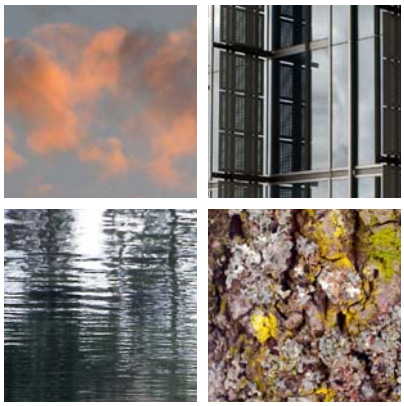


Executive Summary

The central Puget Sound region is looking ahead towards the year 2040 and seeking to develop a preferred strategy for accommodating the forecasted 1.6 million new residents and 1.1 million new jobs. People in the region have a chance to shape the future by participating in the update of VISION 2020, the region's strategy for growth, transportation and the economy.

This Executive Summary summarizes the findings of the Draft Environmental Impact Statement for the update of VISION 2020, which analyzes four alternatives that distribute forecasted growth into different types of areas throughout the region. None of the alternatives has been selected as preferred and, over the next year and a half, the region will face some tough choices as it seeks to develop a single growth alternative that reflects our shared values and aspirations.

The Executive Summary contains the following information: (a) background on the existing VISION and the update process, (b) description of the growth distribution alternatives, (c) summary of the analysis and key findings regarding potential impacts, (d) next steps in the VISION 2020 update, and (e) overview of the contents in the full Draft Environmental Impact Statement.

Purpose of the Update

The region is engaging elected officials, agencies, interest groups, and individuals in a process aimed at strengthening VISION 2020 and extending it to 2040.

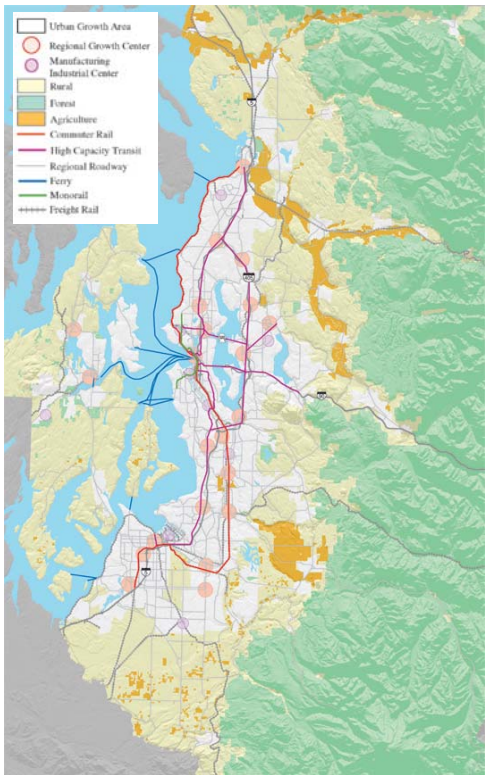
The objective is to refresh our **common vision for how and where growth should occur**. This is being done to keep the region's growth management desires current and accessible to the public. The goal is to refocus our commitment to an environmentally friendly and economically successful growth pattern that can be efficiently served by infrastructure, services, and amenities.

The updated growth vision will provide a **common framework for the region's leadership to coordinate efforts to provide the resources necessary to support the needs of a growing population**.

The growth vision will also allow the region to take the necessary public policy steps to bend growth trends, if necessary, to promote the desired growth pattern. It will **provide regional guidance to future work** on countywide growth targets, countywide planning policies and local comprehensive plans.

A. Background

VISION 2020 MAP



Nearly two decades ago citizens, interest groups, business leaders, and elected officials came together to create VISION 2020, the long-range growth, economic, and transportation strategy for the central Puget Sound region encompassing King, Kitsap, Pierce, and Snohomish counties.

The vision helps guide how and where we grow and how we establish planning and investment priorities. It provides local jurisdictions, the public, the business community, and interest groups with a regional vision to which they can contribute.

VISION 2020 recognizes that our Puget Sound communities are connected by shared ecosystems, transportation systems, and the economy. It recognizes that the region's economic health is dependent on its ability to get goods to market and people to their jobs, and that the ability to preserve open space and parks depends on the fiscal health of its communities. VISION 2020 also recognizes that the way land is developed affects air and water quality, the character of neighborhoods, and the cost of transportation and utilities (see *Chapter 3 – Introduction and Background*).

VISION 2020 contains the region's multicounty planning policies that are required by the Washington State Growth Management Act. These framework policies and strategies address land use, economic prosperity, transportation, the provision of adequate public services, and the protection of the environment (see *Chapter 7 – Discussion of Multicounty Planning Policies*).

THE VISION 2020 UPDATE'S PURPOSE AND NEED

Beginning in 2003, the Puget Sound Regional Council engaged in a public dialogue regarding whether to revise the existing VISION, which was last updated in 1995. Over a five-month period, Regional Council staff had contact with over 2,000 individuals, organizations, and local jurisdictions throughout the region, and received comments raising more than 1,200 points (see *VISION 2020 Update Scoping Report* at psrc.org).

Commentors believed VISION 2020 needed to be updated, and expressed the following broad themes for the update:

- Build on the current VISION.
- Think long range.
- Be bold and provide regional leadership.
- Broaden the VISION to cover regional issues not currently addressed.
- Be specific when possible — for example, add measurable objectives to policies.

Based on these comments, the Regional Council's Executive Board unanimously agreed that it was time to begin a thorough update of VISION 2020. The purpose of the update was defined as follows:

- Extend the VISION to 2040 to allow it to continue to lead growth management efforts in the region.
- Engage in a public discussion of growth, its impacts, and the region's preferred strategy for managing growth.

- Strengthen strategies and policies to add detail, clarity and to make implementation and monitoring easier.
- Support related regional goals and initiatives for growth management.
- Keep the VISION current, relevant and useful to decision-makers and the public.

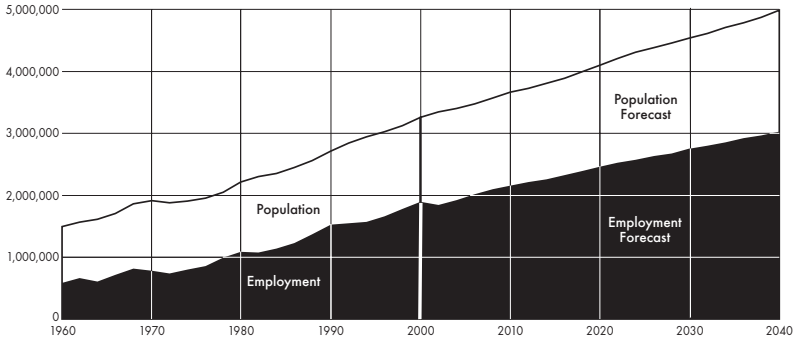
These themes and the defined purpose created the framework in which the VISION 2020 update is occurring (see *Chapter 1 – Purpose and Need*).

The ideas raised in the public review were further researched in a series of 10 issue papers that were developed under the guidance of the Regional Council's Growth Management Policy Board. These are available on the attached compact disk (see *Appendix E – Compilation of Issue Papers and Informational Papers*).

A CENTRAL QUESTION — WHERE AND HOW TO ACCOMMODATE FUTURE GROWTH?

The Growth Management Act requires regions, counties, cities and towns to plan for forecasted growth. Over the past decade, jurisdictions in the region have done this through the adoption of local comprehensive plans and associated activities.

POPULATION AND EMPLOYMENT TRENDS AND FORECASTS



The VISION 2020 update is also about accommodating forecasted growth, with 1.6 million additional residents and 1.1 million additional jobs* anticipated by the year 2040. Maintaining and enhancing the region's quality of life in the face of this growth is a monumental challenge, and the manner in which the region should accommodate the next 35 years worth of growth is the central question of the update.

The VISION 2020 update addresses the questions of "where" growth should and should not occur (as far as location and amounts). It also considers "how" development should take place, meaning it's design, building types, and development practices. The selection of a preferred growth alternative will help answer the where question. Updating the region's multicounty planning policies will help answer the how question.

For both questions, the Draft Environmental Impact Statement starts the process of considering the effects of the four growth alternatives on the region's people, the built environment (such as housing, land use, and transportation), the natural environment (such as ecosystems, water resources, and air quality), and other resources (such as energy, public services, and visual quality) (see *Chapter 5 – Environmental Effects and Mitigation*).

