inc. Aquaculture)	214	-29%	152	-14.5%	130	58.5%	206
Tourism	548	-22%	429	5%	450	70%	766
Public Sector	1,769	9%	1,930	0.3%	1,936	10.1%	2,131
Construction	520	34%	698	-9.6%	628	-2.7%	611
Fishing	88	45%	128	-5%	122	40%	170
Non-resource manufacturing	115	-17%	95	0%	95	60%	152
Total	**4,923**	**0%**	**4,923**	**-4.5%**	**4,702**	**12.8%**	**5,303**

Note: Includes jobs with both fixed and no fixed place of work.
Sources: Statistics Canada, Vann Struth Consulting Group

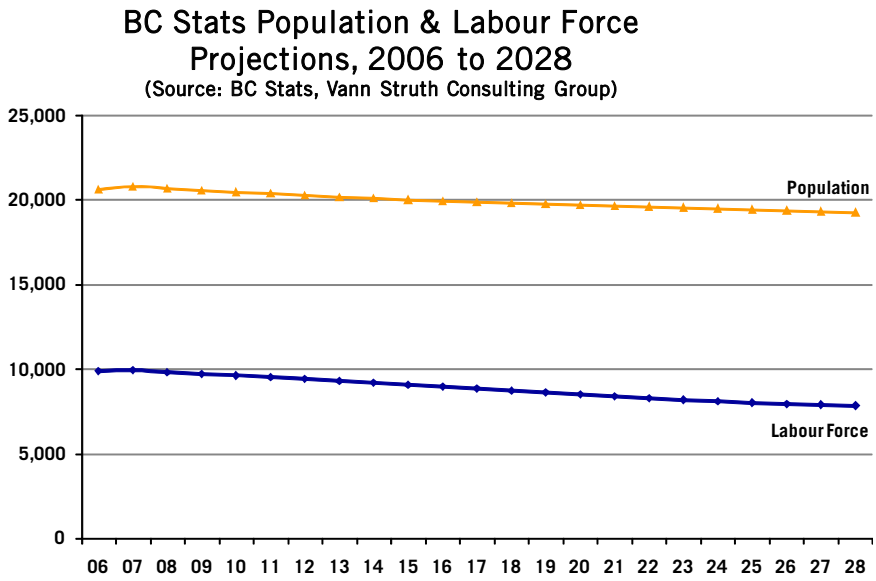
[21] The model also ignores the death rate for retirees. In reality, some of the new retirees moving to the PRRD will die within the next 20 years, but the model assumes that any retirees who die will be replaced by new retirees.

5. PROJECTION SCENARIOS

This chapter presents two possible scenarios for future growth and development in the PRRD. **The key difference between the two scenarios is the nature of migration to the PRRD.**

As discussed earlier in Section 2.5, migration is the key to sustaining and/or expanding the PRRD's population. In the absence of migration, the regional population will fall (because birth rates are substantially less than the replacement rate).

The BC Stats population projections for the region include assumptions about net migration that are based largely on historic patterns of growth and migration. As explained in Section 4.13, most of the people moving to the PRRD are expected to be in the 30-49 age range, while there is consistent out-migration of people in the 15-29 age range. Yet even with the influx of people in the prime working years of 30-49, the BC Stats projections show the PRRD's population continuing to age substantially. The graph shows population declining by about 1,400 people from 2008 to 2028, but due to the aging of the population, the region's labour force is projected to decline even more, by about 1,900 people[22]. The implication is that **if the BC Stats population projections are correct, the PRRD will have a serious labour shortage in the future.**



This labour shortage will affect the PRRD's growth and land use because without sufficient labour, many businesses will be forced to downsize their operations.

5.1. Baseline Scenario

The first scenario, called the "Baseline Scenario", has the following characteristics:

- It assumes the BC Stats population projections are correct.
- It adds additional migration from retirees (as explained in Section 4.13, BC Stats does not adequately anticipate the PRRD's potential to attract a greater number of retiree migrants in the future). These new retirees will add somewhat to the region's labour force, but not enough to sustain the labour force at its current levels.

[22] The decline in the labour force occurs even though labour force participation rates are expected to increase, as shown in Table 9 on page 22.

- The potential growth in economic base industries is assumed to follow the projections outlined in the previous chapter, but each industry's growth must be modified downward due to insufficient labour.

The Baseline Scenario is therefore a "low" scenario for future growth.

5.2. Worker Migration Scenario

The second scenario, called the "Worker Migration Scenario", has the following characteristics:

- It starts with the BC Stats population projections, but then assumes that as labour shortages start to appear, additional working-age migrants (and their families) move to the region. This is a much more optimistic scenario as British Columbia is already experiencing labour shortages and the PRRD will be in competition with many other parts of the province to attract the workers it needs.
- It adds additional migration from retirees, same as the first scenario.
- Growth in economic base industries is assumed to follow the projections outlined in the previous chapter, with no constraints due to insufficient labour.

The Worker Migration Scenario is therefore a "high" scenario for future growth.

5.3. Projection Results

The projection results for each scenario are summarized in Table 19.

