

Chapter 5: Land Use, Population, Employment, and Housing

1 How are land use, population, employment, and housing examined in this chapter?

This chapter examines potential population, employment, housing, and land use impacts associated with the different transportation networks and services in the Transportation 2040 alternatives. It is not intended to evaluate the impacts associated with urban growth generally, or those associated with the central Puget Sound region's particular growth pattern. These impacts have been addressed previously in environmental documents prepared for VISION 2040 and for each county's and each city's comprehensive plan. For detailed background information on population, employment, housing, and land use trends and current conditions, refer to Appendix B: Regional Trends and Forecasts.

This analysis also does not consider what effect, if any, the plan alternatives could have on the overall levels of future growth in the region. All alternatives assume the same amount of regional growth in population and employment from 2006 to 2040—1.5 million additional people, 1.2 million additional jobs, and approximately 800,000 additional housing units. This amount of growth does not vary.

This analysis tests how transportation can affect land use patterns by employing a new land use model, UrbanSim (www.urbansim.org).

Given that growth over the next several decades would be building upon a well-established urban area, the distributional

Which elements of Washington Administrative Code (WAC) 197-11-444 are addressed in this chapter?

This chapter addresses:

- Section (2)(b)(i) Relationship to existing land use plans and to estimated population
 - Section (2)(b)(ii) Housing
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What is UrbanSim?

UrbanSim is a land use model used by PSRC to examine the effects of each alternative upon the future land use patterns of the region.

UrbanSim starts by creating a virtual representation of the region's collective future land use plans. Then, each alternative, including the Baseline Alternative, is evaluated to assess whether it results in land use patterns consistent with VISION 2040 policies. Refer to Appendix E for a more detailed technical description of the UrbanSim modeling framework and the representation of land use policy in the region's models.

land use differences among the Transportation 2040 alternatives are expected to be marginal over the time period analyzed. As such, all of the alternatives produced population distribution patterns that were consistent with the VISION 2040 Regional Growth Strategy. The modeled population distributions across regional geographies varied very little in response to the differing transportation networks in each action alternative.

2 What land use strategy is contained in VISION 2040?

VISION 2040 features a Regional Growth Strategy, which provides guidance for where future population and employment growth should be located to achieve the goals of VISION 2040. The Regional Growth Strategy is based on regionwide growth forecasts and covers a planning period of 2000 to 2040. It is organized around “regional geographies,” which are groups of cities that share similar characteristics, along with categories for unincorporated urban areas and rural areas. There are four types of regional geographies for cities: metropolitan cities, core cities, larger cities, and small cities refer to Exhibits 5-1 and 5-2.

The Regional Growth Strategy plans for an increased role in accommodating growth for metropolitan cities and core cities, as well as larger cities. At the same time, the Regional Growth Strategy anticipates a decreased role for smaller cities, unincorporated urban growth areas (UGAs), and rural areas. Exhibit 5-3 depicts a conceptual map of potential future population and employment densities.

Regional Growth Centers. Within the metropolitan and core cities, VISION 2040 supports concentrating population and employment growth in more than two dozen regionally designated growth centers. These centers serve as hubs for regional transportation, public services, and amenities. They are envisioned as focal points of higher-density population and employment, with efficient multimodal transportation infrastructure and services. They are intended to house mixed-use neighborhoods containing jobs, retail, services, and

What is VISION 2040?

VISION 2040 is an integrated strategy for guiding development, environmental planning, and the provision of transportation and services in the central Puget Sound region. For more information about VISION 2040, refer to Chapter 2: Introduction and Background. The entire VISION 2040 document and its Final Environmental Impact Statement are available online at www.psrc.org.

What are Urban Growth Areas?

Urban growth areas, or UGAs, are areas within which an urban level of growth is encouraged. Outside UGAs are rural areas and designated natural resource lands (farms, forests, mineral lands), where growth can occur only if it is not urban in nature.

Designated Regional Growth Centers

King	Auburn	Seattle- Downtown
	Burien	Seattle- First Hill/Capitol Hill
	Bellevue- Downtown	Seattle- Northgate
	Federal Way	Seattle- South Lake Union
	Kent	Seattle- University Community
	Redmond- Downtown	Seattle- Uptown
	Redmond- Overlake	Kirkland -Totem Lake
	Renton	Tukwila
	SeaTac	
Kitsap	Bremerton	Silverdale
Pierce	Lakewood	Tacoma - Downtown
	Puyallup- Downtown	Tacoma- Mall
	Puyallup - South Hill	
Snohomish	Bothell/ Canyon Park	Everett Lynnwood

housing. Twenty-seven regional growth centers are identified in VISION 2040. Smaller-scale centers in smaller jurisdictions will also play an important and increased role over time as places that accommodate growth. Refer to Exhibit 5-4 for a map of the regional growth and manufacturing and industrial centers.

Exhibit 5-1

Regional Growth Strategy: Regional Population and Employment Growth, 2000–2040

Regional Geography (number of places)	People	Jobs
Metropolitan Cities (5) Bellevue, Bremerton, Everett, Seattle, Tacoma	550,000 – 32%	513,000 – 42%
Core Cities & Silverdale (14) Auburn, Bothell, Burien, Federal Way, Kent, Kirkland, Lakewood, Lynnwood, Puyallup, Redmond, Renton, SeaTac, Silverdale (unincorporated), Tukwila	369,000 – 22%	354,000 – 29%
Larger Cities (18) Arlington, Bainbridge Island, Des Moines, Edmonds, Fife, Issaquah, Kenmore, Maple Valley, Marysville, Mercer Island, Mill Creek, Monroe, Mountlake Terrace, Mukilteo, Sammamish, Shoreline, University Place, Woodinville	240,000 – 14%	151,000 – 12%
Small Cities (46) <i>Cities in Contiguous UGA</i> - Algona, Black Diamond, Bonney Lake, Brier, Covington, Du Pont, Edgewood, Fircrest, Gig Harbor, Lake Forest Park, Lake Stevens, Medina, Milton, Newcastle, Normandy Park, Orting, Pacific, Port Orchard, Poulsbo, Ruston, Steilacoom, Sumner. <i>Small Residential Towns</i> - Beaux Arts, Clyde Hill, Hunts Point, Woodway, Yarrow Point. <i>Free-Standing Cities & Towns</i> - Buckley, Carbonado, Carnation, Darrington, Duvall, Eatonville, Enumclaw, Gold Bar, Granite Falls, Index, North Bend, Roy, Skykomish, Snohomish, Snoqualmie, South Prairie, Stanwood, Sultan, Wilkeson	136,000 – 8%	76,000 – 6%
Unincorporated Area (assumed to be annexed over time)	302,000 – 18%	94,000 – 8%
Rural Area	115,000 – 7%	30,000 – 2%
Total Increase	1,712,000 – 100%	1,219,000 – 100%

Source: PSRC (numbers may not appear to sum correctly due to rounding). Note: Regional Growth Strategy values and percentages reflect a technical amendment adopted by the PSRC Executive Board on May 28, 2009.

