

# The Balance of **Jobs & Housing**

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# The Balance of Housing & Jobs



It is said that a house is where a job goes at night. Employment and housing are linked in complex ways that have a huge impact on economic development, transportation and the overall quality of life. Because regional economies and housing markets are so large and dynamic, the balance between jobs and housing is not something that can be managed in any precise way. But the degree to which employees can find appropriate housing within a reasonable commute, and the degree to which employers can find workers able to travel to their sites, should be a central concern of local and regional planning.

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This paper outlines the issues around the balance of jobs and housing. It begins with a discussion of the importance of this balance and the reasons it can tip in the wrong direction. The second section reviews ways to measure balances, in terms of geography, housing type and commute patterns. The third section discusses ways to incorporate the jobs-housing balance into local and regional planning.

While concerns about the jobs/housing balance can seem most acute in larger metro areas such as Central Puget Sound, Portland/Vancouver and Spokane, the impacts of a lack of balance can be felt in other parts of the state. A lack of housing close to large job centers will push demand for affordable homes to adjacent areas. A further impact is felt in communities that attract large numbers of retirees with high incomes who can outbid local residents for affordable housing. The data in this report cover the housing dynamics in Central Puget Sound, but the principles apply in many other areas.

A central theme of the paper is choice. Individuals and families face a bewildering array of choices as they arrange their lives in our society. Not only are they finding jobs, they are changing jobs frequently, commuting to two jobs from the same household and choosing schools for their children. Most households face trade-offs among these choices, all of which have different timing in their lives. And to complicate matters further, people tend to change jobs at a much higher rate than they change homes. In the end, the most useful public policies will emphasize a wide range of housing choices, so that households have the highest likelihood of striking the right balances within their lives.

A second important theme in the discussion of housing and jobs in the Puget Sound region, is the focus on sub-regions, or commute-sheds. These rough geographic designations are built around employment centers and encompass an area that can offer commutes of under a half hour to most of the major employment sites in the sub-region. The commonly-recognized sub-regions in

Central Puget Sound are: South Snohomish County, East King County, Seattle/Shoreline, South King County, North Pierce County, Kitsap County. While designation of these sub-areas is not new, the solution to maintaining a good balance of jobs and housing demands that jurisdictions within these sub-areas coordinate planning at a much closer level than they do currently.

The concept of sub-regions also applies to the role of Clark County in the Portland metro area. Just as the subareas of Puget Sound are defined by transportation choke points, the Columbia River crossing sets Clark County apart from Portland and raises issues similar to those faced in Puget Sound.

Sub-regional dynamics play out beyond Central Puget Sound. Each of the commute sheds of the Central Puget Sound region has adjacent areas that will feel the impact of housing market dynamics in Puget Sound. Demand from Pierce County spills into Thurston County, and when Thurston becomes unaffordable, Mason and Lewis Counties see demand leakage. Similarly, Skagit and Island counties experience demand leakage from Snohomish County. At times, King County demand has even leaked across the Cascades to Kittitas County.

## Why worry?

One look at any of the major freeway choke points— Lake Washington bridges, the Southcenter Hill, Renton S-curves, I-5 through JBLM, Canyon Park, all of SR-167, the Columbia River crossings— at around 8:00 in the morning shows just how out of balance

housing and employment are in major metro areas. Each day, hundreds of thousands of people commute long distances from their neighborhood of choice to their jobs.

In the American Community Survey for 2012, over 300,000 people in King, Pierce, Snohomish and Kitsap counties reported a commute time of over 45 minutes and over 150,000 of those reported a commute time in excess of 60 minutes. In Clark County over 21,000 commuters reported a morning trip over 45 minutes and in Spokane County over 15,000 commuters reported a 45 minute trip. It is safe to say that many, if not most, of those people stuck in traffic would prefer to live a bit closer to work.

But the inability to find appropriate housing near one's job results in more than just irritation. Long commutes have economic, social and environmental costs for both individual households and the region as a whole.

## Housing and Job Creation

Regional economic development strategies aim to strengthen the economic base of regions by attracting and retaining employers that export value to other regions. The jobs created by employers in the economic base, in turn, support retailers, homebuilders, healthcare and other service businesses. Many of the kinds of businesses that make up the economic base—manufacturers, large service companies, corporate headquarters, military and other federal government installations—can locate in a variety of places. Each employer has its own set of locational criteria, which are a source

of great interest to economic development strategists. Housing is one of those criteria.

The exact relationship between housing and job creation has proved elusive. Instinctively, it seems that high prices and low supply would drive away employers who would fear that they would have to pay employees too much. But many of the really booming parts of the country, and even the world, have severe housing shortages at the same time they continue to prosper. Conversely, many really affordable areas see little job growth. In the Puget Sound area, housing prices increased an average of 8.5 percent per year from the mid-1990s through the middle of 2007, while employment grew a healthy annual average of 2 percent during those years, which included a major recession. More recently, housing prices have recovered to pre-recession levels in many markets and job growth has averaged 3.5 percent per year. High housing prices have not deterred growth in the Puget Sound area or Metro Portland.

Two urban economists working through the Harvard Institute for Economic Research found an explanation for this phenomenon as they sought to define the relationship between a region's housing stock and its population and job growth. They discovered that a region's housing supply determines the kinds of jobs that will be created in its economic base. An area with an abundant and affordable housing supply will support a workforce with a wide range of skills and pay levels, and therefore will attract a wide range of employers. Conversely, an area with a tight and expensive housing supply will only attract highly skilled people who can command high wages, and therefore, will only attract employers who can pay high wages.

These findings have two very significant consequences for economic strategies in the state and region. First, efforts to recruit employers that pay mid-level wages will prove frustrating if those employers feel that the wages they can afford to pay will be insufficient to support the kinds of employees they want. But with the continuing uncertainty around employment at Boeing and the ports, it is exactly those mid-level-wage manufacturing jobs that are so badly needed. Second, in a high-wage, high-price economy, jobs in the local service sector will not likely pay enough for workers in that sector to afford housing. The combination of these two consequences—fewer middle income jobs and struggling service workers—results in a very unfortunate economic structure.

### **Housing and employee recruitment and retention in the service sector**

While most jobs in the region are not at risk of disappearing because of the low availability and high cost of housing, many employers will face frustration finding and keeping employees in low and moderate wage jobs. Areas with expensive and scarce housing still require retail and service employees, but many of those employees will not be able to live anywhere near their job. Stores, hotels and restaurants cannot afford to pay high enough wages to allow their employees to live in expensive areas, and as a result, suffer from short-staffing, absenteeism and high turnover.