Note that agriculture has been excluded from the calculation of floorspace and land demand. As discussed in Section 4.7, it is anticipated that all of the growth in agricultural production can be accommodated on the existing agricultural land base, as well as all or most of the growth in agricultural processing and/or food products manufacturing. If some new off-farm manufacturing operations are developed, such as a community kitchen or abattoir, they can be accommodated within the given estimates for growth in industrial land. Aquaculture is also included in the agriculture employment statistics, but growth in aquaculture will have relatively minor impacts on land demand as most of the expansion occurs in water-based facilities.

Note also that **the key insight from this table is the amount of growth**. The estimates of floorspace and land demand for 2008 are inexact given the incomplete data that is available, particularly for industrial and institutional properties. What is most important in planning for future growth in the region is the projected change in floorspace and land demand.

Table 19. Summary of Projection Scenarios

		I. Baseline Scenario			II. Worker Migration Scenario		
	2008	2028	Growth	Growth Pct.	2028	Growth	Growth Pct.
Employment Floorspace Demand (thousands of square feet)							
...Commercial - Retail/Services	971	906	-65	-7%	1,154	183	19%
...Commercial - Office	381	343	-39	-10%	425	43	11%
Commercial (Total)	1,352	1,248	-104	-8%	1,578	226	17%
Industrial	942	645	-297	-32%	911	-31	-3%
Institutional	620	600	-20	-3%	682	62	10%
Total (non-Agriculture)	**2,915**	**2,494**	**-421**	**-14%**	**3,172**	**257**	**9%**
Employment Land Demand (ha)							
...Commercial - Retail/Services	36.1	30.6	-5.5	-15%	39.0	2.9	8%
...Commercial – Office	11.8	9.7	-2.2	-18%	12.0	0.1	1%
Commercial (Total)	47.9	40.2	-7.6	-16%	50.9	3.0	6%
Industrial	87.6	54.5	-33.0	-38%	77.0	-10.6	-12%
Institutional	28.8	25.3	-3.5	-12%	28.8	0.0	0%
Total (non-Agriculture)	**164.2**	**120.1**	**-44.1**	**-27%**	**156.7**	**-7.5**	**-5%**
Employment							
Total Jobs	**7,856**	**6,872**	**-984**	**-13%**	**8,735**	**879**	**11%**
...Home-based (included above)	826	814	-11	-1%	1,077	251	30%
Population							
Age 0-14	2,834	2,324	-510	-18%	2,574	-260	-9%
Age 15-24	2,375	1,520	-855	-36%	2,279	-96	-4%
Age 25-64	11,253	9,241	-2,012	-18%	10,923	-330	-3%
Age 65+	4,242	7,013	2,771	65%	7,013	2,771	65%
Total	**20,704**	**20,098**	**-606**	**-3%**	**22,789**	**2,085**	**10%**
Median Age	**47**	**54**			**49**		
Housing							
Single Family	8,012	8,557	546	7%	9,375	1,363	17%
Townhouse/Rowhouse etc.	402	449	47	12%	484	82	20%
Apartment	1,208	1,397	190	16%	1,527	319	26%
Mobile Home/Other	284	316	31	11%	339	55	19%
Total Units	**9,906**	**10,719**	**813**	**8%**	**11,725**	**1,819**	**18%**
...recreational (included above)	561	824	263	47%	824	263	47%

The projection results show that under the Baseline Scenario, the region will experience negative growth in employment and consequently negative growth in all categories of employment floorspace and land. The population will age significantly, with senior citizens the only age category showing growth. Housing demand will expand, driven by incoming retirees, shrinking household sizes and sustained demand for recreational housing.

The Worker Migration Scenario, which will require the PRRD to successfully attract working-age residents to fill labour shortages, will lead to modest growth in most categories of employment floorspace and land. Population will grow by 10% over the next 20 years, although all of the growth will be in the 65+ age category. Housing demand will expand by 17% (1,363 units), the majority of which will be for single family homes, although all housing types are projected to see increased demand.

Effect of Catalyst Paper

The effect of Catalyst Paper on the industrial categories must be further explained. The figures shown in Table 19 assume a continued decline in Catalyst employment, similar to the trends that have been observed over the last twenty-five years. Due to its large share of industrial activity in the PRRD, any change in Catalyst employment carries a heavy weight in overall projections of industrial floorspace and land demand.

As explained in Section 4.2, the Worker Migration Scenario assumes that Catalyst employment will fall by more than 200 workers over the next 20 years. Using the standard industrial ratios of 600 sf/job and an FAR of 0.11 (values which may not be accurate for Catalyst as its data was not included in the assessment calculations) leads to a loss in demand for about 125,000 sf of industrial floorspace and more than 10 ha (26 acres) of industrial land. This means that the decline in Catalyst employment is responsible for the entire projected decline in industrial land demand under this scenario and also causes projected demand for industrial floorspace to be negative when it would otherwise be positive.

Yet even if Catalyst employment does decline significantly, it is not possible for other industrial users to simply move in and immediately start using floorspace or industrial land that becomes surplus to Catalyst's needs, in part because the land and building needs of the mill are likely quite different from other industrial users. It is therefore more appropriate to show projections for industrial land and floorspace demand that exclude Catalyst Paper from the calculations.

