To What Extent Do Municipalities In Metro Vancouver Support A Jobs-Housing Balance?

An Evaluation of Official Community Plans in Metro Vancouver

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TO WHAT EXTENT DO MUNICIPALITIES IN METRO VANCOUVER SUPPORT A JOBS-HOUSING BALANCE? AN EVALUATION OF OFFICIAL COMMUNITY PLANS IN METRO VANCOUVER

by

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EXECUTIVE SUMMARY

The general objective of a jobs-housing balance is to match the number of employment opportunities with the number of housing opportunities as part of a complete community that allows residents to live close to where they work. In a rapidly growing region, this balance is essential in maintaining a sustainable, livable region. Metro Vancouver acknowledges this, encouraging a balance of jobs and housing through its Regional Growth Strategy goals. This research seeks to assess the extent to which the 21 municipalities in the region support such a balance through a plan quality evaluation of their Official Community Plans. The findings show that while some municipalities do not seek such a balance, the majority of municipalities do support a jobs-housing balance, though to varying degrees. This study provides planning implications and best practice examples with the aim to improve on the balance of jobs and housing in the region.

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Introduction: A Growing Region

Results from Canada's 2011 Census show that the Metro Vancouver region is growing rapidly, outpacing both the provincial and national averages. The metropolitan Vancouver region has grown by 9.3% since the last census in 2006. By comparison, the national growth rate was 5.9% while British Columbia as a whole grew by 7.0%. When the Greater Vancouver Regional District[1] was first established in 1967, the region's population was 950,000. Today, Metro Vancouver is home to 2.3 million, with over 1 million more people and 600,000 new jobs expected to come over the next 30 years. In order to remain a healthy and livable region, how Metro Vancouver is planned and developed is of utmost importance. As the region grows, proper planning ensures that housing and jobs are accommodated in a way that is conscious of its impacts on the region's land use, transportation system and natural environment.

Over the years, patterns of growth have shifted away from the traditionally job-rich central areas of the region with workers commuting from housing-rich suburban municipalities, to employment growth in suburban business parks and areas outside regional town centres with workers commuting from all over the region. According to a 2001 Greater Vancouver Regional District report, between 1990 and 2000, 50% of new office jobs were in office parks in the outer municipalities, while only 7% have located in the regional town centres. Young suburban municipalities in the South-of-Fraser and Tri-Cities areas have seen the fastest growth: Surrey, Langley and White Rock together added more than 85,000 residents and accounted for almost 44% of Metro Vancouver's gain in population in the last 5 years; they have a current combined population of 616,848. Similarly, Coquitlam, Port Coquitlam and Port Moody accounted for 10.8% of regional growth in the last 5 years, almost double the previous period's growth rate of 5.6%; they now have 218,509 residents, 21,284 more than in 2006. This is in contrast with older, more central municipalities such as Vancouver, Burnaby and New Westminster which together made up only 28% of Metro Vancouver's population gain between 2006 and 2011, down from 37% between 2001-2006 (Nagel 2011).

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[1] Now rebranded as Metro Vancouver

These changing patterns have in turn affected our regional transportation system. Like most major metropolitan regions, Vancouver faces regional congestion issues, particularly during rush hour. In 2004, the Ministry of Transportation and Infrastructure and TransLink completed a travel survey of Metro Vancouver residents. One of the key trends identified was the increased job growth outside town centres, which has resulted in a greater need for travel between municipalities as more and more people commute to areas outside of downtown Vancouver. Nearly 50% of new office jobs are located outside Vancouver's downtown core and regional town centres and therefore not easily accessible by transit. Many drive to work, leaving the Highway 1/Port Mann corridor congested 13 hours a day (Gateway Program 2011). Congestion results from basic lifestyle choices about where we chose to live and the way we design our communities and transportation systems (Frank 2005). A spatial mismatch of jobs and housing can lead to congestion, increased obesity, air pollution and respiratory dysfunction, increased energy consumption and climate change.

What is local government's role in this? Politicians and planners can help alleviate the congestion situation in the region and promote complete communities by establishing policies that promote a jobs-housing balance. The idea of a "jobs-housing balance" is an important part of the concept of a complete, livable community and has been studied by numerous researchers. The regional district of Metro Vancouver has long supported this idea of a jobs-housing balance as part of its regional planning program (LRSP 1996).

What is a Complete Community?
A Complete Community should be a great place to live, work, shop, and play. This means local access to options for food, transportation, housing, recreation, education, retail, and employment.

www.completecommunities.ca

This research project seeks to uncover if the planning policies of municipalities in the region are aligned with Metro Vancouver's goal of a spatial land pattern that provides opportunities for people to live close to where they work. Through a plan quality evaluation of Official Community Plans (OCPs) in the region, this paper seeks to answer the question: **To what extent do OCPs in Metro Vancouver support a jobs-housing balance?**

A Jobs-Housing Balance

What is a Jobs-Housing Balance?

The general objective of a jobs-housing balance policy is to match the number of employment opportunities with the number of housing opportunities in a given area. This contributes to the greater concept of a "balanced" or "complete" community – one that is self-contained, self-reliant, within which people live, work, shop and recreate without having to travel great distances. Research on the concept of a jobs-housing balance is not new; jobs-housing balance has its roots in the urban planning tradition of matching workplace and homeplace that reaches as far back as Ebenezer Howard's 1902 concept of garden cities (Levine 1998).

This concept continues to be supported by well-respected organizations such as the American Planning Association and the Urban Land Institute. In his 1996 book "Best Development Practices" that was prepared for the Florida Department of Community Affairs and published by the American Planning Association in cooperation with the Urban Land Institute, Reid Ewing lists "Contribute to the area's jobs-housing balance" as one of the Best Land Use Practices. He states that new communities often market themselves as places where people can both live and work – "a good selling point and a worthy goal" (Ewing 1996, 19). In 2003, the American Planning Association published a Planning Advisory Service Report entitled "Jobs-Housing Balance" written by Jerry Weitz. It in, Weitz makes a case for jobs-housing balance and provides a guide that jurisdictions can use to implement balancing policies.

In arguing for the need to balance jobs and housing, Weitz (2003) cites trends in the United States that show that people are driving longer distances, particularly to work, as land-use patterns in the past few decades have increased travel distances by separating homes, jobs and other destinations. A better planned, mixed-use community that has a balance of jobs and housing can help reduce travel distances and thus, can limit the increase in trip lengths (Urban Land Institute 1999). The reduction of Vehicle Miles Travelled (VMT) and traffic related impacts have generally garnered the most interest in

terms of both research and objective of implementing jobs-housing balancing policies. Most notable is Robert Cervero's seminal article "Jobs-Housing Balance and Regional Mobility" (1989) where his examination of data from 40 major suburban U.S. employment centres showed that suburban workplaces with severe jobs-housing imbalances result in less walking/cycling by residents and more traffic congestion. He argues that having jobs and housing geographically close together can reduce congestion as commute trips are shortened (Cervero 1989). With shortened trip lengths, VMT are reduced as well (Ewing 1996). For example, the case of increased housing in Toronto's central downtown resulted in a reduction of peak-hour commute trips into the area due to the increase of population where many jobs were located (Nowlan and Stewart 1991). Similarly, the Southern California Association of Government's (SCAG) strategy for redistributing "9 percent of the region's forecast employment growth to the year 2010 from job-rich to job-poor areas, and 5 percent of the forecast housing growth from housing-rich to housing-poor areas… was estimated to reduce regional vehicle miles travelled (VMT) by 33.4 million miles (8.5 percent)…" (Armstrong and Sears, 2001, 19). A corresponding benefit of the reduction of congestion and VMT is lowered tailpipe emissions, and resultantly, better air quality (Armstrong and Sears 2001).

Jobs-housing balancing also has social benefits such as reduced travel time for commuters as well as lower personal transportation costs. For instance, by dispersing employment among residential areas in a metropolitan area instead of concentrating jobs in a central location surrounded by residential areas, workers have the option of living close to where they work, thereby reducing commuting time as well as costs (Altshuler and Gomez-Ibanez 1993). Better planned, mixed communities also provide additional benefits like the reduced cost of public infrastructure such as new road construction, or the maintenance and improvement of heavily used commuter routes (Weitz 2003). There are also intangible social benefits of balancing jobs and housing such as the reduction of class segregation and the creation of interesting, pedestrian-oriented places (Cervero 1989; 1991). Further, the reduction of the stress of commuting can contribute to higher productivity and greater family stability and cohesion, as well as provide for more diverse urban settings that exhibit cultural richness (Armstrong and Sears 2001).

What is a Good Jobs-Housing Balance/Ratio?

Simply stated, a jobs-housing balance is roughly an equal number of jobs and housing units in a jurisdiction. The concept is commonly expressed in its most basic measure – a ratio of the number of jobs to the number of housing units in an area. The jobs-to-housing-unit ratio is most often used due to the ease of acquiring such data. However, caution must be used as it might misrepresent the actual number of workers in a community. For example, a housing unit or household may contain more than one worker, or no workers. Other measures might include the following:

- Jobs-to-occupied-housing-units ratio
- Jobs-to-households ratio
- Percentage of workers who reside locally
- Employment-to-population ratio
- Jobs-to-resident workers (labour force) ratio

If the data is available, the number of jobs to resident workers – the actual labour force – is the best measure to use (Weitz 2003).

Ratios are often expressed as a range, with different scholars recommending different ranges to signify balance. For jobs-to-housing-units, Ewing (1996) calls for a range of 1.3:1 to 1.7:1 and Cervero (1991) for 1.4:1 to 1.6:1. For a jobs to labour force ratio, a target standard of 1:1, with a target range of 0.8:1 to 1.25:1 is desired (Cervero 1996, Weitz 2003). Despite the recommendations, Cervero (1996) argues against any universal standard for jobs-housing balance and rather, policies for regional growth management that are appropriate for a community should be applied. In addition, this concept should go beyond mere numerical equality and should ideally be a matching of the jobs available in the community with the labour force skills, along with housing that is appropriate to the workers who wish to live in the area (Cervero 1989, Weitz 2003). Therefore, it is critical to consider the qualitative as well as the quantitative aspects of achieving jobs-housing balance. Lastly, it must be noted that jobs-housing ratios only indicate the *potential* for greater balance. These recommendations should merely be used as guides; targets or ranges should be based on local context, availability of accurate data, and local policy objectives.

How to Implement a Jobs-Housing Balance?

Jerry Weitz (2003) provides some recommended steps for applying jobs-housing balance in a locality:

Step 1: Determine the appropriate unit of geography for the study and application of jobs-housing balance policies.

Step 2: Determine what jobs-housing measurement will be used, according to the available or obtainable data.