SELECTING A PREFERRED GROWTH ALTERNATIVE

The preferred growth alternative will be selected after the public reviews and comments on the alternatives included in the Draft Environmental Impact Statement. The Draft Environmental Impact Statement contains criteria for evaluating alternatives and selecting a preferred growth alternative, with measures under the following categories: environmental quality, health, economic prosperity (the objectives of the Regional Economic Strategy), land use, transportation (the objectives of Destination 2030, the region's long-range transportation plan), social justice and human potential, maintaining rural character, protecting resource lands, efficiencies in the provision and use of infrastructure and public facilities and services (see *Appendix C – Evaluation Criteria for Selecting a Preferred Alternative*).

The preferred growth alternative will then be analyzed alongside the other alternatives in a Supplemental Draft Environmental Impact Statement that will be published for additional public comment (see *Chapter 3 – Introduction and Background*).

* Note: The figures 1.6 million new people and 1.1 million new jobs refer to growth between the present (2005) and 2040. For the purposes of modeling and analysis, the majority of the discussions in the Draft Environmental Impact Statement consider growth from the base year (2000) to 2040. When discussing growth from the base year 2000, the figures 1.7 million new people and 1.2 million new jobs are used.

UPDATING THE EXISTING MULTICOUNTY PLANNING POLICIES

During its initial assessment of the existing multicounty planning policies in the 1995 VISION 2020 document, the Regional Council's Growth Management Policy Board directed staff to build on the existing policies, eliminate those that are obsolete, and develop additional ones where there are gaps. A preliminary proposal is to reorganize the existing eight policy areas into five groupings in the updated VISION. None of the topical material would be eliminated; rather, it would be rearranged to better express the inherent interrelationships among the policies. The proposed five groupings include: (1) environment, (2) development patterns, (3) economy, (4) transportation, and (5) public services and orderly development.

Building on the material contained in the issue paper series, the five groupings will include three components: (a) revised multicounty policies, (b) actions and/or strategies to implement them, and (c) measures for monitoring the implementation and, where possible, effectiveness of the policies (see *Chapter 7 – Discussion of Multicounty Planning Policies*).

CENTRAL PUGET SOUND REGION IN LARGER ECOREGIONAL CONTEXT

UPDATING THE VISION WITHIN AN ENVIRONMENTAL FRAMEWORK

Since VISION 2020 was first adopted in 1990, our understanding of the region's environment has grown substantially. Environmental protection and restoration efforts — spurred by the listing of salmon species, damage to sensitive areas, human health objectives, loss of forestlands, and other concerns — have also intensified.

During the initial public outreach period in 2003-2004, many comments emphasized a desire for the Regional Council to use the VISION 2020 update process to develop an environmental framework within which to address its ongoing land use, employment, and transportation responsibilities. Comments called for the VISION to serve as a driving force that unifies comprehensive plans and countywide planning policies into a regional environmental framework.

Commentors noted that VISION 2020 is uniquely suited to create a unifying vision of the ways in which current environmental planning efforts interconnect at the regional level. The VISION has the potential to meaningfully affect these issues because of both the collaborative process being used in the update and through the use of multicounty planning policies.

This Draft Environmental Impact Statement begins the process of developing an environmental framework, and contains a Regional Environmental Baseline chapter that seeks to draw together the regional environmental picture, raise the level of regional environmental analysis, and be useful for other planning efforts (see *Chapter 2 – Regional Environmental Baseline*).

B. The Growth Distribution Alternatives

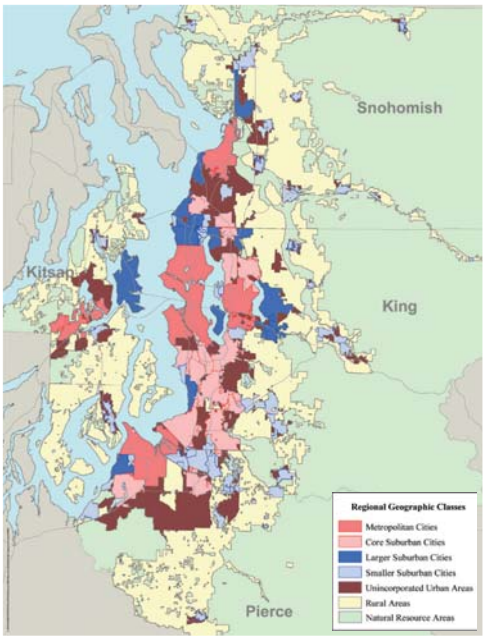
Over the past year, the Regional Council has continued to engage in discussions with a wide range of interest groups, county planning directors, countywide staff, and elected officials across the region in order to develop a series of growth distribution alternatives that would undergo environmental analysis. These conceptual alternatives were defined to represent a wide, but realistic, range of regional growth options and embody four distinct sets of choices for accommodating growth on a regional scale in cities, unincorporated urban areas, and rural areas (see *Chapter 3 – Introduction and Background*).

DEFINING REGIONAL GEOGRAPHIES TO GUIDE THE ANALYSIS

In order to distribute growth and conduct an environmental review, the region's jurisdictions were categorized into seven Regional Geographies based on size, location, existing and planned land uses, as well as current thinking about the roles these areas might play in the region's future (see *Chapter 4 – Definition of Alternatives*).

The seven regional geographies are shown on the adjoining map, and described in the text below:

VISION 2020 REGIONAL GEOGRAPHIES



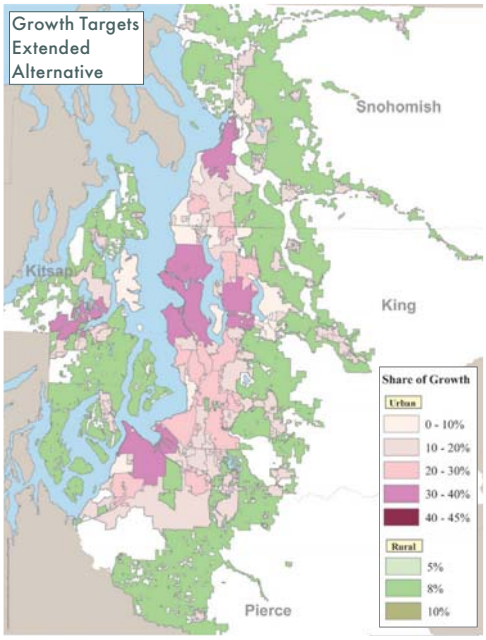
- **Metropolitan Cities.** The region's largest core cities in each county containing designated Regional Growth Centers. Regional Growth Centers serve as a key framework for the region's adopted long-range multimodal transportation system. *Bellevue, Bremerton, Everett, Seattle, Tacoma* (5 cities, 216 square miles).
- **Core Suburban Cities.** The region's core suburban cities containing designated Regional Growth Centers. Regional Growth Centers serve as a key framework for the region's adopted long-range multimodal transportation system. *Auburn, Bothell, Burien, Federal Way, Kent, Kirkland, Lakewood, Lynnwood, Puyallup, Redmond, Renton, SeaTac, Silverdale (Kitsap County), and Tukwila* (14 cities, 197 square miles).
- **Larger Suburban Cities.** The region's larger inner-ring suburban cities with combined population and employment over 22,500. Many of these cities contain important local and regional transit stations, ferry terminals, park-and-ride facilities, and other transportation connections. *Bainbridge Island, Des Moines, Edmonds, Issaquah, Kenmore, Marysville, Mercer Island, Mountlake Terrace, Mukilteo, Sammamish, Shoreline, University Place, and Woodinville* (13 cities, 131 square miles).
- **Smaller Suburban Cities.** The region's smaller cities and towns. These jurisdictions represent a wide variety of communities, from historic towns and growing new suburban cities, bedroom communities with limited retail and commercial activity and growth potential, to freestanding cities and towns separated from the region's contiguous urban growth area. As such, they have been divided into three sub-categories:
  - Type A: Smaller Cities and Towns (inside contiguous urban growth area). These are cities and towns often surrounded by larger suburban jurisdictions, often with greater potential to absorb both population and employment growth than purely residential communities. *Algona, Arlington, Black Diamond, Bonney Lake, Brier, Covington, DuPont, Edgewood, Fife, Fircrest, Gig Harbor, Lake Forest Park, Lake Stevens, Maple Valley, Medina, Mill Creek, Milton, Newcastle, Normandy Park, Orting, Pacific, Port Orchard, Poulsbo, Ruston, Steilacoom, and Sumner.*
  - Type B: Small Residential Towns (inside contiguous urban growth area). Small residential enclaves with little capacity to accommodate a great deal of future growth. *Beaux Arts, Clyde Hill, Hunts Point, Woodway, and Yarrow Point.*
  - Type C: Free-Standing Cities and Towns. Cities located outside the contiguous urban growth area. *Buckley, Carbonado, Carnation, Darrington, Duvall, Eatonville, Enumclaw, Gold Bar, Granite Falls, Index, Monroe, North Bend, Roy, Skykomish, Snohomish, Snoqualmie, South Prairie, Stanwood, Sultan, and Wilkeson.*

  In the alternatives, Type A cities receive a larger share of the geographic class allocation of population and employment growth than Types B and C (52 cities, 159 miles).
- **Unincorporated Urban Growth Areas.** Areas within designated urban growth areas that are not within the boundaries of incorporated cities and towns (289 square miles).
- **Rural Areas.** Lands outside of urban growth areas that are not designated as resource areas under the Growth Management Act (1528 square miles).
- **Natural Resource Areas.** As designated under the Growth Management Act, resource areas include forests, agricultural lands, mining lands, and shorelines (3807 square miles). Note: The alternatives did not allocate additional population and employment in these areas.

