long-range projections

OF POPULATION, HOUSING, AND EMPLOYMENT IN THE COWICHAN VALLEY REGIONAL DISTRICT

12 June 2019

by: rennie intelligence

rennie

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UNPARALLELED MARKET KNOWLEDGE

Our rennie intelligence division empowers individuals, organizations and institutions with trusted market insights. We are a diverse team of real estate experts with experience in urban land economics, community planning, demographics and sales.

Data-driven by nature, we research and compile the latest metrics, observe trends as they emerge and create informed forecasts. Our resources support our Advisors, our clients and the public. Through speaking engagements, consulting and regular publications, we help them form sound, strategic plans that help our clients achieve their goals.

01. INTRODUCTION

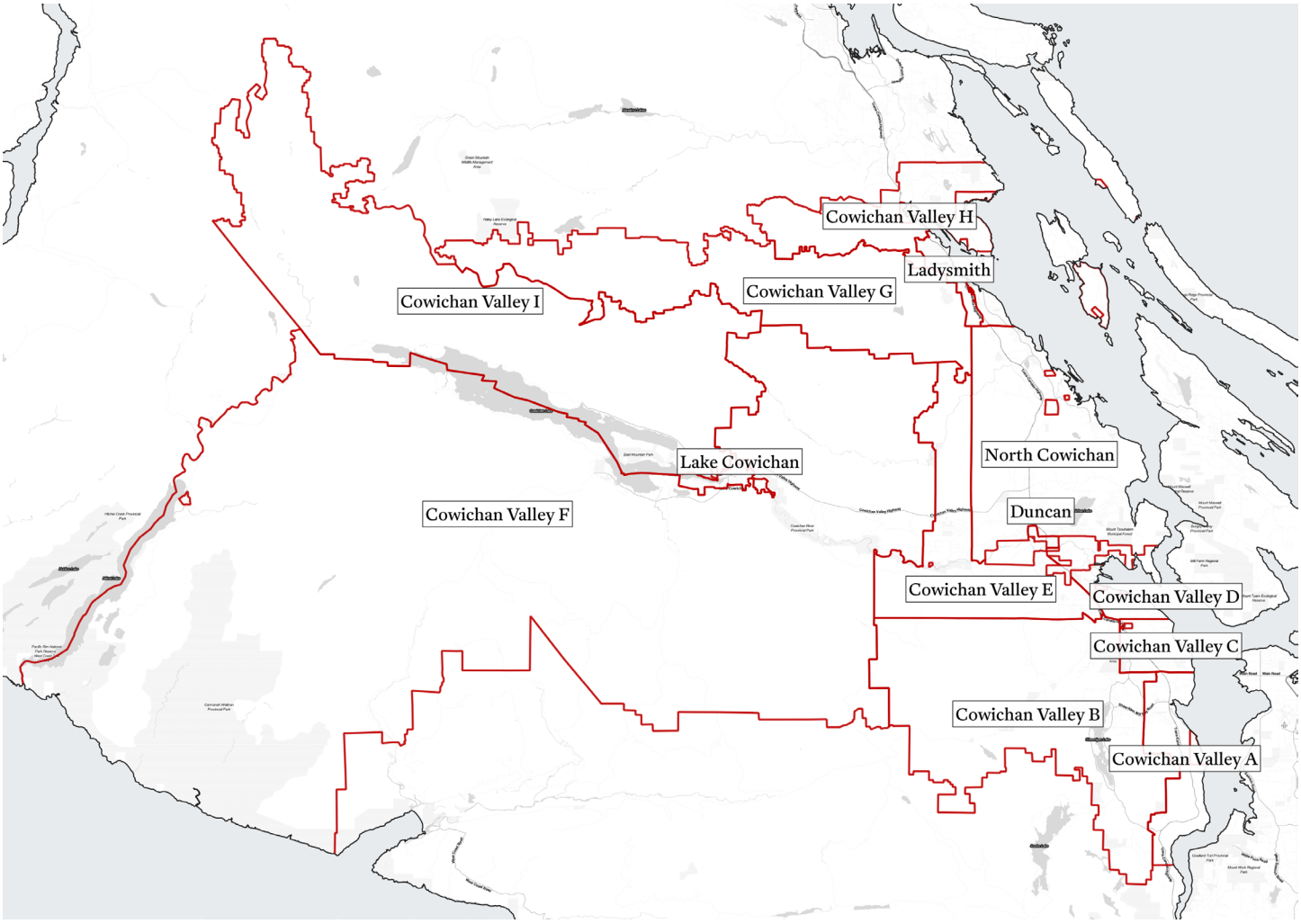
In order to assist efforts related to various long-range planning objectives, including the modernization of its Office Community Plan, staff at the Cowichan Valley Regional District ("CVRD") have engaged rennie intelligence ("rennie") to produce projections of population, housing, and employment (to the year 2050) for the Cowichan Valley region as a whole, as well as for individual census subdivisions ("CSDs") within the region. These CSDs include nine electoral areas (A through I) and four incorporated municipalities (Duncan, Ladysmith, Lake Cowichan, and North Cowichan). Individual Indian Reserves ("IRs"), of which there are 16 throughout the region, have not been explicitly considered but have been implicitly accounted for, in aggregate, within the projection framework.

A NOTE ON THE PROJECTIONS

The projections contained herein are not intended to be prescriptive (i.e. they do not reflect a particular regional or sub-regional "destiny"). Rather than serving as predictions—which they are not—they are collectively intended to be used as a planning tool to help the CVRD and its member electoral areas (and municipalities) to achieve the future the projections describe or, alternatively, to implement policies that will steer the region and its communities away from the projected path in order to achieve a different set of future outcomes.

For each scenario, the output associated with the projections is wholly dependent on the assumptions used as inputs. As such, the models and the scenario output they yield provide insight into the implications of potential future planning policies, both in terms of total population, housing, and jobs and in regards

MAP 1: COWICHAN VALLEY ELECTORAL AREAS & MUNICIPALITIES



to their composition (age, dwelling type, and sectoral composition, respectively). As a corollary to this, no one scenario is more or less likely to be realized than the others.

Finally, the projections contained in this report have been developed using a unique set of models and assumptions, and hence are independent of any previous projections that have been developed for the CVRD or its sub-areas. While the terms of reference for this project did not call for a comparison with existing projections, care should be taken when comparing these projections with those developed by Urban Systems, LAM and Co. Consulting, and Yates, Thorn, and Associates (among others), as the output associated with each group's modelling will specifically reflect the structure of the models used therein, the available data at the time the projections were developed, and the assumptions used to underpin the projections.

REPORT STRUCTURE

This report is structured as follows. First, a detailed overview of the **methodology** used to develop the national, provincial, regional, and sub-regional projections is presented. As part of this, a description of all model interactions, inputs, and data sources is provided.

Next, a brief exploration of recent and projected **demographic trends at the national level** is presented as a means of establishing the Canada-wide context for the provincial, regional, and sub-regional projections that follow. Specifically, the national projections of the components of population growth and change establish the immigration context for the provinces (including British Columbia) and territories that comprise Canada.

Next, **demographic trends for British Columbia** are presented, relying in part on the national immigration projection noted above, and also establishing the context for interprovincial migration to BC for all of the regions, including the Cowichan Valley, that comprise it.

Following this, a more thorough exploration of the components of **demographic change is presented for the Cowichan Valley**, including age-specific fertility rates, age- and sex-specific mortality rates, the resulting trends in births and deaths, and the historical pattern and projected trends in international, inter-provincial, and intra-provincial migration. Combining these components with the existing composition and size of the region's population yields a projection of the CVRD's population.

A **regional projection of housing occupancy demand**, predicated in part on expected demographic changes in the CVRD and in part on trends in regional age-specific household maintainer rates (for each of ground oriented homes and apartments), is presented next.

Future employment changes, described by broad industry sector, are then explored for the region. This projection reflects both the expectation for future sectoral changes in the province as a whole and trends in the changing regional share of provincial employment (again, by sector).

Based on these national, provincial, and regional projections, a **trends-based scenario of future changes in population, housing, and employment at the CSD level within the CVRD** is then presented.

Three alternative allocation-based scenarios of future growth and change are then explored. For each of these scenarios, the regional projection of population, housing, and employment remains constant, with differences in the within-region distribution of these elements defining each scenario.

The **first scenario** describes a future that assumes that 90% of the region's growth occurring outside of the four incorporated municipalities (and IRs) as part of the trends-based outlook would be focused within electoral area urban containment boundaries (UCBs).

The **second scenario** describes a future that assumes that 90% of region-wide growth would occur within the urban containment boundaries of both electoral areas and municipalities.

Finally, the **third scenario** describes a future that would see 75% of growth occur within areas of the region that currently have either water or sewer services (or both).

Note that an Excel file containing all of the projections described above and summarized graphically in the following pages has been provided to the CVRD by rennie.

02. METHODOLOGY

NATIONAL & PROVINCIAL OUTLOOKS

A geographically-nested, hierarchical approach to forecasting growth and change for and within the CVRD has been adopted by rennie. The starting point is a demographic projection for Canada as a whole that acknowledges, along with the other components of population change (namely aging, fertility and mortality), the federal government's new immigration targets. These targets will aim to welcome up to 350,000 immigrants to Canada by 2021 and will have direct and indirect impacts on the country's metropolitan and non-metropolitan areas alike, including those in British Columbia (a province that accommodates 16% of Canada's annual immigration flow).

The primary data source used to develop the national projection of population is Statistics Canada's Demographic Estimates Compendium. As part of this annually-updated publication, historical estimates of population and the components of change (births, deaths, immigration, emigration, and the change in non-permanent residents) are described annually from 1971 to 2017 by single years of age (up to and including the open-ended age group of 100+) and sex.

The national projection—and more specifically, the immigration projection—becomes the basis for the next geographic level of focus for the research.

As at the national level, the projection of population for British Columbia reflects trends in age-specific fertility and age- and sex-specific mortality, along with trends in international and interprovincial migration, delineated by age and sex. This provincial forecast of demographic growth and change establishes, among other things, the inflow of interprovincial and international migrants that will ultimately settle in regions throughout the province, including in the CVRD. This represents the next step in the modelling process.

As is the case with the Canada-wide projection, Statistics Canada's Demographic Estimates Compendium is the primary source of historical data informing the outlook for BC's population.

Additionally, a long-run projection of employment by industry has been developed for BC to provide specific context for the CVRD-level employment projection (described below).

As part of this, provincial age-and sex-specific labour force participation rates (developed using data from Statistics Canada's Labour Force Survey) were applied to the age- and sex-specific projection of population change for BC to project the size of the provincial labour force (the supply of workers) to 2050..

Independent of this demographically-based, supply-side outlook, a projection of employment by broad industry sector was developed using data from Statistics Canada's System of National Accounts (which reports on provincial Gross Domestic Product) and the Labour Force Survey (for data on employment by sector). This yielded an outlook for the demand for workers to 2050.

The two projections—the supply of, and demand for, workers—were then compared and "resolved" through the unemployment rate, which was not permitted to fall below the historical low-point for provincial unemployment (achieved in 2007, at 4.3%) at any point within the projection period. This approach ensured that there existed consistency between the supply- and demand-side of the labour force/employment outlook.

REGIONAL PROJECTIONS

For the CVRD, trends in fertility, mortality, and each migration flow (including international and interprovincial in- and out-flows, as well as those moving within the province—intra-provincial movers) are combined with the existing population, described by age and sex, to develop a long-run projection of **population** growth and change for the 2017 to 2050 period. Each of the immigration and interprovincial in-migrant projections developed for BC as a whole have been used as direct inputs into the regional outlook.

Statistics Canada's Demographic Estimates Compendium is again the primary source of historical demographic data used to develop the CVRD population projection, as well as region-specific data describing fertility and life expectancy that were obtained from BC Vital Statistics and BC Stats.

In order to transition from the demographics to the implications for **housing** at the regional level, data on household maintainers from the 2016 and earlier Censuses have been combined with the regional population projection (by age) to derive an outlook of future housing occupancy demand. The housing projections are presented over the 2017 to 2050 time period for two dwelling structural types (ground oriented and apartment). Note that in this instance, the projection of housing demand only includes housing that is occupied on a permanent basis by usual residents; as such, unoccupied homes (which includes recreational properties) and those occupied by temporary or foreign residents are not considered as part of the projection.

Finally, a projection of **employment** is presented for the CVRD. As a starting point, the employment outlook is rooted in historical Census data (from 2006, 2011, and 2016) that describe the number of jobs associated with various industry sectors that are located within the boundaries of the CVRD. (Note that these data contrast the more common "place of residence" definition of employment, which describes the number of jobs held by residents of a particular jurisdiction, regardless of where those jobs are located.)

An industry-specific shift-share approach has been utilized that reflects both historical structural changes to the CVRD's employment base (again, described by industry) and the evolving outlook for provincial industry-specific employment (described previously). The projections are presented for ten aggregate sectors over a time horizon that extends to 2050. These sectors are: Primary; Transportation, Warehousing, and Utilities; Manufacturing; Construction; Retail & Wholesale Trade; Finance, Insurance, and Real Estate; Education and Health; Food and Accommodation Services; Other Services; and Public Administration.

CSD-LEVEL PROJECTIONS: BASELINE

The regional projections of population by age, housing by type, and employment by sector serve as the foundations for next considering where within the CVRD people, homes, and jobs could locate.

For population, a complex inter-related set of 14 models was used to reconcile the aggregate future population, described by age, in all parts of the CVRD with the outlook developed for the region as a whole in each year to 2050. This CSD-level framework has been structured as a set of cohort-survival models that consider trends in age-specific fertility, age- and sex-specific mortality, age- and sex-specific mobility (both into new homes and into and out of existing homes), and aging at the individual CSD level. Due to the relatively small population counts in some of the CVRD's CSDs, these sub-regional projections have been aggregated to ten-year age groups and organized into ten-year increments to 2050 in the accompanying Excel spreadsheets.

The above-described population projections are predicated on, among other things, an assessment of the spatial distribution of new housing throughout the region. As a baseline, historical trends in each CSD's share of regional net additional housing over the 2006 to 2016 Census period (for each of ground oriented housing and apartments) have been used to allocate future net additions to the CVRD's housing stock to each of the region's nine electoral areas and its four municipalities. Note that the consideration of two dwelling types is important in the context of yielding potential future CSD-level populations, as the size and age composition of households in ground oriented formats differs demonstrably from those in apartments.

The final forward-looking consideration made for electoral areas and municipalities within the CVRD is in relation to employment. While it becomes increasingly difficult to source relevant and detailed historical data on employment the more geographically-focused the research is, rennie has been able to utilize its extensive database of historical custom place-of-work-based employment data to inform a shift-share approach to allocating future jobs from the regional level (for the CVRD) down to the CSD level (for electoral area and municipalities).

As a baseline, each CSD's industry-specific share of regional employment has been held constant at its 2016 level to 2050. The benefits of this approach are twofold. One, the specific industry composition of employment at the local level (which itself reflects local comparative advantages as well as the implicit scale of the local population) is reflected in both the short- and long-term outlook of employment at the CSD level.

Two, regional sector-specific trends are reflected (or "imposed") on the underlying communities where the jobs are located, ensuring consistency between the sub-regional and regional projections of employment. These projections have been presented for ten broad sectors to 2050.

CSD-LEVEL PROJECTIONS: SCENARIOS

In addition to the baseline outlook developed for CSDs within the CVRD, three additional scenarios of future growth and change have been modelled.

As noted previously, each of these three scenarios reflects a unique distribution of the regional population at the CSD-level. In other words, the regional population, housing, and employment projections at the regional level remain the same for each scenario. The defining feature of these scenarios is the consideration of the implications of some proportion of future regional growth being accommodated in various parts of the region based on underlying land uses.

SCENARIO 1. As a starting point, the first scenario holds constant the regional projection of housing occupancy demand by type (ground oriented and apartment) as well as the projection of net additional housing for the region's four municipalities and IRs from the baseline CSD-level projection. Next, of the aggregate growth in housing occupancy demand projected for the region's nine electoral areas as part of the baseline projection, 90% was re-allocated into electoral area UCBs proportionally based on the respective areas associated with residential uses.

The population implications of this reallocation were determined through the interaction of the CSD-level models.

The employment projection as part of this scenario followed a similar set of rules as that of the housing projection, with 90% of the baseline non-municipal job growth being re-allocated to electoral area UCBs according to the relative size of the UCB areas associated with employment uses.

SCENARIO 2. While similar in its construct to Scenario 1, Scenario 2 considered the implications of 90% of all non-IR growth in regional housing occupancy and employment being re-allocated to those parts of the region that are within UCBs. In this case, and in contrast to Scenario 1, UCBs within the four municipalities have also been considered, in addition to the electoral area UCBs.

SCENARIO 3. This final scenario differs from the previous two in that it considers where future growth within the CVRD would occur, given the regional projections and the size of areas that have either water services, sewer services, or both. More specifically, 75% of regional net housing additions and 75% of employment growth have been allocated to these serviced areas over the course of the projection period.