Step 3: Collect data on the jobs-housing measure you select for the study area or areas. Calculate the overall jobs-housing ratio (or whichever measure you choose) for the area and analyze the results of the calculation.

Step 4: Make a value judgment – select a standard and recommend/seek approval of a jobs-housing balance standard.

Step 5: Audit your locality's comprehensive plan to determine the extent to which it promotes your new jobs-housing goal.

Step 6: Amend your comprehensive plan to include the analysis of jobs-housing balance and to include policy statement appropriate to your locality.

Step 7: Prepare and adopt regulations that implement local jobs-housing balance policies.

This research paper uses Weitz's steps as a guide, summarizing steps 1 to 4 which have already been completed by Metro Vancouver, and focusing on Step 5 by way of a Plan Quality Evaluation to answer the question: To what extent do OCPS in Metro Vancouver support a jobs-housing balance?

Context: Metro Vancouver

The Regional Growth Strategy

Like many other jurisdictions, Metro Vancouver subscribes to the notion that a jobs-housing balance is desirable, for many of the reasons stated in the above section, and encourages these policies amongst its member municipalities. Metro Vancouver is the regional federation of 21 municipalities that make up the Lower Mainland of British Columbia. Provincial legislation in British Columbia requires regional districts to generate 20-year plans, called "Regional Growth Strategies" (RGS). The growth strategies legislation is contained in Part 25 of the *Local Government Act* and provides a framework for coordinated planning and action for local governments in British Columbia. Regional Growth Strategies are primarily long-range land use plans meant to provide effective management of a region's growth. They provide a regional vision that commits its municipalities to a course of action to meet common social, economic and environmental objectives.

This idea of jobs and labour force balance has been central to regional planning in Greater Vancouver since the 1960s (LRSP, 1996). "Working toward a jobs/labour force balance means promoting spatial patterns of land use activity which provide jobs that are accessible to where workers live and provide housing close to where jobs are located" (Metro Vancouver 2004). These spatial patterns of land use have a strong influence on other important elements that make up regional livability such as transportation demand, complete communities and compact region.

When this project was being developed, Metro Vancouver was undergoing the process of drafting a new Regional Growth Strategy entitled *Metro Vancouver 2040 – Shaping Our Future*. Hence, both the 1996 *Livable Region Strategic Plan (LRSP)*, which was current at the time of the initial literature review for of this project, and *Metro Vancouver 2040,* which was adopted July 29th 2011, were reviewed. It was deemed important to study both RGSs as while *Metro Vancouver 2040* is the current plan at the time of writing, it lacks the supplemental reports that the LRSP has, such as the annual report evaluating the

progress made in achieving RGS objectives. Additionally, none of the OCPs in Metro Vancouver, at the time of data collection, contained Regional Context Statements (RCS) that reflected the new RGS. RCSs generally take the form of a chapter in a municipality's OCP and identify how the OCP works towards achieving the goals and strategies set out in the RGS. After the adoption of the RGS in July 2011, municipalities have a two year period in which to prepare a RCS, which is submitted to the Metro Vancouver Board for consideration and acceptance.

The LRSP and Metro Vancouver 2040

Metro Vancouver 2040 builds on the goals and policies set out in the LRSP (see Table 1), and the two plans are consistent in the objective of a jobs-housing balance in the region. The 1996 Livable Region Strategic Plan's approach to growth management rests on four fundamental strategies: (1) Protect the Green Zone, (2) Build Complete Communities, (3) Achieve a Compact Metropolitan Region, and (4) Increase Transportation Choice. These strategies are clearly inter-related and have to be achieved in tandem. While recognizing the inter-dependency of these goals, this research focuses on the strategy of building complete communities, which the concept of a jobs-housing balance supports most directly.

There are three central concepts underlying the Build Complete Communities objective:

(1) expanding housing choice
(2) promoting a better balance in jobs and labour force
(3) building a network of centres

Again, these concepts are all inter-connected and serve not only to advance the Build Complete Communities objective but also the Achieve a Compact Metropolitan Region and Increase Transportation Choice strategies of the LRSP.

The LRSP contains the following policies (GVRD 2004):

> *The GVRD Board will seek through partnerships on complete communities: a diversity of housing types, tenures and costs in each part of the region in balance with job distribution.*

And more specific to a jobs/labour force balance:

The GVRD Board will seek through partnerships on complete communities: ***a better balance in jobs and labour force location throughout the region.***

Table 1: Similarities between the 1996 and 2011 Regional Growth Strategy Goals

1996: The Livable Region Strategic Plan	2011: Metro Vancouver 2040 - Shaping Our Future
1. Protect the Green Zone	1. Create a Compact Urban Area
2. Build Complete Communities	2. Support a Sustainable Economy
3. Achieve a Compact Metropolitan Region	3. Protect the Environment and Respond to Climate Change Impacts
4. Increase Transportation Choice	4. Develop Complete Communities
	5. Support Sustainable Transportation Choices

Metro Vancouver 2040 differs only slightly from the LRSP, with an additional goal focusing on a sustainable economy. Its five fundamental objectives are: (1) Create a Compact Urban Area, (2) Support a Sustainable Economy, (3) Protect the Environment and Respond to Climate Change Impacts, (4) Develop Complete Communities, and (5) Support Sustainable Transportation Choices. These goals are again, inter-related and have to be achieved in tandem and the strategy to balance jobs and housing is contained not only in the Develop Complete Communities goal as in the LRSP, but also in the new Support a Sustainable Economy goal, which seeks to "promote land development patterns that support a diverse regional economy and employment close to where people live" (Strategy 2.1, *Metro Vancouver 2040*).

Metro Vancouver's Measure

Metro Vancouver has chosen the measure of Jobs-to-Labour Force, an optimal measure as noted earlier in the text, with academics recommending a target standard of 1:1, and a target range of 0.8:1 to 1.25:1 (Cervero 1996, Weitz 2003). As noted, the literature warns that these are merely guidelines and the best standard is based on local research and objectives. Heeding this advice, Metro Vancouver has established targets based on background studies for the RGS, grouping municipalities into subregions and recognizing differences between inner and outer municipalities. In addition, Metro Vancouver developed indicators such as proportion of labour force working in home

subregion, travel patterns, and housing construction in town centres, to monitor the region's jobs/labour force balance. These statistical analyses provide a good foundation of knowledge upon which this study can be carried out.

Next Steps - Official Community Plan Audit

Steps 1 to 4 of Weitz's recommended steps to achieve a jobs-housing balance in Metro Vancouver have been completed: The unit of geography, municipalities that make up the Metro Vancouver region, has been determined by the scope of this study (Step 1). The measure of jobs-to-labour force has been established, and the corresponding data, calculations and analysis have been performed by the regional district (Steps 2 and 3). A value judgment has been made by way of explicit objectives and policies stated by Metro Vancouver and approved by member municipalities (Step 4). Metro Vancouver's examination of the statistics of population, labour force and jobs growth show the effect of a combination of policies, regulations and trends. This research project aims to look at another side of balancing jobs and housing – the municipal policies that enable, or hinder them. Step 5 is to audit local comprehensive plans to determine the extent to which they promote the jobs-housing goal. Weitz recommends that "the comprehensive plan should serve as the 'home' for any adopted jobs-housing policy" (2003, 24) and thus a comprehensive plan audit is an important step in this process as it is in the comprehensive plan that a community adopts future land-use plans which establish the vision for future growth and development.

Comprehensive plans of municipalities in British Columbia are known as Official Community Plans (OCPs). This study uses OCPs to assess the extent to which municipal policies encourage a jobs-housing balance, as prescribed by the region. The legislative power over land use belongs to municipalities and thus it is OCPs, not the Regional Plan, that dictate patterns of land use activity within municipal boundaries. Regional goals are integrated into municipal planning through Regional Context Statements (RCS), which form a portion of a municipality's OCP. RCSs are prepared by the municipality and referred to the regional district for acceptance; they set out the relationship between the RGS and the OCP.

The Official Community Plan

The OCP is a municipality's long-term vision for the future. It is a general statement of objectives and policies to guide land use, servicing and the form and character of future development. Implementation of the OCP occurs through zoning, development permit guidelines, subdivision requirements and other instruments that are more detailed tools for managing and controlling development in the community.

As part of the development of an OCP, a municipality is required to consult with affected parties (*Local Government Act* Section 879). This generally includes a public engagement process where the community provides input on its values and views about the future. The municipality's current situation, regional trends and legislative requirements are also included in the OCP. It is then adopted as a bylaw by a municipal Council and has legal status which requires that all development and use of land be consistent with the policies of the plan. The OCP states what a municipal Council intends to permit in the way of physical development in the years ahead, allowing property owners and developers a degree of certainty to make informed decisions and anticipate changes. However, the OCP only indicates desired direction. Section 884 of the *Local Government Act* states that an OCP "does not commit or authorize a municipality, regional district or improvement district to proceed with any project that is specified in the plan" but it does require that "all bylaws enacted or works undertaken…must be consistent with the…plan." Thus, no development may occur unless it is consistent with the OCP and other instruments such as zoning and subdivision control bylaws.

An OCP uses a combination of goals, objectives, policies, maps and development guidelines to set directions and shape the community according to its vision. It is a high-level policy framework meant as a blueprint or "umbrella document" to guide Council decisions, regulations and programs. It addresses broader, city-wide community issues, while Planning Area and Sub-Area Plans take care of more local, detailed issues. The OCP is implemented through a number of City regulations and programs such as the annual budget, the Capital Works budget, the Zoning Bylaw, the Subdivision Control Bylaw, the Development Cost Charges Bylaw, and the Building Bylaw.

Methodology

A content analysis methodology was used to assess OCPs in Metro Vancouver. This approach, known as Plan Quality Evaluation, has been applied to the analysis of a variety of elements within plans, from sustainable development (Berke and Conroy, 2000) and smart growth (Edwards and Haines, 2007), to natural disaster mitigation (Nelson and French, 2002) and ecosystem management (Brody, 2003). Currently, no research pertaining to plan quality in Canada has been published. This research is intended to build upon an evaluation of OCPs in Southern British Columbia that is currently underway (Stevens, under review). Further, this research seeks to contribute to the objective of a balance of jobs and housing in Metro Vancouver, a key goal of the region. It is desired that this analysis of existing policies provides a foundation for further work on the issue.

Plan Selection

As the Metro Vancouver region is the scope of this study, all 21 Official Community Plans of the municipalities that make up Metro Vancouver were selected. Though the currently adopted, and thus most recent, plans were used, the ages of the plans still varied by thirteen years, ranging from 1998 to 2011. All the plans were downloaded in their entirety from each municipality's website. They are the same copies used in Stevens' current evaluation of 40 OCPs in Southern British Columbia (under review).