DEFINITION OF ALTERNATIVES

Using the regional geographies as the framework for development of the alternatives, the Regional Council's Growth Management Policy Board and Regional Staff Committee met monthly over a 10-month period to advise and provide direction to Regional Council staff. In September 2005, the Growth Management Policy Board took action to select four growth distribution alternatives to be included in the environmental analysis (see *Chapter 4 – Definition of Alternatives*).

The four alternatives are defined as follows:



Growth Targets Extended Alternative

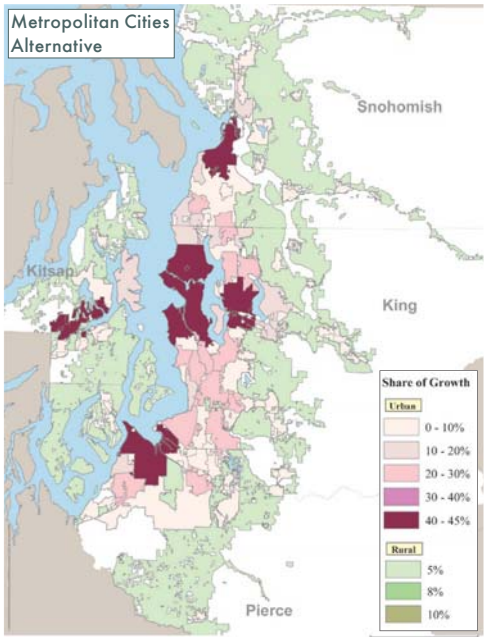
This alternative continues and emphasizes the population and employment growth patterns anticipated in current adopted growth targets, extended to match PSRC's 2040 regional growth forecasts. Future land use designations in local comprehensive plan maps provided a guide for the distribution of growth within regional geographies. Since these targets represent adopted public policy, which would presumably continue if no action were taken to alter the current regional growth vision, this is the No Action Alternative.

Under this alternative, cities and counties would continue to encourage growth to focus in urban centers around the region, as well as in unincorporated urban growth areas and rural areas. Many of the region's new jobs would locate in the largest cities, while medium-sized communities would also become larger employment centers. Many new apartments, condominiums and townhouses could be built in downtown areas near job centers. Extensive residential growth would continue in the region's unincorporated urban and rural areas.

Metropolitan Cities Alternative

This alternative represents the most densely focused regional growth pattern among the alternatives. The largest shares of the region's future growth would occur in the region's five major cities: Seattle, Bellevue, Everett, Bremerton and Tacoma. Growth would also be focused into the region's core suburban cities — those larger suburban municipalities that are already envisioned as important locations for regional growth.

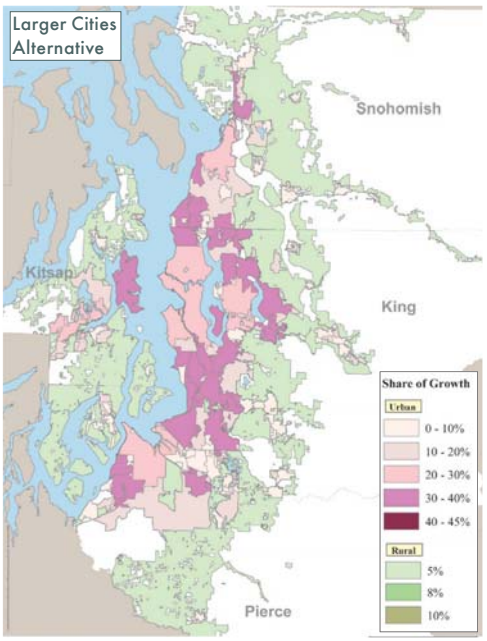
This alternative could result in considerable redevelopment in the region's largest cities, with most new jobs locating in major employment centers, along with new apartments, condominiums and townhouses built near job centers and in areas close to high-capacity transit systems. Much less growth would occur in the region's rural and unincorporated urban areas than is currently planned.

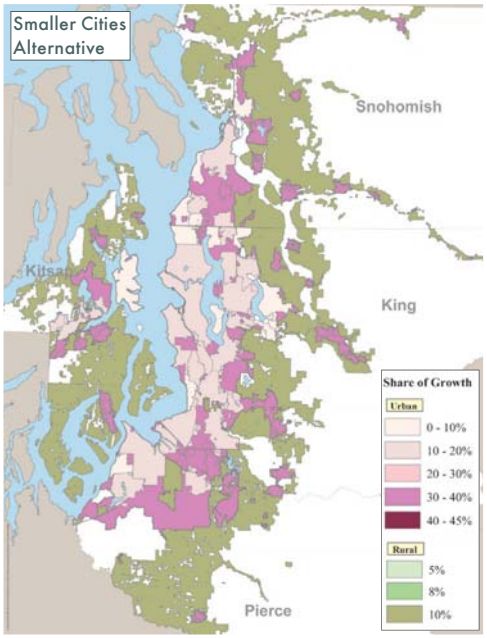


Larger Cities Alternative

This alternative assumes suburban cities in the region would accommodate the bulk of future population and employment growth. Suburban cities with designated regional growth centers and other larger suburban cities could be the primary locations for new development.

Considerable redevelopment could occur in current town center and neighborhood shopping areas, and suburban cities could become major job centers. Many new apartments, condominiums and townhouses could also be built in these areas. Less growth could occur in the downtown areas of the region's largest cities, unincorporated urban areas, and rural areas than is currently planned.





Smaller Cities Alternative

This alternative has the most dispersed regional growth pattern. It would disperse growth within the region's urban growth area — with smaller and freestanding suburban cities and the unincorporated urban growth areas receiving a sizable amount of population and employment growth.

Redevelopment in what are now small downtowns could produce many more significant local employment centers throughout the region. These smaller downtown areas could also develop with new apartments, condominiums and townhouses. Unincorporated urban growth areas — currently the outskirts of small cities and towns — could experience high amounts of new commercial and residential development. There could also be a high amount of single-family housing built in currently undeveloped rural areas.

REGIONAL GROWTH ALTERNATIVES COMPARISON
SHARE OF POPULATION AND EMPLOYMENT GROWTH, BY REGIONAL GEOGRAPHY (2000 TO 2040)

2000–2040 Growth Allocations		Metropolitan Cities	Core Suburban Cities	Larger Suburban Cities	Smaller Suburban Cities	Unincorp. UGA	Rural Areas	TOTAL
Growth Targets Extended Alternative	Population	26%	17%	9%	10%	24%	13%	100%
		452,000	286,000	151,000	179,000	413,000	229,000	1,712,000
	Employment	*45%*	*28%*	*7%*	*9%*	*8%*	*3%*	*100%*
		545,000	*347,000*	*80,000*	*109,000*	*98,000*	*41,000*	*1,219,000*
Metropolitan Cities Alternative	Population	40%	25%	15%	10%	5%	5%	100%
		685,000	428,000	257,000	171,000	86,000	86,000	1,712,000
	Employment	*45%*	*30%*	*10%*	*5%*	*5%*	*5%*	*100%*
		549,000	*366,000*	*122,000*	*61,000*	*61,000*	*61,000*	*1,219,000*
Larger Cities Alternative	Population	20%	30%	30%	5%	10%	5%	100%
		342,000	514,000	514,000	86,000	171,000	86,000	1,712,000
	Employment	*20%*	*30%*	*30%*	*5%*	*10%*	*5%*	*100%*
		244,000	*366,000*	*366,000*	*61,000*	*122,000*	*61,000*	*1,219,000*
Smaller Cities Alternative	Population	10%	10%	5%	30%	35%	10%	100%
		171,000	171,000	86,000	514,000	599,000	171,000	1,712,000
	Employment	*10%*	*10%*	*5%*	*30%*	*35%*	*10%*	*100%*
		122,000	*122,000*	*61,000*	*366,000*	*427,000*	*122,000*	*1,219,000*

Notes: Totals may vary due to rounding. The percentages represent what was adopted by PSRC's Growth Management Policy Board adopted in September 2005. For each alternative, the shaded areas represent the geographies of focus. Please see the footnote on page 3 of the Executive Summary for more information on the total growth figures.