Exhibit 5-2. Regional Growth Strategy Map

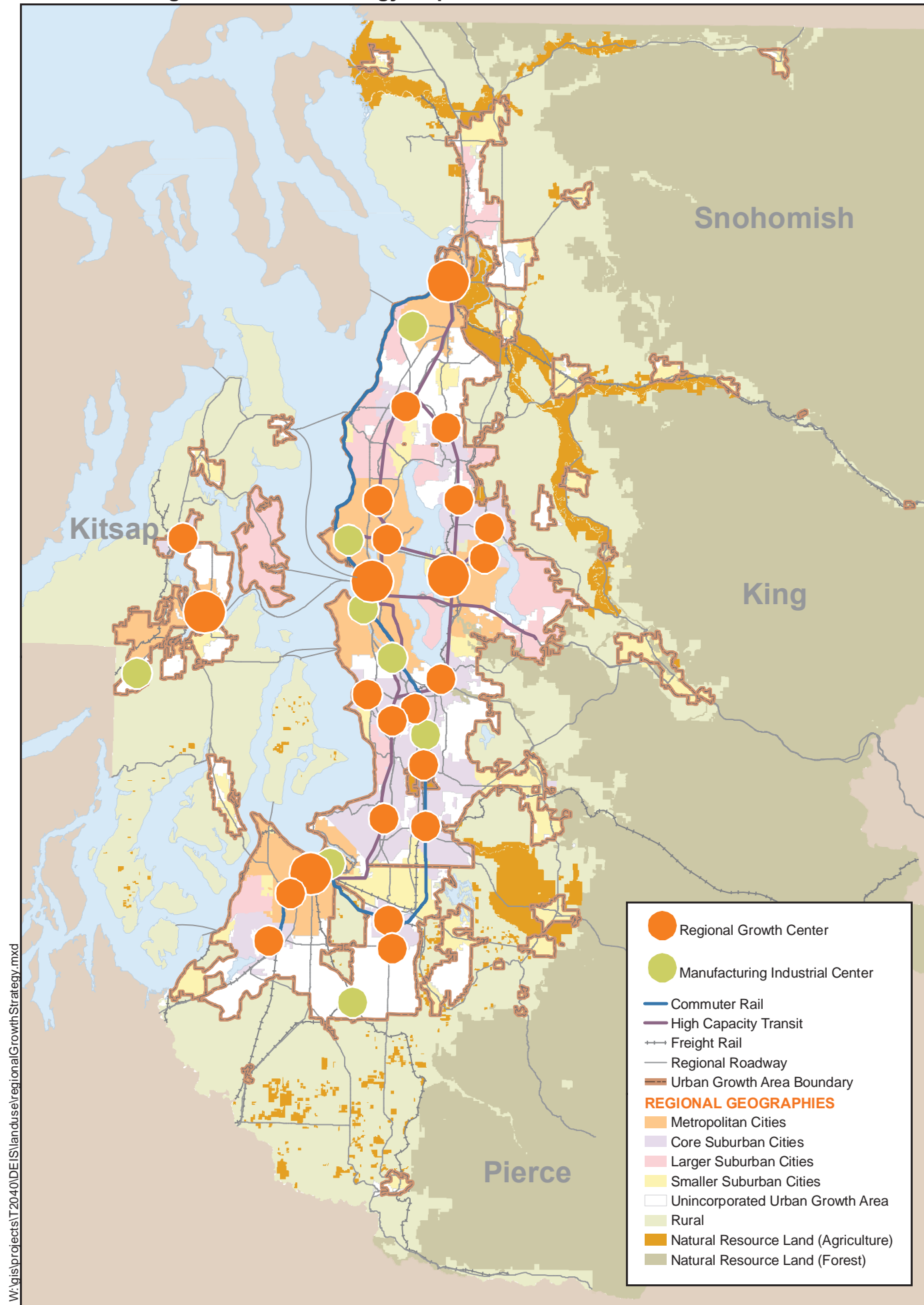


Exhibit 5-3. VISION 2040 Conceptual Regional Growth Strategy Density 2040 - Conceptual Map