The Metro Vancouver regional district was chosen for this study for two reasons. Firstly, the size of this region and the rate of its growth make it important for planners to pay attention to providing opportunities for people to live close to where they work. According to the 2011 census, Vancouver is the 6th fastest growing metropolitan area, seeing a 9.3% increase in population over the last 5 years (see Table 2). Out of the top 6 fastest growing metropolitan areas, Vancouver is the largest census metropolitan area with a population of 2.3 million. Faced with the rapid development of both residential and employment opportunities, it is crucial that land use decisions give consideration to a jobs-housing balance to prevent increased congestion and long commutes across the region. Secondly, Metro Vancouver was selected because its Regional Growth Strategy encourages a

jobs-housing balance, as opposed to a region that might want to grow in a manner that segregates jobs and housing. Therefore, it is useful to see the extent to which municipal plans aligned with this regional goal.

Table 2: Fifteen Fastest Growting Census Metropolitan Areas

Census Metropolitan Area	Population	Percentage Increase from 2006-2011
Calgary, A.B.	1,214,839	12.6%
Edmonton, A.B.	1,159,869	12.1%
Saskatoon, S.K.	260,600	11.4%
Kelowna, B.C.	179,839	10.8%
Moncton, N.B.	138,644	9.7%
Vancouver, B.C.	2,313,328	9.3%

Source: National Post, February 8 2012

Protocol Development

The protocol for this Plan Quality Evaluation was based primarily on recommended elements for a comprehensive plan audit from Jerry Weitz's "Jobs-Housing Balance" (2003). The items were divided into five categories:

1. Fact Base
2. Specific Jobs-Housing Balance
3. Goals
4. Policies
5. Implementation

This categorization was borrowed from the convention established by published Plan Quality Evaluations (Berke and Godschalk 2006) and adapted for this topic. Each category is explained and elaborated on in a later section.

Each plan was rated to the extent to which it included the protocol's items; the items are elements that a plan promoting a jobs-housing balance should have. Items were given a point for being mentioned, regardless of the strength of the statement. The approach of awarding an additional point if the item was expressed more comprehensively was tried

during the pre-testing stage but discarded due to the inconsistent results that method produced. This approach of awarding a plan 0 or 1 or 2 points depending if an item was "not present", "narrow" or "comprehensive" has been found in published plan quality evaluations (Eg. Edwards and Haines 2007), but the researchers coding this study found it difficult to gauge due to vague word usage and differing interpretations. Instead, a binary approach was chosen – as long as there was mention of the item, the plan was awarded 1 point, if an item was not mentioned, the plan received 0 points.

Expectations

There are political concerns and public acceptance issues surrounding a jobs-housing balance. Fundamental to the concept of a jobs-housing balance is that such a balance provides *opportunities* for people to live and work in the same community. It cannot be assumed that everyone wants to live close to their workplace, nor can planners or governments force residents to live and work in the same community. Therefore, it should be accepted that not all municipalities in Metro Vancouver embrace a jobs-housing balance as a local objective. These municipalities are likely to be smaller, semi-rural communities outside of the region's Growth Concentration Area (see Figure 1). Therefore, it is predicted that population size will affect the extent to which municipalities support a jobs-housing balance. Compared to smaller communities, larger communities have more housing and employment opportunities and thus should be more concerned with how land use is planned. Further,

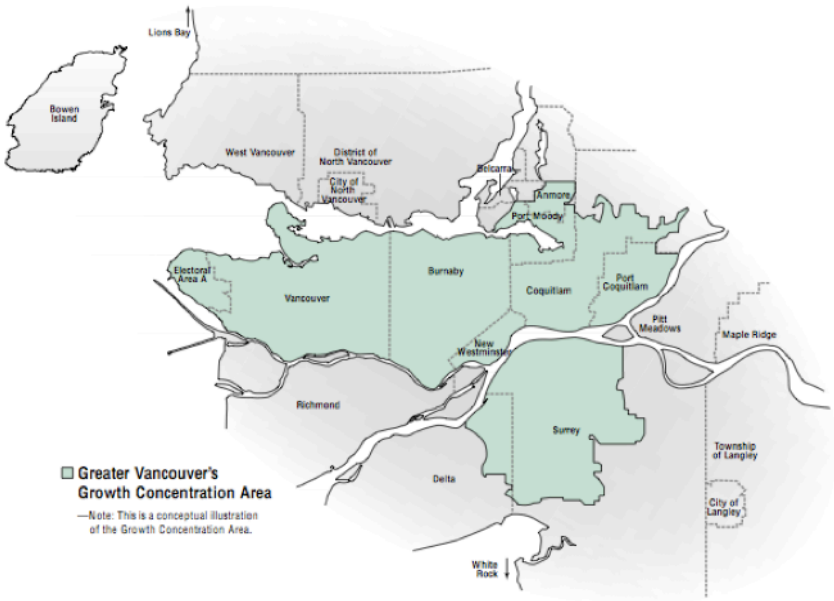


Figure 1: Map of Greater Vancouver's Growth Concentration Area (Source: LRSP 1996)

as mentioned above, having a balance of both jobs and housing is a choice municipalities make and some small communities might not wish to do so.

Part 2 of British Columbia's *Local Government Act* sets out the classification scheme that gives each new municipality a designation: municipalities with a population less than 2,500, are given the designation Village; between 2,500 and 5,000 a Town; greater than 5,000 a City. If the new municipality has an area greater than 800 hectares and an average population density of less than 5 persons per hectare, it is designated a District municipality. Therefore, it is expected that Cities, being the most populated and most dense, will score the highest, followed by Districts, and then Villages. Towns are not included in this prediction as there are no Towns in this set of municipalities.

Plan Evaluation

The plan evaluation process involved two researchers coding each plan independently based on the established protocol. Prior to coding the Metro Vancouver plans, a pretest was conducted to ensure familiarity of the protocol and consistency between researchers. OCPs that were not part of the set of Metro Vancouver plans were selected. The researchers then independently applied the protocol to the plans and compared the results after each plan. Differences in interpretation and understanding of concepts were resolved, and the protocol was revised until there was a consistent understanding of language and concepts. This pre-test was repeated with three OCPs – Nanaimo, Victoria and Chilliwack. The percent agreement scores achieved were, respectively, 77.1%, 81.4% and 88.6%. Percent agreement scores measure the degree of similarity between each researcher's score; the measure is equal to the number of coder agreement for items divided by the total number of items. According to the literature, a percentage agreement above 80% is generally considered acceptable (Miles and Huberman 1984). During the pre-test period, some items were found to be confusing or redundant; some items were removed, reducing the number of items to 57 from the original 61. With each pre-test round, items were better defined between researchers to ensure consistent interpretation.

During the coding process, the researchers met regularly to discuss items where scoring was inconsistent. In some cases, one researcher had simply misread the plan and the score was corrected. In other cases where there was disagreement, reasons for each researcher's coding were discussed and the more accurate code was agreed upon. The scores of each plan were tabulated at the end of the plan evaluation process. Each plan had a total score as well as a score for each category (fact base, specific, goals, policies, implementation). According to the literature, it is best practice to analyze plans based on these categories as opposed to using a total score. This is because to use a total score would imply that each category is weighted at an equal value. Instead, categories might not be valued the same and therefore cannot be grouped as one.

Analysis and Findings

Jobs-Housing Balance Plan Scores

Using the developed plan evaluation protocol, content analysis was conducted on each OCP to examine the extent to which it encourages a jobs-housing balance. The protocol is made up of a series of indicators or items that should exist in a plan that seeks to encourage a jobs-housing balance. Table 3 shows the jobs-housing balance score for each community's plan. The highest score a community could receive is 57 or 100%. A plan receiving all 57 points would be what this protocol would deem a "perfect plan" in that it best encourages a jobs-housing balance in a community. Overall, plans had a weighted mean score of 53%. Between the lowest and top scoring plans, there is quite a range, with the lowest scoring plan, Anmore, at 19.3% and highest, New Westminster, at 77.2%.

Table 3: Official Community Plan Total Scores

Municipality	Total Score	Designation
Anmore	19.3%	Village
Lions Bay	28.1%	Village
Bowen Island	31.6%	Island Municipality
Belcarra	36.8%	Village
Langley Township	42.1%	Township (District)
Pitt Meadows	50.9%	City
Coquitlam	52.6%	City
Delta	54.4%	Corporation (District)
District of North Vancouver	54.4%	District
Langley City	56.1%	City
City of North Vancouver	57.9%	City
Maple Ridge	59.6%	District
Port Coquitlam	59.6%	City
Vancouver	61.4%	City
West Vancouver	63.2%	District
Richmond	64.9%	City
White Rock	66.7%	City
Burnaby	68.4%	City
Surrey	75.4%	City
Port Moody	75.4%	City
New Westminster	77.2%	City

Size of municipality

As expected, the plans that scored the lowest (under 20%) were all the Villages – Anmore, Belcarra, Lions Bay and Bowen Island[2] (see Table 3). These Village municipalities

[2] Though technically designated "Island Municipality", Bowen Island a population les than 2,500 – the criteria by which Villages are designated.

lie outside of the Growth Concentration Area, and have small populations that might desire to be bedroom communities that maintain semi-rural lifestyles and thus generally do not desire to have a balance of jobs and housing (see Figure 1). Table 4 shows the average score of each municipal designation. On average, Villages scored the lowest at 28.9%, followed by Districts, which have larger populations, at 54.7%. Cities, their denser counterpart, scored the highest overall at 63.9%. This is consistent with Edwards and Haines' 2007 comprehensive plan evaluation of smart growth principles where it was found that how well plans scored correlated to its municipal designation; in that case, Cities and Villages had a higher average score than Towns.

Table 4: Average Plan Score by Municipal Designation

Municipal Designation	Average Score
Village	28.9%
District	54.7%
City	63.9%

The size of a municipality as an indicator of whether or not a municipality will have an OCP that promotes a jobs-housing balance is based on the assumption that larger cities tend to cater to both employment and housing opportunities, and thus will have more explicit data, goals and policies trying to achieve such a balance. However, this study shows that this indicator is inconsistent and unreliable on its own as Table 3 demonstrates that some Districts scored higher than some Cities. Therefore, though it can generally be assumed that Cities score better than Districts, and Districts score better than Villages, there might be other factors[3] that might contribute to exceptions.

Analysis by Category

A comprehensive plan should incorporate any written analyses of jobs-housing ratios, jobs-housing policies, and the data that support them. These goals and policies selected should be explicit and located in relevant places of the comprehensive plan: the

[3] In this study, municipal designations were used as a proxy for size of the municipality. One of the limitations of this method is that it does not necessarily reflect a municipality's population size at the time of the adoption of the OCP. Municipal designations are given at the time of municipal incorporation and a municipality's population might have changed drastically since then. Further, Districts might in fact have larger populations than some Cities, but have received designations as Districts because they are larger in terms of land mass and thus less dense.

housing, economic development, and land-use elements. (Weitz 2003). The plan evaluation protocol used in this study was developed with this in mind and this section elaborates on the items that make up the protocol and provides an analysis of how the plans did.