C. Description of Analysis and Key Findings Regarding the Alternatives

The subsequent bullets and table summarize the content, analytical framework, and key findings regarding potential impacts, and are drawn from each of the analysis chapters (*Chapters 5* and *6*) in the full Draft Environmental Impact Statement. Over the spring and summer of 2006, the Regional Council's Growth Management Policy Board will evaluate the alternatives in order to develop a preferred growth alternative. This will be accomplished using an understanding of the impacts disclosed in the full document, public comments, and, among other technical inputs, a set of evaluation criteria that are contained in *Appendix C* on the attached compact disk.

DESCRIPTION OF ANALYSIS AND APPROACH

- The alternatives, which are conceptual in nature, are analyzed at a level of detail that is appropriate for a regional plan. Therefore, the analysis is not site-specific and is conducted at a regional scale that considers major geographic features, typical current environmental conditions, and broad geographies such as counties or classes of cities.
- There is variability regarding how the alternatives could actually be implemented. Each alternative could accommodate population and employment growth at the local level within a range of actual on-the-ground patterns, depending on local decisions regarding development densities, policy choices, market conditions, and the particular land parcels on which growth occurs. Given the variability, and the long-range nature of the VISION, discussions of impacts and mitigations are described as potentials and therefore terms such as could, likely, or might are used interchangeably.
- Each analysis chapter is structured around a set of resources or characteristics that are unique to the element of the environment. However, the chapters generally contain the same sections. These are as follows:
  - Affected environment, including the physical setting, current trends, and regulatory setting.
  - Analysis of alternatives, including impacts common to all alternatives and analysis of each alternative.
  - Cumulative effects.
  - Potential mitigation measures.
  - Significant unavoidable adverse impacts.
- The analysis considers the likely environmental consequences that may occur directly, indirectly, or cumulatively following the adoption of an updated VISION. As a plan level action, the adoption of an updated VISION would have relatively few direct *impacts*; rather, it would have *indirect* impacts, with actions that others could take in response to the VISION and to future demands posed by increased growth (such as infrastructure or housing development) being the actions expected to have *direct* impacts. Also considered in the analysis are *cumulative* effects, which are other past, present, and reasonably foreseeable future actions that could alter the environment, regardless of what agency or person undertakes the action.

KEY FINDINGS COMMON TO ALL ALTERNATIVES

- All of the alternatives will increase the number of people and jobs in the region. This increase in human activity will have impacts. As anticipated by the Regional Council's Growth Management Policy Board when they adopted the alternatives for environmental review and analysis, the alternatives and their impacts present a wide, but realistic, range of distinct sets of choices for accommodating growth on a regional scale.
- The alternatives have different regional and localized impacts, both topically and geographically, because they vary the amount of growth that occurs in given geographies and alter the broad regional pattern of growth. The differences in localized impacts are dependent on where and at what levels the growth occurs. Localized impacts include higher levels of traffic, noise, and air quality pollution, or the amount of development that could occur in or near currently undeveloped lands. Depending on where growth occurs, more development could alter or remove natural landscapes, increase impervious surfaces, or affect properties with historic significance. For local governments, levels of growth could require providing different levels of public services and facilities than currently anticipated in adopted plans.

- The alternatives' regional and localized impacts present a complex set of tradeoffs. For example, some alternatives concentrate growth in areas that would potentially expose more people to higher noise and traffic levels by increasing densities in already dense areas but at the same time keep growth away from pristine habitat areas. Some alternatives are estimated to result in lower region-wide air quality emissions but higher concentrations of emissions closer to major concentrations of growth.

- Generally, alternatives with a more focused growth pattern (such as Metropolitan Cities and Larger Cities) have potentially lower overall environmental impacts, but high growth areas could have higher localized impacts with higher development impacts on people and/or services. Because less land would likely be required to meet growth needs, growth in rural or natural resource areas could be reduced or avoided. Compact growth also reduces the regional levels of automobile use and congestion, and improves transit use, carpooling, walking and bicycling, which in turn lowers air pollution, water pollution, and energy use. Redevelopment of older properties to today's standards could also improve localized conditions and environmental performance in a wide array of areas, ranging from transportation to energy, hazardous materials, and stormwater. Regionally, governments could provide public services more efficiently and public services and other cultural and educational amenities could be closer to more people. However, the localized costs for providing services and facilities in the highest growth areas would be concentrated, with some governments bearing higher costs than others.

- Alternatives with a more dispersed growth pattern (such as Smaller Cities or Growth Targets Extended) have potentially higher overall environmental impacts, and higher impacts on natural resources and/or plants and animals. Because growth would be more spread out throughout the region, some of the localized impacts of growth would be less intensive for any given community. With growth spread through the region, there could be more pressure to develop in rural and resource areas. Regionally, higher levels of automobile use, higher levels of congestion, and lower levels of transit use and other travel modes are estimated. There could also be less pressure to redevelop underutilized areas within existing cities. The costs of providing public services would likely be higher, but would be spread among governments throughout the region.

- The potential impacts to people and/or services are more ambiguous to judge than the potential impacts on resources, plants and animals. For example, denser housing can have impacts on existing residents but may provide additional housing opportunities for new residents. Similarly, spreading growth throughout the urban area may allow more people to live in single-family homes, but it can also potentially increase the number of families that need to have additional automobiles. On the other hand, growth on aquifer recharge lands, increases in air pollution emissions, or development adjacent to, or in, significant habitat areas create impacts to natural resources, plants and animals that are more technically straightforward to judge.

KEY FINDINGS REGARDING EACH ALTERNATIVE

- The ***Growth Targets Extended Alternative*** allocates residential growth to the densest urban areas and the least dense outlying areas, while concentrating employment growth into the densest urban areas. This results in the greatest distances between jobs and housing. While having some of the characteristics of concentrated growth, the alternative also has a relatively high level of growth in the outlying areas, thereby sharing some of the characteristics of dispersed growth.
  - This alternative is estimated to have the highest adverse impacts on the transportation system, the highest air pollution emissions, and some of the highest potential impacts to the region's natural resources.
  - At the same time, it also provides many of the benefits of compact growth, such as placing a high number of the region's residents and employees near key public services, major transportation networks, and cultural and historic resources (which, if protected, provides an opportunity for access and association). This allocation also allows more land and economic development in the rural area than some of the others, which may be a benefit to some residents and businesses in these areas.
  - This approach has mixed results regarding serving the region's minority and low-income residents. This approach results in a concentrated commercial land use pattern in areas that have higher levels of transit service. However, because it spreads residents throughout the region, it potentially makes the connection between jobs, homes and services more difficult to serve by transit.
  - This alternative has the potential for an economy of scale for positive actions such as brownfields redevelopment, and potentially increased revenue for retrofit and upgrades to existing, older infrastructure.

- The ***Metropolitan Cities Alternative*** results in the most focused growth pattern, allocating residential and employment growth to the densest urban areas, and decreasing growth in the least dense outlying areas as compared to Growth Targets Extended.
  - This alternative shares, and intensifies, some of the localized impacts of Growth Targets Extended for metropolitan cities, including crowding, economies of scale for brownfields redevelopment, and the higher potential need for retrofits to older infrastructure.
  - There would likely be much greater density in already denser urban areas, which could impact existing neighborhoods. It would have perhaps the highest impact on already degraded urban waterways, and result in the highest levels of potential exposure to traffic, air pollution, noise and hazardous waste sites for residents and employees in these areas.
  - This alternative is estimated to result in the lowest levels of regional vehicle use, higher transit ridership levels, lower levels of congestion and delay and lower levels of air pollution emissions at the regional level. This alternative requires less land to meet population and employment growth needs, resulting in lower levels of development and associated infrastructure in the region's more pristine areas.
  - For the region's general population as well as its minority and low-income residents, this alternative is likely to have better access between employment, services, and residences through transit. It also has the potential for more multifamily housing development, and an increased potential for providing more affordable housing units in areas with better transit service than the other alternatives.
- The ***Larger Cities Alternative*** results in the second most focused growth pattern, allocating residential and employment growth in the larger suburban areas, with more moderate amounts of growth in the densest urban areas as compared to Metropolitan Cities Alternative.
  - This alternative shares some of the potential benefits of the Metropolitan Cities Alternative with high transit levels, lower levels of congestion and delay, lower levels of air pollution emissions at the regional level, and lower levels of development and infrastructure in or near the region's more pristine areas.
  - Growth in the larger suburban cities would result in higher levels of urbanization than exists today, and higher localized impacts such as traffic, air quality, noise, and redevelopment.
  - This alternative's impacts diverge from Metropolitan Cities primarily in its impacts within the region's densest areas. By shifting population and employment growth from the metropolitan cities to the largest suburban cities, some transportation performance measures improve, and air pollution emissions decrease, and the potential intensification of metropolitan cities is reduced and spread over many more cities (meaning, impacts in more areas, but at a potentially lower level).
  - For the region's minority and low-income residents, this alternative is likely to be fairly similar to Metropolitan Cities. Differences could exist in housing affordability and transit access between residences and jobs and services.
- The ***Smaller Cities Alternative*** results in the most dispersed growth pattern, allocating residential and employment growth to the smallest and freestanding suburban cities and to the outlying areas, and significantly reducing growth in the dense urban areas as compared to the other three alternatives.
  - This alternative shares, and is estimated to increase, some of the regional adverse impacts of Growth Targets Extended, including high impacts on the transportation system, high levels of air pollution emissions, and the highest potential impacts to the region's natural areas and species. This alternative has the highest amount of growth allocated close to the region's urban growth area boundary and near natural resources areas, creating the highest potential for conversion of land.
  - This alternative's impacts diverge from Growth Targets Extended in that it allocates little growth to the region's densest areas, meaning the adverse and positive impacts described for the Metropolitan Cities and Larger Cities alternatives are not likely to occur in these denser areas. Conversely, localized impacts would occur in smaller cities and towns, in the unincorporated urban growth area, and in the rural area.
  - The impacts to public services and facilities are estimated to be the highest under this alternative, with the highest anticipated need for extensions of services and facilities into areas that are currently not planning for major improvements or investments, and with lesser potential for economies of scale.
  - For minority and low-income residents, this alternative results in a commercial pattern that is the most difficult to serve by transit. Also, public services and facilities are likely to be more spread throughout the region. These factors may increase costs and create difficulties for accessing employment and services.