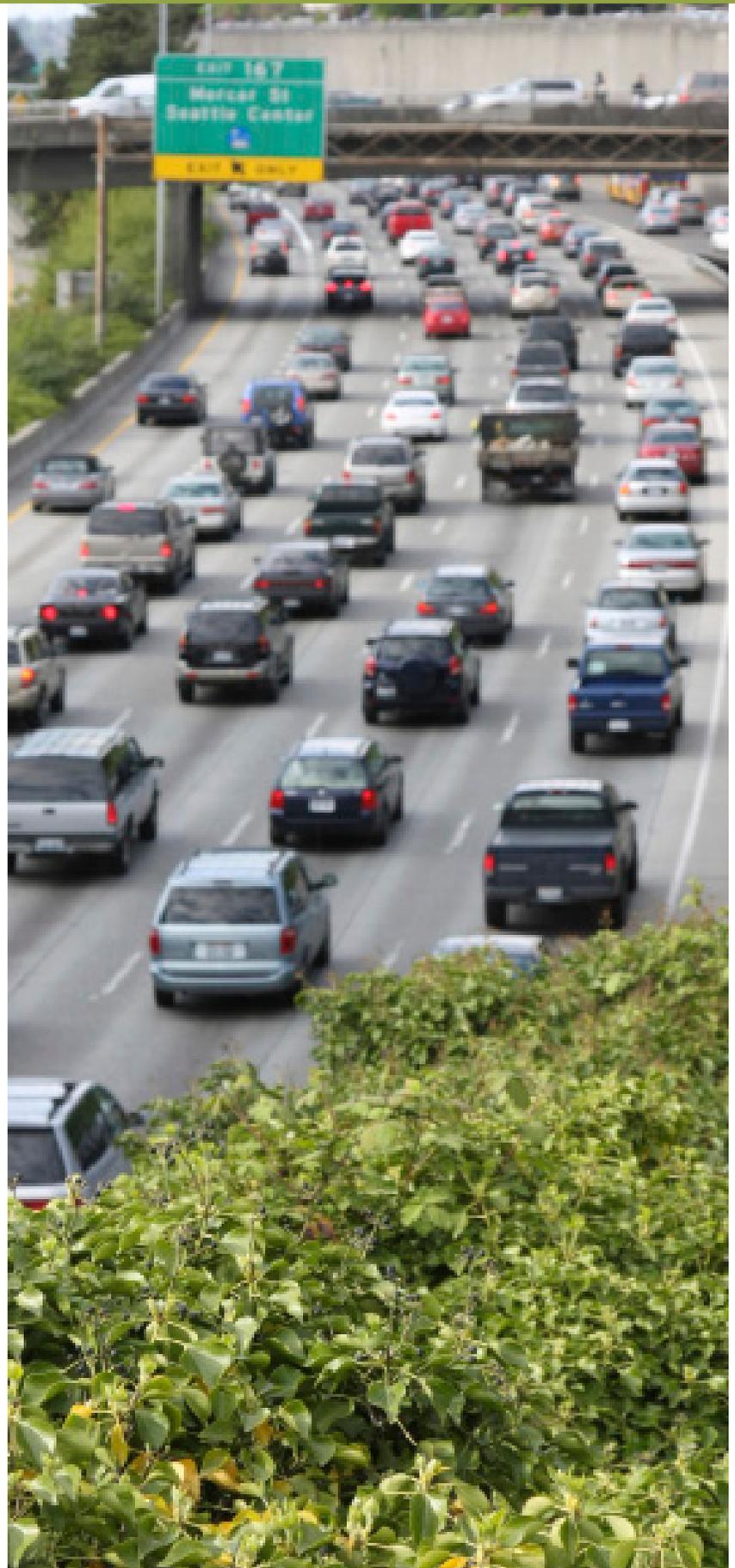
This points to the obvious fact that a balance of jobs and housing within a commute-shed is not just a matter of overall housing units, but also of housing types and price levels. An area may have an adequate supply of inexpensive apartments, but service workers with families

may still commute from a distant area where they can afford a detached home.

### **Freeway choke points**

It is no coincidence that the points at which the sub-areas of the region intersect are the scenes of the Puget Sound region's worst traffic problems. The physical geography of the region, combined with the limited freeway and highway network, has created a series of choke points in the transportation system. Commuters who must travel between sub-areas will almost invariably encounter at least one serious choke point and have no alternative but to travel through it.

These choke points are operating at full capacity during rush hour, so the only way to get more cars through them is to spread out the time during which the section of freeway is completely full and creeping along. This phenomenon of "spreading the peak" has meant that some sections of freeway flow freely for just a few hours a day. This has a major impact not only on commuters, but on commercial traffic that relies on the freeway network.



Even the most optimistic of plans does not envision these choke points gaining significant new capacity in the foreseeable future, and transit cannot absorb all the growth in commuters. So, the only way to address is to allow more people to live in the same sub-area where they work and thereby stay out of those choke points. Most people currently do work in the same sub-area where they live, but in the future, an even higher percentage will need to do so. We cannot allow the lengthening morning peak to meet the afternoon peak, and create continuous gridlock from 5:00 a.m. to 8:00 p.m.

### **Spillover housing demand**

As noted above, an imbalance of jobs and housing does not bring a region to a halt, but it does have powerful distorting effects. One impact is the spillover of housing demand from high-income, job-rich areas to more affordable areas. But because those affordable areas are tied to their own job base, the rising prices caused by spillover demand push workers in a previously affordable area out, and they, in turn spill over to the next most affordable area.

This phenomenon became very clear during the housing boom of the 2000s. Seattle and East King County added tens of thousands of jobs while failing to add enough housing. This pushed prices up in those areas and sent moderate income households up and down the Interstate-5 and 405 corridors in search of homes they could afford. And when these people arrived in South Snohomish or South King County they pushed up prices there, and sent the people working in those areas to Pierce and northern Snohomish Counties. This

cascading pattern kept going, with Skagit and Thurston counties, and even Lewis County experiencing price pressures.

The impacts of spillover demand highlight the planning and governance shortcomings under which the state operates. Each county plans for itself, and if one county does not provide housing to accommodate its own job growth, the adjacent counties will feel the demand pressure, and can do nothing about it. The data below will show how King County has consistently failed to balance job growth with housing growth, resulting in price pressure north and south.

This same pattern began playing out even earlier in Portland and Clark County. The Oregon growth management system allowed Portland to create an urban growth line that was open on the top, drawing Clark County even more into the Portland housing market. As housing became scarce on the Oregon side of the border, demand spilled across the river and into the previously affordable Clark County.

### **Cost of living and quality of life**

A person who works eight hours a day, sleeps eight hours and commutes one hour has another seven hours for personal time, family time, chores and recreation. An added hour of commute time reduces personal time by about 15 percent. And given all the unavoidable things in daily life, that hour will likely come out of family time.