Table 5: Analysis Results by Category

Category	Min	Max	Mean
Fact Base	25.0%	85.0%	60.7%
Specific	10.0%	100.0%	53.2%
Goals	0.0%	100.0%	53.6%
Policies	23.1%	76.9%	52.4%
Implementation	11.1%	77.8%	49.2%

The results in Table 5 show that Fact Base was the best scoring category, with plans scoring 60.7% on average. This is not surprising as facts and data related to a jobs-housing balance such as a count, composition, projection and location of jobs and housing are basic elements of comprehensive plans and are relatively easy to collect. Even small municipalities without resources to do their own studies can borrow from census data or other levels of government. Further, the Metro Vancouver region does extensive data collection and projections that are shared with municipalities.

Implementation scored the lowest amongst the categories, decreasing the probability that well intended goals and policies will become reality. On one hand, this might imply that jobs-housing balance goals are merely lip service, written without any plan or intent of action. On the other hand, the omission of specific implementation actions might be well intended – to enable the Official Community Plan to remain a high level visionary document that can gain consensus for adoption easily, while leaving more detailed implementation actions for area plans and zoning regulations.

Fact Base

It is crucial for local governments to be aware of existing conditions in their municipality before considering any policy changes in support of a jobs-housing balance. Prior to any analysis or decisions, data on existing employment and housing in the municipality should be collected. Local planners should be armed with this information in order to make informed decisions and answer questions from decision-makers or the public in regards to the jobs-housing balancing. Additionally, it may be found that there is insufficient data to make an educated decision and additional data need to be collected.

Data relating to jobs and housing that make up a fact base are fairly easily obtained through sources such as the census or other public agencies. Further, items such as a land use map are required by the British Columbia *Local Government Act* to be part of an OCP. Not surprisingly, this category scored the highest in the analysis with the average plan

Fact Base Items Score Card

Min score of an OCP	Max score of an OCP	Mean score of 21 OCPs
25.0%	85.0%	60.7%

Item - Current Data	Frequency (/21)
Population Present Size	17
Population Present Composition	11
Households Present Count	14
Housing Types Present Count	16
Jobs Present Count	10
Jobs Present Composition	6
Residents Work Within Municipality Census Data	5

Item - Analyzed Data	Frequency (/21)
Housing Land Supply	18
Economic Dev Land Supply	15
Residents Work Within Municipality Analysis	7

Item - Projects	Frequency (/21)
Population Future Size	20
Population Future Composition	5
Households Future Count	20
Housing Types Future Count	10
Jobs Future Count	14
Jobs Future Composition	3

Item - Spatial Data	Frequency (/21)
Location of Population/ Household Growth	20
Location of Jobs Growth	16
Map - Land Use	17
Map - Urban Villages/Town Centres	11

Figure 2: Fact Base Items Score Card

scoring 60.7% This is positive as having the facts and information provides a good foundation upon which local governments can make policy decisions.

As Weitz comments, "an updated comprehensive plan with existing and projected population, housing, and employment data is absolutely essential to the implementation of jobs-housing balance policies" (2003, 23). The literature recommends that protocol items not only include current and future housing and employment data, but also look beyond total numbers to define composition, such as housing types, population and job composition. This is important because a community with 80% of its population in the labour force will have very different needs from a community with 80% of seniors and children. Likewise, different household compositions require different housing types – a single working adult might prefer a studio apartment while a family of 5 might prefer a single family home with a yard. It is interesting to note that there were 3 items that 20 OCPs included:

- Households Future – The projected number of households or housing stock (number of houses) in the future.
- Population Future Size - Population size, projection into the future (any year into the future).
- Location of Population/Household Growth – A spatial acknowledgement of where the majority of residential growth will be concentrated (what areas/ neighbourhoods). This can be in the form of a statement or map.

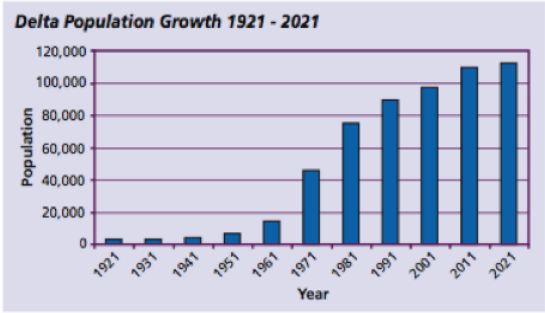
This is a positive finding as it shows that nearly all municipalities are making sure to consider future population and household growth as well as where such growth will be located. Notably, data on future jobs did not show up as frequently; this information is generally less accessible than population data. In fact, the item with the lowest frequency was "Jobs Future Composition", present in only 3 out of the 21 OCPs. While it seems more difficult to forecast jobs than housing/population, it appears even more complex to predict future compositions. "Population Future Composition" was only found in 5 plans out of 21, the second lowest frequency.

CORPORATION OF DELTA

Fact Base – Best Practice Example

Some examples of best practice elements found in Delta's OCP that contributed to its high score in the fact base category are:

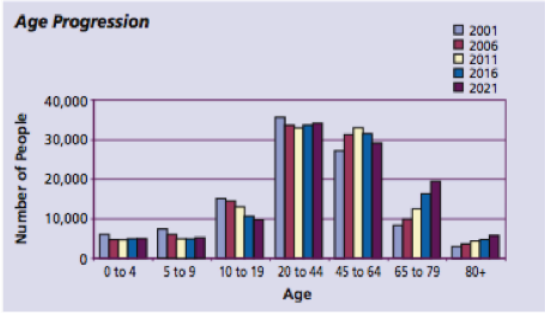
According to the 2001 Census, the population of Ladner was 21,367, Tsawwassen was 21,337, North Delta was 52,108, and the rural area was 2,396.



Sources: Census Canada / Greater Vancouver Regional District

A graph accompanying text that shows Delta's historical population growth as well as projected growth. A side text box breaks down the current population according to sub-areas.

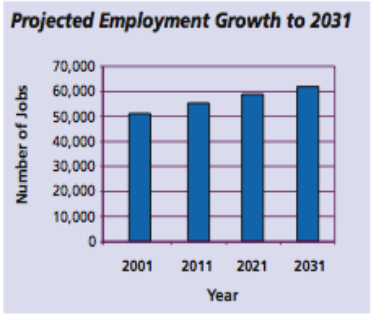
Delta is also becoming a more ethnically diverse community with increased immigration from India, Taiwan and the Philippines. Approximately 27% of Delta's residents are foreign-born, compared with 54% in Richmond and 33% in Surrey.



Sources: Census Canada / Greater Vancouver Regional District

Projected age structure, accompanied by an in-text discussion of future implications such as an aging population and shrinking household sizes.

A graph shows projected employment growth to 2031, with accompanying text providing some explanation to the predicted trend.



Source: Greater Vancouver Regional District

This chart shows estimates of employment growth in Delta to the year 2031. Improvements in the transportation system could lead to more jobs in the transportation and warehousing sectors. The continued development of Delta's industrial areas could lead to additional high tech and manufacturing jobs. This employment growth is likely to occur in existing industrial and commercial areas as policies in this OCP support directing growth and development to existing areas.

A chart showing the composition of jobs in Delta.

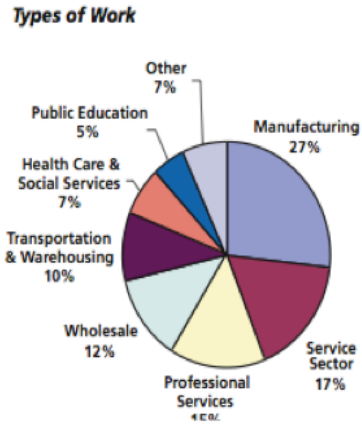


Figure 3: Fact Base Best Practice Example - Corporation of Delta

Recognizing where development is located in a community and where future growth should be located is another important element that can be captured through a future land use plan or map. Plans gained points for including a future land use map as well as a map identifying Urban Villages or Town Centres. The plans were also rewarded for identifying the location of population/household growth as well as the location of jobs growth.

> The future land-use plan establishes a community's vision that translates needs for new jobs and new housing units into a recommended pattern, mix, and intensity of land uses. Future land-use plans tell citizens, developers, and local decision makers the approximate locations in the community where houses should be built and employment centres should be established. These plans, therefore, should be closely linked to the need for future development as determined by projections of population and employment growth.
>
> Weitz 2003, p.23

Specific

This category consists of data and goal items that are very specific to and directly address jobs-housing balancing. There was a fairly wide spread amongst the plans in this category, with the lowest scoring OCP at 10% and the highest scoring OCP at 100%; the average plan scored 55%. It was somewhat expected that the smaller, more rural plans would not score as well as larger cities within Metro Vancouver's Growth Concentration Area (refer to Figure 1) where both housing and employment growth are encouraged by the region.

The protocol looked to see whether OCPs provided dedicated sections or at least a paragraph discussing the general issue of jobs-housing balancing; only 9 out of 21 OCPs did so. This item does not capture a municipality's situation, intentions or goals, but merely gives it a point for mentioning the topic. Out of the 21 OCPs, 7 provided the municipality's current jobs-housing balance. In order to gain a point for this item, the plan must explicitly compare the current number of jobs to the number of houses. Six out of these 7 did so using

Specific Items Score Card

Min score of an OCP	Max score of an OCP	Mean score of 21 OCPs
10.0%	100.0%	55.0%

Item - General	Frequency (/21)
Section or Paragraph Dedicated to Jobs-Housing Balance Issues	9
Current Jobs-Housing Balance	7
Defined Target or Ratio	6
Defined Target or Ratio Based on Analysis	5
Quantitative Analysis of Jobs-Housing Balance	6

Item - Qualitative Factors	Frequency (/21)
Qualitative Factors of Housing	19
Qualitative Factors of Jobs	12

Item - Regional Factors	Frequency (/21)
Regional Growth Strategy Goal	18
Town Centres	15
Relate Jobs-Housing Balance and Transportation	15
Coordination Between Municipalities/Agencies	5

Figure 4: Specific Items Score Card

CITY OF PORT MOODY

Specific Items - Best Practice Example

Some examples of best practice elements found in Port Moody's OCP that contributed to its high score in the specific items category are:

The jobs to housing balance is intended to promote urban growth that maintains a sustainable local tax base, provides an adequate range of shops and services in each area and allows people to live close to work or work close to home. Closely linked to this balance is the provision of a sufficient number of employment opportunities to match the resident labour force. Based on the 2006 Census, Port Moody had a jobs to employed residents ratio of 0.42. This ratio has consistently decreased from 0.44 in 2001 and 0.55 in 1991. Although in absolute terms, the number of jobs in Port Moody increased by 28% since 2001, this figure is overshadowed by the significant population growth in the city during this same period.