For use in each of these three scenarios, and the baseline one, GIS-based land use data were obtained by rennie from CVRD staff.

03. THE DEMOGRAPHIC CONTEXT

Before exploring the projections for the CVRD and its CSDs, it is instructive to briefly consider the demographic context for the region per the demographic outlook for Canada and British Columbia.

As noted previously, the CVRD-level projection of population is impacted directly by the immigration outlook for Canada and BC, and by the expectation of future inter-provincial inflows to the province.

CANADA

In 2017, Canada's population stood at 36.71 million people, having added 10.26 million over the previous 30 years. This growth—averaging annual additions of 340,000 people, or 1.1%, over the period—was largely driven by immigration (Figure 1)s.

Specifically, immigration added an average of 232,000 per year over the past three decades. Over the past decade, this average was even higher (at 265,000 people annually), having peaked at 323,000 in 2015.

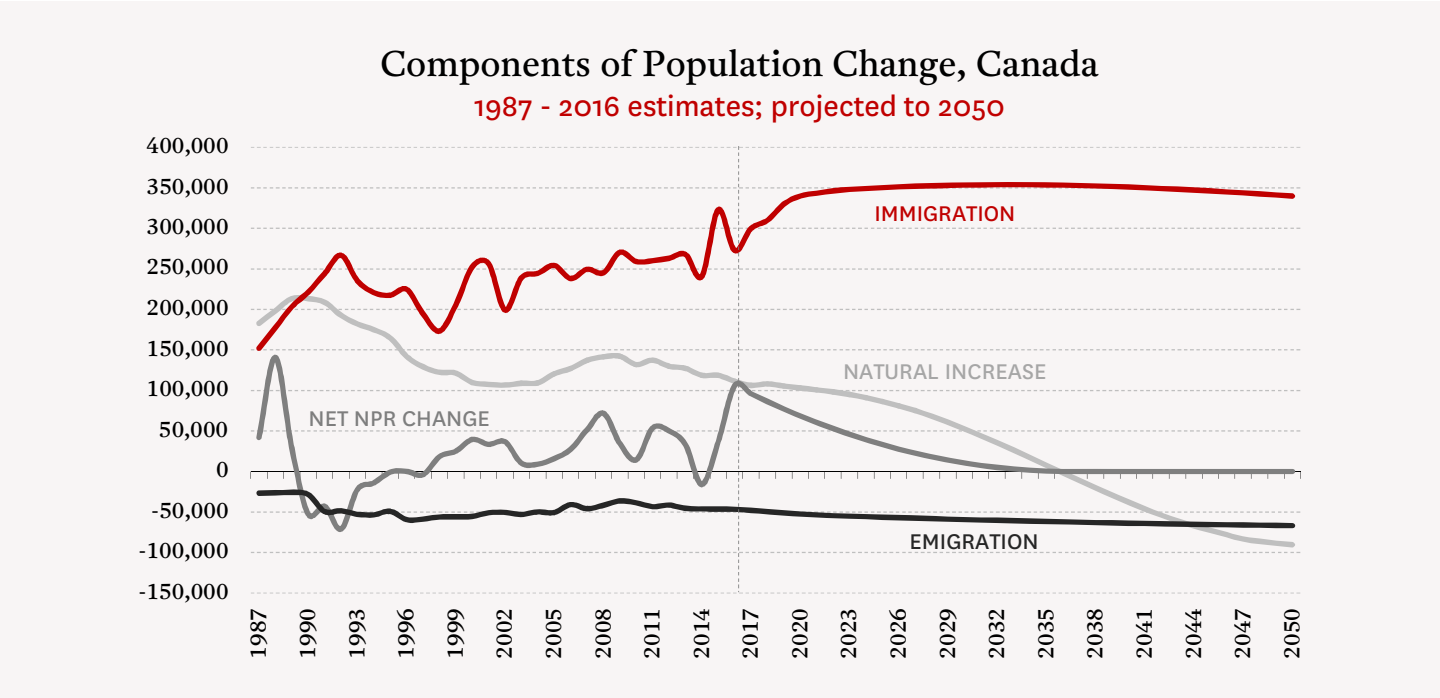
In comparison, Canada added 23,000 people each year on average over the past three decades as non-permanent residents, with the number most recently peaking at 106,000 in 2016. Emigration, on the other hand, saw 45,000 people leave Canada each year on average, while natural increase—the difference between births and deaths—added an average of 146,000 people annually going back to 1986.

Looking ahead, the contributions to growth of natural increase and non-permanent residents is expected to diminish over time (with natural increase becoming natural decrease beginning in 2036), while emigration will grow along with the Canadian population.

As a result, immigration will be the main driver to future population growth, reaching 350,000 people in 2021 (per the federal government's target), and then remaining steady and increasing slightly to 354,000 people annually by 2035.

With Canada adding an average of 346,000 people annually between 2017 and 2050 through immigration, this sets the demographic context for the country's provinces (including British Columbia) and territories, as well as the urban and rural regions that they comprise.

FIGURE 1



BRITISH COLUMBIA

POPULATION: At 4.82 million people, BC accounted for 13% of Canada's population in 2017. Over the preceding 30 years, provincial population growth averaged 59,000 net additions each year, for 1.5% growth annually (vs 1.1% nationally; Figure 2).

With the exception of only a few years, net international migration has been the biggest driver to population growth in BC for the past three decades, adding an average of almost 34,000 annually. Although it slowed in the late-2000s and early-2010s, net international migration bounced back more recently, reaching 37,000 people in 2016.

In comparison, net interprovincial migration to BC (reflecting the movement of people to and from BC, from and to other parts of Canada) has added an average of 13,000 people annually to the provincial population since 1986. This does belie, however, a high degree of cyclicality in the net interprovincial migration flow, trending in positive territory when BC's economy has performed well relative to other parts of the country (notably Alberta) and dipping below zero when opposite conditions have prevailed. More recently, net interprovincial migration reached almost 27,000 (in 2015) before subsiding to 16,000 in 2016.

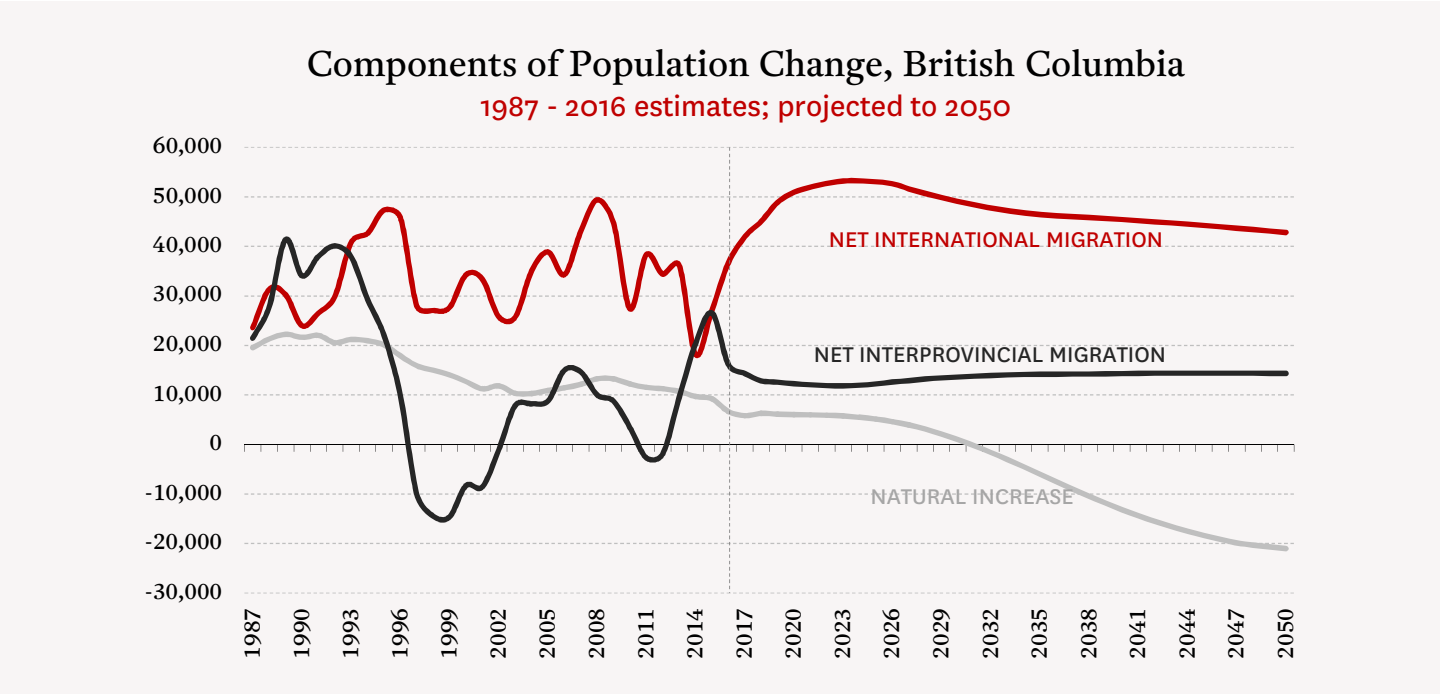
Meanwhile, natural increase has added just under 12,000 people annually over the past 30 years (under 7,000 most recently).

Based on provincial trends, combined with the outlook for Canada as a whole (including the federal government's new, higher immigration targets to 2021), net international migration is projected to be the most significant driver to BC's population growth. Specifically, the province is expected to add an average of 47,000 net international migrants between 2017 and 2050, peaking at 53,000 in 2024.

While natural increase would become negative in 2031 (compared to 2036 for Canada as a whole, the result of differing provincial-national age compositions, fertility rates, and life expectancies), net interprovincial migration is projected to remain positive, on average, to 2050. In doing so, it would add an average of almost 14,000 people each year over the projection horizon, supporting growth that would primarily be driven by the immigration context.

Each of these net flows—international and interprovincial migration—in turn have specific implications for the pace and composition of demographic change within the province's regions, including the CVRD.

FIGURE 2



EMPLOYMENT: Over the past 30 years, British Columbia has seen its population and labour force, as well as employment, steadily grow, while the provincial unemployment rate has generally followed a downward trajectory (Figure 3).

More specifically, compared to provincial population growth of 54% (in the 15-plus age group), the provincial labour force has expanded by 64% while employment has grown by 77%; as a result, the overall labour force participation rate rose from 56% in 1987 to 60% in 2017, while the unemployment rate fell from 12.1% to 5.1% over the same period.

Based on a projection of future Gross Domestic Product (GDP) change that would average 2.0% annually to 2050, combined with the historical relationship between GDP change and employment growth, total employment in BC is projected to grow by 836,000 jobs between 2017 and 2050, equivalent to a 36% increase.

Based on the projection of BC's 15-plus population, combined with age- and sex-specific labour force participation rates, the province's labour force is projected to grow by 851,000 people (a 34% increase).

With future employment growth (the demand for workers) expected to exceed that of the labour force (the supply of workers), the provincial unemployment rate would decline to its historical minimum of 4.3%, where it would remain for the duration of the projection period.

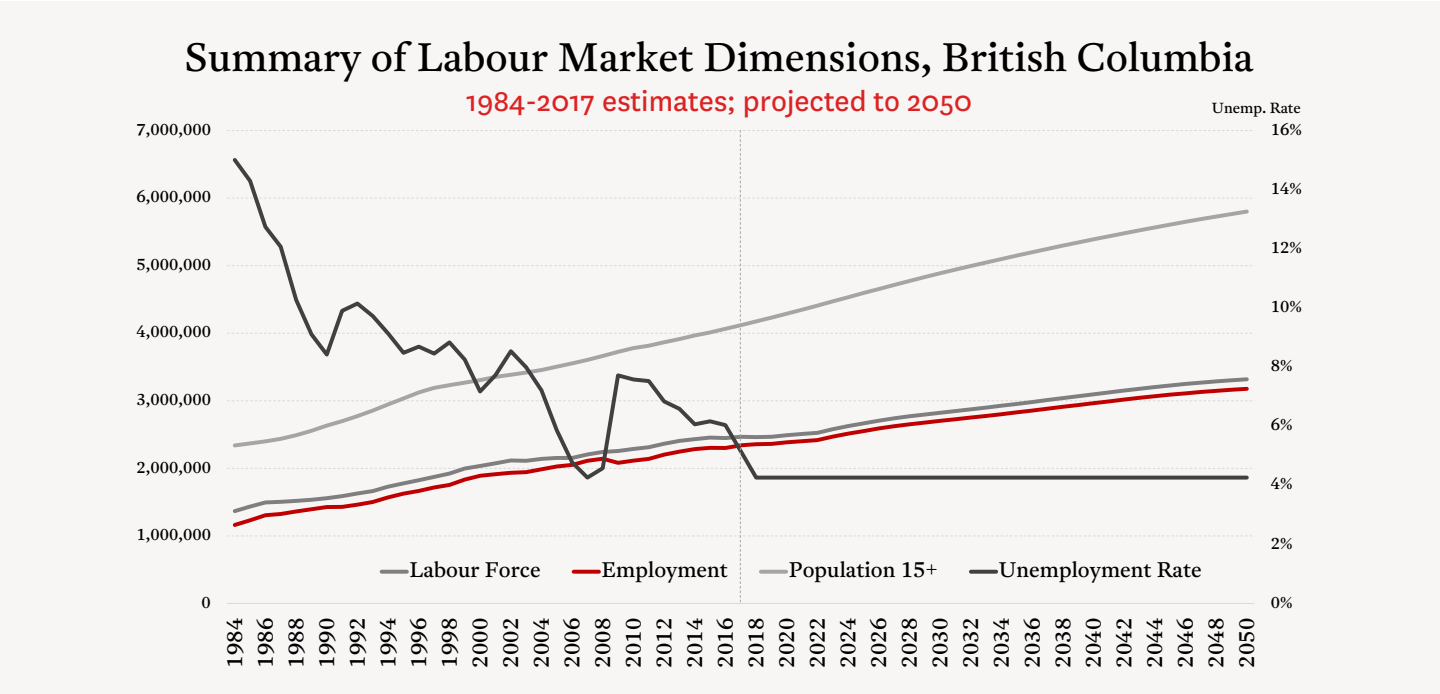
On an industry-specific basis, more job additions would be seen in Education and Health (+295,000 jobs) than in any other sector. This would be followed by Finance, Insurance, and Real Estate (FIRE), at +186,000 jobs, and Wholesale and Retail Trade (+112,000).

Conversely, the Primary Industry sector would see an 11,000-job decline. Meanwhile, Manufacturing would add only +7,000 jobs between 2017 and 2050—the smallest increment of growth of any individual sector.

In relative terms, Education and Health (+51%), Accommodation and Food Services (+50%). and FIRE and Construction (each at +43%) would grow the fastest. Primary would decline by -13%, while Manufacturing would grow the slowest, at +5%.

As with the migration projections described previously, these total and sector-specific employment projections serve as the context for future changes in the employment composition of the CVRD.

FIGURE 3



04. THE REGIONAL OUTLOOK: CVRD

The following section describes the projection of each of population, housing occupancy demand, and employment for the Cowichan Valley Region.

POPULATION

As the regional population projection was developed using a cohort survival framework with migration, it is useful to briefly explore each of the basic demographic inputs to the model.

FERTILITY. The Cowichan Valley's total fertility rate (TFR: the number of children a female would be expected to have over the course of her lifetime) was most recently estimated at 1.85 (Figure 4), which is below the replacement-level rate of 2.10 but significantly higher than BC's TFR of 1.40. Over the past 20 years the region's TFR has fluctuated, going from a low of 1.53 in 2001 to its current level (a two-decade high).

When considered on an age-specific basis, the data show that the most typical mother in the CVRD is a 31-year-old (the same as in the province as a whole), with an associated fertility rate of 14.4%.