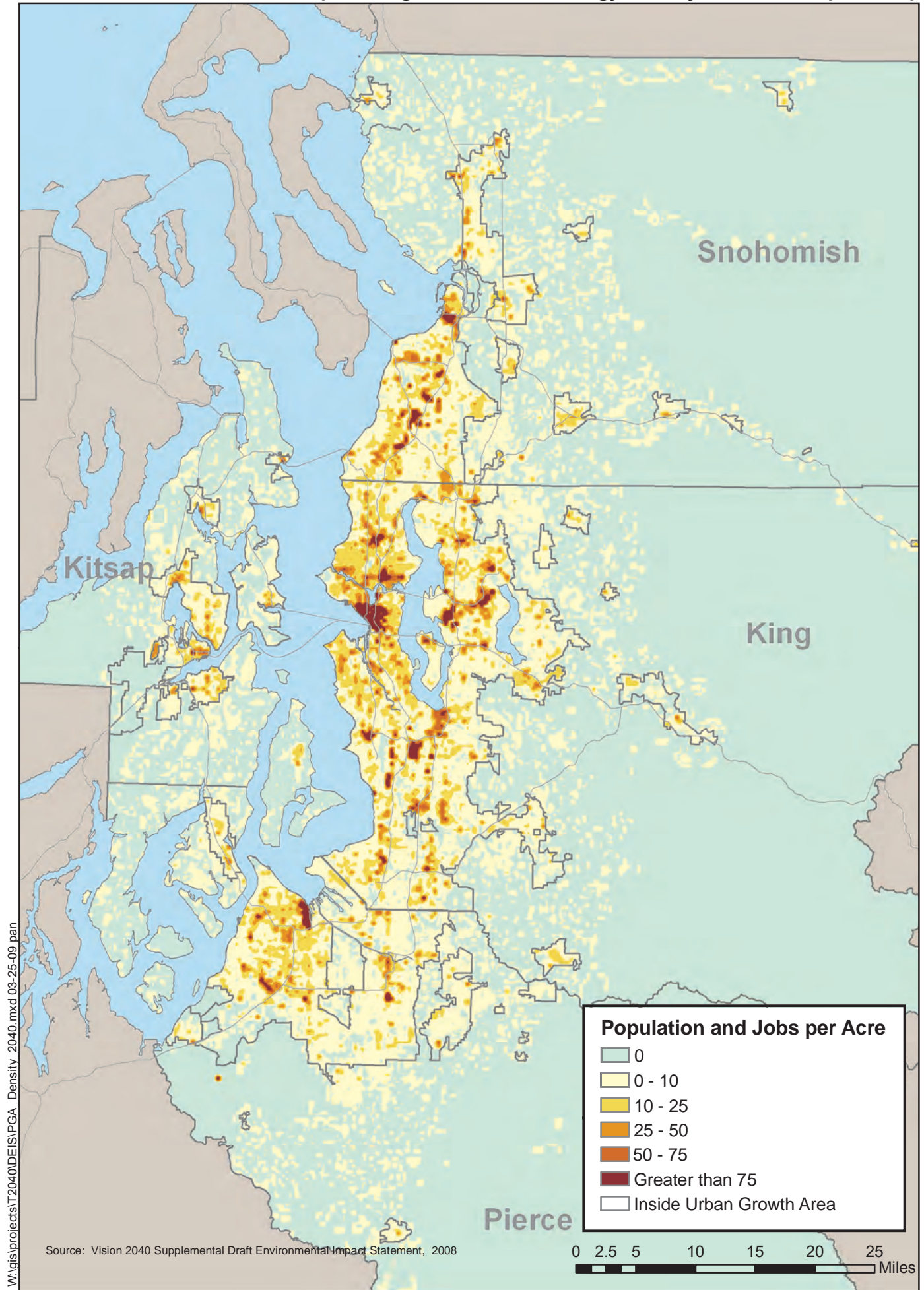
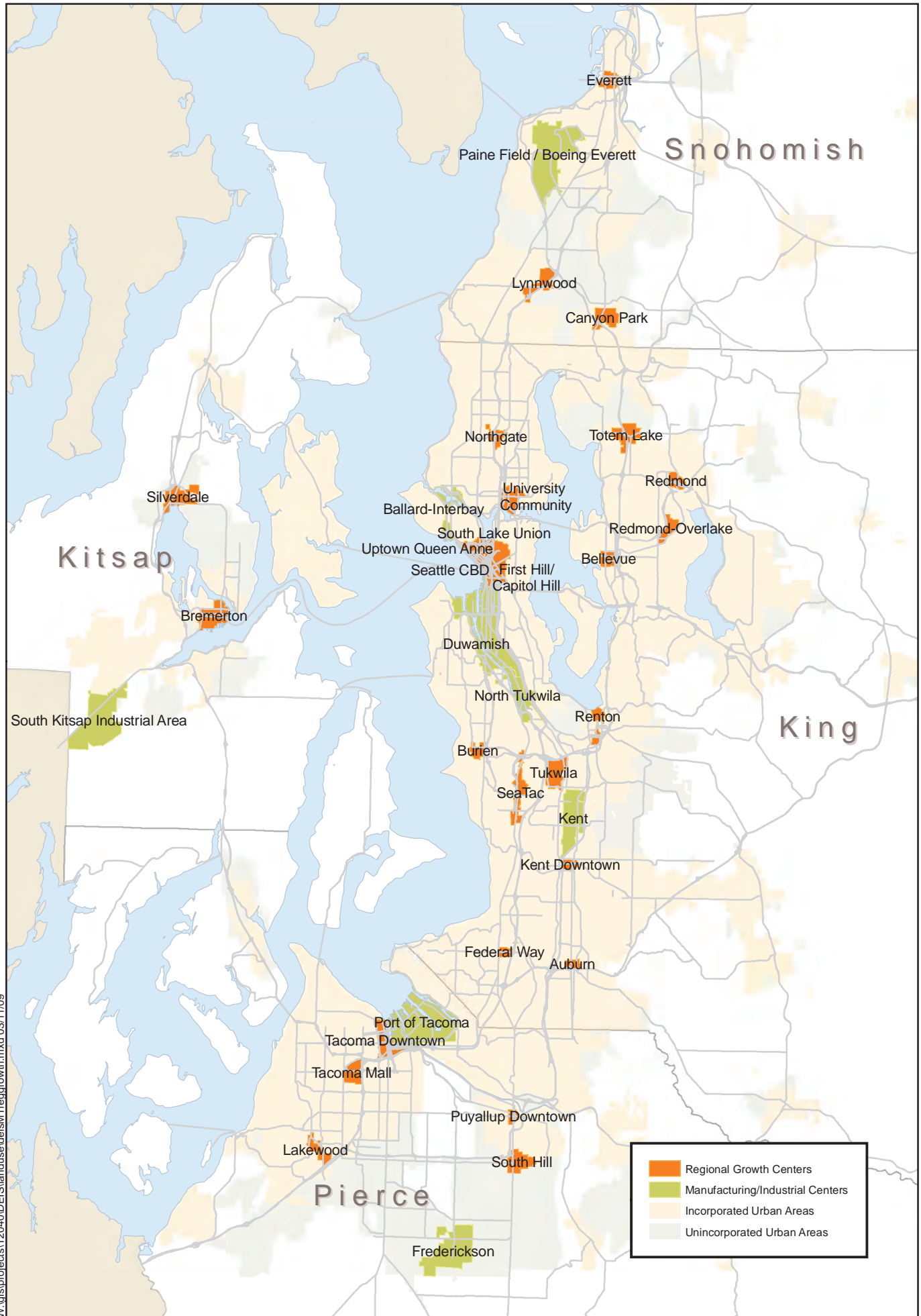


Exhibit 5-4. Map of Designated Regional Growth Centers and Manufacturing and Industrial Centers



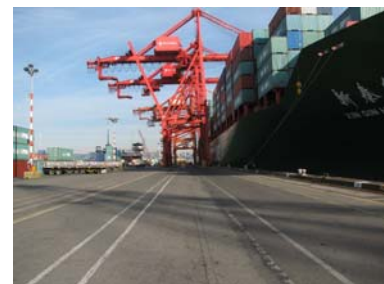
Overall, cities anticipate focusing much of their growth within regional growth centers. Some cities have aggressive plans to add substantial numbers of housing units within these centers, while others expect nominal increases in population but large increases in jobs. The regional growth centers represent planning areas that are expected to develop as the region's major hubs over time, although they are not all intended to develop uniformly. Some centers may have a greater mix of housing, jobs, or other activities, while others may remain predominantly places with a high concentration of employment.

Manufacturing and Industrial Centers (MICs). These centers, shown in Exhibit 5-4, have a much different urban form and purpose than regional growth centers. The region's MICs can be characterized as areas of large, contiguous blocks served by the region's major transportation infrastructure, including roadways, rail, and port facilities. They generally have developed an urban form suitable for manufacturing and industrial uses, which often requires areas for outdoor storage, buffers from residential areas, and facilities with large spaces for assembly lines. Typically, there is no residential component in these types of centers. Evolving over many decades, the size, shape, and location of the manufacturing and industrial centers have been determined by the needs of the region's industrial market and the need for efficient access to the region's land and water transportation systems. They also account for a large number of jobs within the areas in which they are located.

The purpose of designating manufacturing and industrial centers is to help protect and preserve areas of intense manufacturing and industrial uses and to provide them with the necessary services and infrastructure to allow these uses to continue. These areas have been affected by growth, which has consumed large areas for housing, schools, stores, streets, and other urban uses.