...Seventy-four percent of employed residents left Port Moody to travel to jobs in other municipalities, predominantly in Vancouver, Burnaby and Coquitlam. While the number of residents living and working in Port Moody is growing, the commuting pattern of the majority of employed residents continues to have a significant impact on the consumption of fossil fuels, greenhouse gas emissions, air quality, traffic congestion and reduces employees' quality of life.

- ✓ Port Moody's OCP dedicated a whole section to discuss jobs-housing balance;
- ✓ States the curent jobs-housing balance;
- ✓ Provides historic jobs-housing balance and discusses changes and trends;
- ✓ Discusses the impacts of a jobs-housing inbalance on commuting patterns, and on the effects of congestion.

The Inlet Centre area in Port Moody is identified in the LRSP as a Municipal Town Centre.

The City of Port Moody will continue to work towards greater consistency between its OCP and the Complete Community policies of the LRSP by:
• Exploring the use of variety of measures to encourage the maintenance and development of affordable housing in the City including density bonussing, inclusive zoning, streamlining the approval process, rental replacement program, pre-zoning for supportive housing and treatment facilities and consideration of innovative housing forms such as small-house/small lot development, cluster housing, laneway housing and garden suites

- ✓ Recognition of a regionally designated Town Centre.
- ✓ Not only complying with the RGS goal, but also stating means by which greater consistency will be achieved between the OCP and the RGS.

Figure 5: Specific Items Best Practice Example 1 - City of Port Moody

a table comparing the two numbers (coded under "Quantitative Analysis of Jobs-Housing Balance"). Six OCPs had a projected goal of a jobs-housing balance, providing a defined target and/or ratio. It is interesting to note that the 6 OCPs with projected targets were not necessarily the same as the 7 OCPs that provided current jobs-housing balance data; only 5 OCPs had both pieces of information and there was one case of an OCP that stated a jobs-housing target without analysis of its current situation. This implication that an OCP chose a balancing target without analysis of the current situation is not encouraged as the literature recommends that targets be based on an assessment of local conditions. Similarly, it is disappointing that only 5 OCPs provided a discussion of how they came to their defined target/ratio (coded under "Defined Target or Ratio based on Analysis"), again not linking their target to an analysis of local factors.

The literature recommends that a good jobs-housing balance is one that goes beyond basic quantitative evaluation to consider more refined qualitative aspects in order to better address the needs of a community. Thus, this protocol rewards plans that address qualitative factors of both jobs and housing. Both qualitative factors of jobs and of housing were frequently discussed, with qualitative factors of jobs being mentioned in 12 plans and that of housing in 19 plans. This high frequency is not surprising as housing affordability is one of the biggest issues in the region.

Regional elements are also considered in this category as "the issue of balancing jobs and housing manifests itself most often in a regional context" (Weitz 2003, 14). To its credit, the LRSP specifically addresses the jobs-labour force balance (one type of jobs-housing balance measure) through its own goals. This protocol rewards plans that explicitly support the regional goal; 18 out of 21 plans did so. Referencing coordination with other agencies or municipalities to encourage jobs-housing balancing, identifying town centres in their municipality, and discussing the link between a jobs-housing balance and transportation or mobility issues all gained OCPs points as well.

CITY OF SURREY

Specific Items - Best Practice Example

Some examples of best practice elements found in Surrey's OCP that contributed to its high score in the specific items category are:

An analysis of the labour force to jobs ratio, and a comparison with neighbouring cities.

Figure A-2. Employment in the Major GVRD Cities

City	Workforce	Local Jobs	Ratio
Richmond	76,800	90,000	1.17
Vancouver	286,000	321,000	1.12
Burnaby	94,000	97,000	1.03
Langley	55,750	39,600	.71
Delta	53,470	37,500	.70
Surrey	159,000	87,000	.55
Coquitlam	55,400	30,000	.54

Source: Census of Canada 1996

Employment. *While Surrey's job growth has been steady over the past 10 years, population growth has exceeded employment growth. The 1996 Census estimated that about 87,000 jobs were located in Surrey. With a population of 304,000 and a labour force of 159,000, Surrey had about 5.5 jobs for every 10 residents in the labour force. Figure A-2 shows that Surrey's employment to resident labour force ratio ranked 6th among the 7 largest GVRD cities.*

Surrey's OCP states that one of its primary objectives is to achieve a jobs to labour force ratio of 1:1. It then provides detailed analysis in the form of an economic growth scenario. The table below shows the current projected trend will result in a jobs to labour force ratio of only 0.69 by the year 2021. The OCP objectives strive to increase the number of jobs; achieving the OCP growth objectives would result in a jobs to labour force ratio of 0.95 by year 2021.

Figure A-8. Projected Trend and OCP Objectives for Surrey Employment Growth [4]

		Trend		OCP Scenario	
	Total Jobs 1996	Job Growth 96-21	Job Total 2021	Job Growth 96-21	Job Total 2021
GVRD	914,000	500,000	1,422,000	500,000	1,422,000
Surrey	87,000 (9.5% of GVRD)	100,000 (20% of GVRD)	190,000 (13% of GVRD)	172,000 (34% of GVRD)	260,000 (18% of GVRD)
Labour Force	159,000		275,000		275,000
Ratio	.55		.69		.95

Sources: Lower Mainland Employment Study, Coriolis Consulting Corp; City of Surrey

Figure 6: Specific Items Best Practice Example 2 - City of Surrey

Goals

A jobs-housing balance is a choice that a community makes. It is not appropriate for all communities as there are some that choose a rural/semi-rural lifestyle or want to remain bedroom communities. The wide spread of scores from 0% to 100% is indicative that the goal of a jobs-housing balance is a choice communities make, with some embracing or rejecting such goals entirely. Villages and more rural communities scored the lowest, while cities within the Growth Concentration Area scored the highest.

This category is significant as for communities that choose to have a balance of jobs and housing, it is important for their comprehensive plans to state clear, defined goals (Weitz 2003). While no municipality's OCP explicitly stated that it does not want a jobs-housing balance, there were 4 plans (Anmore, Belcarra, Delta and Lions Bay) where none of the goals in this protocol were found, thus receiving a 0% score for this category. The general goal of jobs-housing balance is a crucial indicator whose presence reflects a municipality's choice to seek out a jobs-housing balance; 15 out of 21 plans indicated a jobs-housing balance as an objective in their OCP. It is also important to ensure that there is consistency within the plan, therefore goals to support a jobs-housing balance should also be found in both the employment and housing sections of the plan as recommended by the literature. It is notable that a jobs-housing balance goal was more often found in Economic Development sections of plans than in the housing/residential section.

Goal Items Score Card

Min score of an OCP	Max score of an OCP	Mean score of 21 OCPs
0.0%	100.0%	50.0%

Item - General	Frequency (/21)
General Goal of Jobs-Housing Balance	15
Goal to Reduce Use of Private Vehicles	9

Item - Section Consistency	Frequency (/21)
Section - Economic Development	11
Section - Housing/Residential Development	9

Figure 7: Goal Items Score Card

CITY OF RICHMOND

Goals - Best Practice Example

Some examples of best practice elements found in Richmond's OCP that contributed to its high score in the goals category are:

In the Goals section, the OCP explicitly lists a balance of jobs and housing as a goal, and included results of a survey that shows residents' support for the goal.

Recognizing Richmond's rural heritage, "garden city" tradition, and strong economic growth. ***To achieve BALANCE between****:*

- *Urban and rural uses;*
- *Development and the natural environment;*
- ***Jobs and housing****, especially entry-level housing*

Residents Support OCP Goals:

- *Balance development and environment (95%);*
- *Balance jobs and housing (84%);*
- *Balance urban and rural (82%).*

Source: 1997 OCP Survey.

The Regional Context Statement section highlights the goal of balancing jobs and housing as part of the "Building Complete Communities" objective of the LRSP. It references both the economy and housing sections, where specific goals and policies are listed in more detail.

The OCP supports the "Building Complete Communities" policies described in the Livable Regional Strategic Plan.
The OCP (see 2.4 Commercial, and City Centre Area Plan) identifies and promotes key strategies for facilitating the achievement of complete communities, by working to balance the City's role as an economic centre through the creation and reinforcement of strong neighbourhoods; the development of a broad range of housing to meet the needs of a sizable and diverse resident population; and fostering locally based employment and jobs ***(see 2.0 Jobs & Business, and 3.0 Neighbourhoods & Housing)****.*

Figure 8: Goals Best Practice Example - City of Richmond

Another goal in this protocol is that of the reduction of the usage of private vehicles. This item takes into account the commute between work and home, rewarding a plan for having a goal of concentrating residential and employment opportunities in order to reduce usage of private automobiles and to facilitate the provision of public transit in support of a complete community.

Policies

Policies set out specific directions that municipalities desire. Policies in this protocol were developed based on recommendations from the literature (Weitz 2003; Cervero 1989, 1996). The goal of these policies is to ensure individuals have sufficient housing that is suitable to their household/lifestyle close to jobs that are appropriate to their skill levels. The encouragement of mixed land uses was commonly found in 19 out of 21 plans – a positive sign as "mixed-use development may be the most promising option today for providing this choice [of allowing individuals to live close to where they work]" (Weitz 2003, 13). Other policies that allow home occupation, found in 19 plans, and live/work units, in 5 plans, strongly promote a jobs-housing balance as an individual is able to live and work in the same space – the ultimate balance of jobs and housing!