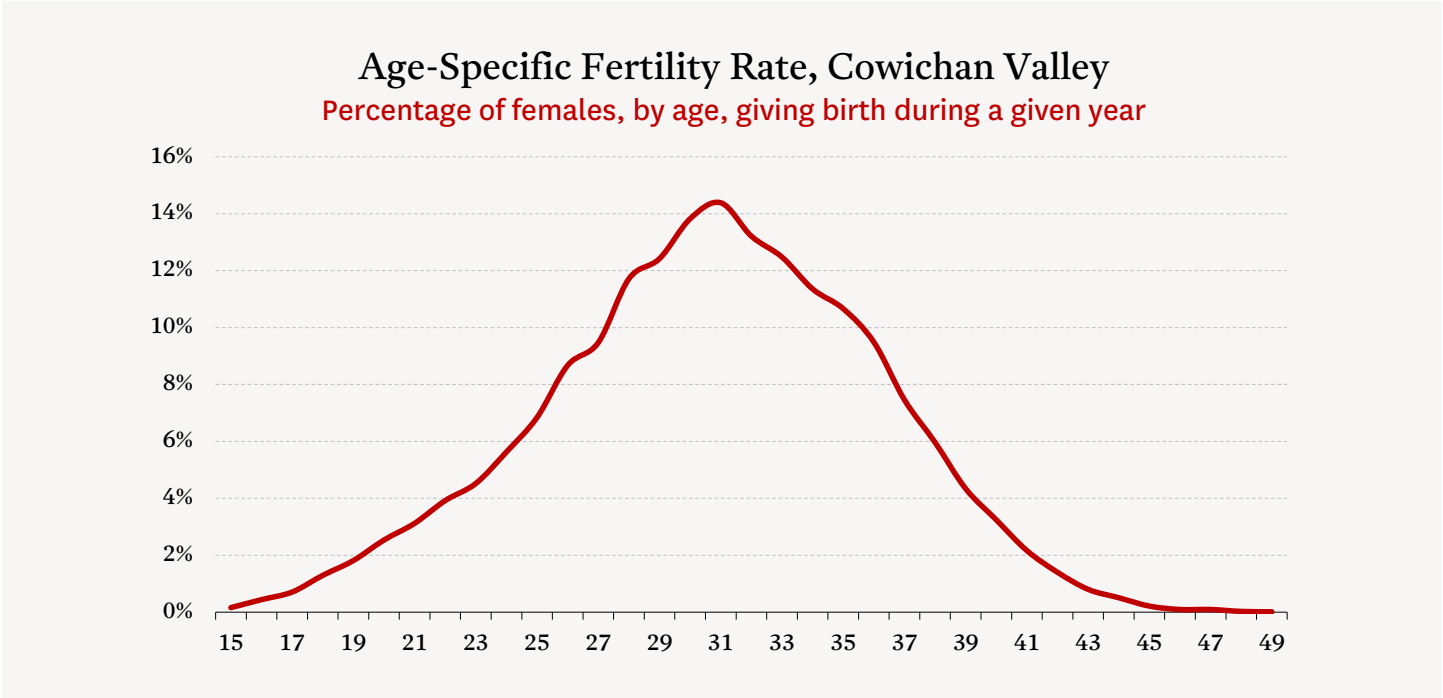
Based on provincial trends in age-specific fertility rates, the region's TFR is expected to remain stable to 2050, declining marginally to 1.83 by the end of the projection period.

In combining the age-specific projection of fertility rates with the female population by age, the result is a projection of the total number of births within the CVRD annually to 2050.

BIRTHS. Over the past 30 years, there has been an average of 750 births annually in the CVRD. Looking ahead, this number is expected to rise from the most recent 726, moving to upwards of 900 per year by 2050.

Despite a relatively stable TFR (and associated age-specific fertility rates) expected to characterize the region in the coming years, the number of births would rise as the female population grows over time.

FIGURE 4



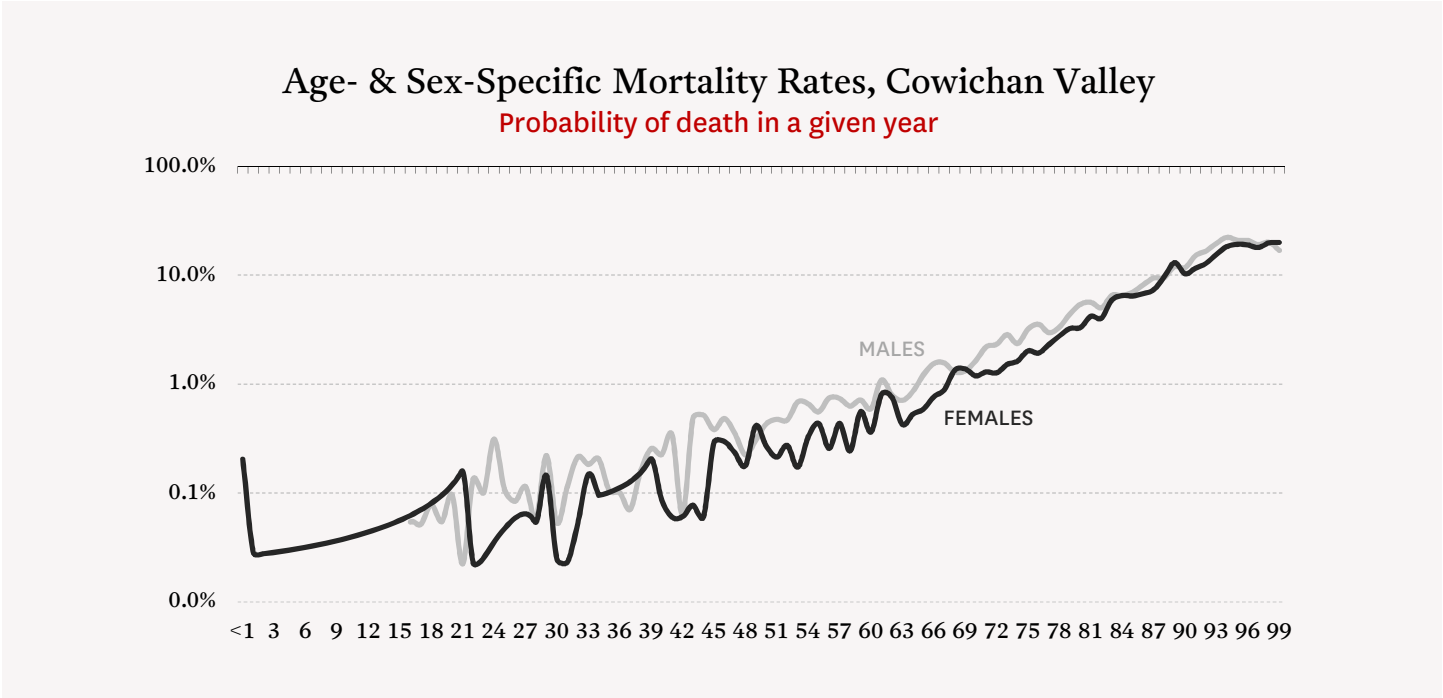
MORTALITY & DEATHS. For both males and females in the Cowichan Valley, mortality rates remain under 1% (the probability that an individual will pass away in a given year) into one's mid-60s, before increasing steady into the late-80s and early-90s and peaking near 30% in the late-90s (Figure 5).

Following historical trends, as well as projected ones at the provincial level, age- and sex-specific mortality rates are expected to continue to decline over time, albeit not at the rate experienced historically. As part of this decline, the convergence between male and female life expectancies would continue as male mortality rates decline faster than those of their female counterparts.

In combining future mortality rates with the projection of population, described by age and sex, for the CVRD, a projection of deaths can be made.

As with births, the regional outlook for deaths would see them increase over time due to the growth of the region's population into the older age groups. Compared to an average of 640 deaths each year over the past three decades, and the most recent estimate of 881 (in 2016), the number of deaths in the CVRD would steadily increase to the year 2050, where they would reach 1,723 in that year. On average each year, the region would experience almost 1,400 deaths over the next 30 years.

FIGURE 5



NATURAL INCREASE. When the number of deaths is a particular year is subtracted from the number of births in that year, the result is referred to as *natural increase*. For Canada, its provinces, and for most regions, natural increase has contributed positively to population growth over the past three (or more) decades. Reasons for this include low and declining mortality rates and a relatively young population, despite fertility rates in Canada being below the replacement level since the mid-1970s.

As populations have aged over time—and, in particular, as the post-World War II baby boom generation has aged out of the high fertility stages of life and into increasingly higher mortality stages—the contribution of natural increase to population growth has generally slowed.

In the Cowichan Valley, natural increase actually became natural decrease beginning in 2007, when there were 747 deaths and only 741 births (Figure 6). This gap between births and deaths has continued to increase since then, reaching -155 in 2016. In looking to 2050, natural decrease is expected to be a permanent feature of the region's demographic landscape, increasing to a peak of -812 in 2047 before moderating slightly thereafter (this marks the point in time when the youngest of the baby boomers reach their average life expectancy in their mid-80s). On average, natural decrease would average just over 500 people annually in the region, representing a permanent headwind to population growth in the CVRD.

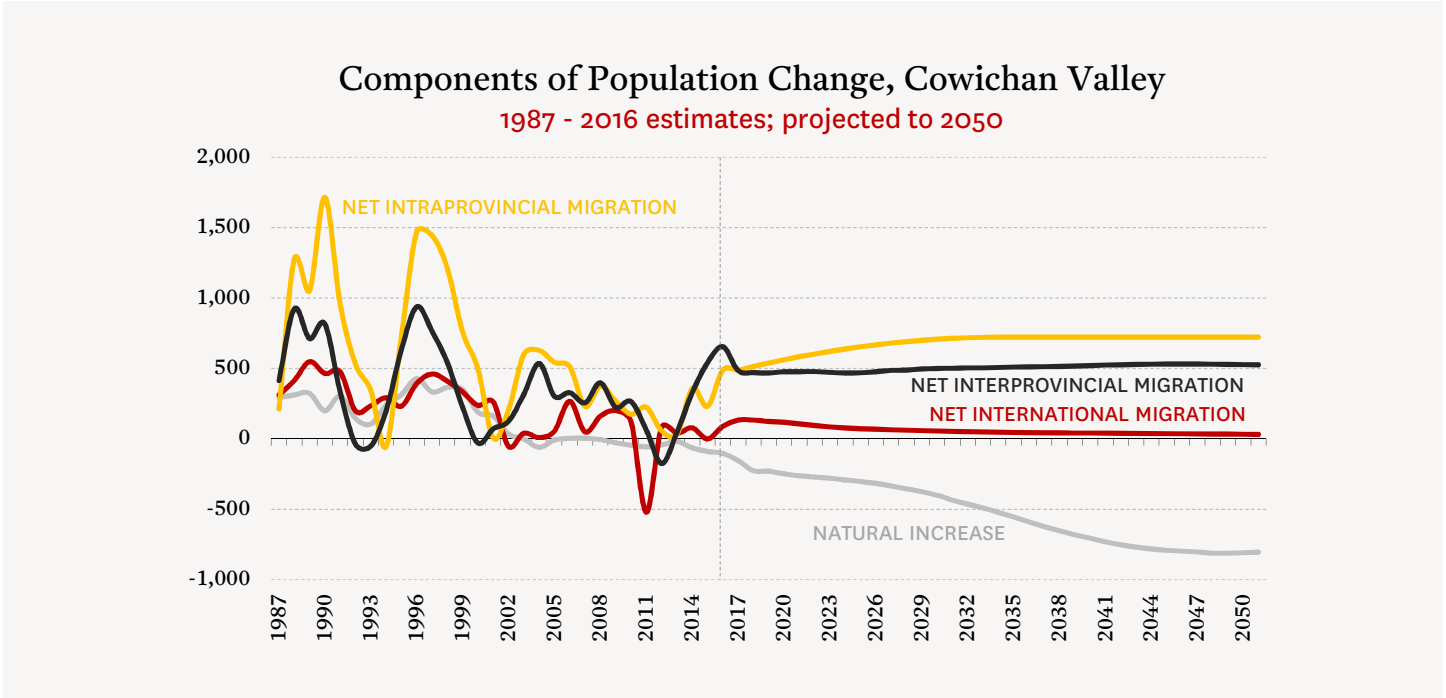
MIGRATION. With natural increase projected to remain negative, net migration would be the only source of regional population growth in the coming years (Figure 6). Net migration comprises net international, interprovincial, and intra-provincial migration, each of which is summarized below.

As has largely been the case over the past 30 years, net intra-provincial migration is expected to be the biggest contributor to future population growth in the region, adding an average of 686 people per year (compared to 567 each year historically).

Net interprovincial migration would also be relatively significant, adding an average of 504 people annually to 2050. This would be higher than the 359 added from other provinces each year over the past 30.

Net international migration (which comprises immigrants, emigrants, returning emigrants, those temporarily abroad, and the net change in non-permanent residents), is projected to contribute the least of the three migration flows to population growth, adding an average of 58 people to the CVRD annually to 2050. This compares to 194 people each year historically coming from other countries.

FIGURE 6



It should also be noted that in addition to adding to the region's population, these positive net inflows of people from other parts of BC, other parts of Canada, and abroad will also influence the age composition of the Cowichan Valley's population. To wit, the most typical age of an immigrant to the CVRD is 28 years, and for interprovincial and intra-provincial in-migrants its 27 (these compare to the age of the most typical resident of the Cowichan Valley today, which is 59 years old). These migration flows, and their associated younger age mix, therefore not only contribute to population growth, but also directly (and significantly) influence the local labour supply and demand for housing.

PROJECTED POPULATION. In combining these components of demographic change—births, deaths, and migration—with the aging of the existing regional population, it is possible to produce a projection of population by age for the Cowichan Valley out to 2050.

From its current, Census undercoverage-adjusted population of 85,234 (in 2017), the region is projected to grow to 108,905 residents by 2050 (Figure 7, next page). This reflects growth of 28% through the addition of 23,670 people, averaging 715 additions each year over the course of the projection period. Over this period, the annual rate of population growth would slow considerably (similar to what is expected for Canada and BC) due in large part to the aging of the regional population and the growing natural decrease headwind: from 1.4% year-over-year growth today, this would slow to less than 1% by 2030 and further to 0.4% by 2050.

In comparison, the CVRD added an average of just over 1,000 people annually over the past three decades, with the annual rate of growth averaging 1.5%.

As shown in Figure 8 (next page), the region would see its population age over time as it grows, with each of the 75-84 and 85+ age groups experiencing above-average rates of growth between 2017 and 2050 at 101% and 221%, respectively (due to continued net in-migration, the 25-34 group would also grow at an above-average rate of 32%). All of the other age groups would grow at a below-average rate ranging between a 2% decline in the 55-64 group (the result of the younger baby boomers, who are currently in this group, aging out of this segment over time and not being replaced) and a 27% increase in the number of residents aged 35-44.

In absolute terms, the 65-plus age group would account for 59% of total regional population additions (14,020 of 23,671 additions), with the 25-44 group accounting for a further 20% of total growth (4,689 additions).

As a result of these changes, the Cowichan Valley would see its 65-plus segment go from accounting for 24% of the regional population today (2017) to 32% by 2050. At the same time the under-25 group would see its share fall from 26% today to 24% by 2050, while the prime working-age population (those aged 25-64) would see its share fall from 50% to 44% over the course of the projection period.

FIGURE 7

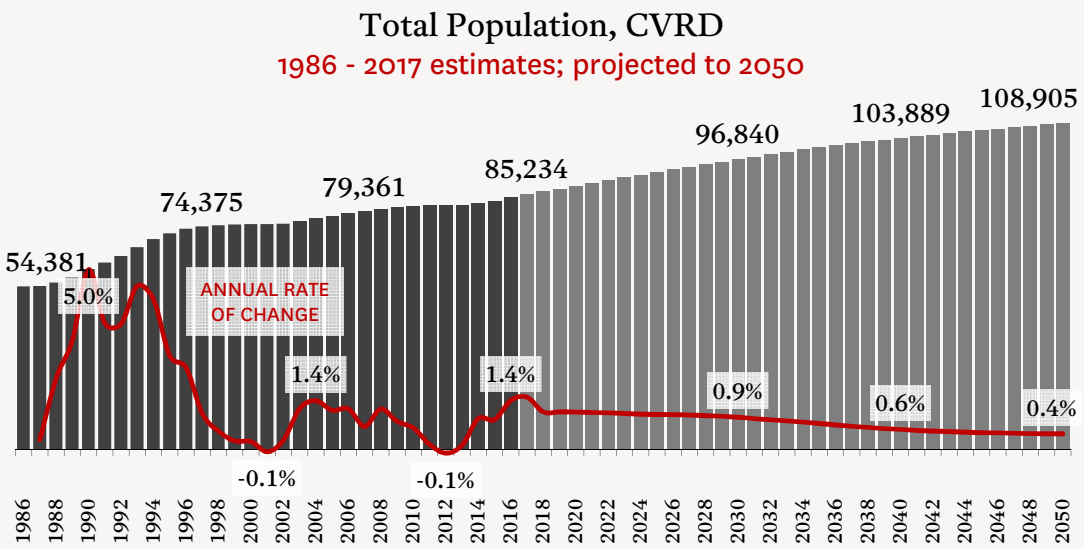
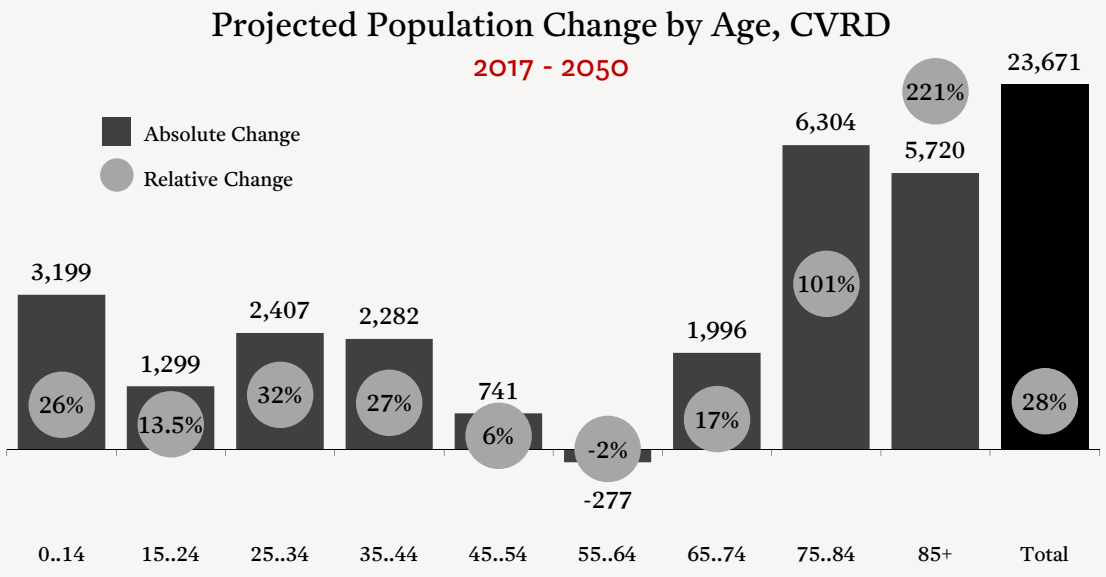


FIGURE 8



HOUSING OCCUPANCY DEMAND

HOUSEHOLD MAINTAINER RATES: The functional link between projections of population (by age) and housing demand (by dwelling type) is commonly referred to as the household maintainer rate. It is calculated as the number of people in an age group divided by the number of people in that group who, on their Census form, indicate that they are primarily responsible for their household's finances.