The people most likely to face this problem are young families that would like to have a detached house with a back yard, but cannot

afford to be near the employment centers of Seattle and East King County. Long commutes not only mean less time at home, but they also make it harder to deal with family emergencies and sick children or even wait for the furnace technician. Because so few choices of moderately-priced family-friendly housing are available in high cost markets, moderate income families face the unattractive choice between long commutes and stacked-flat housing.

For those who cannot afford appropriate housing near their jobs, the greater affordability of outlying areas is partially offset by higher commute costs. As gasoline gets more expensive, and stop-and-go traffic reduces fuel economy and increases maintenance expenses, long commutes become costly. And in many affordable areas, transit service is scarce and unlikely to offer a point-to-point commute. Many long distance commuters face a choice between an expensive automobile trip and a time-consuming transit trip.

The impact of high housing costs on the cost of living and quality of life is not confined to lower income workers. The economic impacts of housing costs affect everyone. When service employers in high cost areas have difficulty recruiting employees, they must raise wages, thereby increasing prices. And the instability that comes with long commutes for low wage workers affects service quality, as retailers and other service businesses simply cannot fill their employment rolls and their shifts. In 2015, King County has again reached full employment levels, which means that many service businesses in Seattle and East King County will struggle to find workers and will fail to meet their customer service standards.

## Where imbalances come from

Homebuilding is a mature, highly competitive industry, with a wide array of participants working in all niches, product types and areas. Labor and materials are widely available, and most builders work from proven plans that will sell easily. The cost of construction of buildings—materials and labor—has risen very little in recent years, as higher labor costs are offset by improved equipment and techniques, and new materials are substituted for ones becoming scarce. In other words, a shortage of housing cannot be blamed on high costs or a lack of capacity or enthusiasm on the part of the homebuilding industry. The source of a jobs housing imbalance must be found elsewhere.

The most likely place to begin looking is in the dirt. Literally. Houses themselves, from the foundation up, have become a commodity that is sold for the cost of production plus profits. While some homebuilders start with raw land, most prefer to purchase building lots from developers who have subdivided land into legal lots, installed roads, sidewalks and utilities and paid all impact fees. By starting with finished lots, builders can concentrate on producing homes efficiently and at as low a cost as possible, without the uncertainties of land development.

Multi-family developers generally start with raw land and undertake both land development and construction together. As growth management has encouraged a shift in multi-family from outlying, low density sites to intense urban sites, the cost of buying and working with land for multi-family projects has risen substantially. But as with single family, the

construction of multi-family buildings has not risen substantially.

So, the challenge for supply and affordability of housing comes not from the structures themselves but from the process of creating finished, fully entitled building lots or multi-family sites. The route from raw land to a finished building lot or an approved multifamily project is strewn with obstacles that can prevent housing growth from keeping up with job growth.

### **Imbalance between zoning and demand**

Nearly all the land available for housing construction in the urbanized parts of the state is within an urban growth boundary and has an existing zoning classification, so it is easy to tell whether there is an adequate supply of land for the various types of housing that the market demands. An inadequate supply of zoned land will result in too few units available for a particular housing type, and, as noted below, those will be higher priced units. A shortage of land will also result in speculative purchasing by investors who will hold the land off the market in anticipation of future price increases.

An interesting illustration of this phenomenon is seen in Seattle, where there is abundant zoning for multi-family housing, but very little vacant land available for single family housing. Apartment builders have been able to take advantage of rising demand for rental housing and have brought thousands of units on the market in recent years. From 1998 through 2008, multi-family permits averaged 3,675 units per year, with nearly 6,000 permitted in 2007.

The recession brought multi-family construction in Seattle nearly to a halt, but as the recession eased and job creation picked up, apartment builders went on a tear, permitting over 24,000 new units between 2010 and 2014. During the same period, the net gain of market rate, single family housing was quite small, and continued strong demand for single family houses in Seattle caused prices to rise by over 10 percent per year during the housing boom of the 2000s, and again in recent years.

Seattle has less of a jobs-housing imbalance with respect to apartments than it does with respect to single family houses. Zoning in Seattle allows for a robust apartment market, such that people accepting jobs in Seattle who wish to live in an apartment have a good chance of finding one that meets their needs and price range. At the same time, the stock of single family houses in Seattle is growing very slowly because, although the city is zoned predominantly for detached housing, there is very little vacant land in those zones. Thus, those people accepting new jobs in Seattle who want a single family house will often need to look outside the city to find a house they can afford.

### **High land cost limits lower priced housing**

Homebuilders, and, importantly, the banks that provide their construction financing, still operate from the rule of thumb that the final price of a house should be between three and four times the price of the finished building lot. (This rule also holds even when the homebuilder has done the land development, and, in effect, sold the lot to itself.) A shortage of zoned capacity, relative to demand created by job growth, will push up the price of land

and building lots. This, in turn, pushes up the price of the finished homes that can be built, creating a shortage of lower-priced homes.

Thus, a jobs-housing imbalance can be confined to the part of the market that seeks moderately-priced, new-construction detached housing. For example, a family with an income of \$70,000 per year can afford a house priced around \$300,000. New construction homes at this price will be impossible to find in East King County, but can be found in South King County. So although there are a lot of jobs in East King County that pay \$70,000 per year, there is little housing affordable to a family with that income. And the difference is land availability and cost.

The problem of land cost is not limited to the single family, for-sale market. High land costs also have an impact on apartment rents, primarily because of parking requirements. When land is inexpensive, apartment builders will provide parking lots, which cost just a few thousand dollars per space. When land gets expensive, builders must

shift to underground parking, which is very expensive. This pushes up the price of the whole apartment project and, therefore, pushes up rents.

So while Seattle, Bellevue, Redmond and other hot markets are adding apartments at a brisk pace, those units are almost all quite expensive, with much less apartment inventory being added at the lower end. This then forces those who are working in these areas at lower paying jobs, and renting, to go farther out to find affordable apartments or to pay more for rent than is customary.

### **Lag time between job growth and housing growth**

Business cycles can turn around relatively quickly, with a large number of jobs added within a few months, whereas it takes years to bring new housing on the market. As business cycles slow down, land developers, homebuilders and multi-family builders tend to reduce their activity so they are not left with inventory and vacant apartments during a downturn. But when jobs begin to pick up, they have little in the pipeline. This

trend affects both single family and multi-family markets.

Compounding this general problem is the trend in immigration. People move to Washington when the economy is doing well, especially compared to the economies of Oregon, California and Alaska (where a large number of in-migrants come from). Because fewer people move to the area during a recession, housing demand arises mostly from new households. But new household formation tends to drop off during a recession, since fewer people can afford to move out on their own. When the economy picks up, local residents move away from parents or roommates and renters think about buying houses and, at the same time, a wave of in-migrants begins to arrive. Meanwhile, the housing industry is just getting geared up.