DESCRIPTION OF ANALYSIS AND SUMMARY OF POTENTIAL IMPACTS TABLE

Note: Names of the regional geographies are shown in lower case and shortened (i.e., metropolitan cities is referred to as metro cities, core suburban cities is referred to as core cities, etc.) and the names of alternatives are shown in upper case.

5.1 — Population, Employment, and Housing

Contents and Analysis

This chapter describes historical and current population, employment and housing characteristics in the central Puget Sound region. Some highlights regarding how these characteristics could potentially be impacted under the growth distribution alternatives are noted below.

Impacts Common To All:

- All of the alternatives increase the number of people, jobs, and housing in the region. The alternatives vary by location in terms of mix of uses, allocations to each county, and allocations to the regional geographies.
- The alternatives vary the mix of population and employment allocated to each county. Alternatives that allocate comparable amounts of both population and employment growth to given geographies are likely to result in better job-housing balances.
- Where growth occurs, the pattern and type of housing and employment sites would vary by alternative. The alternatives that focus growth the most would likely involve more multifamily or mixed-use developments, whereas more alternatives that disperse growth could allow more single-family development.

Characteristics of Alternatives/Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Second highest levels of population and employment growth in Kitsap, Pierce & Snohomish.	• Highest levels of population & employment growth in King.	• Second highest levels of population & employment growth in King. • The amount of employment in Kitsap & Snohomish would double by 2040.	• Highest levels of population & employment growth in Kitsap, Pierce & Snohomish. • The amount of employment in Kitsap, Pierce & Snohomish more than double by 2040.
• Population distributed throughout region, with focus in metro cities, as well as unincorporated urban and rural areas (higher than other alternatives). Employment focused in metro and core cities. Rural is lower than in other alternatives.	• Population and employment focused in metro cities, core cities, and larger cities. • Population shifted to metro cities, core cities, and larger cities from unincorporated urban and rural areas. Employment very similar to Growth Targets Extended, meaning little shifting of allocations as under Growth Targets.	• Population and employment focused in core and larger, then metro cities. • Population shifted to core and larger cities from unincorporated urban, rural, then metro cities. • Employment shifted from metro cities.	• Population and employment focused in smaller cities and unincorporated urban areas. • Population and employment shifted to smaller cities and unincorporated urban areas from metro cities and core cities.
• The amount of population in the smaller cities and unincorporated urban areas would double by the year 2040 as compared to the amount that existed in the year 2000.	• The amount of employment in larger cities and rural areas would double by the year 2040.	• The amount of population in core cities would double by the year 2040. • The amount of employment in larger cities would grow by four times by the year 2040. • The amount of employment in unincorporated urban and rural areas would double by the year 2040.	• The amount of population in smaller cities would triple, and employment would grow by almost four times by the year 2040. • The amount of population in unincorporated urban would more than double and the amount of employment would grow by over four times by the year 2040. • The amount of employment in rural areas would triple by 2040.

Common Impacts to Housing

- All alternatives have varying levels of potential for displacement of employment sites and housing through redevelopment. This would typically occur in urban areas that today have less intensive development, and where capital costs are comparatively low. However, new development could create additional supply of jobs and housing sites.
- All the alternatives would likely produce price pressure on housing costs. All else held constant, housing costs are typically lower, per-unit, for multifamily versus single-family. Alternatives that result in higher levels of non-single-family homes (multifamily, townhouses, condominiums) may allow for a wider range of homeownership opportunities at varying price levels.
- Costs for housing, and affordable housing, are based on a complex set of site-specific factors. Redevelopment and infill are complex and urban land prices are high. At the same time, cost of living factors (particularly the potential for additional transportation costs) can be higher in outlying areas.

Distinct Impacts to Housing

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Potentially high amounts of multifamily in denser urban areas and single-family in less dense outlying areas.	• Likely the highest amount of multifamily housing of any of the alternatives, although in cities that are used to having this type of housing development.	• Housing met through a mix of single- and multifamily housing (potentially lower amounts of multifamily than under Metropolitan Cities, and in cities less used to this type of housing development).	• Potentially highest amount of traditional single-family housing.

5.2 — Land Use

Contents and Analysis

This chapter discusses existing and planned land use policies and development patterns, as well as the region's overall urban and rural form. Some highlights regarding potential impacts to these policies and development patterns under the growth distribution alternatives are noted below.

Impacts Common To All

- All of the alternatives will change land use conditions in some locations in the region. Where large amounts of growth are allocated, there are potential adverse and positive impacts. These could include crowding, densification, and changes to existing neighborhoods, but also allow for increased amenities, a wider range of lifestyle options and localized revitalization.
- The alternatives vary in terms of their impacts to overall development patterns in the region, consumption of land in less-developed areas, and the future urban to suburban to rural regional form.
- The allocations will affect how many jurisdictions could need to revisit their comprehensive plans to ensure that they are planning to accommodate a sufficient amount of growth.
- The land use changes would typically be most intensive in the regional geographies that are the focus of the alternative's growth pattern. The Growth Targets Extended Alternative would distribute growth among a broader array of geographic classes, while the others could more than double the amount of growth for some cities.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Overall densification throughout region, especially in the most and least developed areas. • Second most consumption of land in the unincorporated urban and rural areas through new development. • Changes to region's urban and rural form are widespread. Land use could potentially change in all parts of the region from what exists today.	• Densification in already heavily developed areas through redevelopment of less dense properties. Less change elsewhere than under Growth Targets Extended. • Metro cities would likely need to revise plans to allow higher-intensity development in local areas targeted for growth. • Least consumption of land in the unincorporated urban and rural areas. • The most differentiation would exist between the region's urban and rural areas. Land use in the less developed parts of the region might not change significantly from what exists today.	• Densification of suburban areas through redevelopment of less dense properties as well as new development. Less change elsewhere than under Growth Targets Extended. • Larger cities and core cities could need to revise plans to allow higher amounts of growth. • Least consumption of land in the unincorporated urban and rural areas. • The region would have two tiers of urban, and much less developed areas. Land use in these less developed parts of the region might not change significantly from what exists today.	• Densification in outlying areas through new development, and much less change in currently denser urban areas than the other alternatives. • Smaller cities, which typically have less high-density development, would likely need to substantially revise their plans to accommodate higher amounts of growth. • Most consumption of land in the unincorporated and rural areas through new development. • The least differentiation would exist between the region's urban to rural areas. Land use in the most urban parts of the region might not change significantly from what exists today.