Policies guiding development can also promote jobs-housing balance: Planned Unit Developments (PUD) are a type of Master Planned Development that allow mixtures of housing types with supportive neighbourhood commercial use. PUD regulations might specify that a certain percentage of housing units be live/work, or that a minimum

Policy Items Score Card

Min score of an OCP	Max score of an OCP	Mean score of 21 OCPs
23.1%	76.9%	50.0%

Item - Policies	Frequency (/21)
Accessory/Secondary/Infill Housing	19
Home Occupation	19
Mixed Land Use	19
Reduce Private Vehicle Use	16
Commercial Centres	14
Incentives	12
Inclusionary Zoning	7
Live/Work Units	5
Planning Unit Developments	1
Linkage Programs	0

Item - Section Consistency	Frequency (/21)
Section - Economic Development	17
Section - Housing/Residential Development	13

Item - Strength	Frequency (/21)
Policies Action-Oriented/ Mandatory	1

Figure 9: Policy Items Score Card

CITY OF PORT MOODY

Policies - Best Practice Example

Some examples of best practice elements found in Port Moody's OCP that contributed to its high score in the policies category are:

• *Expanding the City's economic base to move toward a balance between the resident labour force and jobs and accommodate the diverse needs and skills of the community* • *Attracting new businesses that contribute to the local economy and provide local employment opportunities*	✓General policies regarding economic development as pertaining to a jobs-housing balance
• *Creating opportunities for residents to live and work in the same community by encouraging high density mixed use developments within Inlet Centre*	✓Mixed Land Use
• *Encouraging live/work and work/live units as part of multi- family and mixed use development as a means of creating local jobs and small business opportunities and reducing commuter traffic*	✓ Live/Work Units
• *Encouraging a variety of housing types, forms and tenures to meet the changing needs of a diverse population of varying ages, income levels, accessibility and lifestyles*	✓ Accessory/Secondary/Infill housing
• *Encouraging the establishment of locally oriented commercial activities that serve the daily shopping needs of residents, as well as, specialty retail businesses*	✓ Commercial Centres
• *Encouraging home based businesses provided there are no adverse impacts on residential neighbourhoods*	✓ Home Occupation
• *Promoting improved public transit connections, bicycle and pedestrian linkages and other alternatives to the automobile*	✓ Reduce Private Vehicles

Figure 10: Policies Best Practice Example - City of Port Moody

percentage of developed land be designated to commercial, civic or office space. Inclusionary zoning works the same way, requiring developers to include affordable housing in market-rate housing developments. Incentive programs such as density bonusing, reduced fees, reduced fees or expedited processing times can be implemented to encourage developers to provide types of developments needed to balance jobs or housing

(e.g. affordable housing, commercial space). Linkage programs encourage or require major employers to secure or provide housing for a portion of any new workforce created by those employers.

It was not surprising to see that policies encouraging accessory housing were found in 19 of the plans. Infill housing provides affordable options close to jobs; this is particularly significant in the Metro Vancouver region where housing affordability is one of the most pressing issues. Not found in any of the OCPs was mention of linkage programs, perhaps not feasible in this region where there are no major employers with substantial campuses unlike in areas such as San Francisco, Berkeley and Boston where such programs are popular (Weitz 2003). Planned Unit Developments were also not found in the majority of OCPs. This is perhaps because such regulations might be too detailed for a high-level plan such as an OCP, and may be found in area plans or zoning regulations.

An extra point was awarded to OCPs whose actions were action-oriented or mandatory. The definition for "action-oriented/mandatory" was obtained from Edwards and Haines' evaluation of smart growth (2007). Only one OCP, Maple Ridge, gained a point for having policies that are action-oriented/mandatory as it used "will" in majority of its policy statements. The majority of the OCPs used passive language such as "encourage", "promote" and "should". This is consistent with Edwards and Haines' (2007) finding that policy statements are often passive rather than action-oriented. "The inclusion of broad goal statements accompanied by weak or nonexistent policies suggests that communities may simply be paying lip service to smart growth because the law requires them to do so" (Edwards and Haines 2007, 61).

Lastly, mirroring the Goals category, "Section – Economic Development" and "Section – Housing" indicate if an OCP has *any* policy that promote jobs-housing balance within each section of the OCP. This ensures that policies are in both employment and housing sections of the plan, and also serves to capture any policies that might not be in the established list. Consistent with the Goals category, more OCPs have jobs-housing balance policies in their Economic Development section (17) compared to their Housing section (13).

Implementation

These items support a plan's implementation of jobs-housing balance policies. Items such as "Other Plans" and "Supporting Studies" look for other documents that reinforce the policies laid out in the OCP. "Other Plans" was found in 17 OCPs, usually referencing the municipality's Economic Development, Housing or specific neighbourhood plans. "Supporting Studies" were the next most common with 16 OCPs citing supplemental research such as housing studies. "Cross-Referencing" awards an OCP for explicitly referencing another section of the OCP within itself. For example, while discussing jobs-housing balance issues in the housing section, a plan might say "refer to Economic Development section".

The literature recommends a public engagement process to decide which policies are best for a municipality. Communities have competing objectives and "efforts to set goals, build consensus, and decide on policy are best achieved through the public participation process of a comprehensive planning exercise" (Weitz 2003, 23). Only 15 of the 21 OCPs mentioned their public engagement process, even though such a process is a

Implementation Items Score Card

Min score of an OCP	Max score of an OCP	Mean score of 21 OCPs
11.1%	77.8%	49.2%

Item - Supporting Documentation	Frequency (/21)
Other Plans	17
Supporting Studies	16
Cross-Referencing	9

Item - Other	Frequency (/21)
Financial Considerations	0
Updated Within Last 5 Years	7

Item - Public Process	Frequency (/21)
General Public Process	15
Jobs-Housing Balance Specific Public Process	9

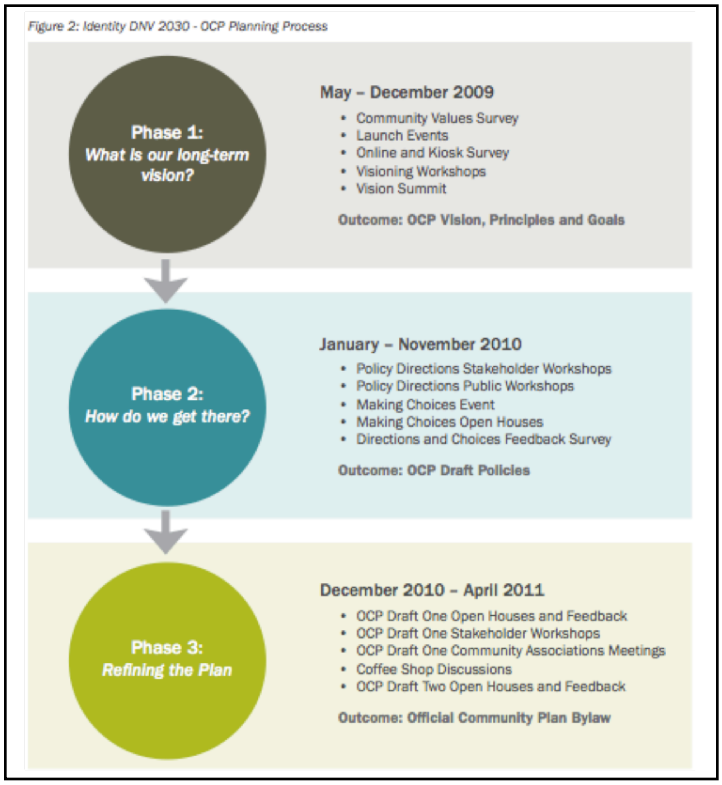
Item - Implementation Actions	Frequency (/21)
General Implementation Program	16
Specific Jobs-Housing Balance Implementation Actions	4

Figure 11: Implementation Items Score Card

DISTRICT OF NORTH VANCOUVER

Implementation - Best Practice Example

Some examples of best practice elements found in the District of North Vancouver's OCP that contributed to its high score in the implementation category are:



The OCP included a section outlining the general public process, including this figure summarizing the process in a visually appealing way.

The OCP outlined the specific issues that were discussed during the public process. These issues are specifically pertaining to the issue of a jobs-housing balance.

Key Issues to Address in Planning for the Future

Initial plan development began with an inventory of existing conditions in the District and an analysis of the challenges facing us. Over the course of the public engagement process, certain issues and trends emerged. Policy statements contained in this Plan are designed to address those issues and their implications by proactively managing change in a way that enables us to preserve and enhance what is loved most about the District. Some of the key issues that this plan seeks to address are outlined below.

Lack of housing diversity and affordability

As much as 70% of housing in the District is in the form of detached homes. As the population ages and household sizes decrease, more than 10% of our detached homes now have only one person living in them. This form of housing is the most expensive and presents a barrier to first-time buyers and to seniors wishing to downsize. With an effective 0% vacancy rate and a dwindling and aging rental housing stock, there are few options for renters.

Loss of economic vibrancy

The District lost about 1,000 jobs between 1996 and 2006 at a time when the Metro Vancouver region gained around 150,000 jobs. Fewer local jobs mean fewer options for District residents to work close to home and more transportation-related greenhouse gas emissions. With businesses contributing 30% of the District's property tax revenue, their success is vital for all of the community.

Figure 12: Implementation Best Practice Example 1 - District of North Vancouver

legal requirement for the adoption of an OCP. Out of the fifteen, 9 OCPs specifically referenced issues relating to jobs-housing balance; for example, a plan was awarded a point for mentioning that the creation of local employment opportunities appropriate to the community was discussed as part of the public process. Having an implementation plan in a municipality's OCP increases the likelihood that implementation will actually occur. Sixteen OCPs included a general program or timeline for implementation and only 4 of those contained specific actions needed to implement jobs-housing balance policies.

Financial considerations acknowledge the staff or resources needed to achieve jobs-housing balance goals and policies. This aids implementation as it shows careful consideration has been taken in regards to the resources required for action to occur. This item was not found in any of the OCPs, leading to the possible explanation that these policies are merely high-level visionary desires of a community that may or may not get implemented. A municipality is not legally obliged to fulfill everything set forth in an OCP, but cannot act in a way that contradicts it. Omission of more concrete implementation actions and the allocation of resources to make them happen allows decision-makers to take action at a later time, or not at all. Lastly, the protocol awards a point to OCPs that have been updated in the last five years. It is important for plans to get updated in a timely manner in order to reflect the community's current situation and vision for its future.

The District of North Vancouver's OCP included an implementation section that highlighted specific implementation actions pertaining to a jobs-housing balance strategy. It included a current baseline, future target, and community indicators that can be used to monitor progress.

OCP Policies	2010 Baseline	2030 Target	Additional Community Indicators
Economic Development	22,000 fixed workplace jobs (up to 27,000 total jobs including no fixed workplace)	**36,000 total jobs in the District by 2030**	• % of District jobs that are full-time • Job-to-residents ratio or jobs-to-labour force ratio • Tax competitiveness in Metro Vancouver • % of District residents working in the District and/or North Shore

Figure 13: Implementation Best Practice Example 2 - District of North Vancouver

CITY OF WHITE ROCK

Implementation - Best Practice Example

An example of best practice elements found in the City of White Rock's OCP that contributed to its high score in the implementation category:

White Rock's OCP included an implementation section that highlighted specific implementation actions pertaining to a jobs-housing balance strategy. It includes explicit reference to policies mentioned in the plan, key action items, a time frame, as well as assigns responsibility for implementation (in this case, to the Development Services department)

Policy	Key Action Item	Time Frame				Lead Role
		Short (1-2 yrs)	Medium (3-4 yrs)	Long (5+ years)	Ongoing	
6.2.2	Initiate and participate in an economic development plan workshop.	X		X		DS
6.2.4	Protect the commercial land base from conversion to non-employment uses and allow home occupations.				X	DS
6.2.5	Explore ways to encourage an expanded business sector.		X			DS

Figure 14: Implementation Best Practice Example 3 - City of White Rock

Trends and Observations

This research shows that OCPs in Metro Vancouver benefit from strong fact bases, which in turn support jobs-housing balance research, analysis and policy-making. The fact that the *Local Government Act* legally requires some of this content might explain the high frequency of these protocol items. The Specific items category, consisting of both data and goals, the Goals category and Policies category demonstrated varying results amongst the plans. Ways they can be strengthened are discussed in the Planning Implications section below. Plans that scored well in these categories are commendable, as stating goals and policies in an OCP set out a policy framework for a municipality's development. It means that Council's actions cannot contradict what is written in the OCP and thus sets a direction for a municipality towards a jobs-housing balance.