A surge in the economy not only causes an overall surge in demand for housing, but it also can lead to demand for higher quality housing, as rising incomes and more stable employment allow people to improve their housing. Since it is easier to build multi-family

housing than single family housing in urban markets, an economic surge puts pressure on the single family market more than the multi-family market, forcing moderate income buyers who can now get into the single family market to look well outside their sub-region.

### **Imbalance between housing and employment capacity**

Jobs and housing would tend to stay in balance if a sub-region had the same capacity for employment as it had for housing employees. In other words, if the market for residential land and the market for commercial land moved at the same pace, job creation would bump up against its limits about the same time that housing bumped up against its limits.

Many areas of the state, however, have a much larger capacity for jobs than for housing. Part of the imbalance is simply the result of maturing economies, in which more people work in high density office settings than in low density manufacturing or warehousing settings. At the same time, local governments are much more likely to increase employment capacity than to increase housing capacity.

For example, the core of East King County has very little capacity remaining for single family housing. And yet, high-rise office construction in downtown Bellevue, the new Spring District and the continued expansion of Microsoft and other employers in the Overlake area will add tens of thousands of new jobs to the Eastside, with no end in sight. In both areas, older, low density commercial buildings are being redeveloped into higher density office buildings. Underground parking has become economically feasible in downtown Bellevue

and is becoming common in the tech campuses of Overlake, signaling even higher densities. The surge in high-rise housing in Bellevue will accommodate some of the demand created by these employment centers, but will not help that part of the workforce that wants detached housing, the supply of which will grow only very slowly.

### **Inadequate transportation**

As has been discussed, and will be amplified on below, the jobs-housing balance is ultimately a question of commute times. A long-standing standard for acceptable commutes remains one half-hour. This paper argues that the only way to ensure a commute of that length is to ensure that a commuter working in one of the major employment centers stays within the sub-region surrounding that center. As noted above, the most significant choke points in a metro area's transportation network lie on freeways and highways where the sub-regions intersect.

As traffic congestion worsens, the radius of the half-hour commute shrinks, and the area within which jobs and housing must balance becomes smaller. The severe imbalance of jobs and housing in Seattle would not be a huge problem if commutes from South King County and South Snohomish County were easy. And the jobs-housing imbalance in Portland would not be an issue if the Columbia River crossing were a snap. But commutes across choke points can easily exceed a half-hour and stretch into 45 minutes or an hour.

Transit service can help provide shorter commutes, especially with rail or buses in dedicated rights of way. But for transit to provide a commuter with a real advantage,

it must provide service directly from home to work. Long drives to park-and-ride lots, transfers, and long walks from the bus or train to work can easily add another half-hour to the trip. When parking is available, as it is in most employment centers outside the largest central cities, driving will usually be the preferred mode.

## **Geography of the jobs-housing balance**

Discussions of jobs-housing balances often refer to a variety of geographic designations, so it is worth looking at them. (Although the following discussion concerns the Central Puget Sound region, the same principles apply to other metro areas.)

### **Economic region**

Jobs and housing will, by definition, balance at the regional level. After all, just about everyone who works within an economic region lives somewhere within that region. If there is unmet demand for housing in a region, builders will find someplace to construct it, even if those new neighborhoods are far from the actual employment centers. Although Skagit and Thurston counties provide some housing for people working in Central Puget Sound, the economic region can be defined as four counties: King, Kitsap, Pierce, Snohomish.

### **County**

The county level has several advantages in measuring jobs-housing balances. First, data tend to be aggregated at the county level by a number of agencies, so it is easy to set up apples-to-apples comparisons. Second, a focus on jobs-housing balances will drive toward

policies that reside at the county level through county-wide planning policies. Third, the commute-sheds that constitute the best analytic level tend to reside exclusively within one county. The data presented below will begin at the county level.

### **City or Census-designated place**

Planning begins with countywide planning policies but the tools needed to achieve a balance of jobs and housing exist primarily at the city level and the county level for unincorporated areas. City and county councilmembers and commissioners will make most of the relevant decisions. But decisions about where to live, where to work and where to locate a business do not necessarily take city boundaries into consideration.

Businesses base their location decisions on a wide range of factors, and will likely look at a larger area encompassing many cities before deciding on a particular location. Some cities are known to be “developer friendly,” but even this only affects those employers who plan to build their own facility. More important than the friendliness of a particular city will be the availability of land or leased space, proximity to transportation, proximity to other related businesses, etc. And in the case of service businesses, the primary consideration will be the location of customers, and a trade area may encompass several cities.

For individuals, the famous “Tiebout Hypothesis” claims that, in a fragmented metropolitan area, people choose a city to live in that best meets their own preferences for public services, amenities and taxes. So although the city in which an individual works may offer appropriate housing, other cities in

the area may offer a more appealing lifestyle or set of public services or better schools. The SR-520 bridge provides an excellent illustration of this, as workers commuting westbound to Downtown Seattle from their cul de sacs on the Eastside pass high tech workers commuting to Redmond from their fashionable urban neighborhoods in Seattle.

Another problem with focusing on cities is that many smaller cities simply do not have appropriate settings for commercial development, and a few are naturally dominated by commercial activity. Half of the cities in the Puget Sound region have fewer than 12,000 residents, and while these cities will have some employment base, it makes little sense to try to balance jobs and housing within them.

## **Neighborhood**

Discussion of jobs-housing balance at the neighborhood level usually involves one of two objectives: bringing jobs to low income neighborhoods and bringing housing to major employment centers.

The poverty of inner city neighborhoods is often attributed to the disappearance of employers from those areas, and it is felt that those neighborhoods would be significantly improved by moving jobs back into them. While this is certainly the case in many of the large, Eastern and Midwestern cities, it is less so in the Puget Sound area. Low income neighborhoods in Seattle, Tacoma, Everett and some inner ring suburbs are not as large and isolated as their Eastern and Midwest counterparts. Moreover, they never had large scale industries within them and therefore do

not contain large tracts of developable land that could accommodate new large industries. As seen by the gentrification of some of those areas in recent decades, their close-in location makes them attractive commuter neighborhoods.

Encouraging housing development adjacent to major employment centers often does make sense. Mid-rise and high-rise development in Seattle, Bellevue and Tacoma provides the opportunity for people working in those areas to walk to work and to access neighborhood retail and services on foot. This type of development is generally confined to multi-family housing, however, which will tend to attract singles, childless couples and empty-nesters. Furthermore, this housing tends to be relatively expensive. Focusing on housing at the urban center level can make a major contribution to achieving an overall balance of jobs and housing, but will be concentrated in just a few market niches.

## **Sub-regional level**

While the balance of jobs and housing can be addressed at the regional, city or neighborhood level, the sub-regional level makes the most sense. As noted, sub-regions contain significant concentrations of employment and a wide variety of housing types, and, therefore, should offer commuters a choice of lifestyles within a half hour commute of their job. The main challenge is to ensure that housing growth within these sub-regions keeps up with job growth, so the market can offer a wide range of housing types and price points, thereby minimizing spill-over demand to other sub-regions.