Table 20. Projections of Industrial Floorspace and Land without Catalyst Paper

		I. Baseline Scenario			II. Worker Migration Scenario		
	2008	2028	Growth	Growth Pct.	2028	Growth	Growth Pct.
Employment Floorspace Demand (thousands of square feet)							
Industrial without Catalyst Paper	630	572	-59	-9%	724	94	15%
Employment Land Demand (ha)							
Industrial without Catalyst Paper	58.6	48.3	-10.3	-18%	61.2	2.6	4%

These revised figures show the potential for some growth in industrial floorspace and land under the Worker Migration Scenario. Growth in greenfield industrial development may be even greater than the figures shown in the table if other current industrial areas that become surplus are not redeveloped, forcing new users into previously undeveloped industrial areas.

5.4. Projection Results by PRRD Sub-Area

An initial estimate of how the PRRD's future growth will be distributed among its sub-areas can be obtained by extrapolating the current distribution of employment across the sub-areas. The projected rate of growth of each sector varies significantly, so sub-areas with relatively more employment in the high-growth sectors are projected to see relatively more demand for employment floorspace and land in the future.

This assumes it is reasonable for the current distribution of employment by sector to remain relatively consistent into the future. This seems a reasonable assumption – Stillwater in Area C will remain a centre of forest industry activity, Okeover Inlet will remain a centre of aquaculture production, Texada Island will remain the centre of mining activity, and the city of Powell River will continue to hold most higher-order services and office-based functions.

Table 21 shows projected commercial and industrial floorspace and land demand for each sub-area[23]. The analysis of assessment data suggests that Floor Area Ratios are higher in the city compared to the rural areas, which is consistent with typical patterns of urban relative to rural development. To account for these differences, the PRRD-wide FARs shown in Table 13 are increased for the city (by about 10%) and decreased for the rural areas such that the PRRD-wide average stays the same. Similar to Table 19, the **emphasis should be on the projected growth in each area.**

One other note regarding this exercise is that separate projections are not available for Sliammon First Nation, although they are included in the PRRD total.

[23] Data on institutional properties is not shown for the sub-areas.

Table 21. Projections of Demand for Commercial and Industrial Floorspace and Land, by PRRD Sub-Area

		I. Baseline Scenario			II. Worker Migration Scenario		
	2008	2028	Growth	Growth Pct.	2028	Growth	Growth Pct.
City of Powell River							
Commercial Floorspace (000 sf)	1,135	1,061	-74	-7%	1,340	205	18%
Industrial Floorspace (000 sf)	659	433	-227	-34%	643	-17	-3%
Total Floorspace (000 sf)	**1,795**	**1,493**	**-301**	**-17%**	**1,983**	**188**	**10%**
Commercial Land (ha)	36.1	30.7	-5.4	-15%	38.8	2.7	7%
Industrial Land (ha)	55.1	32.9	-22.2	-40%	48.9	-6.3	-11%
Total Land (ha)	**91.3**	**63.6**	**-27.7**	**-30%**	**87.7**	**-3.6**	**-4%**
Area A							
Commercial Floorspace (000 sf)	50	46	-4	-8%	62	12	24%
Industrial Floorspace (000 sf)	51	37	-14	-28%	49	-2	-4%
Total Floorspace (000 sf)	**102**	**83**	**-19**	**-18%**	**111**	**10**	**10%**
Commercial Land (ha)	2.4	2.0	-0.4	-17%	2.7	0.3	13%
Industrial Land (ha)	6.2	4.1	-2.1	-35%	5.4	-0.8	-13%
Total Land (ha)	**8.6**	**6.0**	**-2.5**	**-30%**	**8.1**	**-0.5**	**-6%**
Area B							
Commercial Floorspace (000 sf)	43	43	0	1%	52	9	22%
Industrial Floorspace (000 sf)	17	12	-5	-30%	16	-1	-3%
Total Floorspace (000 sf)	**60**	**55**	**-5**	**-8%**	**68**	**9**	**15%**
Commercial Land (ha)	2.0	1.8	-0.2	-8%	2.2	0.2	11%
Industrial Land (ha)	2.0	1.3	-0.7	-37%	1.8	-0.2	-12%
Total Land (ha)	**4.0**	**3.1**	**-0.9**	**-22%**	**4.0**	**0.0**	**-1%**
Area C							
Commercial Floorspace (000 sf)	31	28	-3	-10%	35	4	13%
Industrial Floorspace (000 sf)	69	49	-20	-29%	66	-3	-4%
Total Floorspace (000 sf)	**101**	**77**	**-23**	**-23%**	**102**	**1**	**1%**
Commercial Land (ha)	1.5	1.2	-0.3	-18%	1.5	0.0	3%
Industrial Land (ha)	8.4	5.4	-3.0	-36%	7.3	-1.1	-13%
Total Land (ha)	**9.9**	**6.6**	**-3.3**	**-33%**	**8.8**	**-1.1**	**-11%**
Area D (Texada Island)							
Commercial Floorspace (000 sf)	42	40	-2	-5%	51	10	23%
Industrial Floorspace (000 sf)	93	88	-5	-5%	101	7	8%
Total Floorspace (000 sf)	**135**	**128**	**-7**	**-5%**	**152**	**17**	**12%**
Commercial Land (ha)	2.0	1.7	-0.3	-13%	2.2	0.2	12%
Industrial Land (ha)	11.3	9.7	-1.6	-14%	11.1	-0.2	-2%
Total Land (ha)	**13.2**	**11.4**	**-1.8**	**-14%**	**13.2**	**0.0**	**0%**
Area E (Lasqueti Island)							
Commercial Floorspace (000 sf)	12	11	-1	-7%	14	1	11%
Industrial Floorspace (000 sf)	17	14	-4	-21%	17	0	1%
Total Floorspace (000 sf)	**29**	**25**	**-4**	**-15%**	**31**	**2**	**5%**
Commercial Land (ha)	0.6	0.5	-0.1	-16%	0.6	0.0	1%
Industrial Land (ha)	2.1	1.5	-0.6	-28%	1.9	-0.2	-8%
Total Land (ha)	**2.6**	**2.0**	**-0.7**	**-25%**	**2.5**	**-0.2**	**-6%**