That the Implementation category scored the lowest is interesting and opens up ideas for future research. Do the low scores imply that the goals and policies outlined in the OCP are merely lip-service without real intent for action? Or are implementation items intentionally omitted or left vague so as to ease the OCP adoption process? An understanding of such political complexity cannot be derived from a mere analysis of plan texts. Though the OCP does not commit a municipal Council to action, detailed implementation timelines and action plans within the OCP might open a Council to criticism should it fail to follow through.

Jobs-housing balance is a choice

It must be reiterated that a jobs-housing balance is a choice municipalities make based on community values, goals and politics. It can be assumed that the 6 municipalities (Anmore, Belcarra, Bowen Island, Delta, Lions Bay and West Vancouver) that do not explicitly state an overall goal of a jobs-housing balance have chosen not to do so within their municipal borders, but still support it as a regional goal based on the fact that they have approved of the Regional Growth Strategy's goals.

Planning Implications

The Planning Practice

This study provides an overview of jobs-housing balancing, highlights its benefits, and provides steps on how to implement this balance as an objective. By using Metro Vancouver as a case study of what can be done to improve balance, this study not only provides an assessment of OCPs within Metro Vancouver, but also acts as a model upon which similar plan quality evaluations can be performed. The protocol developed in this research (Appendix A) can be adapted for use in any other jurisdiction wishing to improve their jobs-housing balance. The development of this protocol also contributes to the field of plan quality evaluations by building on and adopting best practices from published evaluations.

Municipalities

This research was conducted not to critique municipalities in Metro Vancouver for failing to encourage jobs-housing balancing, but to serve as an assessment of the current situation and suggest ways for improvement. The wide range of scores, with the lowest overall score being 19% and the highest being 77%, show that many OCPs have room for improvement. For municipalities that want to improve on their protocol scores and better encourage jobs-housing balancing in their community, the protocol developed in this study could serve as a guide or checklist during the OCP development process. A municipality can use the master score card (Appendix B) to look for examples of other municipalities who have gained points in the elements or categories it is seeking to improve. The best practice examples for each category also serve as a model that can be adapted to each municipality's situation (see Figures 3, 5, 6, 8, 10, 12).

Region and Province

The regional district or provincial government can use the guide or checklist based on this study's protocol to mandate elements it feels are a priority in the region. Research shows that requirements mandated by senior government play a big role in what plans contain (Berke and Conroy 2000, Edwards and Haines 2007). The requirement for an OCP

to include a Regional Context Statement (RCS) that outlines how a municipality conforms with the Regional Growth Strategy (RGS) is a significant tool that could be supplemented with more specific mandated elements. As a jobs-housing balance is a goal in the RGS, municipalities are obligated to comment on how their OCP relates to the jobs-housing balance goal; this encourages municipalities to give jobs-housing balancing goals and policies consideration where they might have otherwise overlooked the issue. However, this study shows that OCPs in Metro Vancouver address a jobs-housing balance to varying degrees. A provincial mandate to address the jobs-housing balance can strengthen the extent to which OCPs support such a balance. For example, the province can require all OCPs to include an assessment of a municipality's current jobs-housing balance and a target jobs/housing ratio.

Future Research Opportunities

There are two main limitations of this study of OCPs that future research can supplement and rectify. Firstly, jobs-housing balance is a regional issue and thus an analysis of plans and policies at a municipal scale does not allow a more holistic view of the issue as a regional scale would have. For instance, this study would not reflect the fact that even though a municipality does not have a jobs-housing balance, its sub-region might be balanced. Nor does this study take into account, for example, a job-rich community might be adjacent to a housing-rich community. However, in British Columbia, land use policy decisions are within the jurisdiction of municipalities, and therefore the documents that contain these land use policies, Official Community Plans, were reviewed. Future research might add a regional scope of analysis on to this study in order to provide a more complete look of the regional picture.

Secondly, how well the plans scored according to the jobs-housing balance protocol might not accurately reflect what is happening on the ground. As well meaning as plans are, there are many other factors that could affect a municipality's development and its jobs-housing balance. OCPs are merely the guiding policy framework and do not necessarily invoke action. Future research could take a closer look at a municipality's other planning documents, such as area plans and zoning regulations, to see the extent to which a jobs-housing balance is encouraged. Additionally, developments in a community could happen independent of an OCP's intentions through lobbying or support from both local and external champions, so long as they do not contradict the current OCP[4]. Funding and/or political influence from other agencies such as TransLink or senior government might affect housing or employment opportunities thereby affecting their balance. Future research could investigate the correlation between the results of this analysis with data and statistics that show what is actually happening. Another option is to do a follow-up with community representatives, such as in Edwards and Haines' 2007 study evaluation of smart growth, where they conducted phone surveys to better understand why communities are embracing some smart growth goals and policies more so than others.

[4] Bearing in mind that with the support of the community, OCPs can be amended to reflect changing values and desires.

Conclusion

This study asks the research question: To what extent do OCPs in Metro Vancouver support a jobs-housing balance? The results of the analysis show that the results vary greatly. At one end of the spectrum, there the 6 municipalities whose OCPs do not state the goal of a jobs-housing balance at all. The other 15 municipalities have chosen to embrace a goal of a balance of jobs and housing, but do so to varying degrees and success in their OCPs.

What is important to remember is that though there are many benefits to having people live near where they work, it is not something that can be mandated or forced on to residents of a region. It is instead the *opportunity* to live close to where one works that is the fundamental notion of a jobs-housing balance. Even in Metro Vancouver where municipalities have agreed and adopted the regional goal of a job to labour force balance, individual municipalities still hold the political power to make their own land use decisions, which might not include a balance *within* their municipal borders. This study has shed light on where municipalities stand on the issue as shown through their OCPs. Though more research will have to build on this study in order to further the goal of a jobs-housing balance, for now, the OCPs have shown that municipalities that choose to do so are on their way towards achieving a jobs-housing balance within Metro Vancouver.

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Appendices

Appendix A: Protocol Codes and Definitions

FACT BASE

1.1D - Households Future
Projected number of households in the future. Or housing stock (number of houses)

1.1D - Households Present
Number of households or housing stock (number of houses)

1.1D - Housing Land Supply
Is there enough land to accommodate future housing demand? Can be qualitative and/or quantitative.

1.1D - Housing Types Future
Projected future composition of types of housing (eg. apartments, single family, etc)
Does not need to have a certain number of categories. For example, if a municipality only has single family houses and says that all/100% of housing is single family that is okay.
Can be percentage or raw numbers

1.1D - Housing Types Present
Composition of types of housing (eg. apartments, single family, etc)
Does not need to have a certain number of categories. For example, if a municipality only has single family houses and says that all/100% of housing is single family that is okay.
Can be percentage or raw numbers

1.1D - Location of Pop/Household Growth
Where is the majority of residential growth concentrated (areas/neighbourhood).
Probably should be a statement, accompanying map would work too.
Just want to see if there is a spatial acknowledge of where growth is going to go
Okay if it's a policy

1.1D - Pop Future Composition
Future projection of population. Broken down by different age categories

1.1D - Pop Future Size
Population size, projection into the future. Any year into the future

1.1D - Pop Present Composition
What is the composition of the current population in terms of age?
Broken down by different age categories

1.1D - Pop Present Size
What is the present size of the population?

1.2D - Jobs Future
Projected number of jobs in the future

1.2D - Jobs Future Composition
Future projection of jobs, broken down to show labour force
Measures of employment by occupation or industry. Numbers or percentage

1.2D - Jobs Present
How many jobs are there?

1.2D - Jobs Present Composition
Jobs, broken down to show labour force
Measures of employment by occupation or industry. Numbers or percentage

1.3D - Economic Development Land Supply
Is there enough land to accommodate jobs? Can be qualitative and/or quantitative.
This can refer to Commercial, Industrial, etc. land. Basically land zoned for people to work in.

1.3D - Location of Jobs Growth
Where is the majority of employment growth concentrated (areas/neighbourhood)?
Probably should be a statement, accompanying map would work too.
Just want to see if there is a spatial acknowledge of where growth is going to go
Okay if it's a policy

1.3D - Residents Work Within Municipality
Number/percentage of residents that had their regular place of employment withing the municipality. (This information is collected by the census)
I want to see if the OCP USES or DISCUSSES this information. Not simply put it in a table on the side.
This can be coded in addition to the next code if the OCP sources the census data AND USES the information in their own analysis/discussion

1.3D - Residents Work Within Municipality Census Data
Number/percentage of residents that had their regular place of employment withing the municipality. (This information is collected by the census)
I want to see if the OCP INCLUDES THE CENSUS DATA.
This can be coded in addition to the previous code if they source the census.
Code only this item if the census data is only included but not used further.

1.4D - Map - Land Use Map
Does this plan have a land use map?

1.4D - Map - Urban Villages/Town Centres
Map that denotes areas that are designated for both housing and employment growth.
Eg. Nodes, Urban Villages, Town Centres

SPECIFICS

2.1S - Current Jobs-Housing Balance
What is the current jobs-housing balance? Must be some mention of balance or imbalance/ Must compare number of jobs to houses. Not just how many jobs and how many houses without relating the two.

2.1S - Defined Target/Ratio
Is there a defined target and/or ratio of jobs-housing balance? Show if they thought about what they want to achieve.

2.1S - Defined Target/Ratio Based on Analysis
To show that their defined target/ratio is based on an analysis of local factors. Generally some discussion/indication that they came up with the target/ratio based on their population/employment data.

2.1S - Qualitative Factors of Housing
Does the plan consider qualitative balancing factors eg. type of housing, price, location, etc. to meet the needs of the community.
(Can just be mention of one, eg. housing affordability and type. Does not need to be all the factors)
Trying to make the link. For example, if a community needs more housing, OCP talks about what kind of housing needed.

2.1S - Qualitative Factors of Jobs
Does the plan consider qualitative balancing factors eg. type of job, location, etc. to meet the needs of the community.
(Can just be mention of one. Does not need to be all the factors)
Trying to make the link. For example, if a community needs more jobs, OCP talks about what kind of jobs needed. So if for example the community is mostly uneducated, low skill workers, developing a bio-tech zone or something that requires high skill work force would not be very appropriate.