As shown in Figure 9 (next page). there is a distinct lifecycle pattern to total age-specific household maintainer rates in the Cowichan Valley (per the most recent Census data).

From only 1% of 15-19 year olds indicating that they are their household's primary maintainer, this rate jumps to 14% in the 20-24 age group and further to 48% in the 30-34 group, thereby reflecting the movement of young adults out of the home in which they grew up and into households of their own.

While some variance in household maintainer rates is seen from one age group to the next, rates remain fairly steady through to the age of 65 (increasing slightly during the intervening years), where they reach 59%. This (unofficially) marks the beginning of the empty-nester phase of the lifecycle, with rates increasing up to a peak of 67% in the 75-79 age group—reflecting a combination of late-life divorce or the death of one spouse. From here rates step downwards through the oldest age groups, falling to a still relatively-high 61% in the 85-plus group. The decline in maintainer rates in these oldest age groups marks the movement of individuals out of private housing and into collective housing (such as seniors' residences or nursing homes, among other forms of accommodation) or into the home of their offspring (where they are no longer the primary household maintainer).

A distinct pattern in age-specific maintainer rates is also seen when dwelling types are categorized into ground oriented and apartment forms (Figure 10, next page).

With respect to ground oriented homes (which include any dwelling forms with a private entrance that opens to ground level, including detached homes, row houses, and basement suites, to name a few), the lifecycle pattern of housing occupancy is very similar to the overall pattern described above. Rates increase significantly in the market-entry age groups (from 15-19 through to 30-34), before slowly increasing through the late-60s and early-70s. After peaking at 58% in the 75-79 age group, the ground oriented maintainer rates decline to 49% in the 85-plus group, reflecting movement in part out of private housing, in part into their adult childrens' homes, and in part downsizing into apartments. On this point, regional apartment maintainer rates can be seen to rise from 4% in the 60-64 group to a high of 12% in the 85-plus group.

With apartment dwelling forms (which include homes that share a common corridor entrance and are stacked on top and/or next to one another) accounting for only 10% of all occupied dwellings in the Cowichan Valley, apartment maintainer rates are low in a provincial context and compared to those of ground oriented dwellings in virtually all age groups.

From 1% in the 15-19 age group, apartment rates jump to 4% in the 20-24 group. Rates remain in this neighbourhood until older residents begin downsizing in their late-60s.

FUTURE HOUSING OCCUPANCY DEMAND: Combining the projection of the CVRD's population by age with these age- and structural-type-specific household maintainer rates yields an outlook for regional housing occupancy demand to 2050. (Note that in projecting future maintainer rates, provincial trends of a general movement upwards of apartment rates and downwards of ground oriented rates have been applied to the base-year rates for the CVRD. The overall maintainer for each age group remains constant throughout the projection horizon.)

Given previously-described demographic trends and the 28% increase in the Cowichan Valley's population (through the addition of 23,671 people), overall housing occupancy demand is projected to grow by 31% between 2017 and 2050 via the additional demand for 10,957 homes (Figure 11 on page 18). This would take the total stock of occupied dwellings in the region from 35,437 today to 46,384 by 2050.

While many more ground oriented homes would be demanded compared to apartments (9,328 additional ground oriented homes versus 1,629 additional apartments), the relative growth in the region's apartment stock would far exceed that of ground oriented growth at 48% to 29%.

FIGURE 9

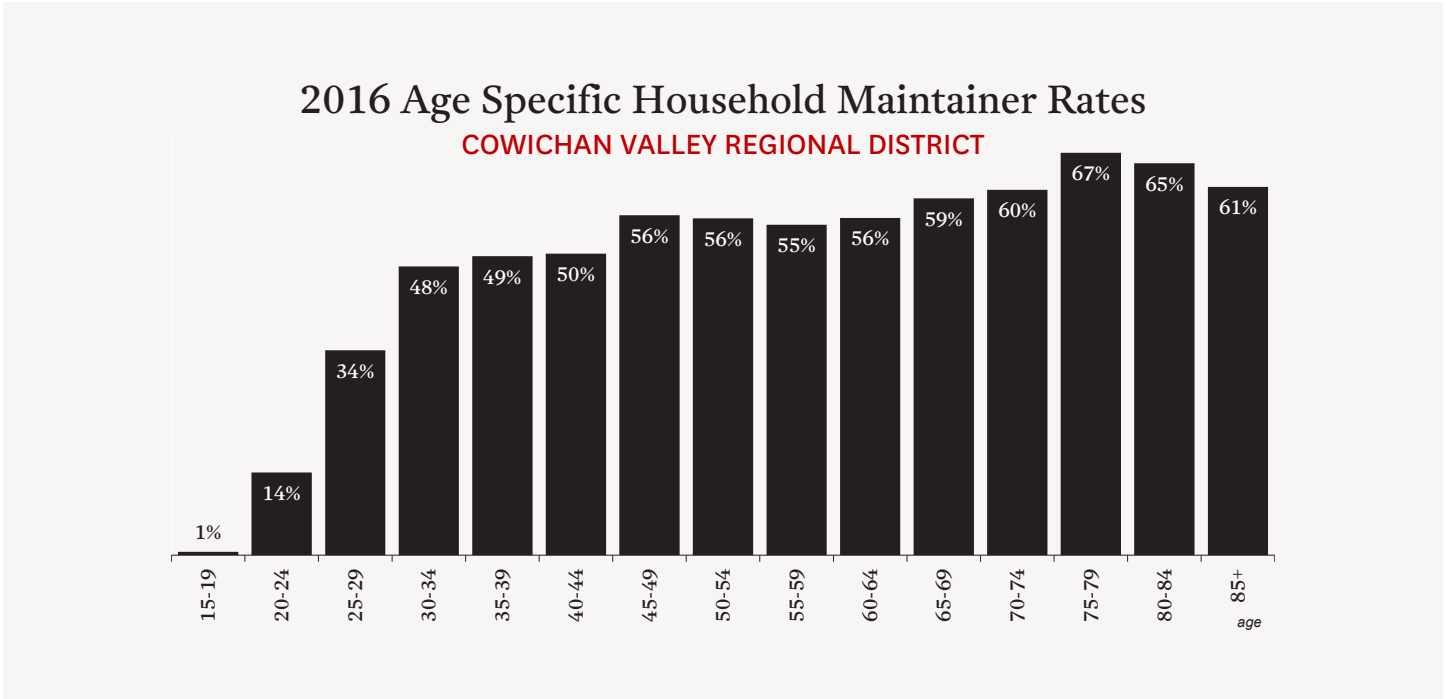
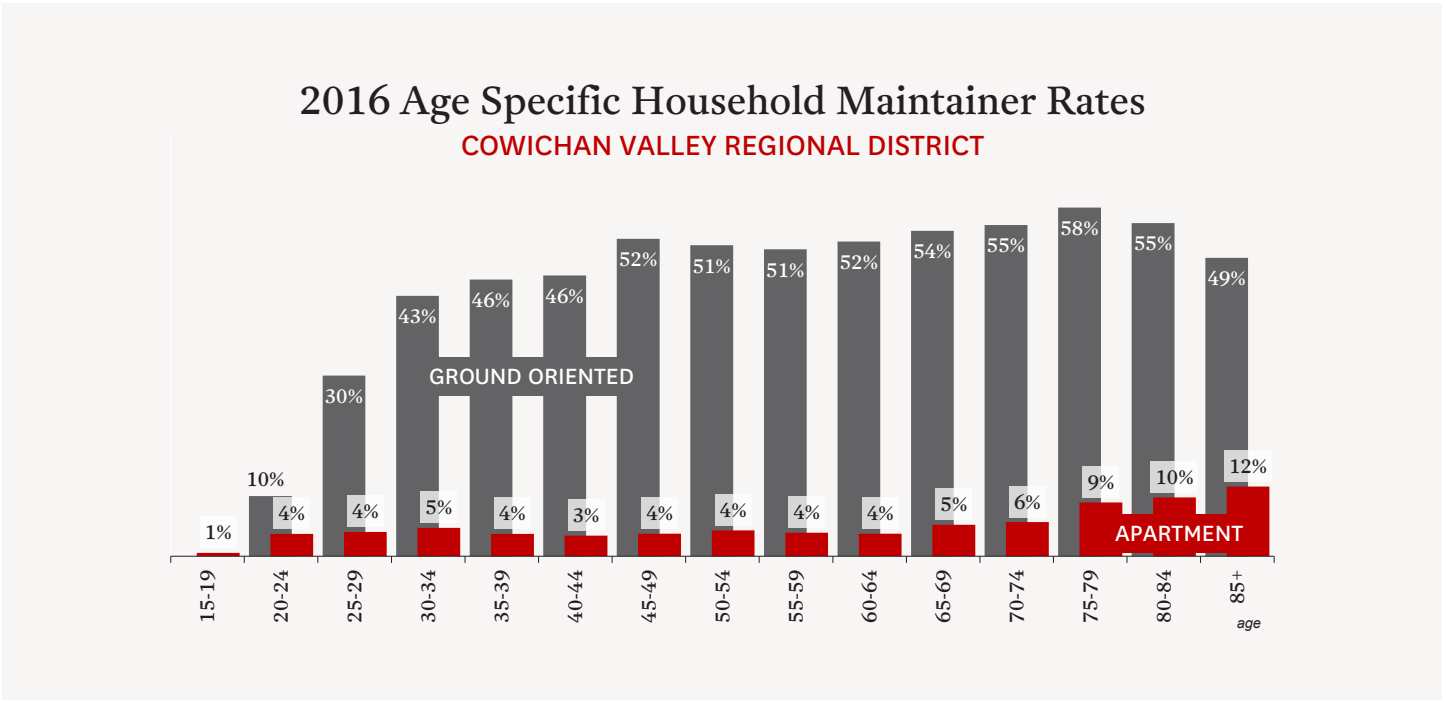


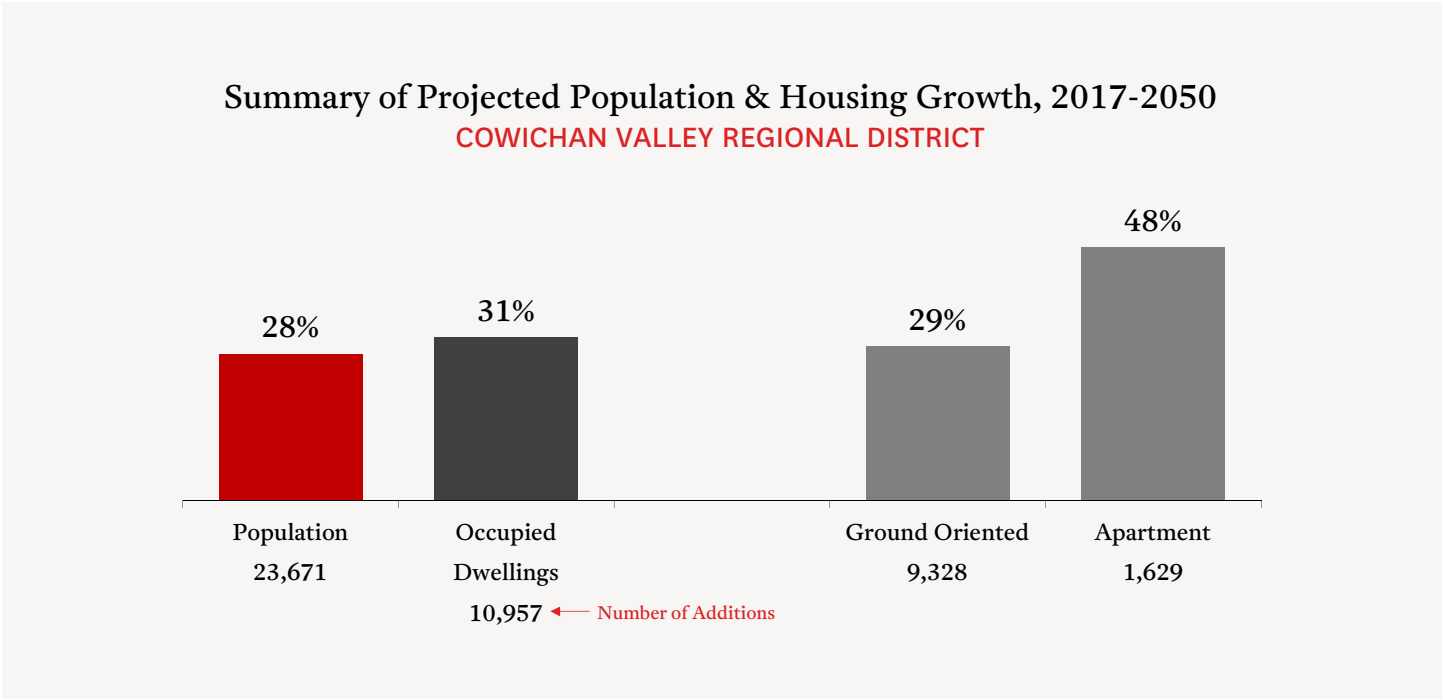
FIGURE 10



In terms of composition, the regional housing stock would therefore shift slightly at the margin, going from 90% ground oriented (and 10% apartment) in 2017 to 89% ground oriented (and 11% apartment) by 2050.

This regional housing projection serves as the basis for the future allocation of homes under each of the baseline projection for the CVRD's CSDs and the three additional projection scenarios. Before presenting the sub-regional output, however, the final regional consideration is future employment.

FIGURE 11



EMPLOYMENT

Based on Census undercoverage-adjusted, place of work employment data, Figure 12 summarizes the industry composition of jobs located within the Cowichan Valley. These jobs include those associated with a usual place of work outside of the home, those located at home, and those with no fixed workplace address.