Distinct Impacts *(continued)*

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• All jurisdictions might need to plan for more residential growth than they currently have planned for in their local plans, based on their adopted residential growth targets for 2022/2025.	• Shifts in residential allocations from Growth Targets Extended means that fewer jurisdictions, including metro cities, core cities and larger cities, might need to plan for more growth than they currently have planned for in their local plans. • There could be the need to plan for much less growth in unincorporated urban and rural areas, and only a little more in smaller cities than adopted targets.	• Shifts in residential allocations from Growth Targets Extended means that only core cities and (especially) larger cities might need to plan for more growth than they currently have in their local plans. • There could be the need to plan for only a little more in metro cities, less in smaller cities, much less in unincorporated urban, and less in rural areas than adopted targets.	• Shifts in residential allocations from Growth Targets Extended means only smaller cities, unincorporated urban areas and, to a lesser extent, rural areas could need to plan for more growth than they currently have in their local plans. Instead, metro cities, core cities, and larger cities might need to plan for much less.
• Estimates of proximity to transit (population and employment within ¼ mile of existing or planned transit routes) are the second lowest, with about 6,000,000 people living and working close to transit routes. • Estimates of proximity to the urban growth area boundary (population and employment within ¼ mile of either side of currently designated boundaries) are the second highest, with 720,000 people living and working close to the boundary.	• Proximity to transit estimated to be highest, with almost 450,000 more people living and working near transit than Growth Targets Extended. • Proximity to the urban growth area boundary estimated to be the lowest, with about 95,000 fewer people living and working near the boundary than Growth Targets Extended.	• Proximity to transit estimated to be second highest, with almost 300,000 more people living and working near transit than Growth Targets Extended, but 150,000 fewer than Metropolitan Cities. • Proximity to the urban growth area boundary estimated to be second lowest, with about 70,000 fewer people living and working near the boundary than Growth Targets Extended, but about 25,000 more than Metropolitan Cities.	• Proximity to transit estimated to be the lowest, with over 250,000 fewer people living and working near transit than Growth Targets Extended and over 700,000 fewer than Metropolitan Cities. • Proximity to the urban growth area boundary estimated to be the highest, with over 300,000 more people living and working near the boundary than Growth Targets Extended, and about 400,000 more than Metropolitan Cities.

5.3 — Transportation

Contents and Analysis

This chapter describes the region's existing and planned transportation services and infrastructure. Some highlights are noted below regarding how the growth distribution alternatives are served by, and impact, the planned system based on a wide range of transportation performance indicators.

Impacts Common To All

- Future transportation conditions under each of the alternatives are based on the region's existing long-range transportation plan, *Destination 2030* (which plans for transportation out to the year 2030). The alternatives vary in their impacts on the planned transportation system, and each could require some level of change regarding the mix or timing of investments and programs that are currently adopted in *Destination 2030*.
- A number of transportation performance indicators are considered in the analysis, and most are estimated to be different in 2040 than they are in the base year 2000.
  - With the increase in population and employment, ***overall tripmaking*** in the region is estimated to increase by approximately 72 percent by the year 2040 under all of the alternatives. While overall trips are similar among the alternatives, distinctions exist in terms of trip times and distances (see the subsequent "Distinct Impacts" section). The choice of modes (i.e., driving, transit, nonmotorized) is also more variable than overall number of trips, and therefore dependent on the alternative. This is reflected in the range of estimated increases in trips in the following modes:
    - o *Single-occupancy vehicle* trips are estimated to increase between 63 – 72 percent by the year 2040, but are estimated to constitute a slightly *lower* share of overall trips.
    - o *Transit* trips are estimated to increase between 76 – 146 percent by the year 2040, but are estimated to constitute a slightly *higher* share of overall trips.
  - With increased trip making in all modes, the amount of ***total vehicle miles traveled*** in the region is estimated to increase by between 49 to 67 percent by the year 2040. The choice of facility (i.e., freeway or arterial) is variable among the alternatives:

Impacts Common To All *(continued)*

- o Vehicle miles traveled on the *freeway system* are estimated to increase 43 – 53 percent.
- o Vehicle miles traveled on the *arterial system* are estimated to increase 53 – 81 percent.

– Reflecting the increased number of trips, mode choices, and total miles traveled, the total vehicle hours traveled are also estimated to increase by between 63 to 107 percent by the year 2040. Vehicle hours traveled has a wider range of variability (reflecting more distinctions among the alternatives for this measure) than miles traveled, both for total hours and for hours on freeways or arterials:

- o Vehicle hours traveled on the freeway system are estimated to increase 48 – 99 percent.
- o Vehicle hours traveled on the arterial system are estimated to increase 66 – 111 percent.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• In part because of the spatial mismatch and distances between population and employment centers (and therefore a mismatch between trip origins and destinations), this alternative is estimated to result in the longest trip distances and times: – Longest average work trip distances. – Longest average non-work trip distances (similar to Smaller Cities). – Longest average work trip times. • Similarly, the allocations are expected to result in the highest amount of miles and hours spent traveling on both freeways and on arterials (although miles on arterials are similar to Smaller Cities). Growth Targets Extended also has the highest amount of delay on both arterials and freeways. • The allocations of residential growth to metro cities, as well as the long trip times and high delay, result in this alternative having the second highest percentage of trips being made by transit.	• The concentration of the greatest shares of both population and employment into the fewest locations creates the most proximity between trip origins and destinations. This is estimated to result in much lower trip distances and times compared to Growth Targets Extended: – Shortest average work and non-work trip distances (similar to Larger Cities). – Shortest average work and non-work trip times (similar to Larger Cities). • The allocations, and the ability to make trips using alternative modes (see next set of bullets), result in this alternative having the lowest amounts of arterial miles traveled (although at levels similar to Larger Cities). • The allocations of growth to metro cities and core cities, where transit service is most available, results in the highest estimated percentage of trips being made by transit. In addition, the concentration of growth is estimated to result in the highest percentage (by a large margin) of "activities" (such as retail, entertainment, schools) being accessible by transit. • For similar reasons, this alternative is estimated to have the highest percentage of walking or biking trips.	• While still focused in the urban area, this alternative spreads population and employment over a larger area than under Metropolitan Cities, although it is more focused than Growth Targets Extended or Smaller Cities. This alternative also puts new growth closer to residential concentrations that existed in 2000. These factors are estimated to result in lower trip distances and times: – Shortest average work and non-work trip distances (similar to Metropolitan Cities). – Shortest average work and non-work trip times (similar to Metropolitan Cities). • The allocations under this alternative result in the lowest amounts of total vehicle miles traveled. Interestingly, this alternative is similar to aspects of both Smaller Cities and Metropolitan Cities regarding vehicle miles traveled: – Lowest vehicle miles traveled on freeways (similar to Smaller Cities). – Lowest vehicle miles traveled on arterials (similar to Metropolitan Cities). – Lowest vehicle hours traveled and the lowest total amount of delay. • Similar to Metropolitan Cities (but lower), this alternative allocates growth to areas that have higher levels of transit service. This, with the concentration of jobs and residences close together, leads to higher percentages of trips being made using transit, walking and biking.	• This alternative allocates the most amount of growth in the outlying areas of the alternatives. However, population and employment allocations are comparable, creating less of a mismatch between origins and destinations as compared to Growth Targets Extended, which results in the following: – Longest average non-work trip distances (similar to Growth Targets Extended). – Longest average non-work trip times. • Even though trip distances and times are some of the highest, the impacts of the trips are not evident so much on the region's freeways but rather on its arterials: – Lowest vehicle miles traveled on freeways (similar to Larger Cities). – Lowest vehicle hours traveled and lowest total hours of delay on freeways. • The allocations under this alternative result in the lowest accessibility of activities by transit, the lowest percentages of trips being made by transit, and the lowest percentage of trips being made by walking or biking.

5.4 — Air Quality

Contents and Analysis

Air pollution comes from many different sources, including industry, transportation, construction, and agriculture. It affects both human health and the natural environment. Some highlights are noted below regarding how the four growth distribution alternatives could impact air quality in relation to a number of pollutants, including particulate matter, carbon monoxide, ozone, toxics and greenhouse gases.