Designated Manufacturing and Industrial Centers

King	Ballard/Interbay Duwamish Kent North Tukwila
Kitsap	South Kitsap Industrial Area
Pierce	Frederickson Port of Tacoma
Snohomish	Paine Field/Boeing Everett



The Port of Seattle's container terminals are allocated in the Duwamish Manufacturing and Industrial Center.

Source : Parametrix, Inc.

3 What effects on land use, population, employment, and housing are common to all alternatives?

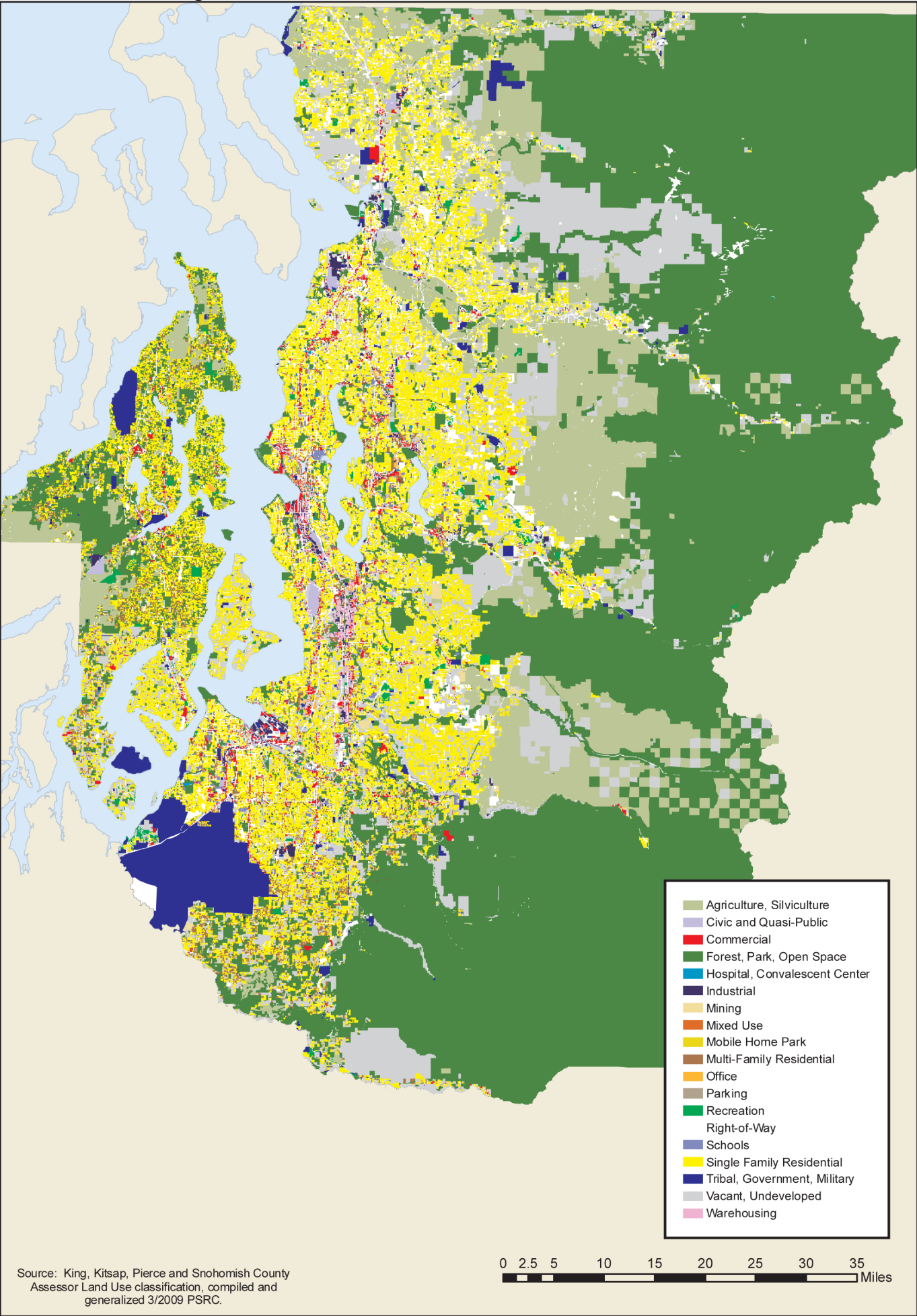
Population, Employment, and Housing. The amount of population and employment growth does not vary among alternatives. From 2006 to 2040, all assume an additional 1.5 million people, an additional 1.2 million jobs, and approximately 800,000 additional housing units. As described in the following sections, all of the alternatives focus on an overwhelming majority of future growth within currently defined UGAs. This growth is depicted in patterns and concentrations consistent at the regional scale with those described by the region's adopted Regional Growth Strategy. The broad patterns of regional growth that are forecasted to interact with the transportation alternatives would not result in impacts to land use, employment, population, or housing beyond those described in the VISION 2040 Final Environmental Impact Statement.

It is important to note that future regional growth will be incremental in nature, adding to an already established urban footprint of over 3.5 million people and 1.5 million existing housing units in an urbanized area of approximately 1,000 square miles. It is also assumed that the designated UGA will not be expanded dramatically. Consequently, much of the forecast growth will occur as infill development in areas that are already characterized by urban development. While the addition of approximately 800,000 additional housing units will affect the character and intensity of urban areas (refer to Exhibit 5-5), it is assumed that the overall urban footprint will not expand dramatically.

What is the difference between plan-level and project-level environmental review?

This is a plan-level (non-project) environmental analysis. Accordingly, alternatives are defined and environmental effects are evaluated at a relatively broad level. More detailed project-specific environmental review and potential mitigation measures will be developed as appropriate in the future for projects identified in Transportation 2040 that are selected for implementation by their sponsors: WSDOT, transit agencies, counties, and cities.

Exhibit 5-5. Existing Land Use



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The transportation alternatives do vary in how they interact with this amount of forecast growth, as well as with existing land use and development regulations. Accessibility, development constraints, and household and employer location choices have the potential to yield different urban development patterns within UGAs, and consequently, the potential for marginal differences in overall regional urban form.

4 What effects on land use, population, employment, and housing are specific to individual alternatives?

This analysis explores how closely each alternative supports a land use pattern that is consistent with the preferred population distribution in the VISION 2040 Regional Growth Strategy.

For a regional scale of analysis, the primary intent was to determine whether the Baseline Alternative and action alternatives supported a fundamental premise of the Regional Growth Strategy: focusing the majority of the region's growth into currently designated urban areas, and within urban areas, into large urban cities and into designated regional centers.

VISION 2040 identifies the importance of transportation in achieving the land use pattern envisioned in the Regional Growth Strategy. VISION 2040 also recognizes that transportation systems alone cannot be expected to produce the region's desired land use and development patterns. Fine-grained changes to development regulations over time based on local circumstances, together with a variety of other economic incentives, will play equally critical roles.

Modeled land use policy assumptions were developed to facilitate a comparative analysis to learn about the sensitivity of land uses to different transportation networks. Development constraints consistent with VISION 2040 land use policy direction were applied uniformly to regional geographies across the region within the UrbanSim land use model.