Several general conclusions from the projected allocation of growth to each sub-area:

- Commercial growth is considerably stronger than industrial growth, reflecting the continued transition of the PRRD economy from an economy reliant on resource industries to a more services-oriented economy reliant on tourism and retirees. For the Baseline Scenario, this means that the projected decline in floorspace and land demand is greater for industrial uses.

- The exception to this rule is Area D (Texada Island) where the strength of the quarries will sustain demand for industrial space into the future. Any growth will be accommodated within the existing quarry sites, however, so there is unlikely to be any net growth in industrial land development.

- As discussed in the previous section, the effect of Catalyst Paper must be taken into consideration when interpreting the projection results for the city of Powell River. The Worker Migration Scenario projects a decrease in industrial land demand of 3.6 ha in the city. Removing the effect of Catalyst Power leaves a projected *increase* in demand of about 4 ha of industrial land.

Distribution of Population and Housing Growth

Projected population growth ranges from a decline of about 600 people under the Baseline Scenario to an increase of nearly 2,100 people under the Worker Migration Scenario. Housing demand grows under both scenarios, with increases ranging from 800 to 1,800 units. The driving factors behind the increased housing demand are migration of retirees and increased demand for recreational housing.

While the ultimate distribution of population growth will depend on where new supply is made available and the attractiveness of this supply to potential purchasers, the following inferences can be drawn:

- Consultation with realtors suggests that the housing preferred by most retirees is a single family home, with the highest demand for waterfront access (either ocean or one of the lakes).

- Single family housing with waterfront access is most common in the rural parts of the region, suggesting stronger demand for new housing in the rural areas compared to the city.

- Demographic projections show that the region will have fewer children in the future, which suggests that demand may be lower for suburban-style housing in the city that is located in proximity to schools and recreational facilities.

- Looking beyond 20 years, when many of the baby boomer retirees who move to the region in their 50s reach a more advanced age, their housing demand will shift toward more apartments and other multi-family housing developments that have lower maintenance requirements and closer proximity to health care and other services.

- Regional population estimates (shown in Table 3 on page 7) since 1991 show that population growth has been faster in the rural areas compared to the city, although the situation has reversed in the last five or so years with faster growth in the city. This may be due in part to greater availability of new housing options in the city.

5.5. Comparison of Land Demand to Land Supply

The City of Powell River provided comprehensive statistics on the amount of vacant land that is designated for future commercial, industrial or residential use, and the ease of servicing this land. Table 22 compares the City's figures with projected land demand in this study. Future demand for industrial land is shown

without Catalyst Paper because, as discussed in Section 5.3, it is unlikely that surplus Catalyst land on the mill site will become available for other industrial companies within the next 20 years[24].

Table 22. Comparison of Land Demand to Land Supply in City of Powell River, 2028

	Projected Additional Land Demand (ha)		Current Vacant Land (ha)		
Land Use	Baseline Scenario	Worker Migration Scenario	Total Vacant Land	Readily Serviceable	Non-Readily Serviceable
Commercial	-5.4	2.7	10.93	4.40	6.53
Industrial (without Catalyst Paper)	-2.0	4.2	21.43	4.45	16.98
Total	**-7.4**	**6.9**	**32.36**	**8.85**	**23.51**

Source: City of Powell River (vacancy statistics), Vann Struth Consulting Group (land demand projections)

Even under the optimistic Worker Migration Scenario, there is still **projected to be sufficient readily serviceable commercial and industrial land to accommodate future demand in the city of Powell River**. Under this scenario, increased demand is 2.7 ha of commercial land, compared to 4.4 ha of readily serviceable vacant commercial land, while increased industrial land demand of 4.2 ha can be accommodated within the 4.45 ha of readily serviceable vacant industrial land.

Similar comprehensive data on land supply in the rural areas of the PRRD is not available. Due to the limited land use regulations in the rural areas, there is no equivalent "designation" of long-term land use. This is not a problem, however, as the analysis projects at best a small increase in demand for commercial land in the rural areas and a moderate decline in demand for industrial land (due to a projected employment decline in some of the major industrial operations in the rural areas, such as logging companies).