The dilemma of addressing the jobs-housing balance at the sub-regional level is that these geographic areas exist as a market concept but not in any administrative, political or policy sense. Data is not often gathered on a sub-regional basis, and there are no planning or regulatory mechanisms at the sub-regional level to correct an imbalance between jobs and housing. The sub-regional housing market is shaped by a patchwork of individual city planning and zoning decisions that have no sub-regional context.

## Measuring jobs and housing

While achieving the right balance of jobs and housing is hardly a precise undertaking it is possible to see if certain sub-regions have significant imbalances and/or a trend that will result in future imbalances. This process begins by measuring current ratios of jobs and housing across the region, then at projections for future growth over the next 10 to 20 years. The housing trends are then matched against current and projected commuting patterns. Below is a template that can be used anywhere in the state to measure jobs and housing. Data from the Puget Sound area provides an example in the use of the template.

The basic unit of measure will be the jobs/housing ratio, which is the number of jobs divided by the number of housing units. The data used will vary somewhat, since it comes from different sources. Key data are:

**Covered employment.** This is the most accessible and reliable data on employment. It can be obtained from both the U.S. Bureau of Labor Statistics and the Washington State Department of Employment Security. This data counts “covered employees,” that is, workers who are covered under the state’s unemployment insurance program. This excludes some workers, such as the self-employed, but because it is based on mandatory filings by employers, it is the most accurate data.

**Total employment.** The projections from the Puget Sound Regional Council, which will be discussed below, use an estimate of total employment, which includes all jobs, whether covered by unemployment insurance or not. Note: This will be higher than the figures for covered employment.

**Housing units.** Counts of housing units will come from the census as well as the Puget Sound Regional Council, which uses modeling techniques to extrapolate from census data. The Census Bureau and the Puget Sound Regional Council also track building permits. Housing counts and building permit data are both available for the entire state from the Census Bureau.

**Households.** The Puget Sound Regional Council forecasts provide projections of households, a figure which does not count vacant housing units.

## Current ratios

Tables 1 and 2 show two alternate methods of calculating the jobs-housing ratio. Table 1 uses covered employment and housing unit count. This understates the ratio by counting fewer jobs than exist in the economy. This method can be employed in all areas of the state, using Census Bureau data.

**Table 1: 2013 Jobs-housing ratio for Puget Sound covered employment and housing units**

	Covered Employment	Housing Units	Ratio
<b>King</b>	1,183,811	869,835	1.36
<b>Kitsap</b>	79,426	108,449	0.73
<b>Pierce</b>	267,700	331,861	0.81
<b>Snohomish</b>	264,844	293,586	0.90
<b>Total</b>	1,795,781	1,603,731	1.12

Sources: Puget Sound Regional Council, Wash. St. Department of Employment Security

Table 2 measures total employment and households using data from the Puget Sound Regional Council's Land Use Baseline for 2010. This provides a more accurate count of jobs, but undercounts housing by eliminating vacant housing units, which can vary between about three and seven percent of the housing stock. The measures in Table 2 will be used later to look at PSRC forecasts for the Puget Sound region.

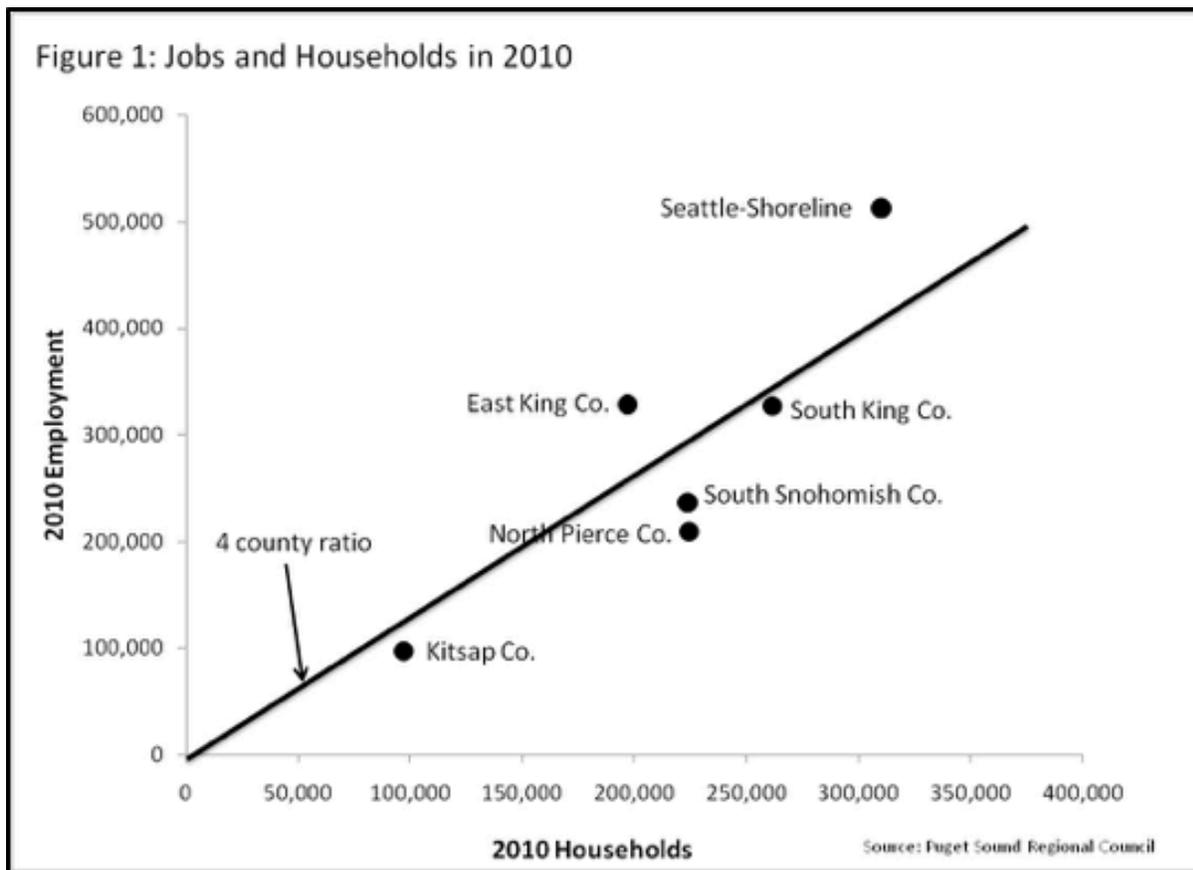
**Table 2: 2010 Jobs-housing ratio for Puget Sound Total employment and households**

	Total Employment	Households	Ratio
<b>King</b>	1,181,537	789,232	1.50
<b>Kitsap</b>	97,417	97,220	1.00
<b>Pierce</b>	317,874	299,918	1.06
<b>Snohomish</b>	268,586	268,325	1.00
<b>Total</b>	1,865,414	1,454,695	1.28

Source: Puget Sound Regional Council

No matter which data is used, the important thing is to look at how the various areas compare with each other and with the region-wide total. A ratio above the region-wide total indicates a shortage of housing, and a ratio below indicates a shortage of jobs, or a tendency towards long commutes. With either the Table 1 or the Table 2 method, King County shows up as short on housing, and the other three counties show up as short on jobs.