Impacts Common To All

- All of the alternatives would increase urban area activities that create air pollution. This includes pollution from construction activities, commercial and industrial actions, shipping, aviation, and surface transportation.
- Air pollution emissions from motor vehicles are estimated based on travel demand model results. Impacts from other sources are assessed qualitatively. Since the alternatives would affect the projected demand for transportation, which directly causes pollution from vehicle emissions, the alternatives have different air quality results.
- Due to technological improvements (cleaner fuels and vehicles) assumed by the air quality model in forecast years (between 2000 and 2040), emission estimates in the year 2040 are lower than current rates. With these assumptions, where emissions standards exist, none of the alternatives is forecast to cause them to be exceeded.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Given some of the highest transportation results for vehicle miles and hours traveled, as well as hours of delay, this alternative is estimated to have the highest levels of air quality emissions for a number of pollutants: – Highest carbon monoxide. – Highest ozone emissions, but at levels similar to Smaller Cities. – Highest fine particulate emissions (known as $PM_{2.5}$), but at levels similar to Smaller Cities. – Highest carbon dioxide emissions (a greenhouse gas), but at levels similar to Smaller Cities. • On coarser particulate matter (know as PM_{10}), which is estimated in three specific industrial areas, the results are more varied: – Second lowest in Kent. – Second highest in the Duwamish area. – Second highest in Tacoma.	• Given some of the lowest transportation results, this alternative is estimated to have some of the lowest levels of emissions: – Second lowest in carbon monoxide. – Lower ozone emissions, at levels similar to Larger Cities. – Lower fine particulate emissions ($PM_{2.5}$), but at levels similar to Larger Cities. – Lower carbon dioxide emissions, but at levels similar to Larger Cities. • On coarser particulate matter (PM_{10}), the concentration of growth near the three specific industrial areas results in this alternative having the highest levels of emissions in the Duwamish area and in Tacoma.	• Given some of the lowest transportation results, this alternative is estimated to have some of the lowest levels of emissions: – Lowest in carbon monoxide. – Lower ozone emissions, at levels similar to Metropolitan Cities. – Lower fine particulate emissions ($PM_{2.5}$), but at levels similar to Metropolitan Cities. – Lower carbon dioxide emissions, but at levels similar to Metropolitan Cities. • On coarser particulate matter (PM_{10}), the movement of growth from the metro cities to the larger cities results in this alternative having the highest levels of emissions in Kent, but second lowest in the Duwamish area and the lowest in Tacoma.	• The transportation results for this alternative were more variable than the others (for example, having the lowest vehicle miles traveled on freeways but the highest on arterials). This results in a variable set of results on levels of air quality emissions on a number of pollutants: – Second highest carbon monoxide. – Second highest ozone emissions, but at levels similar to Growth Targets. – Second highest fine particulate emissions ($PM_{2.5}$), but at levels similar to Growth Targets. – Second highest carbon dioxide emissions, but at levels similar to Growth Targets. • On coarser particulate matter (PM_{10}), the movement of growth away from metro cities and larger suburban cities is estimated to result in the lowest emissions in Kent and the Duwamish area, and the second lowest in Tacoma.

5.5 — Ecosystems

Contents and Analysis

This chapter summarizes existing ecosystem conditions and features in the region and refers to natural resource features and conditions, specifically vegetation, wetlands, streams, lakes and other waterbodies, marine resources, fish, and wildlife. Some highlights are noted below regarding how the alternatives could impact areas identified as having regionally significant habitats, and the overall functioning of the region's ecosystems.

- The majority of ecological damage occurs with habitat loss through development. The initial development actions, including clearing, grading, and the change in land surface, have the most impacts, meaning that new development has significantly higher potential impacts than redevelopment.
- Development in or near pristine areas has a far greater impact than development in already-developed areas.
- Transportation networks contribute significantly to the transformation of land and are a key factor in the fragmentation and isolation of habitat. Further, transportation-related pollutants are a primary source of damage to ecosystems.

Impacts Common To All

- All of the alternatives are likely to reduce and impact habitats and ecosystem functions compared to today through their potential to remove vegetation, increase paved or impervious surfaces, increase runoff, and provide more sources and quantities of water quality pollutants. The region's increased demand for water supply could also affect conditions in the region's rivers, streams and lakes, impacting aquatic species.
- The highest impacts would likely occur due to loss or alteration of habitat due to development, with redevelopment having a much lower potential for further impacts than new development. Redevelopment also provides the potential for retrofits to infrastructure and redevelopment of properties to undo existing damage and reduce the overall net impact of growth.
- The region's increased demand for water supply could affect conditions in the region's rivers, streams, and lakes, which would impact aquatic species.
- Concentrating growth has the potential to create economies of scale for mitigation strategies and/or for conservation actions. For instance, a more concentrated growth pattern could use less land and allow more natural areas to be preserved.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Growth in outlying areas results in second highest potential risk of adverse impacts to areas identified as supporting regionally significant habitats. • Growth allocations lead to second highest risk to less developed (and therefore potentially more pristine) lands and habitat areas through development and associated infrastructure-related impacts. • Highest potential air and transportation pollution impacts to ecosystems. • High potential need for programs to protect and potentially restore/enhance urban ecosystems. • High potential need for conservation programs.	• Lowest potential risk of adverse impacts to identified regionally significant habitats. • Concentration of growth into already developed areas results in lowest risk to pristine lands and habitat areas through development and associated infrastructure-related impacts. • Second lowest potential air and transportation pollution impacts to ecosystems, similar to Larger Cities. • High potential need for programs to protect, restore, and enhance urban ecosystems.	• Very similar to Metropolitan Cities in risk of adverse impacts to regionally significant habitats. • Shift of growth from metro cities (currently most developed) to larger cities (less developed) and double the amount of growth in unincorporated urban spreads out growth and therefore potentially increases risks to ecosystems as compared to Metropolitan Cities. • Least potential air and transportation pollution impacts to ecosystems, similar to Metropolitan Cities.	• Highest potential risk of adverse impacts to identified regionally significant habitats. • Growth in least developed areas results in highest potential for impacts on remaining pristine lands and habitat areas. • Second highest potential air and transportation pollution impacts to ecosystems.

Distinct Impacts *(continued)*

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Growth allocations result in second highest potential risk of conversion of lands from rural to urban (see *5.2 – Land Use*), and/or from natural resource to rural or urban. • Estimates of proximity to natural resource areas (population and employment within ¼ mile of designated lands) are the second highest, with over 300,000 people living and working close to these areas.	• Lower than Growth Targets Extended, and about equal to Larger Cities, regarding the risk of conversion of lands. • Proximity to natural resource areas estimated to be similar to Larger Cities. These alternatives are estimated to have about 50,000 fewer people living and working near these areas than Growth Targets Extended.	• Lower than Growth Targets Extended, and about equal to Metropolitan Cities, regarding the risk of conversion of lands. • Similar proximity to natural resource areas as Metropolitan Cities (but with about 7,500 more people living and working near these areas than that alternative).	• Highest potential need for conservation programs. • Highest potential risk of conversion of lands. • Proximity to natural resource areas estimated to be highest, with about 45,000 more people living and working near these areas than Growth Targets Extended and 95,000 more than Metropolitan Cities.

5.6 — Water Quality and Hydrology

Contents and Analysis

Water resources are key elements of this region's setting and overall quality of life. This chapter describes existing water resources and hydrology, and covers five primary topics: (1) impervious surfaces and stormwater runoff, (2) impaired waters, (3) sole source aquifers, (4) large contiguous floodplains, and (5) wetlands, lakes, rivers and streams. Some highlights are noted below regarding how these resources could potentially be impacted under the growth distribution alternatives.

Impacts Common To All

- All of the alternatives have the potential to remove natural landscapes and create new impervious surfaces, including pollution-generating surfaces such as roads and parking lots (however, levels of imperviousness, and therefore impacts, vary among the alternatives). Regional growth has the potential to aggravate existing water quality problems in the region's rivers, lakes and streams, as well as in the Puget Sound itself. Impacts would be due to urban construction, stormwater runoff, wastewater discharges, and changes in temperature and water quantity.
- Development could increase impervious surfaces over sole source aquifers, which reduces the ability of groundwaters to be replenished by rainfall filtering through the ground.
- More paved or impervious surfaces, along with development in floodplains, would increase the potential for increased flooding. Development would also have the potential to affect watersheds by filling wetlands, and further developing the areas adjacent to the Puget Sound and lakes, rivers and streams.
- Growth would require additional sources for water supply, and could reduce natural flows in rivers, lakes and steams. Water withdrawals from aquifers can also reduce water flowing into rivers, lakes and streams.
- Development in rural areas is more likely to cause impacts to water resources due to septic systems, proximity to more pristine stretches of rivers, and proximity to floodplains (which occur throughout the region, but many are associated with agricultural lands).
- Alternatives that reduce vehicle miles and hours traveled (and therefore water pollution due to roadway runoff) are likely to have fewer impacts.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Some of the highest levels of impacts to water quality and hydrology (similar to Smaller Cities) because of second highest rural area growth and highest vehicle miles traveled and delay. • Highest potential impacts to water quality and hydrology from roadway runoff pollutants.	• Lower levels of impacts (similar to Larger Cities) because of lower rural area growth, and lower levels of vehicle miles traveled and delay. • Some of the lowest potential impacts to water quality and hydrology from roadway runoff pollutants.	• Lower levels of impacts (similar to Metropolitan Cities) because of lower rural area growth, and lower levels of vehicle miles traveled and delay. • Similar to Metropolitan Cities in terms of potential impacts to water quality and hydrology from roadway runoff pollutants.	• Some of the highest levels of impacts (similar to Growth Targets Extended), with more growth but less vehicle miles traveled and delay. • Similar to Growth Targets Extended in terms of potential impacts to water quality and hydrology from roadway runoff pollutants.