2.1S - Quantitative Analysis of JHB
Generally, a table showing numbers of each. Must show analysis of the two/compare the two.

2.1S - Section
Is there a section that specifically addresses job-housing balance?
Does not have to have its own section title, but has to be more than a passing reference. Ideally at least a paragraph dedicated to talking about the issue a bit.

2.1S - Transportation
Link jobs-housing balance to transportation (should probably be in the Issues/Preamble. If goal or policy, see if Goal or Policy - Reduce Private Vehicle is more appropriate.
For example talking about how better jobs-housing balance will alleviate traffic congestion. Or mention of resident labour force commuting to work - whether or not commuting is an issue. Does not have to be quantitatively detailed.
I am just trying to see if they acknowledge that a jobs-housing imbalance results in longer commuting times, and commuting is a problem in this region.

2.2S - Coordination
Look for reference for coordination with other agencies/municipalities
(in the acknowledgement that jobs-housing balance is a regional issue)

2.2S - RGS Goal
Does the municipality SUPPORT the region's jobs-housing balance goal?
Not enough to mention the goal but not support it
(this will probably be found in the Regional Context Statement)

2.2S - Town Centres
Acknowledge a RGS designated town centre (match against the list of designated Town Centres)

GOALS
3.1G - General Goal of Jobs-Housing Balance
Is there an overall goal of jobs-housing balance in the vision/growth management sections?
Eg. Goal of complete communities

3.2G - Section - Economic Development
Is the goal of a jobs-housing balance in this section?
(Intent is to see the integration of policies in different sections)
Must be explicit - refer to jobs-housing balancing

3.2G - Section - Housing/Residential
Is the goal of a jobs-housing balance in this section?
(Intent is to see the integration of policies in different sections)
Must be explicit - refer to jobs-housing balancing

3.3G - Reduce Private Vehicle
Goal of concentrating residential employment/commercial development to reduce usage of private automobiles or to facilitate provision of public transit (in support of a complete community)
Put jobs and housing closer together so people don't have to drive.

4.1P - Section - Economic Development
Are policies to support jobs-housing balance in this section?
Doesn't need to be explicit. Eg. Live-work studios in commercial policy section

4.1P - Section – Housing
Are policies to support jobs-housing balance in this section? Doesn't need to be explicit

4.2P - Accessory/Secondary/Infill housing
Policies to encourage accessory/secondary/infill housing

4.2P - Commercial Centres
Policies that provide for neighbourhood commercial centres or establishment of employment areas in appropriate locations to meet jobs-housing balance policies (eg. corner store or neighbourhood commercial zone at the edge of the neighbourhood)

4.2P - Home occupation
Policies that encourage home based businesses/working from home

4.2P - Incentives
Density bonus, reduced fees, streamlined permit process, expedited processing times, development impact fee waivers. Incentive for a mixed use development

4.2P - Inclusionary Zoning
Eg. require/encourage developers to include affordable housing in market-rate housing developments. Eg. Housing Agreements

4.2P - Linkage Programs
Encourage major employers to secure or provide housing for a portion of any new workforce created by those employers

4.2P - Live/Work Units
Policies to encourage live/work units

4.2P - Mixed land use
Policy that promotes mixed land use

4.2P - Planning Unit Developments (PUDs)
Eg. PUD regulations might specify that 10% of housing units are to be live/work units, or the minimum percentage of developed land devoted to civic, office and neighbourhood commercial space be from 10-25% of the total site area

4.2P - Reduce Private Vehicle
Policies to encourage concentrating residential and employment/commercial to reduce usage of private automobiles or to facilitate provision of public transit (in support of a complete community)

4.3P - Polices Action-Oriented/Mandatory
Action-oriented language used in policies eg. adopt, develop, will
(versus passive language: encourage, promote, should)

OPPORTUNITIES FOR IMPLEMENTATION

5.1O - Cross-Referencing
Is there cross-referencing of jobs-housing balance policies (must be explicit. Usually between Land Use, Housing and Economy sections)

5.1O - Other Plans
Is there a reference to other plans addressing jobs-housing balance in more detail Eg. economic development or housing plan (when in doubt, of if general reference, code anyways. I might see how often there is more detail in secondary plans)

5.1O - Public Process General
Was there a public process where the plan was adopted?
(Legal Framework)

5.1O - Public Process Specific
Is there specific reference to issues relating to jobs-housing balance highlighted in the public process?
Eg. Creation of local employment opportunities
Wanting a certain type of job that is appropriate to the community
(Legal Framework)

5.1O - Supporting Studies
Studies that support goals/policies in the plan.
For example, housing projections studies.
Code if mentions supporting study OR if it is in the appendix
Future studies or intent to do studies counts

5.2O - Financial Considerations
Acknowledgement of the staff/resources needed to achieve jobs-housing balance policies

5.2O - Implementation Actions
Identification of specific actions needed to implement a jobs-housing balance policy

5.2O - Implementation Program General
Is there a program/timeline for implementation (General)

5.2O - Updated
Has the plan been updated in the last 5 years

Appendix B: Master Score Card

		Anmore	Belcarra	Bowen	Burnaby	Coquitlam	Delta	Langley City	Langley Township	Lions Bay	Maple Ridge	New Westminster	City of North Vancouver	District of North Vancouver	Pitt Meadows	Port Coquitlam	Port Moody	Richmond	Surrey	Vancouver	West Vancouver	WhiteRock
Fact Base	1.1D - Households Future	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
	1.1D - Households Present	0	1	0	1	0	1	1	0	1	0	1	1	0	0	1	1	1	1	1	1	1
	1.1D - Housing Land Supply	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1
	1.1D - Housing Types Future	0	1	0	1	0	0	1	1	0	1	0	0	1	0	1	0	1	1	1	0	0
	1.1D - Housing Types Present	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
	1.1D - Location of Pop/Household Growth	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1.1D - Pop Future Composition	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0
	1.1D - Pop Future Size	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
	1.1D - Pop Present Composition	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	1	1	0	0	1	1
	1.1D - Pop Present Size	0	1	1	1	0	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1
	1.2D - Jobs Future	0	0	0	0	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1
	1.2D - Jobs Future Composition	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0
	1.2D - Jobs Present	0	0	0	1	0	1	1	0	0	0	1	1	0	0	0	1	0	1	1	1	1
	1.2D - Jobs Present Composition	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	0	1	0
	1.3D - Economic Development Land Supply	0	1	1	1	0	1	0	1	1	1	1	1	0	1	1	0	1	1	0	1	1
	1.3D - Location of Jobs Growth	0	1	0	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1
	1.3D - Residents Work Within Municipality	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	1	0
	1.3D - Residents Work Within Municipality Census Data	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0
	1.4D - Map - Land Use Map	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	1
	1.4D - Map - Urban Villages/Town Centres	0	0	0	1	1	1	0	0	0	1	1	1	1	0	1	0	1	1	0	1	0
		5	**12**	**8**	**13**	**7**	**17**	**14**	**10**	**11**	**13**	**16**	**13**	**9**	**10**	**15**	**13**	**15**	**14**	**11**	**16**	**13**
Specific	2.1S - Current Jobs-Housing Balance	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1
	2.1S - Defined Target/Ratio	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0
	2.1S - Defined Target/Ratio Based on Analysis	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0
	2.1S - Qualitative Factors of Housing	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
	2.1S - Qualitative Factors of Jobs	0	0	1	1	1	1	0	0	0	1	1	1	0	1	1	1	0	1	1	0	0
	2.1S - Quantitative Analysis of JHB	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	1
	2.1S - Section	0	0	0	1	1	0	1	1	0	0	1	1	0	0	0	1	0	1	0	0	1
	2.1S - Transportation	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	2.2S - Coordination	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	1	1	1	1	0	1
	2.2S - RGS Goal	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2.2S - Town Centres	0	0	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1
		1	**1**	**2**	**11**	**8**	**4**	**8**	**4**	**1**	**6**	**11**	**8**	**4**	**5**	**6**	**10**	**5**	**11**	**5**	**4**	**8**
Goals	3.1G - General Goal of Jobs-Housing Balance	0	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1
	3.2G - Section - Economic Development	0	0	0	1	1	0	0	0	0	1	1	1	0	1	0	1	1	1	1	0	1
	3.2G - Section - Housing/Residential	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1
	3.3G - Reduce Private Vehicle	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	1	1	1	1	1	1
		0	**0**	**1**	**4**	**3**	**0**	**1**	**1**	**0**	**2**	**3**	**2**	**2**	**3**	**1**	**4**	**4**	**4**	**4**	**2**	**4**
Policies	4.1P - Section - Economic Development	1	1	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	4.1P - Section - Housing	0	0	1	1	1	1	1	0	0	0	1	0	0	1	1	1	0	1	1	1	1
	4.2P - Accessory/Secondary/Infill housing	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	4.2P - Commercial Centres	0	0	0	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0
	4.2P - Home occupation	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
	4.2P - Incentives	0	0	1	0	0	1	0	0	0	1	1	1	1	1	0	1	1	1	1	1	0
	4.2P - Inclusionary Zoning	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1
	4.2P - Linkage Programs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.2P - Live/Work Units	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0
	4.2P - Mixed land use	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	4.2P - Planning Unit Developments (PUDs)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.2P - Reduce Private Vehicle	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0
	4.3P - Polices Action-Oriented/Mandatory	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		3	**3**	**6**	**7**	**8**	**7**	**7**	**6**	**3**	**7**	**8**	**6**	**9**	**7**	**7**	**10**	**7**	**9**	**9**	**8**	**6**
Implementation	5.1O - Cross-Referencing	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1
	5.1O - Other Plans	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1
	5.1O - Public Process General	1	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1
	5.1O - Public Process Specific	0	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	1	0	1	1	0
	5.1O - Supporting Studies	0	1	1	0	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1
	5.2O - Financial Considerations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.2O - Implementation Actions	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
	5.2O - Implementation Program General	1	1	0	0	1	1	0	1	0	1	1	1	1	0	1	1	1	1	1	1	1
	5.2O - Updated	0	1	0	0	0	0	0	0	1	1	0	0	1	1	0	1	0	0	0	0	1
		2	**5**	**1**	**4**	**4**	**3**	**2**	**3**	**1**	**6**	**6**	**4**	**7**	**4**	**5**	**6**	**6**	**5**	**6**	**6**	**7**
	Total Score	**11**	**21**	**18**	**39**	**30**	**31**	**32**	**24**	**16**	**34**	**44**	**33**	**31**	**29**	**34**	**43**	**37**	**43**	**35**	**36**	**38**