Figure 1 breaks out the data from Table 2 into sub-regions, and shows which are balanced, and which have a shortage of either jobs or housing. The diagonal line indicates the region-wide ratio of jobs to households. Sub-regions below the line have a surplus of housing over jobs, and sub-regions above the line have a surplus of jobs over housing.



### Trends in job-housing balance

The other measure to note is the trend in the balance of jobs and housing. Over time, as both employment and housing grow throughout the region, do areas tend to move more toward a balance or away from one? The impacts discussed above, such as employee recruitment and retention should have self-correcting mechanisms: employers open facilities near a ready workforce, and avoid places with too little housing. Trends in job and housing creation should show whether these mechanisms have a chance to work.

**Table 3: Change in Jobs-housing ratios covered employment and housing units**

	1990	2000	2010	2014
<b>King</b>	1.42	1.57	1.29	1.36
<b>Kitsap</b>	0.86	0.77	0.75	0.73
<b>Pierce</b>	0.81	0.85	0.79	0.81
<b>Snohomis</b>	0.86	0.89	0.82	0.90
<b>Region</b>	1.17	1.25	1.07	1.12

Sources: Puget Sound Regional Council, Wash. St. Department of Employment Security

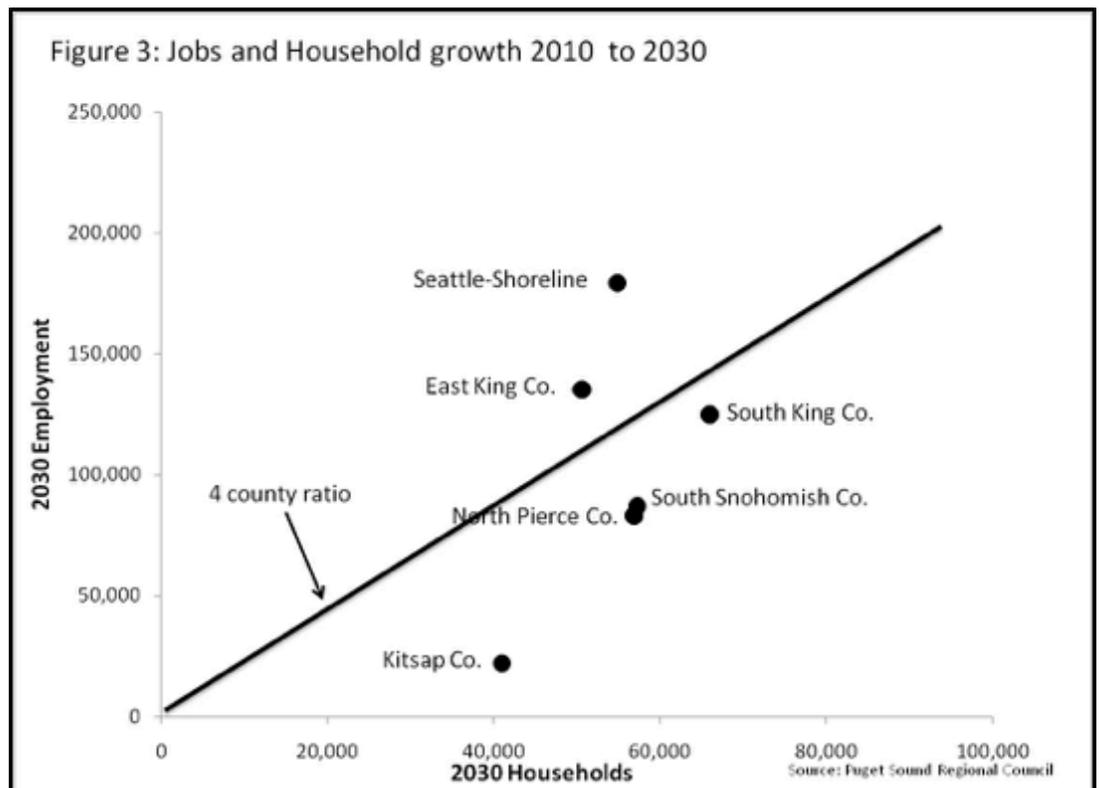
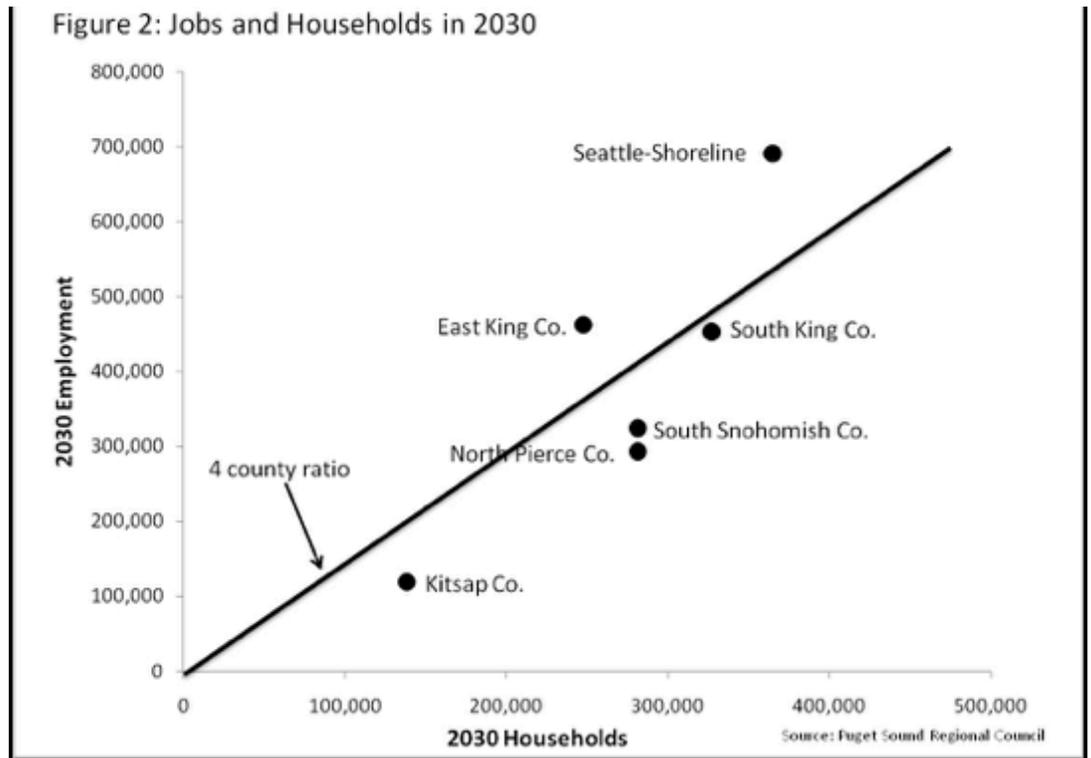
Table 3 shows jobs housing ratios for 1990, 2000 2010 and 2014. 2000 was a peak year for employment in the region, and jobs-housing ratios were quite high. Conversely, 2010 saw lower employment from the Great Recession, and housing unit counts that included some overhang in inventory. In 2014 ratios have bounced back and are near their levels for 1990. Table 3 shows that, at the county level, the ratio of jobs and housing fluctuates with the economy and with homebuilding, but, over time, do not change a great deal.