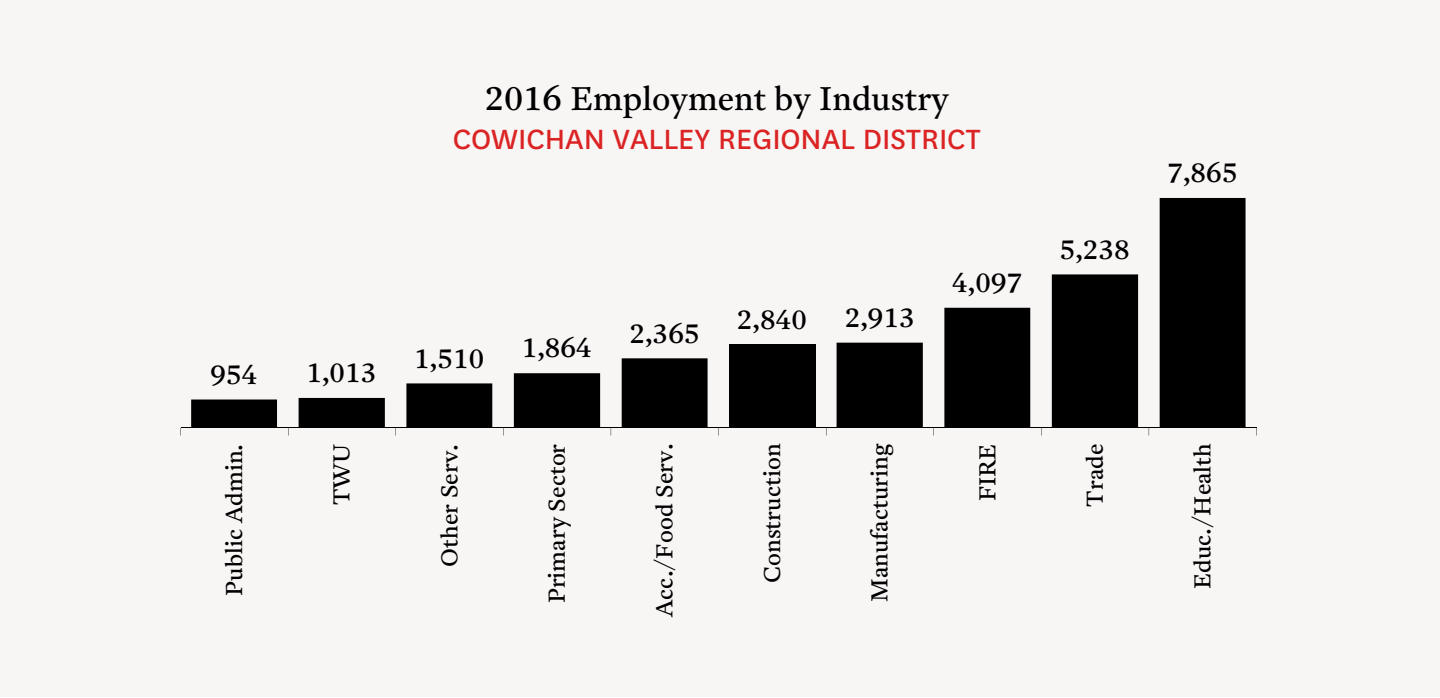
As of 2016, there were 30,659 jobs located in the CVRD. The largest sector was Education and Health, accounting for 26% of total employment (7,865 jobs). This was followed by Wholesale and Retail Trade at 17% (5,238 jobs) and FIRE at 13% (4,097). The smallest sectors were Transportation, Warehousing, and Utilities and Public Administration, each at 3% of total jobs (1,013 and 954 jobs, respectively).

As a next step towards developing a forward-looking assessment of regional employment, the CVRD's historical sector-specific shares of provincial employment were first considered.

Between 2006 and 2016, the CVRD's share of BC-wide employment generally declined, falling in each industry sector with the exception of Manufacturing and FIRE (Figure 13, next page).

By 2016, the CVRD's share of provincial employment was highest in the Primary sector (2.56%), followed by Manufacturing (1.77%), while the smallest shares were in Public Administration (0.95%) and Transportation, Warehousing, and Utilities (0.69%).

FIGURE 12



In looking ahead, it was assumed that the trends in the Cowichan Valley's industry-specific shares of BC-wide employment between 2006 and 2016 would continue over the course of the projection period. Consequently, eight of the ten sectors would see their shares diminish over time, while two (Manufacturing and FIRE) would see their shares rise slightly.

When these sector-specific shares are applied to the BC-wide projection of employment by these same sectors, the output is a projection of jobs in the Cowichan Valley, by broad industry, to 2050.

From an estimate of 31,129 jobs in 2017, the region would add 9,107 jobs and grow by 29% by 2050 (compared to 28% growth in the regional population and 36% growth in provincial employment over the same period).

The fastest-growing sectors would be Education and Health (47%) and FIRE (44%), followed by

FIGURE 13

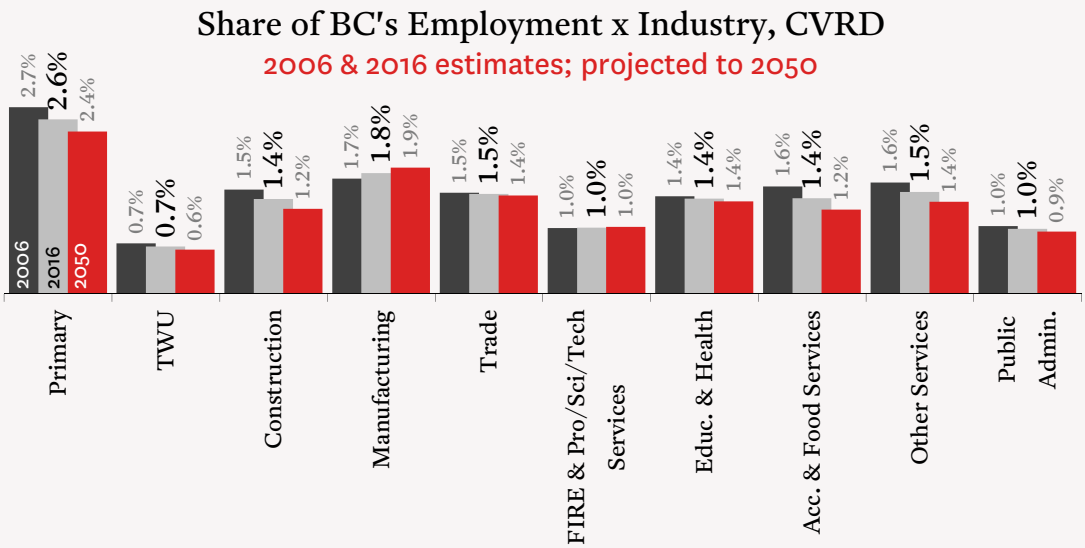
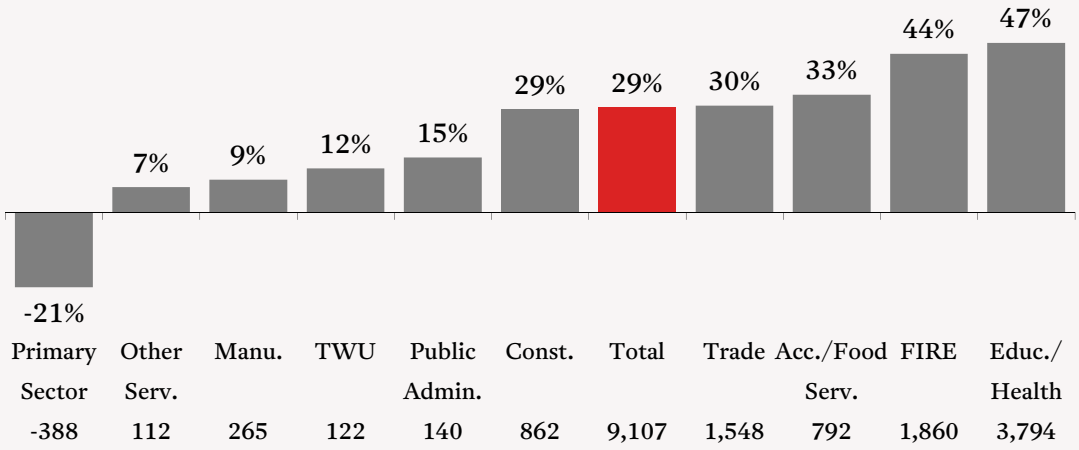


FIGURE 14



Accommodation and Food Services (33%) and Wholesale and Retail Trade (30%; Figure 14, previous page).

All other sectors would expand at a rate equivalent to the overall average or slower, with the slowest growers being Other Services (7%) and Manufacturing. Employment in the Primary sector would decline by 21%.

In absolute terms, the largest number of jobs that would be added would be in Education and Health (+3,794, equivalent to 42% of total employment growth). FIRE would add +1,860 jobs (20% of the total), while Wholesale and Retail Trade would grow by +1,548 (17% of the total). The Primary sector would lose 388 jobs over the 2017 to 2050 projection period.

In light of these changes, the overall structural composition of employment in the CVRD would not change perceptibly over the next three-plus decades, with the exception of Education and Health, which would go from accounting for 26% of all jobs today (2017) to 29% in 2050. This in part reflects the growing needs of an expanding, and aging, population.

By 2050, the three largest sectors—Education and Health, Wholesale and Retail Trade, and FIRE—would account for 24,616 of the 40,237 jobs, or 61% (Figure 14, previous page).

05. SUB-REGIONAL PROJECTIONS

The projections presented in the previous section for the Cowichan Valley region as a whole—population, housing, and employment—reflect trends in the demographic, housing, and economic structure of British Columbia, Canada, and the CVRD, and in turn represent the basis for developing future allocations of regional growth to sub-regions within the CVRD.

In this section, a baseline projection of housing, people, and jobs is presented for each of the region's nine electoral areas (A through I), its four municipalities (North Cowichan, Duncan, Lake Cowichan, and Ladysmith), and the 16 Indian Reserves (IRs) that are located within its borders. (Collectively, these jurisdictions are referred to as Census Subdivisions, or CSDs, in this report.)

The projections are summarized here in tabular format, including population by ten-year age group, housing by broad structural type (ground oriented and apartment), and employment by aggregate industry sector (of which there are ten). While the projections are presented as estimates for each of 2017 and 2050 (as well as the incremental change over that period) as part of this report, more detailed projection tables, including the years intervening 2017 and 2050, have been shared with CVRD staff in Excel format.

As a starting point for each of the baseline projection and the three projection scenarios, Table 1 summarizes the 2017 Census undercoverage-adjusted estimates of population, occupied dwellings, and (place of work) employment in each CSD.

TABLE 1

2017 Census Undercoverage-Adjusted Estimates
Cowichan Valley Regional District

Census Subdivisions	Population	Occupied Dwellings	Employment
EA A	4,870	1,976	1,749
EA B	8,804	3,328	1,760
EA C	4,838	2,230	1,824
EA D	3,378	1,403	1,076
EA E	4,248	1,620	2,038
EA F	1,688	711	259
EA G	2,461	1,054	309
EA H	2,508	1,077	635
EA I	1,267	595	166
North Cowichan	29,913	12,820	11,310
Duncan	5,099	2,394	4,574
Lake Cowichan	3,341	1,486	836
Ladysmith	8,820	3,744	2,755
IR Aggregate	3,999	989	1,840
CVRD Total	**85,234**	**35,427**	**31,129**

BASELINE PROJECTION

The baseline projection for CSDs in the CVRD was predicated on recent Census-based trends in housing (which yielded a distribution of future net additional homes and, by extension, people) and in employment.

A summary of the output associated with the scenario is presented below.

TABLE 2

2017 Estimates

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	599	585	334	446	814	960	1,132	**4,870**	1,916	60	**1,976**
EA B	1,547	1,067	882	1,111	1,432	1,494	1,271	**8,804**	3,310	18	**3,328**
EA C	539	464	289	372	617	837	1,718	**4,838**	2,211	19	**2,230**
EA D	467	351	262	363	468	634	833	**3,378**	1,329	74	**1,403**
EA E	671	488	430	500	619	771	770	**4,248**	1,604	17	**1,620**
EA F	192	173	139	178	266	352	390	**1,688**	710	1	**711**
EA G	211	222	177	185	302	543	821	**2,461**	1,048	6	**1,054**
EA H	246	243	180	219	382	545	693	**2,508**	1,065	11	**1,077**
EA I	134	99	77	92	187	322	357	**1,267**	594	1	**595**
North Cowichan	4,321	3,407	2,700	2,918	3,995	4,961	7,612	**29,913**	11,247	1,573	**12,820**
Duncan	668	473	475	443	581	732	1,728	**5,099**	1,339	1,055	**2,394**
Lake Cowichan	462	370	299	377	467	603	762	**3,341**	1,320	166	**1,486**
Ladysmith	1,292	897	753	851	1,184	1,399	2,444	**8,820**	3,363	381	**3,744**
IR Aggregate	1,085	783	544	418	464	386	317	**3,999**	982	7	**989**
CVRD Total	**12,434**	**9,622**	**7,541**	**8,471**	**11,778**	**14,540**	**20,848**	**85,234**	**32,037**	**3,390**	**35,427**

TABLE 3

2017 Estimates

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	49	15	232	60	379	303	462	167	64	17	**1,749**
EA B	148	67	286	72	135	291	507	144	83	26	**1,760**
EA C	86	22	327	215	319	245	334	112	152	13	**1,824**
EA D	154	52	95	95	238	64	77	218	72	9	**1,076**
EA E	246	142	354	411	303	280	141	9	129	21	**2,038**
EA F	18	0	82	18	11	35	13	42	23	17	**259**
EA G	49	22	55	12	11	87	19	19	27	9	**309**
EA H	111	37	68	30	81	76	128	60	34	9	**635**
EA I	12	15	0	18	32	29	26	9	15	9	**166**
North Cowichan	653	397	859	1,586	1,814	1,102	3,323	772	558	249	**11,310**
Duncan	31	105	286	83	612	1,020	1,745	297	167	227	**4,574**
Lake Cowichan	43	15	109	24	135	146	160	116	53	34	**836**
Ladysmith	197	82	150	298	411	402	654	288	121	150	**2,755**
IR Aggregate	43	22	95	12	709	122	430	163	114	129	**1,840**
CVRD Total	**1,841**	**996**	**2,999**	**2,933**	**5,192**	**4,203**	**8,018**	**2,417**	**1,612**	**918**	**31,129**

TABLE 4

2050 (Baseline Scenario)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	865	659	560	568	784	761	2,123	**6,320**	2,616	157	**2,773**
EA B	1,730	1,114	1,060	1,233	1,355	1,462	4,055	**12,010**	4,536	188	**4,724**
EA C	967	687	618	634	803	872	2,059	**6,639**	2,815	103	**2,918**
EA D	653	450	410	451	503	538	1,510	**4,516**	1,831	144	**1,975**
EA E	617	434	402	422	469	553	1,549	**4,446**	1,842	50	**1,892**
EA F	228	160	145	141	195	203	658	**1,730**	820	16	**836**
EA G	388	292	273	225	315	388	914	**2,793**	1,372	29	**1,401**
EA H	352	253	229	215	302	332	952	**2,635**	1,271	40	**1,311**
EA I	213	148	132	151	182	172	539	**1,537**	745	22	**767**
North Cowichan	5,554	3,923	3,565	3,774	4,467	5,158	12,171	**38,612**	14,310	2,209	**16,519**
Duncan	828	604	593	601	643	899	1,914	**6,081**	1,678	1,126	**2,804**
Lake Cowichan	698	477	437	468	519	653	1,544	**4,795**	1,761	258	**2,019**
Ladysmith	1,790	1,200	1,091	1,259	1,347	1,562	3,799	**12,048**	4,567	631	**5,199**
IR Aggregate	749	518	433	613	636	711	1,082	**4,742**	1,199	47	**1,246**
CVRD Total	**15,633**	**10,921**	**9,948**	**10,753**	**12,519**	**14,263**	**34,868**	**108,905**	**41,365**	**5,019**	**46,384**

TABLE 5

2050 (Baseline Scenario)

	Employment										
	Primary	TWU	Construction	Manufacturing	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	39	17	298	65	492	437	680	222	69	20	**2,340**
EA B	117	76	369	78	176	420	747	191	89	30	**2,292**
EA C	68	25	421	234	415	353	491	148	162	15	**2,333**
EA D	122	59	123	104	309	93	113	290	77	10	**1,299**
EA E	194	160	456	448	394	404	208	12	138	25	**2,439**
EA F	15	0	105	19	14	50	19	56	24	20	**322**
EA G	39	25	70	13	14	126	28	25	28	10	**379**
EA H	88	42	88	32	105	109	189	80	37	10	**780**
EA I	10	17	0	19	42	42	38	12	16	10	**207**
North Cowichan	515	445	1,106	1,729	2,355	1,589	4,895	1,024	596	287	**14,542**
Duncan	24	118	369	91	794	1,472	2,570	395	178	262	**6,273**
Lake Cowichan	34	17	140	26	176	210	236	154	57	40	**1,090**
Ladysmith	156	92	193	325	534	580	964	383	130	173	**3,530**
IR Aggregate	34	25	123	13	921	177	633	216	122	148	**2,412**
CVRD Total	**1,454**	**1,117**	**3,860**	**3,198**	**6,740**	**6,064**	**11,812**	**3,209**	**1,724**	**1,058**	**40,237**

TABLE 6

2017-2050 Change (Baseline Scenario)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	266	74	226	122	-30	-199	991	**1,450**	700	97	**797**
EA B	183	47	178	122	-77	-32	2,783	**3,205**	1,226	170	**1,396**
EA C	428	223	329	261	186	34	340	**1,801**	605	84	**689**
EA D	187	100	148	88	35	-95	677	**1,139**	502	70	**572**
EA E	-53	-54	-28	-78	-150	-219	780	**198**	238	33	**271**
EA F	36	-13	7	-36	-71	-148	269	**42**	110	15	**125**
EA G	177	70	95	40	13	-155	93	**333**	325	22	**347**
EA H	107	10	49	-5	-80	-214	260	**128**	206	29	**235**
EA I	79	49	56	59	-5	-150	183	**269**	150	21	**171**
North Cowichan	1,233	516	865	856	472	198	4,559	**8,699**	3,063	636	**3,700**
Duncan	160	132	118	158	61	167	186	**982**	340	71	**410**
Lake Cowichan	235	107	139	91	52	50	782	**1,454**	441	92	**533**
Ladysmith	499	303	338	408	163	162	1,355	**3,228**	1,205	250	**1,455**
IR Aggregate	-336	-265	-112	195	172	324	765	**744**	217	40	**257**
CVRD Total	**3,199**	**1,299**	**2,407**	**2,282**	**741**	**-277**	**14,020**	**23,671**	**9,328**	**1,629**	**10,957**

TABLE 7

2017-2050 Change (Baseline Scenario)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	-10	2	67	5	113	134	219	55	4	3	**591**
EA B	-31	8	82	6	40	129	240	47	6	4	**532**
EA C	-18	3	94	19	95	108	158	37	11	2	**508**
EA D	-32	6	27	9	71	28	36	72	5	1	**224**
EA E	-52	17	102	37	90	124	67	3	9	3	**401**
EA F	-4	0	24	2	3	15	6	14	2	3	**64**
EA G	-10	3	16	1	3	39	9	6	2	1	**69**
EA H	-23	5	20	3	24	34	61	20	2	1	**145**
EA I	-3	2	0	2	10	13	12	3	1	1	**41**
North Cowichan	-137	48	247	143	541	488	1,572	253	39	38	**3,231**
Duncan	-6	13	82	8	182	452	826	98	12	35	**1,699**
Lake Cowichan	-9	2	31	2	40	65	76	38	4	5	**254**
Ladysmith	-41	10	43	27	123	178	310	94	8	23	**775**
IR Aggregate	-9	3	27	1	211	54	203	53	8	20	**572**
CVRD Total	**-388**	**122**	**862**	**265**	**1,548**	**1,860**	**3,794**	**792**	**112**	**140**	**9,107**

SCENARIO 1: 90% OF FUTURE EA GROWTH WITHIN EA URBAN CONTAINMENT BOUNDARIES

As a starting point, Scenario 1 holds constant the regional projection of housing occupancy demand by type (ground oriented and apartment) as well as the projection of net additional housing for the region's four municipalities and IRs from the baseline CSD-level projection. Next, of the aggregate growth in housing occupancy demand projected for the region's nine electoral areas as part of the baseline projection, 90% was re-allocated into electoral area UCBs proportionally based on the respective areas associated with residential uses.