The use of the region's land use model in this analysis is not intended to predict population and employment locations in small geographic areas, but to allow the land use model to react

Subgroups of VISION 2040 Regional Growth Strategy Regional Geographies Used in the Transportation 2040 Analysis

Urban Core

- Metropolitan Cities
- Core Cities
- Larger Cities

Outlying Urban

- Small Cities
- Unincorporated Urban Growth Areas

Rural Areas

to the transportation plan alternatives to see if resulting land use patterns are consistent with VISION 2040 at a regional scale. Land use assumptions were not developed to explicitly represent individual policies or land use actions that would be adopted at the local level. These will necessarily differ from more global assumptions used in this analysis. For a more detailed description of the representation of land use policy in Transportation 2040 modeling and analysis, refer to Appendix E.

In the Baseline Alternative, 59 percent of regional population growth occurred in urban core geographies, somewhat less than Regional Growth Strategy guidance of 64 percent. Thirty-eight percent of growth occurred in outlying urban regional geographies, and 3 percent occurred in rural areas. This compares to Regional Growth Strategy guidance of 30 percent and 7 percent, respectively.

While the modeled regional distribution of population growth from 2000 to 2040 does not exactly match the percentages contained in guidance provided by the Regional Growth Strategy, 97 percent of regional population growth and 98 percent of employment growth in the Baseline Alternative occurs within the designated UGA. Therefore, the Baseline Alternative does not appear to lead to disproportionate levels of population, housing, or employment growth outside the UGA. The draft action alternatives and the Preferred Alternative also do not appear to lead to disproportionate levels of population, housing, or employment growth outside the UGA.

For all alternatives, population and employment growth concentrates overwhelmingly in the existing UGA. In this respect, regional growth in the Baseline Alternative and action alternatives is distributed in patterns highly consistent with the Regional Growth Strategy.

All of the alternative transportation networks produced population distribution patterns that were generally consistent with the VISION 2040 Regional Growth Strategy. As illustrated in Exhibits 5-6 and 5-7, the modeled population distributions across regional geographies varied very little in

response to the differing transportation networks for the draft action alternatives and the Preferred Alternative.

Exhibits 5-6 and 5-8 show that, similar to population, the employment distribution across regional geographies also varied little in response to the differing transportation networks for the Baseline Alternative, draft action alternatives, and the Preferred Alternative. Existing concentrations of employment exert a strong influence on the location choices of new firms and businesses, making dramatic differences in overall regional employment patterns unlikely. The Baseline Alternative resulted in a distribution of employment growth that was highly consistent with the guidance contained in the Regional Growth Strategy, which itself is similar to the distribution of existing employment concentrations. While the differences among the alternatives are slight, there are some observable differences in the distribution of employment across alternatives at the regional level.

Compared to the Baseline Alternative, all draft action alternatives support slightly more employment growth in outlying urban and rural areas. The Preferred Alternative minimizes those differences and produces an employment pattern similar to the Baseline Alternative.

Compared to the Baseline Alternative, Alternative 4 is the least supportive of employment growth in the urban core, and supports more growth in outlying urban areas than any other alternative. Alternatives 3 and 4 supported slightly more growth in rural areas than the Baseline Alternative. The Preferred Alternative produces slightly less employment growth in outlying areas. Despite these marginal differences, all of the alternative networks produced employment distribution patterns consistent with the VISION 2040 Regional Growth Strategy at the regional level.

Exhibit 5-6¹**Population and Employment Growth in Regional Geographies**

(2040 Baseline Alternative and Change from Baseline Alternative)

POPULATION	2000	Baseline	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	PA-C	PA
Metro Cities	955,100	1,500,600	8,500	-7,100	13,100	4,800	2,700	4,800	-1,200
Core Cities	580,100	873,100	-10,600	700	-8,500	-3,400	2,700	-2,100	7,000
Larger Cities	326,700	480,100	2,300	3,300	2,300	700	1,000	-100	300
Small Cities	258,600	482,200	900	1,900	-3,300	-1,400	-3,500	3,500	-4,500
Unic UGA	594,600	1,018,400	-400	1,800	-2,500	-1,000	-2,500	-4,900	200
Rural	484,600	532,700	-600	-700	-1,000	200	-300	-1,200	-1,800
Urban Core	1,861,900	2,853,800	200	-3,100	6,900	2,100	6,400	2,600	6,100
Outlying Urban	853,200	1,500,600	500	3,700	-5,800	-2,400	-6,000	-1,400	-4,300
Rural	484,600	532,700	-600	-700	-1,000	200	-300	-1,200	-1,800
TOTAL	3,199,700	4,887,100	100	-100	100	-100	100	0	0

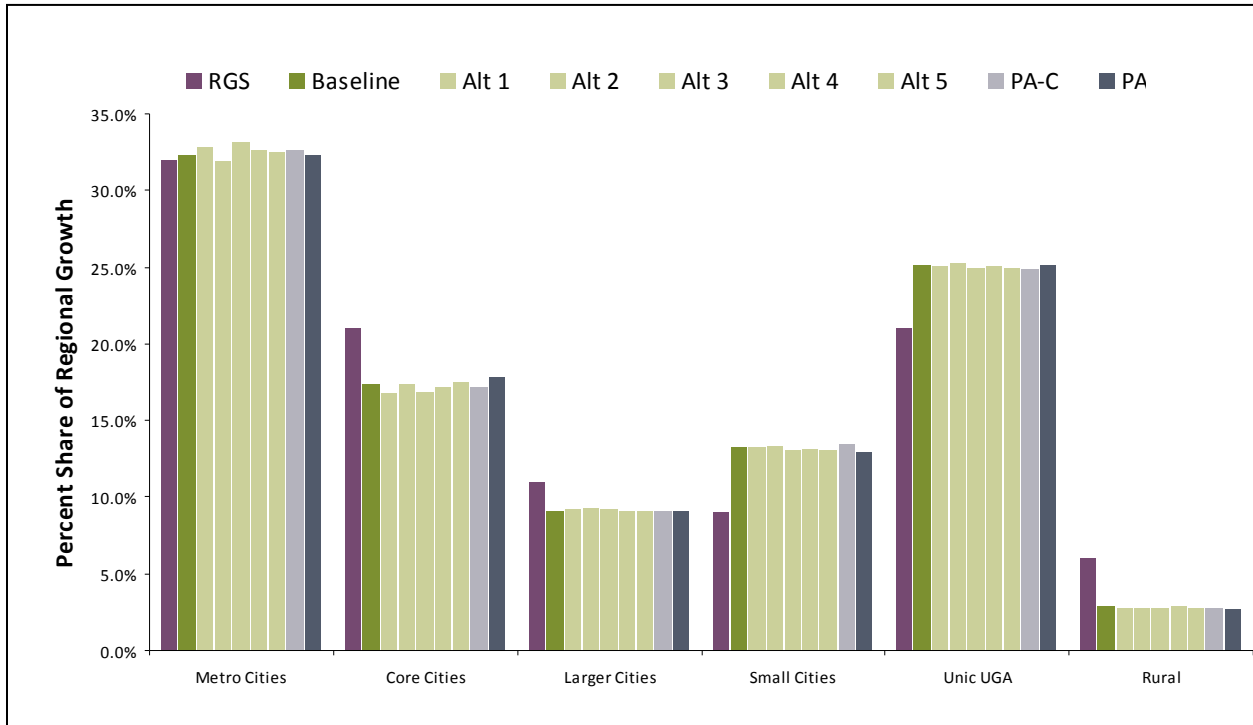
EMPLOYMENT	2000	Baseline	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	PA-C	PA
Metro Cities	924,000	1,526,300	13,100	18,000	-14,500	-4,200	11,300	-9,900	17,700
Core Cities	521,000	833,200	-15,300	-28,100	16,200	-19,300	-14,500	4,800	-16,800
Larger Cities	121,000	181,700	1,500	7,400	-2,600	6,500	1,500	2,500	4,100
Small Cities	106,000	197,100	-2,400	-2,400	3,500	5,100	-3,100	5,100	1,600
Unic UGA	118,000	223,600	3,200	5,100	-3,100	11,200	3,000	-3,000	-4,700
Rural	65,000	93,600	100	200	1,000	1,000	500	1,200	-1,400
Urban Core	1,566,000	2,541,200	-700	-2,700	-900	-17,000	-1,700	-2,600	5,000
Outlying Urban	224,000	420,700	800	2,700	400	16,300	-100	2,100	-3,100
Rural	65,000	93,600	100	200	1,000	1,000	500	1,200	-1,400
TOTAL	1,855,000	3,055,500	200	200	500	300	-1,300	700	500