Table 3 also shows that, while King County is still a net importer of workers from adjacent counties (i.e. its jobs-housing ratio is higher than that of the region as a whole), the source of those workers may be shifting. The jobs-housing ratio in Snohomish County rose between 1990 and 2014, while the ratio fell in King County and region-wide. Meanwhile the ratio for Pierce County has held relatively steady. This indicates that more residents of Snohomish County are working there and a smaller share of Snohomish residents are commuting to King County, while an increasing share of Pierce County residents are commuting to King County.

Projections for the more distant future do not show substantial improvement in jobs-housing ratios. Figure 2 shows the Puget Sound Regional Council forecast for 2020 for jobs and households in the region. It shows the same basic pattern as seen in Figure 1. The major difference is that Southwest Snohomish Counties and Northern Pierce Counties become even more pronounced as bedroom communities. Figure 3 shows the projected growth in households and employment that will establish the pattern shown in Figure 2. Under these projections, Seattle and East King County will continue to produce jobs at a much higher rate than housing, and North Pierce, South Snohomish and Kitsap will produce much more housing than jobs.

South King County appears to have a relatively good balance between jobs and housing. But this is something of an illusion. Much of the spillover demand for housing from Seattle and East King County is met in South King County. This pushes up prices to levels that are unaffordable to many of the people working in the Green River Valley, and those workers must look for affordable housing in North Pierce County.

If these forecasts are accurate, they suggest the perpetuation of patterns of jobs, housing and commutes that have proved unsustainable with the existing transportation network.



## Jobs-housing balance and housing types

Housing is usually counted by “units,” but no one lives in a “unit.” Households choose places to live that meet their needs and financial capacity and, to the largest extent possible, that offer a neighborhood and community they find agreeable. Looking at balances in terms of jobs and overall units provides a rough idea of whether balances are being achieved, but to truly understand the dynamics of commutes and employment patterns it is necessary to examine the housing stock by types.

**Table 4: Housing types in 2012**

	Single Family/ Townhouse	2 to 4 units	5 to 19 units	20 or more units	Mobile home, etc	Total
<b>King</b>	59.7%	6.5%	14.1%	17.6%	2.2%	100.0%
<b>Kitsap</b>	72.7%	5.1%	8.4%	5.5%	8.3%	100.0%
<b>Pierce</b>	69.2%	7.7%	10.0%	6.6%	6.5%	100.0%
<b>Snohomish</b>	68.9%	6.0%	11.3%	7.8%	5.9%	100.0%
<b>Total</b>	64.2%	6.6%	12.4%	12.7%	4.2%	100.0%

Source: U.S. Census Bureau

Table 4 shows the distribution of housing by type in the four counties. Throughout the region, nearly two thirds of all housing is either single family detached or common wall (duplex or townhouse). One fourth of the housing units are part of complexes of five or more apartments or condominiums. King County has a higher percentage of units in multi-family complexes, and a much lower percentage in mobile homes. The substantial gap in the single family housing share between King County and the other three counties indicates that large numbers of households with jobs in King County are commuting from affordable single family homes in adjacent counties.

**Table 5: Housing type share of total permits 2008-2012**

	Single Family	2 to 4 units	5 to 19 units	20 or more units	Mobile home etc.	Total
<b>King</b>	25.4%	7.4%	3.4%	63.8%	0.0%	100.0%
<b>Kitsap</b>	98.7%	-14.4%	8.2%	6.9%	0.6%	100.0%
<b>Pierce</b>	65.1%	8.1%	8.3%	17.3%	1.2%	100.0%
<b>Snohomish</b>	69.2%	7.8%	4.4%	17.9%	0.7%	100.0%
<b>Total</b>	42.6%	7.0%	4.5%	45.6%	0.3%	100.0%

Source: Puget Sound Regional Council

**Table 6: Net housing units permitted 2008 to 2012 by type**

	Single Family	2 to 4 units	5 to 19 units	20 or more units	Mobile home etc.	Total
<b>King</b>	10,301	3,025	1,387	25,932	-15	40,630
<b>Kitsap</b>	1,841	-269	153	128	12	1,865
<b>Pierce</b>	7,103	879	909	1,891	136	10,918
<b>Snohomish</b>	9,062	1,016	574	2,341	95	13,088
<b>Total</b>	28,307	4,651	3,023	30,292	228	66,501

Source: Puget Sound Regional Council

Table 5 shows the production of housing in the region by these same types. Between 2008 and 2012, a time of significant challenges for the homebuilding industry, single family production was just slightly below average for Pierce and Snohomish counties. It was far lower for King County and low for the region as a whole. At the same time, all three large counties show strong production of larger multi-family developments. Table 6 shows the actual numbers of units, with King County's large multi-family projects accounting for nearly 40 percent of all units constructed in the region. Another important trend to note is the lack of production of mobile homes, which constitute a very important source of affordable housing.

Breaking the housing stock down by unit type changes the picture. Since the bias in King County is toward multi-family construction, more units will house single people and retirees, and therefore have fewer jobs per housing unit. In other words, with a higher proportion of its housing stock in multi-family, King County should have a lower than average jobs-housing ratio. Rather, as seen above, King County's ratio is higher than average.

## Commute Patterns

Patterns of commuting provide an easy way to identify an imbalance of jobs and housing. Table 7, based on a study undertaken by the Puget Sound Regional Council in 2000 shows the destination of all morning trips take in King, Pierce and Snohomish Counties. This will include non-work trips, but it can be safely assumed that the vast majority of trips taken from 7:00 to 9:00 involve a commute to work.