The population implications of this reallocation were determined through the interaction of the CSD-level models.

The employment projection as part of this scenario followed a similar set of rules as that of the housing projection, with 90% of the baseline non-municipal job growth being re-allocated to electoral area UCBs according to the relative size of the UCB areas associated with employment uses.

A summary of the output associated with Scenario 1 is presented on the following two pages.

TABLE 8

2050 (Scenario 1)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	1,053	791	688	691	931	948	2,451	**7,553**	3,035	209	**3,245**
EA B	1,557	992	943	1,118	1,219	1,290	3,753	**10,872**	4,165	133	**4,298**
EA C	811	578	512	531	681	717	1,783	**5,614**	2,468	54	**2,521**
EA D	576	396	357	400	443	461	1,375	**4,007**	1,655	118	**1,773**
EA E	520	365	336	357	393	456	1,379	**3,806**	1,628	20	**1,648**
EA F	320	225	209	202	267	296	823	**2,342**	1,037	44	**1,082**
EA G	273	213	194	151	228	274	715	**2,048**	1,080	8	**1,088**
EA H	275	199	176	164	243	255	816	**2,126**	1,086	14	**1,100**
EA I	608	425	402	409	486	566	1,231	**4,128**	1,695	147	**1,842**
North Cowichan	5,565	3,931	3,572	3,781	4,476	5,169	12,191	**38,686**	14,310	2,209	**16,519**
Duncan	830	605	594	602	644	901	1,916	**6,092**	1,678	1,126	**2,804**
Lake Cowichan	699	478	438	469	520	654	1,547	**4,805**	1,761	258	**2,019**
Ladysmith	1,794	1,203	1,093	1,262	1,349	1,565	3,805	**12,071**	4,567	631	**5,199**
IR Aggregate	752	520	434	616	638	713	1,084	**4,756**	1,199	47	**1,246**
CVRD Total	**15,633**	**10,921**	**9,948**	**10,753**	**12,519**	**14,263**	**34,868**	**108,905**	**41,365**	**5,019**	**46,384**

TABLE 9

2050 (Scenario 1)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	6	26	337	79	494	460	669	231	74	22	**2,398**
EA B	105	76	372	87	221	417	677	195	92	30	**2,272**
EA C	71	25	358	221	351	287	390	128	155	14	**1,999**
EA D	130	56	130	102	278	113	140	244	76	10	**1,280**
EA E	228	144	365	415	312	292	148	10	130	22	**2,065**
EA F	3	4	120	25	48	88	80	64	26	19	**478**
EA G	46	23	56	12	11	91	20	19	27	9	**314**
EA H	103	38	70	30	84	79	134	62	34	9	**643**
EA I	0	28	122	42	161	208	256	82	27	14	**941**
North Cowichan	515	445	1,106	1,729	2,355	1,589	4,895	1,024	596	287	**14,542**
Duncan	24	118	369	91	794	1,472	2,570	395	178	262	**6,273**
Lake Cowichan	34	17	140	26	176	210	236	154	57	40	**1,090**
Ladysmith	156	92	193	325	534	580	964	383	130	173	**3,530**
IR Aggregate	34	25	123	13	921	177	633	216	122	148	**2,412**
CVRD Total	**1,454**	**1,117**	**3,860**	**3,198**	**6,740**	**6,064**	**11,812**	**3,209**	**1,724**	**1,058**	**40,237**

TABLE 10

2017-50 Change (Scenario 1)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	453	206	354	246	117	-13	1,320	**2,682**	1,119	149	**1,269**
EA B	10	-75	61	8	-213	-204	2,481	**2,068**	856	114	**970**
EA C	272	114	223	158	64	-121	65	**776**	257	35	**292**
EA D	109	45	95	37	-25	-173	541	**630**	326	44	**370**
EA E	-151	-122	-94	-142	-226	-315	609	**-442**	24	3	**27**
EA F	129	52	70	25	1	-56	433	**653**	327	44	**371**
EA G	62	-9	17	-35	-74	-269	-106	**-413**	32	2	**35**
EA H	29	-44	-4	-55	-139	-291	123	**-382**	21	3	**23**
EA I	474	326	325	317	300	244	875	**2,861**	1,101	146	**1,247**
North Cowichan	1,244	524	872	864	482	209	4,578	**8,774**	3,063	636	**3,700**
Duncan	162	133	119	159	63	169	189	**993**	340	71	**410**
Lake Cowichan	237	108	139	92	53	51	784	**1,464**	441	92	**533**
Ladysmith	502	305	340	411	165	166	1,361	**3,251**	1,205	250	**1,455**
IR Aggregate	-333	-264	-111	198	174	327	767	**757**	217	40	**257**
CVRD Total	**3,199**	**1,299**	**2,407**	**2,282**	**741**	**-277**	**14,020**	**23,671**	**9,328**	**1,629**	**10,957**

TABLE 11

2017-50 Change (Scenario 1)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/ Tech Serv.	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	-44	11	105	20	115	157	207	64	10	5	**649**
EA B	-43	9	86	16	85	126	170	51	8	4	**513**
EA C	-15	3	31	6	32	42	56	16	3	1	**175**
EA D	-24	4	34	7	40	49	63	26	4	2	**204**
EA E	-18	2	10	4	9	12	7	0	1	0	**27**
EA F	-16	4	38	7	38	53	67	23	4	2	**219**
EA G	-4	0	2	0	0	4	1	1	0	0	**4**
EA H	-8	0	2	0	2	3	6	2	0	0	**9**
EA I	-12	13	122	24	129	179	231	73	12	6	**776**
North Cowichan	-137	48	247	143	541	488	1,572	253	39	38	**3,231**
Duncan	-6	13	82	8	182	452	826	98	12	35	**1,699**
Lake Cowichan	-9	2	31	2	40	65	76	38	4	5	**254**
Ladysmith	-41	10	43	27	123	178	310	94	8	23	**775**
IR Aggregate	-9	3	27	1	211	54	203	53	8	20	**572**
CVRD Total	**-388**	**122**	**862**	**265**	**1,548**	**1,860**	**3,794**	**792**	**112**	**140**	**9,107**

SCENARIO 2: 90% OF FUTURE REGIONAL GROWTH WITHIN ALL URBAN CONTAINMENT BOUNDARIES

While similar in its construct to Scenario 1, Scenario 2 considered the implications of 90% of all non-IR growth in regional housing occupancy and employment being re-allocated to those parts of the region that are within UCBs. Unlike Scenario 1, which held both the IR and municipal housing and employment allocation constant at their baseline levels (thereby only reallocating baseline growth earmarked for electoral areas into electoral area UCBs), Scenario 2 reallocated baseline electoral area growth *along with* baseline municipal growth into both electoral area *and* municipal UCBs. A summary of the output associated with Scenario 2 is presented below.

TABLE 12

2050 (Scenario 2)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	1,002	756	653	659	894	898	2,369	**7,229**	2,896	229	**3,125**
EA B	1,560	994	944	1,121	1,223	1,292	3,761	**10,895**	4,150	160	**4,310**
EA C	814	580	514	533	684	720	1,790	**5,635**	2,469	62	**2,531**
EA D	586	403	364	408	452	471	1,395	**4,079**	1,670	132	**1,802**
EA E	520	365	336	357	393	456	1,379	**3,807**	1,628	20	**1,648**
EA F	329	232	215	209	275	305	841	**2,406**	1,050	60	**1,109**
EA G	273	213	194	151	228	274	715	**2,048**	1,080	8	**1,088**
EA H	275	199	176	164	243	255	816	**2,126**	1,086	14	**1,100**
EA I	638	448	422	430	514	597	1,292	**4,342**	1,737	200	**1,937**
North Cowichan	5,465	3,858	3,505	3,713	4,390	5,068	11,997	**37,995**	14,152	2,089	**16,241**
Duncan	775	565	556	566	600	845	1,821	**5,727**	1,562	1,095	**2,657**
Lake Cowichan	752	515	474	503	561	707	1,637	**5,148**	1,882	266	**2,148**
Ladysmith	1,893	1,272	1,161	1,326	1,424	1,663	3,972	**12,712**	4,806	637	**5,443**
IR Aggregate	752	520	434	616	638	713	1,084	**4,757**	1,199	47	**1,246**
CVRD Total	**15,633**	**10,921**	**9,948**	**10,753**	**12,519**	**14,263**	**34,868**	**108,905**	**41,365**	**5,019**	**46,384**

TABLE 13

2050 (Scenario 2)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	10	27	322	87	524	497	842	247	75	29	**2,660**
EA B	112	78	360	93	245	447	813	207	92	36	**2,482**
EA C	74	25	355	222	358	295	427	131	155	16	**2,059**
EA D	135	57	125	105	288	125	196	249	76	13	**1,368**
EA E	235	144	365	415	312	292	148	10	130	22	**2,072**
EA F	4	4	114	28	59	102	143	70	27	22	**573**
EA G	47	23	56	12	11	91	20	19	27	9	**315**
EA H	106	38	70	30	84	79	134	62	34	9	**647**
EA I	0	30	103	51	199	254	471	101	28	24	**1,261**
North Cowichan	518	436	1,121	1,675	2,249	1,666	4,504	1,007	591	287	**14,054**
Duncan	22	109	312	90	658	1,103	1,902	323	170	233	**4,920**
Lake Cowichan	20	22	160	39	215	255	372	162	59	42	**1,346**
Ladysmith	135	101	275	339	618	682	1,207	405	137	170	**4,068**
IR Aggregate	34	25	123	13	921	177	633	216	122	148	**2,412**
CVRD Total	**1,454**	**1,117**	**3,860**	**3,198**	**6,740**	**6,064**	**11,812**	**3,209**	**1,724**	**1,058**	**40,237**

TABLE 14

2017-50 Change (Scenario 2)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	402	171	318	213	80	-63	1,237	**2,359**	980	168	**1,149**
EA B	12	-73	62	10	-209	-202	2,490	**2,091**	840	142	**982**
EA C	275	116	225	161	67	-118	72	**798**	258	43	**301**
EA D	120	53	102	45	-16	-162	562	**702**	342	58	**400**
EA E	-151	-122	-94	-142	-226	-315	609	**-442**	24	3	**27**
EA F	138	59	76	31	9	-46	451	**717**	340	59	**398**
EA G	62	-9	17	-35	-74	-269	-106	**-413**	32	2	**35**
EA H	29	-44	-4	-55	-139	-291	123	**-381**	21	3	**23**
EA I	504	350	345	338	327	275	935	**3,074**	1,143	199	**1,341**
North Cowichan	1,144	451	806	795	395	107	4,384	**8,082**	2,904	517	**3,421**
Duncan	107	93	82	123	18	113	93	**628**	223	40	**263**
Lake Cowichan	289	145	175	127	93	103	875	**1,807**	562	99	**661**
Ladysmith	601	374	408	476	240	264	1,528	**3,892**	1,443	256	**1,699**
IR Aggregate	-333	-264	-111	198	174	327	767	**758**	217	40	**257**
CVRD Total	**3,199**	**1,299**	**2,407**	**2,282**	**741**	**-277**	**14,020**	**23,671**	**9,328**	**1,629**	**10,957**

TABLE 15

2017-50 Change (Scenario 2)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/ Tech Serv.	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	-39	12	90	27	145	194	381	79	11	12	**911**
EA B	-36	10	74	21	109	155	307	63	9	10	**722**
EA C	-12	3	27	8	39	50	94	20	3	3	**234**
EA D	-19	4	29	9	50	61	119	31	4	4	**292**
EA E	-11	2	10	4	9	12	7	0	1	0	**34**
EA F	-14	4	32	10	49	67	130	28	4	5	**314**
EA G	-2	0	2	0	0	4	1	1	0	0	**6**
EA H	-5	0	2	0	2	3	6	2	0	0	**12**
EA I	-12	15	103	33	166	225	446	92	13	15	**1,095**
North Cowichan	-134	39	263	90	435	564	1,181	236	33	38	**2,744**
Duncan	-9	4	26	6	46	83	157	25	3	6	**346**
Lake Cowichan	-23	7	51	15	80	109	212	46	6	7	**510**
Ladysmith	-62	18	125	41	206	280	552	117	16	20	**1,313**
IR Aggregate	-9	3	27	1	211	54	203	53	8	20	**572**
CVRD Total	**-388**	**122**	**862**	**265**	**1,548**	**1,860**	**3,794**	**792**	**112**	**140**	**9,107**

SCENARIO 3: 75% OF FUTURE REGIONAL GROWTH WITHIN AREAS SERVICED BY WATER & SEWER

This final scenario differs from the previous two in that it considers where future growth within the CVRD would occur, given the regional projections and the size of areas that have either water services, sewer services, or both. More specifically, 75% of regional net housing additions and 75% of employment growth have been allocated to these serviced areas over the course of the projection period.

A summary of the output associated with Scenario 3 is presented below.