Table 23. Summary of Land Demand in PRRD Rural Areas (and Sliammon), 2028

	Projected Additional Land Demand (ha)	
Land Use	Baseline Scenario	Worker Migration Scenario
Commercial	-2.2	0.3
Industrial	-10.8	-4.3
Total	**-13.0**	**-4.0**

Source: Vann Struth Consulting Group (land demand projections)

Note that these projections include the assumption about a gradual densification of uses of 10% over the next 20 years (i.e. the same amount of commercial and industrial floorspace requires 10% less land). If this densification does not occur in the rural areas, there would be slightly greater demand for commercial land in the rural areas and the decline in industrial land demand would be slightly less severe.

In any case, it can safely be concluded that aggregate demand for new commercial and industrial land in the rural areas can easily be accommodated by the existing supply of vacant land.

[24] Note that Catalyst is included in the calculations of future industrial land demand in Table 21, which is why it differs from Table 22.

6. GROWTH ANALYSIS CONCLUSIONS

This chapter summarizes some of the study's key conclusions and observations. Further planning implications and recommendations are contained in Chapter 7.

Which Scenario?

The obvious question in summarizing the results of this growth analysis is which of the projection scenarios is most realistic?

The Baseline Scenario uses the official BC Stats population projections, supplemented by additional retiree migrants, to show that the PRRD's labour force is projected to shrink dramatically in the next 20 years. Given that these projections are based on historic patterns of growth in the PRRD, they should be considered a realistic potential outcome.

The Worker Migration Scenario relies on prudent forecasts of employment growth in each of the PRRD's economic base sectors, plus additional retiree migrants. Even though these forecasts are reasonable given the market prospects of the key sectors in the PRRD economy, without a solution to the pending labour shortages this growth will not be realized.

There is a significant discrepancy in the results of the two scenarios, with the Baseline Scenario forecasting negative growth across all categories of development except housing, while even the optimistic Worker Migration Scenario forecasts only modest growth. **The discrepancy between these two scenarios is an indication of the extent of the labour shortage issue facing the region if historic growth patterns do not change.**

The most likely outcome is development that falls between the two scenarios. The PRRD is unlikely to attract all of the new workers it will require because labour shortages will be a serious issue throughout the British Columbia economy in the coming decades. Yet the BC Stats population projections seem excessively pessimistic about the region's growth prospects. It has already been established that the projections do not adequately account for the PRRD's potential to attract more retirees in the future, while many of the young adults who have historically moved away from the PRRD may find greater opportunities at home due to labour shortages or opportunities to become small business owners.

Given the purpose of this study is supporting cooperative long-range planning in the PRRD, it may be prudent to use somewhat optimistic projections to ensure that land supply and servicing is in place if the best-case growth possibilities are realized. That way even if growth is slower than the best-case scenario over the next 20 years, the region will still be positioned to accommodate future growth over an even longer time horizon.

Projections show Demand…Supply is a Local Decision

The projections developed in this report show the potential *demand* for floorspace, land, and housing in the PRRD. This demand will be realized only if sufficient land and development opportunities are made available in the right locations, for the right price, with the right servicing, and under the right regulatory environment.

But local governments in the PRRD are not obliged to satisfy market demand if it is inconsistent with other community values, such as environmental sustainability, social cohesion, desirable planning principles, or fiscal responsibility.

Implications for Sliammon

This report contains little specific discussion of Sliammon lands. There is unfortunately less data available for the Sliammon Reserve than for other parts of the region, thereby limiting some of the specific analysis.

There are some general conclusions, however, that relate to the development opportunities that were addressed in an earlier report[25] on the highest and best uses of the Sliammon Treaty Settlement Lands, which are located within what is currently Area A. The report suggested that resource uses, including forestry, mining of aggregates (i.e. gravel pits), and aquaculture were the highest and best uses.

This study certainly supports the potential of the aquaculture sector, as well as the potential for housing development (both for First Nations members and others), the development of tourism-related opportunities such as recreational housing, resorts, or golf courses, and participation in large projects such as the construction and operation of Plutonic Power's run-of-river facilities.

It is also worth noting that business development opportunities need not be large, economic base industries – there will also be opportunities to expand population-serving industries, such as neighbourhood-level retail and personal services to meet the needs of Sliammon people and other residents living on or near Sliammon land. The current Sliammon village is the logical location for this type of development, which should be at a scale intended for local needs that does not detract from the region's retail and services core in the city.

[25] Urban Systems (November 2003), *Highest and Best Use Analysis: Treaty Settlement and Reserve Land,* prepared for Sliammon Treaty Society.

7. PLANNING IMPLICATIONS AND RECOMMENDATIONS

This chapter uses the study's key conclusions and observations to provide the implications of the two possible growth scenarios for land-use planning and offers recommendations for the Powell River Regional District.

Commercial and Industrial Land

As noted in Chapter 5, there is a strong possibility that the PRRD – like most regions of the province – will experience a labour shortage in the future, which could result in the downsizing of many businesses. This study also concludes that, in both the Baseline Scenario and the Worker Migration Scenario, the aggregate future demand for new commercial and industrial development can easily be accommodated within the existing vacant land inventory within the PRRD. In the latter scenario, it is conceivable that the rural areas could see an increase in demand for commercial floorspace; however, there is land available to accommodate this demand. Those commercial developments that require serviced or readily-serviceable land will find a more-than-adequate supply within the City boundaries. Commercial uses that are traditional to rural areas should continue to be located within the areas they serve, providing typically rural services – a "corner store", a service station, boat repairs, home-based businesses, agricultural sales, etc.