Source: PSRC

¹ This exhibit has changed since the DEIS.

Exhibit 5-7²

Shares of Population Growth by Regional Geography and Alternative



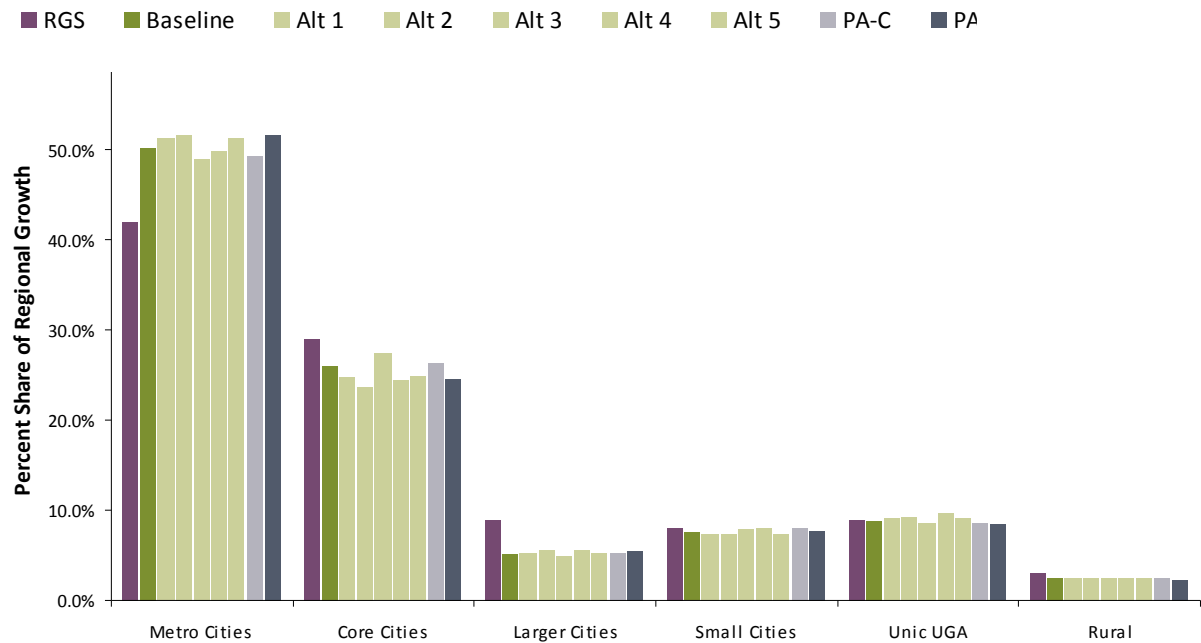
(RGS = VISION 2040 Regional Growth Strategy)

Percent of Population Growth by Geography

	Growth Strategy	Baseline
Urban Core	64%	59%
Outlying Urban	30%	38%
Rural	7%	3%

² This exhibit has changed since the DEIS.

Exhibit 5-8³
Shares of Employment Growth by Regional Geography and Alternative
(RGS = VISION 2040 Regional Growth Strategy)



Percent of Employment Growth by Geography		
	Growth Strategy	Baseline
Urban Core	80%	81%
Outlying Urban	17%	16%
Rural	3%	2%

³ This exhibit has changed since the DEIS.

5 Which land use issues were considered in the analysis?

Housing. Transportation 2040 is a non-project action and will not directly cause significant impacts or changes to the amount, quality, or characteristics of the region's housing stock.

Balance of Jobs and Housing. The VISION 2040 Regional Growth Strategy seeks to improve the balance of job opportunities and available housing within each county, as compared to the regional jobs-population ratio. None of the transportation networks in the Baseline Alternative, draft action alternatives, or the Preferred Alternative seemed to influence the overall distribution patterns of employment and housing units among counties as measured by the ratio of jobs to housing units. Exhibit 5-9 depicts the regional jobs and housing balance information.

Urban Land. The region's urbanized area is likely to become denser as an additional 1.5 million people populate the region by 2040. In compact development patterns, transit and non-motorized transportation modes are often more competitive, convenient, and attractive.

Rural Land. Both the Growth Management Act and regional policy generally prohibit the extension of urban levels of service into rural areas as stated in Revised Code of Washington (RCW) 36.70A.110 (4).

Natural Resource Land. Transportation alternatives that interact with land use policy in a manner that minimizes development adjacent or proximate to these lands are likely to have less impact on water resources (refer to Chapter 9: Water Quality and Hydrology), ecosystem change (refer to Chapter 10: Ecosystems and Endangered Species Act Issues), or infrastructure impacts (refer to Chapter 14: Public Services and Utilities and Chapter 4: Transportation).