TABLE 16

2050 (Scenario 3)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	943	715	613	620	849	839	2,265	**6,844**	2,767	202	**2,969**
EA B	1,814	1,174	1,115	1,290	1,424	1,544	4,207	**12,567**	4,669	244	**4,913**
EA C	1,067	758	685	700	883	971	2,237	**7,302**	3,011	153	**3,164**
EA D	727	503	460	501	563	612	1,643	**5,009**	1,978	183	**2,161**
EA E	653	459	426	446	498	588	1,614	**4,685**	1,908	68	**1,976**
EA F	535	377	355	344	436	510	1,204	**3,761**	1,515	140	**1,655**
EA G	658	484	458	402	528	660	1,399	**4,589**	1,994	163	**2,157**
EA H	490	351	323	306	411	471	1,201	**3,553**	1,586	100	**1,686**
EA I	418	293	272	285	342	377	904	**2,891**	1,220	109	**1,329**
North Cowichan	4,764	3,362	3,028	3,249	3,839	4,368	10,762	**33,373**	12,611	1,836	**14,447**
Duncan	850	621	608	615	659	922	1,948	**6,223**	1,724	1,125	**2,848**
Lake Cowichan	551	373	338	371	402	507	1,284	**3,826**	1,450	192	**1,642**
Ladysmith	1,408	928	831	1,006	1,042	1,178	3,116	**9,509**	3,733	456	**4,189**
IR Aggregate	755	522	435	618	641	716	1,085	**4,773**	1,199	47	**1,246**
CVRD Total	**15,633**	**10,921**	**9,948**	**10,753**	**12,519**	**14,263**	**34,868**	**108,905**	**41,365**	**5,019**	**46,384**

TABLE 17

2050 (Scenario 3)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	18	24	310	81	506	471	783	236	73	27	**2,529**
EA B	94	83	403	104	300	532	981	241	97	41	**2,877**
EA C	54	32	410	238	438	401	629	173	162	22	**2,559**
EA D	122	61	150	113	333	175	293	279	79	16	**1,620**
EA E	219	150	402	428	362	359	254	30	134	26	**2,363**
EA F	0	10	159	41	126	193	321	108	32	28	**1,017**
EA G	11	34	138	37	139	269	363	90	37	20	**1,137**
EA H	84	45	116	44	156	177	328	103	40	15	**1,109**
EA I	0	23	54	35	121	149	261	58	22	17	**740**
North Cowichan	582	417	975	1,639	2,037	1,342	3,952	883	574	266	**12,667**
Duncan	16	112	334	94	701	1,193	2,069	346	173	240	**5,279**
Lake Cowichan	39	16	119	25	148	166	187	127	54	36	**917**
Ladysmith	180	86	167	307	452	461	759	317	124	157	**3,010**
IR Aggregate	34	25	123	13	921	177	633	216	122	148	**2,412**
CVRD Total	**1,454**	**1,117**	**3,860**	**3,198**	**6,740**	**6,064**	**11,812**	**3,209**	**1,724**	**1,058**	**40,237**

TABLE 18

2017-50 Change (Scenario 3)

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	344	131	279	174	35	-121	1,133	**1,974**	851	142	**993**
EA B	266	107	233	179	-8	50	2,935	**3,763**	1,359	226	**1,585**
EA C	527	294	396	328	266	134	519	**2,464**	801	134	**935**
EA D	261	152	198	138	95	-22	810	**1,631**	650	109	**759**
EA E	-18	-28	-4	-54	-121	-183	845	**437**	304	51	**355**
EA F	343	204	216	166	170	159	814	**2,072**	805	139	**944**
EA G	447	262	280	217	226	118	578	**2,128**	947	157	**1,103**
EA H	245	108	144	86	29	-74	508	**1,045**	521	89	**610**
EA I	284	194	195	193	155	55	547	**1,624**	626	108	**734**
North Cowichan	443	-44	329	332	-155	-592	3,149	**3,460**	1,364	263	**1,628**
Duncan	182	148	134	172	78	190	220	**1,124**	385	70	**455**
Lake Cowichan	89	3	39	-6	-65	-97	522	**485**	130	26	**156**
Ladysmith	116	31	77	156	-141	-222	672	**689**	371	75	**445**
IR Aggregate	-330	-261	-109	201	177	330	768	**774**	217	40	**257**
CVRD Total	**3,199**	**1,299**	**2,407**	**2,282**	**741**	**-277**	**14,020**	**23,671**	**9,328**	**1,629**	**10,957**

TABLE 19

2017-50 Change (Scenario 3)

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/ Tech Serv.	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	-31	9	79	21	127	167	321	69	9	10	**780**
EA B	-53	16	117	32	164	241	475	97	13	15	**1,117**
EA C	-33	9	83	24	119	156	295	62	10	9	**734**
EA D	-32	8	55	17	95	111	216	60	7	7	**545**
EA E	-27	8	48	16	58	79	113	21	5	4	**325**
EA F	-18	10	77	23	115	158	308	66	9	11	**759**
EA G	-39	12	83	25	128	181	343	72	10	12	**828**
EA H	-27	7	48	14	75	101	200	43	6	7	**474**
EA I	-12	8	54	17	89	120	235	48	7	8	**574**
North Cowichan	-71	20	116	53	223	241	629	112	16	17	**1,357**
Duncan	-14	7	48	11	90	172	325	49	6	13	**705**
Lake Cowichan	-4	1	10	1	13	20	27	11	1	2	**81**
Ladysmith	-17	3	17	9	41	58	105	29	3	7	**255**
IR Aggregate	-9	3	27	1	211	54	203	53	8	20	**572**
CVRD Total	**-388**	**122**	**862**	**265**	**1,548**	**1,860**	**3,794**	**792**	**112**	**140**	**9,107**

A01. HOUSING NEEDS SUMMARY

This section of the report in part draws on information presented earlier and in part introduces new data about the Cowichan Valley and its electoral areas and municipalities. It is intended to serve as a foundation for the development of a complete Housing Needs Report, per the British Columbia Local Government Act, by way of providing elemental components outlined in Bill 18 - 2018: Local Government Statutes (Housing Needs Reports) Amendment Act, 2018.

CURRENT & FUTURE DEMOGRAPHICS

TABLE A1

2017 Estimates, CVRD

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	49	15	232	60	379	303	462	167	64	17	**1,749**
EA B	148	67	286	72	135	291	507	144	83	26	**1,760**
EA C	86	22	327	215	319	245	334	112	152	13	**1,824**
EA D	154	52	95	95	238	64	77	218	72	9	**1,076**
EA E	246	142	354	411	303	280	141	9	129	21	**2,038**
EA F	18	0	82	18	11	35	13	42	23	17	**259**
EA G	49	22	55	12	11	87	19	19	27	9	**309**
EA H	111	37	68	30	81	76	128	60	34	9	**635**
EA I	12	15	0	18	32	29	26	9	15	9	**166**
North Cowichan	653	397	859	1,586	1,814	1,102	3,323	772	558	249	**11,310**
Duncan	31	105	286	83	612	1,020	1,745	297	167	227	**4,574**
Lake Cowichan	43	15	109	24	135	146	160	116	53	34	**836**
Ladysmith	197	82	150	298	411	402	654	288	121	150	**2,755**
IR Aggregate	43	22	95	12	709	122	430	163	114	129	**1,840**
CVRD Total	**1,841**	**996**	**2,999**	**2,933**	**5,192**	**4,203**	**8,018**	**2,417**	**1,612**	**918**	**31,129**

Indicates largest sector by employment within a particular jurisdiction.

TABLE A2

2050 (Baseline Scenario), CVRD

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	865	659	560	568	784	761	2,123	**6,320**	2,616	157	**2,773**
EA B	1,730	1,114	1,060	1,233	1,355	1,462	4,055	**12,010**	4,536	188	**4,724**
EA C	967	687	618	634	803	872	2,059	**6,639**	2,815	103	**2,918**
EA D	653	450	410	451	503	538	1,510	**4,516**	1,831	144	**1,975**
EA E	617	434	402	422	469	553	1,549	**4,446**	1,842	50	**1,892**
EA F	228	160	145	141	195	203	658	**1,730**	820	16	**836**
EA G	388	292	273	225	315	388	914	**2,793**	1,372	29	**1,401**
EA H	352	253	229	215	302	332	952	**2,635**	1,271	40	**1,311**
EA I	213	148	132	151	182	172	539	**1,537**	745	22	**767**
North Cowichan	5,554	3,923	3,565	3,774	4,467	5,158	12,171	**38,612**	14,310	2,209	**16,519**
Duncan	828	604	593	601	643	899	1,914	**6,081**	1,678	1,126	**2,804**
Lake Cowichan	698	477	437	468	519	653	1,544	**4,795**	1,761	258	**2,019**
Ladysmith	1,790	1,200	1,091	1,259	1,347	1,562	3,799	**12,048**	4,567	631	**5,199**
IR Aggregate	749	518	433	613	636	711	1,082	**4,742**	1,199	47	**1,246**
CVRD Total	**15,633**	**10,921**	**9,948**	**10,753**	**12,519**	**14,263**	**34,868**	**108,905**	**41,365**	**5,019**	**46,384**

Indicates largest age group within a particular jurisdiction.

TABLE A3

2017-2050 Change (Baseline Scenario), CVRD

	Population								Dwellings		
	0-14	15-24	25-34	35-44	45-54	55-64	65+	Total	Ground Oriented	Apartment	Total
EA A	266	74	226	122	-30	-199	991	**1,450**	700	97	**797**
EA B	183	47	178	122	-77	-32	2,783	**3,205**	1,226	170	**1,396**
EA C	428	223	329	261	186	34	340	**1,801**	605	84	**689**
EA D	187	100	148	88	35	-95	677	**1,139**	502	70	**572**
EA E	-53	-54	-28	-78	-150	-219	780	**198**	238	33	**271**
EA F	36	-13	7	-36	-71	-148	269	**42**	110	15	**125**
EA G	177	70	95	40	13	-155	93	**333**	325	22	**347**
EA H	107	10	49	-5	-80	-214	260	**128**	206	29	**235**
EA I	79	49	56	59	-5	-150	183	**269**	150	21	**171**
North Cowichan	1,233	516	865	856	472	198	4,559	**8,699**	3,063	636	**3,700**
Duncan	160	132	118	158	61	167	186	**982**	340	71	**410**
Lake Cowichan	235	107	139	91	52	50	782	**1,454**	441	92	**533**
Ladysmith	499	303	338	408	163	162	1,355	**3,228**	1,205	250	**1,455**
IR Aggregate	-336	-265	-112	195	172	324	765	**744**	217	40	**257**
CVRD Total	**3,199**	**1,299**	**2,407**	**2,282**	**741**	**-277**	**14,020**	**23,671**	**9,328**	**1,629**	**10,957**

Indicates largest age group change within a particular jurisdiction.

HOUSEHOLD INCOME

FIGURE A1

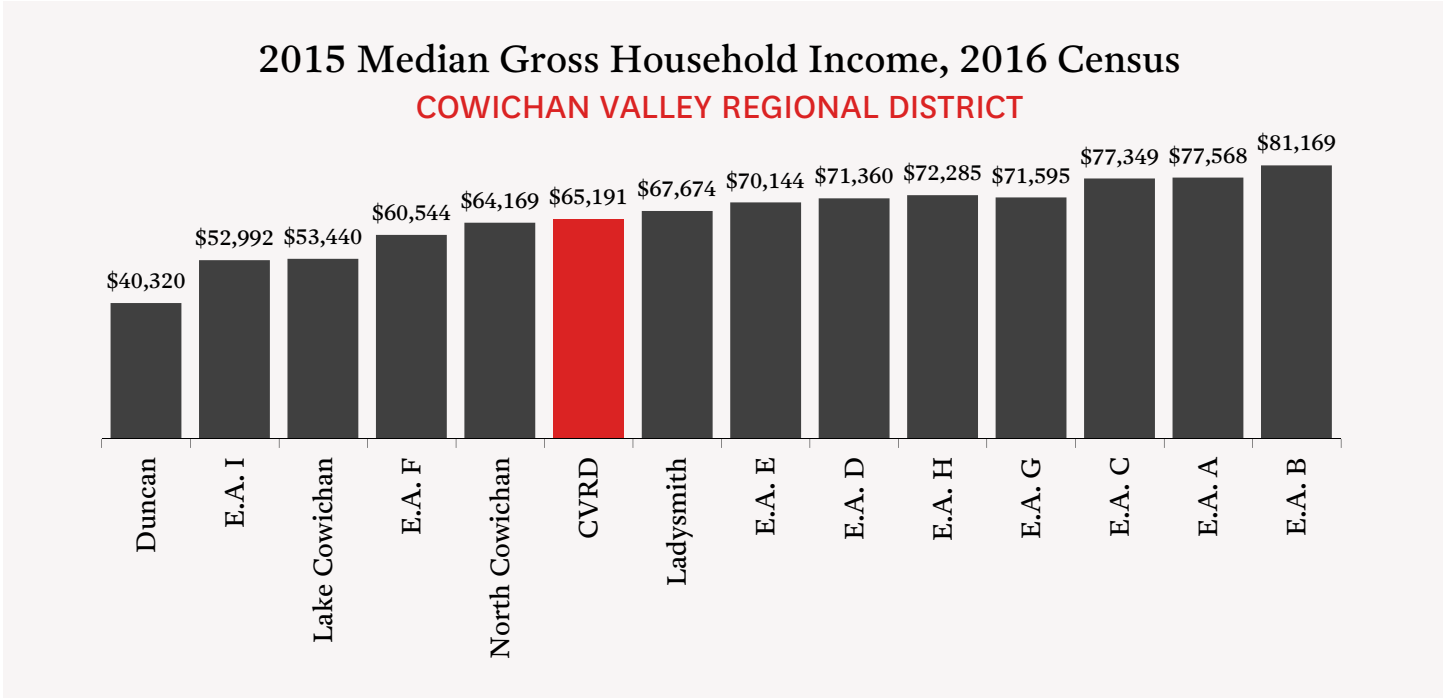


FIGURE A2

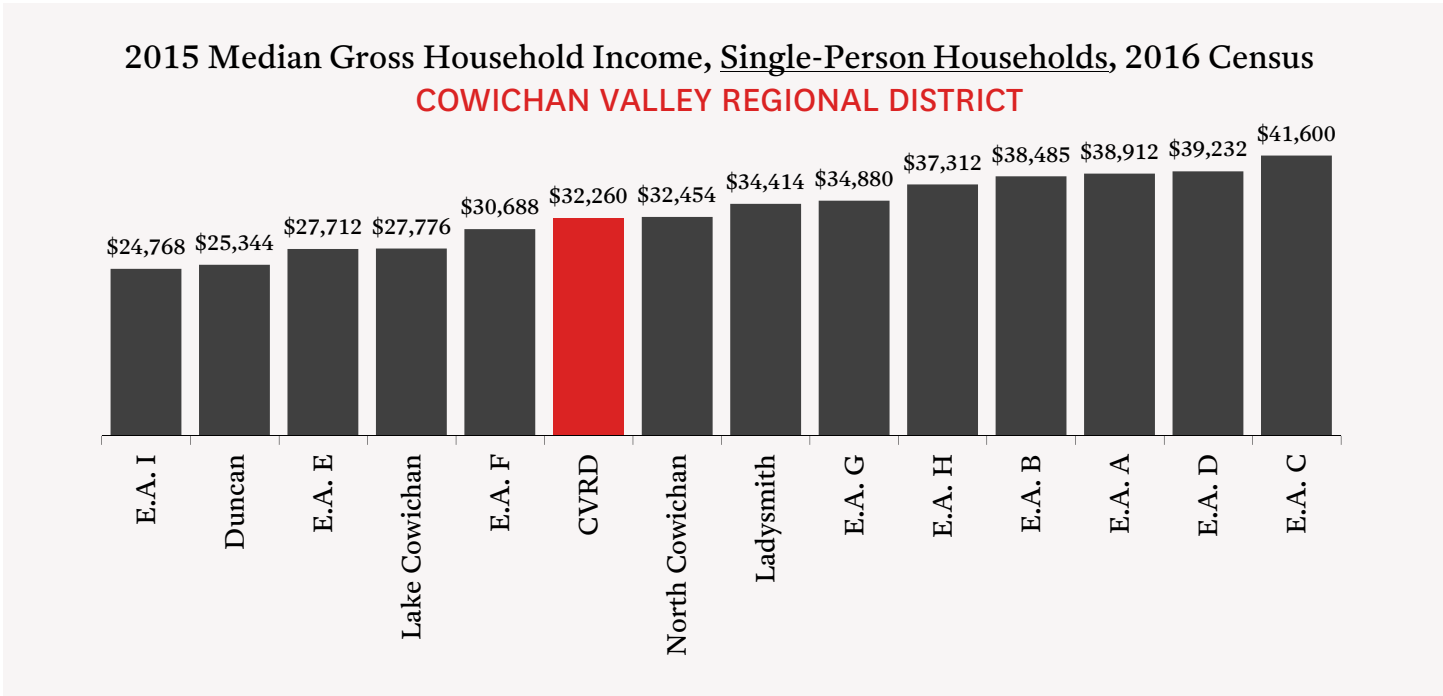
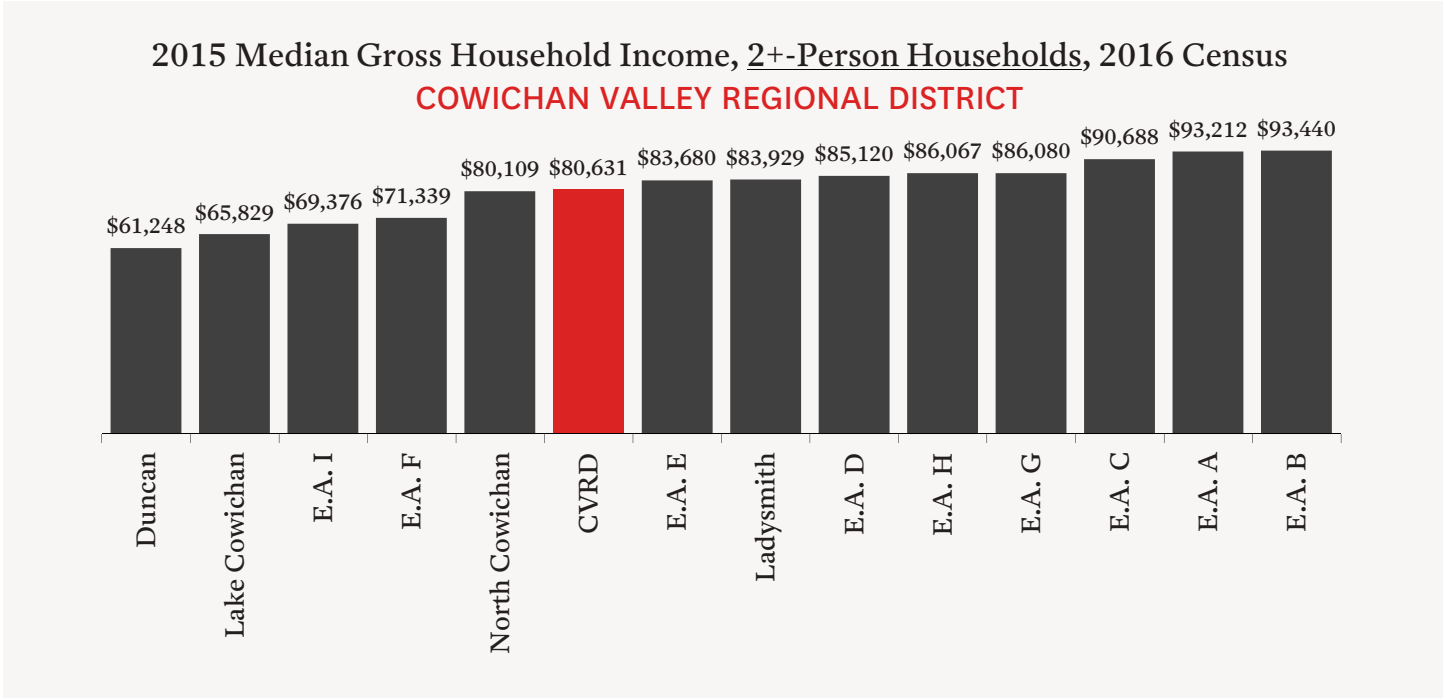
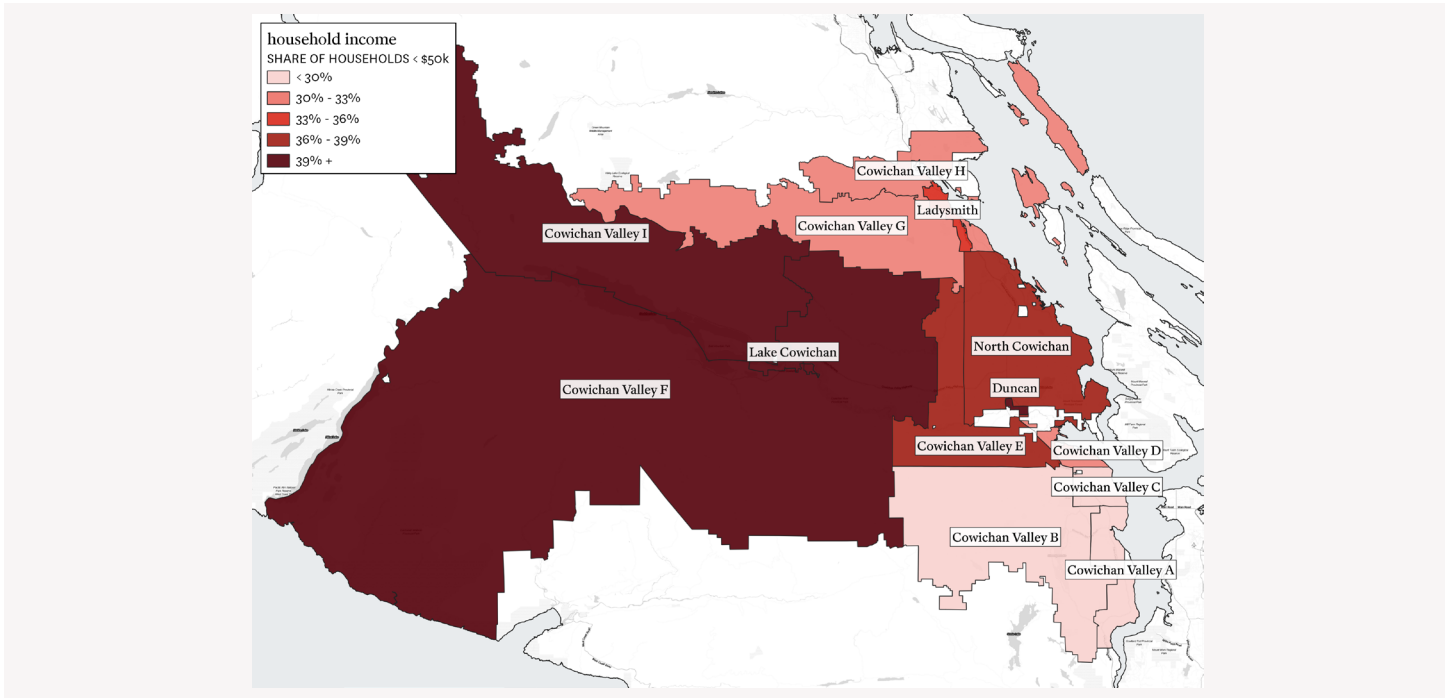