Residential Land

The Baseline Scenario forecasts a decline in the population of about 600 people by the year 2028. Demand for housing increases by 800 units even under this scenario, however, due to a continued decline in the average number of people per household (associated with an aging population) and growth in demand for recreational housing. The Worker Migration Scenario depicts an increase in population of nearly 2,100 people and a corresponding increase in the demand for housing of 1,800 units.
The two scenarios give a range of projected housing demand of an additional 40 to 90 units per year, on average.

Both scenarios have the same growth forecasts for retirees, so the types of housing that will be in demand under both scenarios is housing for retirees and pre-retirees, many of whom will be looking for single-family lots or homes on the waterfront. They will probably not want to be too isolated from the goods and services available in Powell River and are therefore likely to find the coastline and lakes within or close to the city most attractive. While there appears to be an adequate supply of land to accommodate even the most optimistic expectation of growth, the density of achievable development will depend on the availability of water and sewer services.

The higher-growth Worker Migration Scenario forecasts more housing demand by younger, working-age adults, many of whom will have families. While some of this housing demand will be located throughout the rural areas, it will be disproportionately focused on the city, closer to jobs, schools, and other services. The key to realizing this scenario, which will have its greatest impact on housing demand in the city, is successfully attracting working-age people and their families (and keeping more working-age PRRD natives who might otherwise move away).

Recommendations for Land-Use Planning

In light of this study's findings and conclusions, it is recommended that the Powell River Regional District, the City of Powell River, and Sliammon First Nation work cooperatively to:

1. Encourage and facilitate the development of housing for seniors in locations of the region that are serviced with water and sewerage.

2. Anticipate and plan for increased growth in the demand for smaller lots on water and sewer systems, particularly in the city and areas of Sliammon lands and electoral areas where partial services exist.

3. Plan for the provision of services within the region that reflect the needs of an aging population, such as public transit, health and wellness services, care facilities and changing recreational needs (e.g. walking paths and more passive activities).

4. Encourage the redevelopment of existing industrial and commercial areas, as well as the infilling of vacant industrial and commercial lands, rather than designating or permitting the development of new or undeveloped sites.

5. Maintain and support the continued use of industrial areas of strategic importance to the region's economic base sectors, such as waterfront forestry operations.

6. Refuse applications to rezone industrial land for residential use without an area-specific impact analysis.

7. Encourage new local or neighbourhood commercial developments that service rural areas to locate within existing neighbourhood nodes or communities (e.g. Black Point, Kelly Creek, etc.). There are existing commercially and industrially-zoned lands within the City that can accommodate larger-scale commercial and industrial development or redevelopment.

8. Encourage the development of mixed-use buildings – such as residential above commercial or industrial – in neighbourhood nodes with appropriate servicing particularly within the city and where commercial and industrial uses locate, as well as in lands currently developed for commercial and industrial use provided adequate servicing can be provided for the increased density.

9. Encourage clustering of new residential lots in appropriate residentially-zoned areas with waterfront access or water views and with communal water and sewer systems where significant community benefits/amenities can be provided such as trail systems, large park space and the preservation of sensitive ecosystems. Clusters should be designed with greenspace between them to break the impact of continuous waterfront development.

10. Ensure that waterfront residential developments provide public access to the water.

11. Avoid locating denser, contiguous residential development within Electoral Areas in close proximity to the City of Powell River boundary and encourage increased densities to locate within the city and avoid creating sprawl in the Electoral Areas.

12. Encourage the City to enter into a Memorandum of Understanding to provide water and sewer services on a user-pay basis with the Sliammon First Nation in order to create balanced development opportunities and potential benefits within the city and on the Sliammon lands. The provision of water could, at some point in the future, become the topic of a regional system feasibility study.

13. Continue to support the holding of regular *Council of Councils* between the PRRD, the City and the Sliammon First Nation (say, quarterly) to discuss the consideration of land use, economic development and servicing issues on a multi-jurisdictional, regional basis.

APPENDIX A: RESEARCH SOURCES

Alberta Municipal Affairs and Housing, Municipal Services Branch (December 2007), *2007 Official Population List.*

Amos, Greg (June 6, 2008), "Meat regulations hard to swallow", *Whistler Question.*

BC Ministry of Advanced Education and Service Canada BC/Yukon Region (February 2007), *Employment Outlook for British Columbia: COPS BC Unique Scenario for 2005 to 2015.*

BC Ministry of Economic Development (March 2008), *Major Projects Inventory.*

BC Stats (December 2001), *Defining the British Columbia High Technology Sector Using NAICS.*

BC Stats (September 2002), *British Columbia's Fisheries and Aquaculture Sector.*

BC Stats (September 2003), "How many people were missed in the 2001 Census?", feature article on www.bcstats.gov.bc.ca.