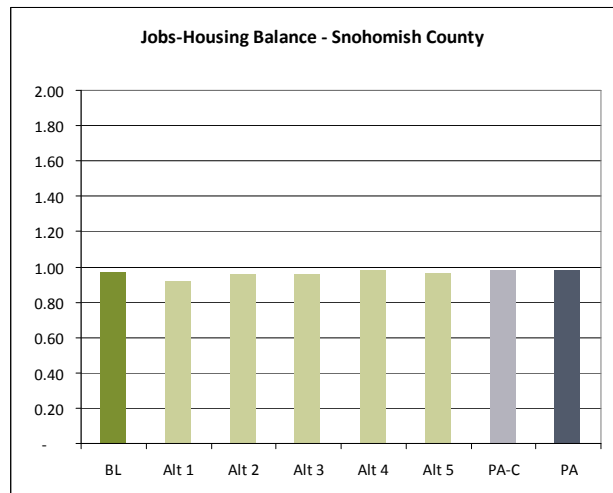
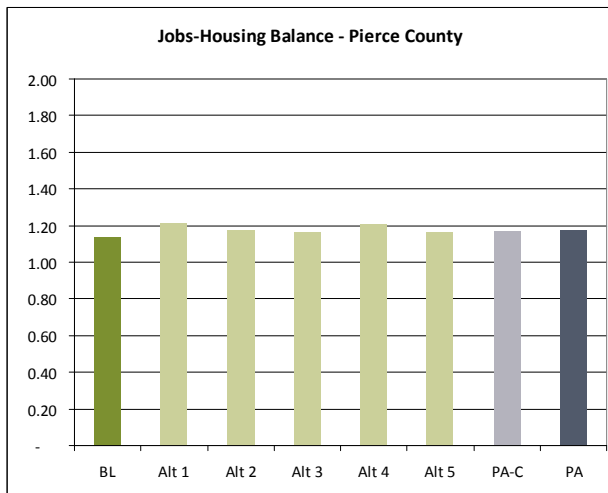
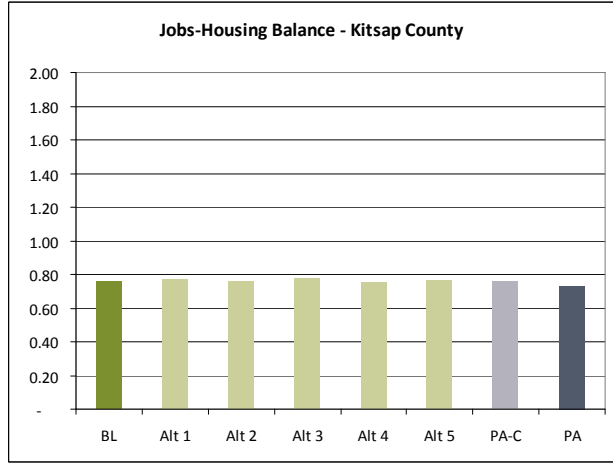
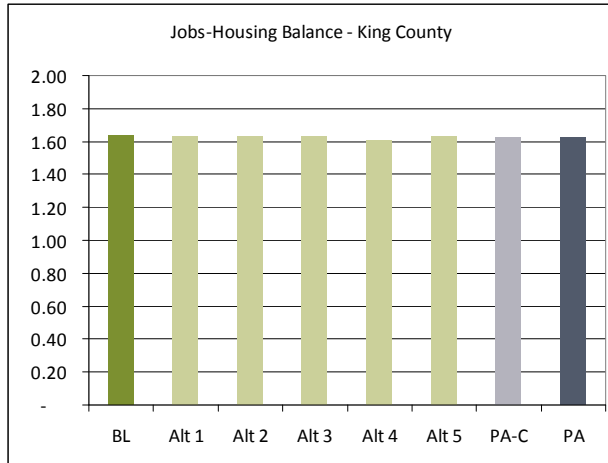


Housing in the region would not be directly affected by the regional transportation plan.

Source: Parametrix, Inc.

Exhibit 5-9⁴**Jobs Housing Balance**

(BL = Baseline)

**2040 Jobs to Housing Ratio**

		BL	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	PA-C	PA
King	Housing Units	1,208,300	1,206,000	1,212,300	1,205,800	1,216,300	1,216,200	1,211,000	1,208,900
	Employment	1,979,600	1,962,000	1,973,200	1,967,300	1,954,200	1,979,100	1,961,900	1,964,600
	Emp/HU	1.64	1.63	1.63	1.63	1.61	1.63	1.62	1.63
Kitsap	Housing Units	172,100	168,600	172,400	170,200	169,600	170,700	174,000	172,400
	Employment	130,100	129,600	130,400	132,300	127,800	129,800	131,500	125,800
	Emp/HU	0.76	0.77	0.76	0.78	0.75	0.76	0.76	0.73
Pierce	Housing Units	456,800	457,200	447,300	458,800	447,400	451,900	455,000	451,600
	Employment	518,500	555,900	524,500	534,000	539,900	525,100	532,900	530,300
	Emp/HU	1.14	1.22	1.17	1.16	1.21	1.16	1.17	1.17
Snohomish	Housing Units	438,900	443,300	445,700	439,700	440,300	434,000	435,300	441,200
	Employment	427,300	408,400	427,600	422,500	434,000	420,200	429,900	435,500
	Emp/HU	0.97	0.92	0.96	0.96	0.99	0.97	0.99	0.99

Source: PSRC

⁴ This exhibit has changed since the DEIS.

Critical Areas. Similar to natural resource lands, growth close to critical areas can have environmental impacts and create pressure for conversion of these areas to other land use types. Alternatives that minimize development adjacent or proximate to critical areas are likely to have less impact on floodplains, steep slopes, and other environmentally sensitive areas such as wetlands and streams. Refer to Chapter 10: Ecosystems and Endangered Species Act Issues and Chapter 9: Water Quality and Hydrology for a more complete discussion of potential impacts to critical areas attributable to the alternatives.

Population and Employment in Centers. As described above, the distribution of population and employment in all of the alternatives was consistent with the allocations in the adopted Regional Growth Strategy, with few appreciable differences among the alternatives.

At a finer grain, however, the Regional Growth Strategy identifies the desire to encourage both population and employment growth in designated regional growth centers in metropolitan and core cities. These areas are intended to attract residents and businesses because of their proximity to services and jobs, a variety of housing types, access to regional amenities, high quality transit service, and other advantages. MICs are intended to accommodate employment growth, but not housing or other uses.

Any growth of population in the region's designated regional growth centers is desirable. Compared to 2006, the Baseline Alternative supported significant population growth of over 170,000 additional people in designated regional growth centers, highly supportive of the objectives of the Regional Growth Strategy. This represents an increase of 139 percent over the year 2006. While the observable differences between the Baseline Alternative and action alternatives are modest, particularly at a regional scale, Alternatives 3 and 4 supported slightly more population growth in regional growth centers than the Baseline Alternative, 5.1 percent and 4.3 percent, respectively. Alternatives 1 and 2 supported slightly less population growth in regional growth centers than the Baseline Alternative, -3.9 percent and -2.6 percent, respectively.



New roads should be designed to avoid critical areas.

Source: Parametrix, Inc.

Alternative 5 is virtually identical to the Baseline Alternative. The Preferred Alternative demonstrated some of the strongest support for growth in centers, ranging between 3 percent and 6 percent more population growth in centers than the Baseline Alternative (refer to Exhibit 5-10).