**Table 7: Destination of morning trips in 2000\***

Begins in:	Trips staying in subarea	Trips ending in				
		Seattle/Shoreline	East King Co.	South King County	Snohomish County	Pierce County
Seattle/Shoreline	85.4%	-	5.9%	5.0%	2.9%	0.8%
East King Co.	75.9%	15.0%	-	4.4%	3.6%	1.1%
South King Co.	74.8%	15.9%	5.8%	-	0.6%	3.0%
Snohomish Co.	69.8%	16.4%	12.0%	1.3%	-	0.5%
Pierce Co.	80.3%	2.9%	5.0%	11.2%	0.7%	-

\* 7:00 to 9:00 a.m. Does not include trips that leave the three-county region

Source: Puget Sound Regional Council

The data in Table 7 show that most trips stay within their sub-region of origin, but that the trips taken outside the various sub-regions are predictable from the data on jobs and housing. The areas with a higher than average ratio of jobs to housing – Seattle, East King County, Green River Valley – are attracting commuters from the areas with more abundant housing – South Snohomish County, North Pierce County.

Table 8 (next page) shows how this picture is projected to look in 2020. The forecasters at the Puget Sound Regional Council believe that the pattern will not change substantially. This means that currently overloaded commuting corridors will be expected to absorb growth in the same proportion as their share of trips today.

**Table 8: Forecast destination of morning trips in 2020\***

Begins in:	Trips staying in subarea	Trips ending in				
		Seattle/Shoreline	East King County	South King County	Snohomish County	Pierce County
Seattle/Shoreline	84.3%	-	6.6%	5.3%	2.9%	0.9%
East King Co.	73.9%	15.8%	-	5.2%	3.8%	1.2%
South King Co.	75.6%	13.8%	6.7%	-	0.8%	3.1%
Snohomish Co.	67.7%	16.1%	13.7%	2.1%	-	0.4%
Pierce Co.	78.1%	5.6%	3.7%	11.7%	0.8%	-

\* 7:00 to 9:00 a.m. Does not include trips that leave the three-county region

Source: Puget Sound Regional Council

Table 9 shows the numbers of additional trips forecast for each of the origin-destination pairs. It is difficult to image that the routes across and around Lake Washington will absorb another 20,000 commuters from the Eastside to Seattle, or that Interstate 5 and SR 167 can absorb another 19,000 commuters heading from Pierce County into the Green River Valley. Since the corridors between these sub-regions are currently operating at capacity, a major increase in transit usage or carpooling will be necessary to allow these trips to happen.

**Table 9: Forecast increase in morning trips by 2020\***

Begins in:	Trips staying in subarea	Trips ending in				
		Seattle/Shoreline	East King County	South King County	Snohomish County	Pierce County
Seattle/Shoreline	75,553	-	8,850	6,231	2,829	1,362
East King Co.	74,266	19,966	-	8,371	4,841	1,858
South King Co.	74,722	5,376	9,876	-	1,677	3,473
Snohomish Co.	111,579	26,864	29,304	6,087	-	749
Pierce Co.	104,463	17,807	883	18,789	1,577	-

\* 7:00 to 9:00 a.m. Does not include trips that leave the three-county region

Source: Puget Sound Regional Council

But the real question raised by Table 9 is whether the various sub-regions will build enough housing to allow the commuters forecast to remain in their sub-region to actually do so. Will Seattle/Shoreline see enough housing to generate over 75,000 new morning trips? If there is not enough housing, will the jobs still be there?

## The jobs-housing balance and the planning process

At the outset, this paper admitted that the balance of jobs and housing cannot be managed in a precise way: there are too many variables at work and too little information about them. But the paper also discussed the consequences of allowing the ratio of jobs and housing to get too far out of balance. The jobs-housing ratio should be seen as an essential benchmark that indicates the degree to which land use planning and regulatory systems are themselves in balance, such that sub-regions can support their own economic growth within their boundaries.

The balance of jobs and housing should take a central place among planning processes of cities, counties and regions. Although much of the data in this paper has centered on counties, the appropriate level to monitor the jobs-housing balance in the Puget Sound area is the six sub-regions: Snohomish, Seattle/Shoreline, East King, South King, Kitsap and North Pierce. For King County this represents a new layer of planning, so the recommendation is not made lightly. But we cannot have a strategy in which housing in Enumclaw is intended to serve job growth in Downtown Seattle, and housing in Federal Way serves job growth in Bellevue. Our transportation system cannot handle that strain, and individuals and families should not have to choose between appropriate housing and excessive commutes.

Integrating the jobs-housing balance into planning will require:

**Working together within sub-regions.** Focusing on the balance of jobs and housing will require local governments to work together to an extent not yet attempted. The current system of housing targets is not very results-oriented, and does not specify what types of housing are needed. Local governments need to focus not just on the population figures from OFM, but on the actual housing needs being generated by employment growth. And they need to decide how best to meet the needs for various housing types, dividing responsibility among themselves for production of them.

**Assembling data.** The data sources for both jobs and housing are well established, and building and maintaining an accurate picture of both should not be difficult. The important thing is that the data go into some detail about both the types of jobs being created and the types of housing being constructed. The two should match. And the data cannot be just a snapshot, but should use rolling totals over several years, taking into account the year-to-year variability of both job and housing growth.

**Understanding markets.** Those who track housing markets – builders, realtors, relocation specialists – have real-time information on what is working well in a given market and what is missing. As noted, the types of jobs being created will dictate to a large degree the types of housing that are needed. Local governments should keep in regular contact with market experts so they can track anticipated needs.

**Reexamining zoning and regulations.** When certain types of housing are found to be lacking in a sub-area, local governments need to find new and creative ways to meet the housing needs generated by job growth. For example, in many areas where detached single family houses have become very expensive, townhouses have become the new entry-level housing. Many areas lack sufficient zoning for townhouses, duplexes , small-lot houses and other alternatives to expensive detached housing, and much of the land zoned for these housing types is near busy streets and commercial areas not suitable for families.

## **Conclusion:**

The disturbing observation about the housing market of the past several years has been the steep rise in prices in the face of relatively slow employment growth and historically low rates of in-migration. The state's economy has picked up steam and the next decade looks very bright on the job front. In-migration has begun to increase across the state and Puget Sound is the fastest growing metro area on the West Coast. All signs point away from a speculative bubble as the cause of the current surge in housing prices, and with job and population growth on the rise, we can expect prices to continue to increase rapidly.

If historic patterns persist, the response of the housing market to the rise in the job market will be to push moderate income workers further and further to the periphery of their economic regions, as well-paid workers drive up prices of scarce housing near job centers. In the current planning regime, no one is in charge of ensuring that housing development matches job development, so while we congratulate ourselves on pulling our economy out of the rut of the past several years, we consign more and more people to punishing commutes.

This needs to change. The state and its economic regions have become much more organized in pursuit of jobs and economic development, and the leaders promoting that growth need to understand that their efforts will be in vain if the housing market cannot keep up with job creation. A parallel effort is needed to get state and local governments working together to ensure that every job created in the region has a home to go to at night not too far away.