BC Stats (January 2004), *British Columbia's Heartland at the Dawn of the 21st Century: 2001 Economic Dependencies and Impact Ratios for 63 Local Areas.*

BC Stats (2006), *A Guide to the B.C. Economy and Labour Market*.

BC Stats (2007), *Industry and Occupation Projections: 2006 to 2011 – Malaspina College Region*.

BC Stats (August 2007), *Migration Assumptions Underlying the Regional Projection.*

BC Stats (August 2007), *Population Extrapolation for Organizational Planning with Less Error (P.E.O.P.L.E.) Run 32: Powell River Regional District 27.*

BC Stats (September 2007), *Profile of the British Columbia High Technology Sector: 20007 Edition,* prepared for the Ministry of Economic Development and the Ministry of Advanced Education.

BC Stats (January 2008), "Trends in BC's tourism sector", in *Business Indicators.*

BC Stats (July 2008), "2007 in Review: Steady Growth in BC's Tourism Sector" in *Tourism Industry Monitor: Annual 2007.*

BC Stats and Ministry of Advanced Education (June 2007), *British Columbia Labour Force Participation Rate Projections to 2031.*

City of Powell River (October 2004), *2004 Official Community Plan Update: Technical Background Report.*

City of Powell River (2005), *City of Powell River Official Community Plan Bylaw 2080.*

Coriolis Consulting Corp., Hotson Bakker Boniface Haden architects + urbanists, John Spick Design (June 2005), *Powell River Waterfront Plan,* prepared for Powell River Regional Economic Development Society.

Enfor Consultants Ltd. (December 2003), *Treaty Settlement Lands Timber Supply Analysis,* prepared for Sliammon Treaty Society.

Eric Vance & Associates and Vann Struth Consulting Group Inc. (March 2004), *Ecosystem Overview of the BC Central and North Coast and Queen Charlotte Islands: Human Systems Component,* prepared for Fisheries and Oceans Canada.

Harris Consulting Inc., Eric Vance & Associates, & Vann Struth Consulting Group Inc. (January 2007), *City of Richmond Marketing Positioning and Employment Land Allocation Strategy,* prepared for City of Richmond.

Hamilton, Gordon (July 8, 2008), "Catalyst permanently shuts down Elk Falls mill", Vancouver Sun.

Lamont Management Inc. (October 2003), *Cultural Master Plan,* prepared for Powell River Regional Economic Development Society.

Levelton Engineering Ltd. and Coriolis Consulting Corp. (June 1996), *Lower Mainland Aggregate Demand Study: Volume I – Aggregate Supply and Consumption,* prepared for BC Ministry of Employment and Investment.

Mackie, John (May 23, 2008),"Boomers lead pack in residential housing: Retirement lures people from Lower Mainland", Vancouver Sun.

McRae, Donald M. and Peter H. Pearse (April 2004), *Treaties and Transition: Towards a Sustainable Fishery on Canada's Pacific Coast.*

Ministry of Sustainable Resource Management (February 2004), *The Malaspina Okeover Coastal Plan.*

Pablo, Carlito (May 22, 2008), "Meat-inspection rules squeeze B.C. farmers", *Georgia Straight.*

Powell River Regional District (2005), *Texada Island Official Community Plan: Bylaw No. 395.*

Powell River Regional Economic Development Society (January 2004), *Action Plan 2004: Strategic Plan Update.*

Powell River Regional Economic Development Society (2006), *Community Profile 2006.*

Powell River Regional Economic Development Society and Randolph Communications (June 2005), *Powell River Forest Sector Strategic Plan & Gap Analysis.*

Powell River Regional Economic Development Society, Vision Marine Consulting, and Randolph Communications (June 2005), *Powell River Shellfish Strategic Plan: "Building capacity for the future",* prepared for Powell River Regional Economic Development Society.

Roslyn Kunin & Associates, Inc. (April 2003), *2010 Winter Games Labour Demand Analysis,* prepared for 2010 Winter Games Human Resources Planning Committee.

Sliammon Treaty Society (March 2004), *Land & Resources Management Plan for Treaty Settlement Lands.*

Urban Systems (November 2003), *Highest and Best Use Analysis: Treaty Settlement and Reserve Land*, prepared for Sliammon Treaty Society.

Vann Struth Consulting Group Inc. and Eric Vance & Associates (September 2003), *Regional Economic Analysis: Vancouver Island/Coast Economic Region,* prepared for Vancouver Island Economic Developers Association (VIEDA).

Vann Struth Consulting Group Inc. and Eric Vance & Associates (March 2007), *Economic Impact Analysis of Plutonic Power's East Toba and Montrose Projects,* prepared for Plutonic Power Corporation.

Walz, Laura (June 6, 2007), "Catalyst mill losing 48 jobs", *Powell River Peak*.

Wegner, Linda (July 2004), *Survey of Powell River Real Estate Trends,* prepared for Powell River Regional Economic Development Society.

Words of Worth (July 2005), *Powell River Forest Industry Sector Labour Force Gap Survey,* prepared for Powell River Regional Economic Development Society.

APPENDIX B: INTERVIEW CONTACTS

The following individuals gave generously of their time in providing input into the future employment and development prospects of industries in the PRRD. Most were interviewed by telephone, with several being interviewed in person and several providing information via email.