Any employment growth in the region's designated regional growth centers is desirable, particularly in centers located in core cities. Compared to 2006, the Baseline Alternative supported significant employment growth of over 475,000 jobs in designated regional growth centers, an increase of 83 percent over 2006 levels. This growth is highly supportive of the Regional Growth Strategy objectives.

As with population, the observable differences in employment growth across the alternatives are relatively modest. Alternatives 3 and 4 support less employment growth in regional growth centers, -3.5 percent and -7.8 percent, respectively. Alternatives 1 and 5 seem to be more supportive of employment growth in designated regional growth centers than the Baseline Alternative, with little to no change in Alternative 2. Alternatives 3 and 4, however, produce notable decreases in employment in regional growth centers (nearly 17,000 fewer jobs in Alternative 3 and over 37,000 fewer jobs in Alternative 4) compared to the Baseline Alternative. Similar to Alternatives 3 and 4, the Preferred Alternative is less supportive of employment growth in designated regional growth centers than the Baseline Alternative, producing a range of between -7 percent fewer jobs in the constrained plan (approximately 35,000) and 1 percent more jobs in the full plan (approximately 3,900). Refer to Exhibit 5-10 for more information.

Exhibit 5-10⁵
Population and Employment in Regional Growth Centers (RGCs) and
Manufacturing Industrial Centers (MICs)

Population and Employment Growth in Regional Centers
(2040 Baseline and Change from Baseline)

Alternative	2000	Baseline	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	PA-C	PA
Population in Regional Growth Centers	122,800	293,400	-6,600	-4,500	8,600	7,300	-200	5,000	10,100
Employment in Regional Growth Centers	573,600	1,049,900	12,600	-1,600	-16,900	-37,400	6,900	-34,600	3,900
Employment in Man/Ind Centers	172,900	195,700	700	700	3,700	4,700	700	2,200	-4,400

Source: PSRC



⁵ This exhibit has changed since the DEIS.

The VISION 2040 Regional Growth Strategy also seeks to bolster the region's designated MICs. Any employment growth in the region's designated MICs is desirable. Compared to 2006, the Baseline Alternative supported significant employment growth—over 22,000 jobs—in designated MICs, highly supportive of the Regional Growth Strategy objectives.

All alternatives appear to support sustained employment in the region's MICs. Alternatives 1, 2, and 5 showed little variation in employment growth in MICs from the Baseline Alternative. Alternatives 3 and 4 appear to be more supportive of employment growth in MICs compared to the Baseline Alternative, increasing growth 16.1 percent and 20.7 percent, respectively. The Preferred Alternative demonstrated a range of support—between 10 percent more and -19 percent fewer jobs—compared to the Baseline Alternative. Refer to Exhibit 5-10 for more information.

6 What cumulative effects could occur if the Transportation 2040 actions coincide with other planned actions?

Future cumulative effects on land use, population, employment, and housing could be affected by other regional plans and actions. Local jurisdictions throughout the region will revise their existing land use plans to be consistent with VISION 2040 and complement the Transportation 2040 Preferred Alternative. New development resulting from these plans could have both positive and negative effects on the environment.

As described in this chapter, PSRC has performed an analysis of the development pattern changes that could result from the transportation alternatives and has concluded that none of the action alternatives would lead to future land use and development pattern changes that are substantively different than the Baseline Alternative. In addition, all of the draft Transportation 2040 alternatives and the Preferred Alternative are consistent with the adopted VISION 2040 Regional Growth Strategy. Therefore, none of the Transportation 2040 alternatives would result in additional cumulative effects on

What are cumulative effects?

Cumulative effects address the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

land use, population, employment, and housing beyond those identified in the VISION 2040 Environmental Impact Statement.

7 What can be done to mitigate the effects of transportation projects upon the region's land uses?

As individual projects are developed, project sponsors would design specific measures to mitigate impacts from transportation projects on land use. At the local level, jurisdictions with land use and planning responsibilities would identify discrete actions to mitigate the direct impacts of urbanization. However, general strategies that could be pursued to address land use issues—which include impacts to people, job locations, and housing—include the following:

Strategies for urban lands

Plan high-capacity transit networks to serve existing and planned concentrations of housing and employment.

Provide for high-density, mixed-use development adjacent to high-capacity transit stations.

Compile and disseminate information—including “model” planning policies, regulations, and guidelines—to facilitate planning for future high-capacity transit station areas.

Prioritize phasing of transportation investments to centers and other areas expected to accommodate a large share of planned growth.

Work with local jurisdictions to discuss and develop strategies for phasing growth, using centers and transportation improvements to determine the location and timing of growth.

Incorporate context-sensitive design practices into planning and development of transportation projects to ensure facilities are compatible with existing development and the surrounding environment.

Site schools and other institutions in locations where they are accessible from multiple transportation modes.

Design “complete streets” to accommodate a wide variety of users.

Design “green streets” to minimize environmental impacts from roadways.

Avoid developing disconnected street networks. Complete the grid to improve connectivity.

Strategies for rural and natural resource lands

Design facilities and infrastructure according to rural standards that neither negatively affect rural character nor provide new opportunities for increased development in rural areas or on natural resource lands. Establish access controls to facilities traversing or close to rural and natural resource lands.

Increase development densities or clustering in existing rural cities, towns, and hamlets to help reduce the conversion of rural land. This may also be effective for reducing the loss of farmland. In addition, this could create more centralized areas of employment to reduce longer-distance commuting and potentially make more jobs accessible by transit.

8 Are there any significant unavoidable adverse impacts?

The update of the plan is intended to support and enhance implementation of local comprehensive plans and achievement of the VISION 2040 Regional Growth Strategy. Indirect impacts would result from the general location of future growth and the incremental change in the relative concentration or dispersion of the future regional land use growth.

The transportation system that is developed will influence the development of individual land parcels, which will have environmental impacts. Depending on the opportunities for transit-oriented development associated with some alternatives, additional planning for growth will be required in some of the region’s jurisdictions.

Significant unavoidable adverse impacts could occur and would vary among the alternatives. Adopted plans, policies, and regulations might need to change to accommodate any of

the future alternatives as particular transportation facilities are developed. Local jurisdictions would determine the actual permitted densities and types of land uses appropriate for different levels of transportation service.

Urban Land. Enhanced transportation facilities and services would help to enable local jurisdictions to accommodate future growth in existing urbanized areas. Existing urban areas are likely to become more compact in nature and will be served by a greater variety of transportation choices.

Rural Land. Counties might need to adopt policies designed to direct new development in unincorporated areas near existing city boundaries or within city spheres of influence. This would include implementation of tools to minimize rural development impacts, particularly in proximity to transportation projects that provide additional capacity and are adjacent to or traverse rural areas.

Natural Resource Land. Transportation projects near designated natural resource areas would provide greater accessibility. This could create pressure for conversion of these lands to other land use types, making it important to implement tools to keep these lands economically viable.