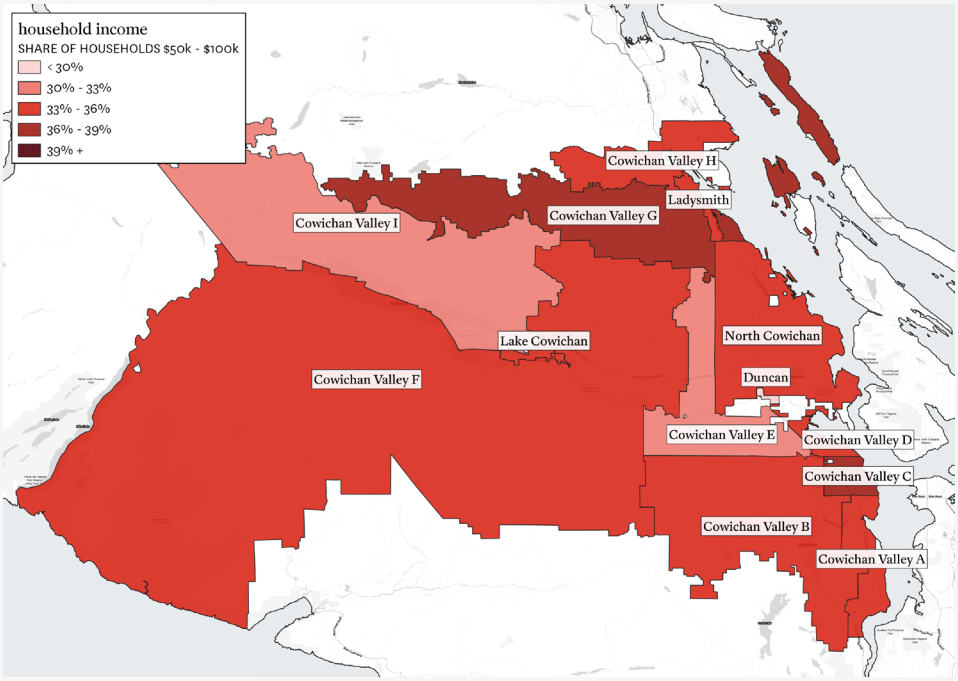
FIGURE A3



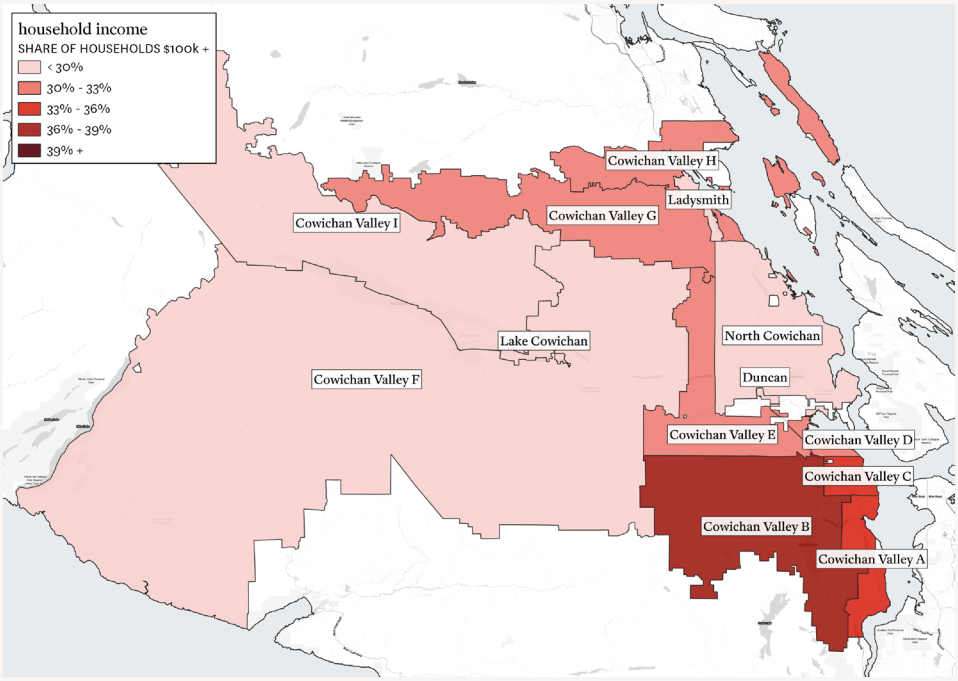
MAP A1



MAP A2


household income
SHARE OF HOUSEHOLDS $50k - $100k
< 30%
30% - 33%
33% - 36%
36% - 39%
39% +
Cowichan Valley H
Ladysmith
Cowichan Valley G
Cowichan Valley I
Lake Cowichan
North Cowichan
Duncan
Cowichan Valley F
Cowichan Valley E
Cowichan Valley D
Cowichan Valley C
Cowichan Valley B
Cowichan Valley A

MAP A3


household income
SHARE OF HOUSEHOLDS $100k +
< 30%
30% - 33%
33% - 36%
36% - 39%
39% +
Cowichan Valley H
Ladysmith
Cowichan Valley G
Cowichan Valley I
Lake Cowichan
North Cowichan
Duncan
Cowichan Valley F
Cowichan Valley E
Cowichan Valley D
Cowichan Valley C
Cowichan Valley B
Cowichan Valley A

SIGNIFICANT ECONOMIC SECTORS

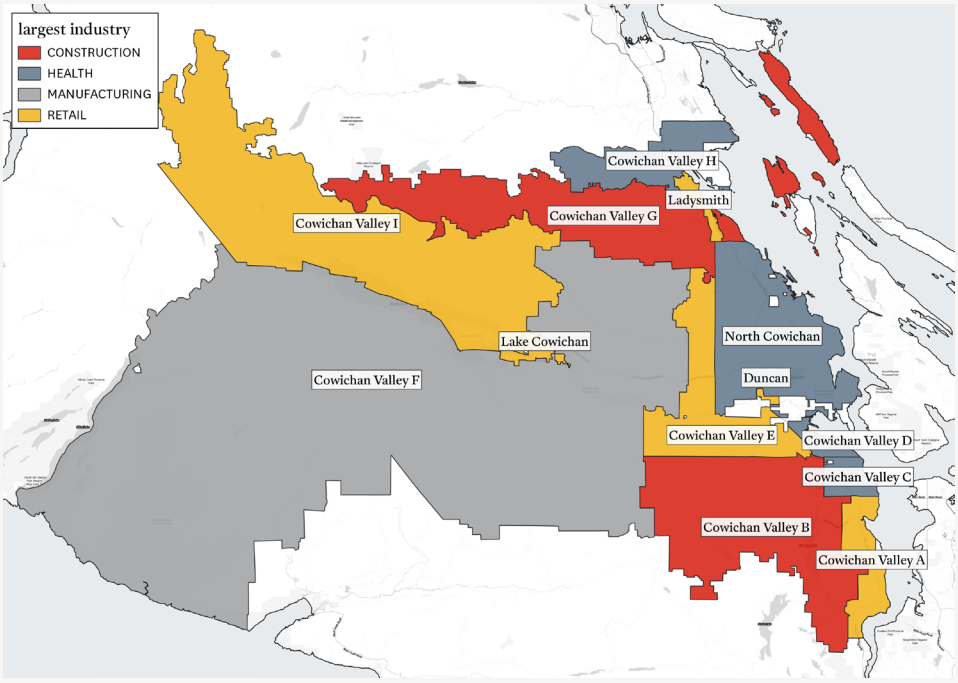
TABLE A4

2017 Estimates, CVRD

	Employment										
	Primary	TWU	Const.	Manu.	Trade	FIRE & Pro/Sci/Tech Services	Educ. & Health	Acc. & Food Services	Other Services	Public Admin.	Total
EA A	49	15	232	60	379	303	462	167	64	17	**1,749**
EA B	148	67	286	72	135	291	507	144	83	26	**1,760**
EA C	86	22	327	215	319	245	334	112	152	13	**1,824**
EA D	154	52	95	95	238	64	77	218	72	9	**1,076**
EA E	246	142	354	411	303	280	141	9	129	21	**2,038**
EA F	18	0	82	18	11	35	13	42	23	17	**259**
EA G	49	22	55	12	11	87	19	19	27	9	**309**
EA H	111	37	68	30	81	76	128	60	34	9	**635**
EA I	12	15	0	18	32	29	26	9	15	9	**166**
North Cowichan	653	397	859	1,586	1,814	1,102	3,323	772	558	249	**11,310**
Duncan	31	105	286	83	612	1,020	1,745	297	167	227	**4,574**
Lake Cowichan	43	15	109	24	135	146	160	116	53	34	**836**
Ladysmith	197	82	150	298	411	402	654	288	121	150	**2,755**
IR Aggregate	43	22	95	12	709	122	430	163	114	129	**1,840**
CVRD Total	**1,841**	**996**	**2,999**	**2,933**	**5,192**	**4,203**	**8,018**	**2,417**	**1,612**	**918**	**31,129**

Indicates largest sector by employment within a particular jurisdiction.

MAP A4: LARGEST SECTOR BY EMPLOYMENT



CURRENT & FUTURE HOUSING

TABLE A5

Total Occupied Dwelling Stock
Cowichan Valley Regional District

Dwelling Type	Year								2017-2050 Change	
	2017	2020	2025	2030	2035	2040	2045	2050	#	%
Ground Oriented	32,037	33,349	35,416	37,197	38,608	39,739	40,584	41,365	9,328	29%
Apartment	3,390	3,586	3,941	4,276	4,559	4,775	4,920	5,019	1,629	48%
Total	**35,427**	**36,935**	**39,357**	**41,473**	**43,168**	**44,515**	**45,504**	**46,384**	**10,957**	**31%**

Total Occupied Dwelling Stock
Cowichan Valley Regional District Census Subdivisions (baseline scenario)

Dwelling Type		Year								2017-2050 Change	
		2017	2020	2025	2030	2035	2040	2045	2050	#	%
Ground Oriented	EA A	1,916	2,014	2,169	2,303	2,409	2,494	2,557	2,616	700	37%
	EA B	3,310	3,482	3,754	3,988	4,173	4,322	4,433	4,536	1,226	37%
	EA C	2,211	2,296	2,430	2,545	2,637	2,710	2,765	2,815	605	27%
	EA D	1,329	1,399	1,510	1,606	1,682	1,743	1,789	1,831	502	38%
	EA E	1,604	1,637	1,690	1,736	1,772	1,801	1,822	1,842	238	15%
	EA F	710	726	750	771	788	801	811	820	110	15%
	EA G	1,048	1,093	1,165	1,227	1,276	1,316	1,345	1,372	325	31%
	EA H	1,065	1,094	1,140	1,179	1,210	1,235	1,254	1,271	206	19%
	EA I	594	616	649	678	700	719	732	745	150	25%
	North Cowichan	11,247	11,678	12,357	12,942	13,405	13,777	14,054	14,310	3,063	27%
	Duncan	1,339	1,387	1,462	1,527	1,578	1,619	1,650	1,678	340	25%
	Lake Cowichan	1,320	1,382	1,480	1,564	1,631	1,684	1,724	1,761	441	33%
	Ladysmith	3,363	3,532	3,799	4,029	4,211	4,357	4,466	4,567	1,205	36%
Total GO		**31,055**	**32,337**	**34,355**	**36,095**	**37,473**	**38,578**	**39,404**	**40,166**	**9,112**	**29%**
Apartment	EA A	60	72	93	113	130	143	151	157	97	161%
	EA B	18	39	76	111	140	163	178	188	170	931%
	EA C	19	29	48	65	79	90	98	103	84	437%
	EA D	74	82	98	112	124	133	139	144	70	94%
	EA E	17	21	28	35	40	45	48	50	33	197%
	EA F	1	3	6	9	12	14	15	16	15	2089%
	EA G	6	9	14	18	22	25	27	29	22	367%
	EA H	11	15	21	27	32	36	38	40	29	249%
	EA I	1	4	8	12	16	19	21	22	21	2089%
	North Cowichan	1,573	1,649	1,788	1,919	2,030	2,114	2,170	2,209	636	40%
	Duncan	1,055	1,064	1,079	1,093	1,106	1,115	1,121	1,126	71	7%
	Lake Cowichan	166	177	197	216	232	244	252	258	92	55%
	Ladysmith	381	411	466	517	561	594	616	631	250	66%
Total Apartment		**3,383**	**3,574**	**3,920**	**4,247**	**4,524**	**4,734**	**4,876**	**4,972**	**1,589**	**47%**