- Ray Balogh, Island Timberlands
- Warren Behan, Coast Realty
- Ed Bereziak, aquaculture producer
- Helena Bird, farmer
- Jim Brown, Ministry of Forests
- Andy Byrne, Granet Lake Logging
- Chris Day, Taylor Shellfish
- Wendy Devlin, Farmers Institute
- Harold Diggon, retired quarry manager
- Steve Drosdovech, Drosdovech Forestry
- Steve Gallagher, Sliammon Treaty Society
- Rick Hopper, Country Woodworkers
- Peter Jacobson, Ministry of Forests
- Stu Leson, WestPac LNG Corp.
- Bill Maitland, Goat Lake Forest Products
- Janet May, Powell River Community Forest
- Don McLeod, Re/Max Powell River
- Elisha Moreno, Plutonic Power Corp.
- Dave Opko, Texada Island Forest Reserve
- Geri Powell, Powell River and Sunshine Coast Real Estate Board
- Powell River Visitor Information Centre staff
- Scott Randolph, Powell River Regional Economic Development Society
- Laura Roddan, Sliammon Treaty Society

- Regina Sadilkova, City of Powell River
- Jeff Ternin, Western Forest Products
- Rolly Thorpe, Texada Quarrying Ltd.

APPENDIX C: DATA TABLES

This Appendix includes several tables of data that provide additional detail to the information included in Chapter 2 (Growth History) and Section 5.3 (Projection Results).

Table 24. Population by Age Groups, Powell River Regional District, 1986-2006,

Age Groups	1986	1991	1996	2001	2006	Change, 86-06
0-14	3,932	4,034	4,130	3,612	3,031	-901
15-24	2,972	2,466	2,350	2,691	2,229	-743
25-34	2,808	2,918	2,553	1,985	1,592	-1,216
35-44	2,804	3,085	3,393	3,198	2,769	-35
45-54	2,093	2,436	2,987	3,268	3,687	1,594
55-64	1,982	2,030	2,145	2,459	3,268	1,286
65+	2,290	2,656	3,063	3,414	3,961	1,671
Total	18,881	19,625	20,621	20,627	20,537	1,656
Median Age	34.1	36.3	38.8	41.5	46.8	12.7

Source: BC Stats

Table 25. Housing Prices, Powell River and Comparable Areas, 2002 (Dec) to 2007(Dec)

	2002	2003	2004	2005	2006	2007
Sunshine Coast*	$198,120	$237,266	$277,638	$343,716	$394,336	$406,146
Parksville/Qualicum	$188,455	$214,984	$254,087	$273,392	$333,268	$379,433
Duncan	$167,815	$180,356	$215,860	$242,005	$307,423	$350,008
Nanaimo	$161,434	$182,108	$219,872	$253,038	$307,490	$343,168
Comox Valley	$156,962	$169,153	$211,308	$236,325	$293,254	$329,280
Campbell River	$145,119	$153,588	$178,571	$210,259	$265,602	$297,046
Powell River	$114,053	$107,585	$149,631	$191,677	$230,536	$269,050

*Note: Data for Sunshine Coast is not directly comparable to other areas as it is a "benchmark price" produced by the Real Estate Board of Greater Vancouver. This figure is not a simple average price, but the price for a typical property in that market.

Sources: Vancouver Island Real Estate Board, Real Estate Board of Greater Vancouver, Powell River Sunshine Coast Real Estate Board

Table 26 shows the projected change in PRRD employment disaggregated into groups of sectors. There is insufficient information available from the BC Stats multipliers to calculate precise employment projections for each of the 20 NAICS sectors, so some sectors are grouped together in the table.

Table 26. Projected Employment by Sector Groups, 2006 to 2028

		I. Baseline Scenario			II. Worker Migration Scenario		
	2008	2028	Growth	Growth Pct.	2028	Growth	Growth Pct.
Employment							
Total Jobs	**7,856**	**6,872**	**-984**	**-13%**	**8,735**	**879**	**11%**
11 Agriculture, forestry, fishing and hunting	628	479	-149	-24%	653	25	4%
21 Mining and oil and gas extraction	137	139	2	2%	151	14	10%
22/31-33 Utilities/Manufacturing	800	408	-391	-49%	713	-86	-11%
23 Construction	628	482	-146	-23%	611	-17	-3%
41 Wholesale trade	85	79	-6	-7%	97	12	14%
44-45 Retail trade	1,010	978	-32	-3%	1,169	159	16%
48-49 Transportation and warehousing	469	384	-84	-18%	502	34	7%
51-53 Information/Culture, Finance/Insurance, Real Estate/Leasing	379	358	-21	-5%	444	65	17%
54-56 Professional/Scientific/Business Services	674	571	-104	-15%	840	165	25%
61-62 Education/Health	1,527	1,484	-43	-3%	1,684	157	10%
71-72 Arts/Entertainment, Accommodation/Food	772	755	-17	-2%	1,025	253	33%
81 Other services (except public administration)	334	351	17	5%	387	53	16%
91 Public administration	415	403	-12	-3%	458	43	10%

Source: Vann Struth Consulting Group projections