Distinct Impacts *(continued)*

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Estimated to result in the second highest amount of land across the region that falls into the highest impervious surface category (greater than 30 percent), with 1,020 miles in that category.	• Least amount of land estimated to be in highest impervious surface category, with about 260 square miles less than Growth Targets.	• About the same amount as Metropolitan Cities in terms of land in highest impervious surface category (with about 240 square miles less than Growth Targets Extended).	• Highest amount of land estimated to be in highest impervious surface category, with about 90 square miles more than Growth Targets Extended and about 170 square miles more than Metropolitan Cities.

5.7 — Public Services and Utilities

Contents and Analysis

Public services and utilities reviewed include: (1) solid waste collection and disposal, (2) sanitary sewer systems, (3) water supply, (4) fire protection and police services, (5) health and emergency medical services (including hospitals), and (6) schools. Some highlights are noted below regarding potential impacts to public services and utilities under the growth distribution alternatives.

All Services/Utilities

Impacts Common To All

- Growth patterns are likely to mean increased demand, under each alternative, for all public services and facilities. Effects on service levels and costs of service are based primarily on population and proximity, and will therefore vary by county and service area for each alternative.
- Economies of scale for investments exist for most service areas. In general, larger systems and facilities have advantages of efficiency and associated ability to efficiently increase size of operations, although providers generally plan for timeframes that are longer than local comprehensive plans.
- Under growth management, all jurisdictions are planning for growth in capital facilities and utilities. The alternatives, however, represent different levels of growth than under currently adopted plans. Those jurisdictions and areas that are already planning for major growth in demand will be less impacted (and may have greater options) than areas planning for a more limited amount of growth.
- Alternatives (such as Metropolitan Cities and Larger Cities) that increase demand closer to existing facilities are likely to be more cost-effective to serve than those alternatives (such as Growth Targets Extended and Smaller Cities) that build far from existing facilities. However, site-specific issues are a key factor that will ultimately determine actual costs.

Solid Waste

Common Impacts for Solid Waste

- Solid waste generation is anticipated to increase over time, with potential need for expansions in capacity to process it — particularly for transfer stations (increased landfill needs more likely met outside the region).
- Increases in demand could possibly be met through expanded hours of service or other approaches that minimize the need for additional facilities that are difficult to site.
- Density increases create potential to increase different types of recycling and thereby reduce waste.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• High potential need for increased services and for increased facilities in most cities. • Potential need to change collection and management methods to accommodate increased demand in outlying areas. • Potential economy of scale for waste reduction in metro cities. • Kitsap and Snohomish have second highest demand and potential for new or expanded stations in outlying areas.	• Highest potential need for increased services and for increased facilities in metro cities and then core cities. • Potential for improved waste reduction and recycling in metro cities and in core cities.	• Similar to Metropolitan Cities in urban areas. • Highest potential need for increased services and for increased facilities in larger cities and then core cities. • Potential for improved waste reduction and recycling in larger cities and in core cities.	• Highest potential need for additional services and facilities in smaller cities, and unincorporated urban and rural areas. • Similar to Growth Targets Extended, potential need to change collection and management methods to accommodate increased demand in outlying areas. • Highest potential impacts in outlying areas to Kitsap, Pierce and Snohomish counties.

Wastewater Systems

Common Impacts for Wastewater Systems

- Under all alternatives, current sewer capacity likely not sufficient and would likely require system upgrades and expansions.
- In general, larger systems and facilities have advantages of efficiency and associated ability and resources to increase size of operations.
- Growth in smaller cities and unincorporated urban areas could impact smaller sewage systems and may necessitate change in technology, which has cost implications.
- Smaller city systems may need expansions, or may choose to contract with regional providers or adjacent jurisdictions. In all jurisdictions that are the focus of the alternative's growth, siting new treatment facilities is likely difficult.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Potential to require expansion of sewers into currently underserved areas. • Creates demand for sewers in areas currently planning for major upgrades, with demand distributed throughout the region to more cities and agencies, in a manner most similar to existing plans. • Extending service could have high per unit costs given the distances. • Growth in rural areas would likely be served by septic systems and could have site-specific impacts on water quality.	• Potential to require improvements and possibly expansions in metro cities and core cities. • Creates additional demand for treatment systems in areas currently planning for major upgrades, but systems with even higher capacity would be needed.	• Potential to require improvements and possibly expansions in larger and then core cities. • Creates demand to extend sewer capacity to areas currently not expecting major upgrades, and demand would likely greatly exceed planned systems capacities for many of the larger cities.	• Potential to require expansion of sewers into currently underserved areas. • Creates demand for sewers in smaller cities and outlying areas, most of which are currently not expecting major upgrades. • Extending service could have high per unit costs given the distances. • Growth in rural areas would likely be served by septic systems and could have site-specific impacts on water quality.

Water Supply

Common Impacts for Water Supply

- Under all alternatives, current water capacity may not be sufficient and could require upgrades to some systems, perhaps by 2020. Additional supply will potentially be needed by 2020.
- More options and system flexibility exist to meet future water supply and demand in larger population-service areas (although growth in these areas could require retrofits and expansions of service/facilities).
- Impacts could be more severe in areas not currently planning for major increases, as water rights processes are complex and extensions are costly.
- Other issues, such as the Endangered Species Act and climate change, make long-range regional analysis and forecasting more uncertain.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Creates additional pressure for meeting demand in areas already planning for upgrades. • Potential to use reclaimed water in metro cities and other urban areas where concentrations of growth support economies of scale to fund these types of investments. • Growth in unincorporated urban and rural areas have the potential to impact water quality and hydrology (see *5.6 – Water Quality*).	• Meeting demand in metro cities and core cities could likely require expanding existing programs, plans, and investments. • High potential to use reclaimed water. • Lesser impact on groundwater in Kitsap and Pierce. • Lesser impact on Snohomish utilities, but still some need for investments in metropolitan cities in Snohomish.	• Meeting demand in larger and then core cities could likely require additional planning to accommodate increased levels of growth in these cities. • Some potential to use reclaimed water. • Decreased growth in metro cities may free water supply for diversion to larger cities. • Lesser impact on groundwater in Kitsap and Pierce. • Lesser impact on Snohomish utilities.	• Highest potential impact given that little planning has been done to address the demand and pressure created for major upgrades under this alternative. • Smaller cities may be impacted because fewer existing or planned supply options exist for areas outside the contiguous urban growth area. Could lead to more reliance on groundwater (some counties already are struggling to meet groundwater supply demands). • Unknown potential for using reclaimed water.

Distinct Impacts *(continued)*

	Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
Water Supply *(continued)*	• Rural growth allocations could require extensions to serve these areas, or drilling additional wells in some areas. • Rural growth allocations could lead to potential impacts in Kitsap (and to lesser extent in Pierce) from septic systems on groundwater drinking supply.			• High levels of growth in unincorporated urban and rural areas have the potential to impact water quality and hydrology (see *5.6 – Water Quality*). • Rural growth allocations could require extensions to serve these areas, or drilling additional wells in some areas. • Rural allocations could mean higher impacts in Kitsap (and to lesser extent in Pierce) from septic systems on groundwater drinking supply.

Fire and Police

Impacts Common To All

- Under all the alternatives, added service could be needed, and response times could increase in some areas. This is particularly an issue for unincorporated "islands."
- Demands on fire and police correlate with growth, meaning there will be localized differences regarding need under each of the alternatives.
- More options exist to meet future supply and demand in larger population-service areas (although growth in these areas could require additional staffing, or retrofits and expansions of existing service/facilities).

Health and Emergency

Impacts Common To All

- Industry-wide consolidation has the potential to concentrate facilities into fewer locations, with the likelihood that they will be in urban and suburban jurisdictions. Growth allocations to unincorporated urban and rural areas may locate residents and employees in areas more distant from facilities, which could increase response times.
- Under all the alternatives, demands on health, hospital, and emergency services correlate with growth, meaning there will be localized differences regarding need under each of the alternatives.

Schools

Impacts Common To All

- Under all the alternatives, demands on schools correlate with growth, meaning there will be localized differences regarding need under each of the alternatives.
- Alternatives that spread population over a larger distance may lead to increased transportation costs for school districts.
- Alternatives that concentrate growth may lead to higher needs for building retrofits and higher staffing levels, but fewer new facilities.

5.8 — Parks and Recreation

Contents and Analysis

This chapter discusses parks and recreation resources with a focus on locally owned parks. The chapter includes a review of typical impacts due to growth. It also includes an analysis of park-to-resident ratios and population and employment proximity to parks, and general qualitative analysis of park maintenance, use, and development issues. Some highlights are noted below regarding how these resources could serve and be impacted by the growth distribution alternatives.

Impacts Common To All

- With growth, there would be increased competition for limited facility space, conflicts between different types of recreational users, and displacement of undeveloped open space.
- All alternatives could cause increased demand for and use of use of existing parks and recreation facilities. In some locations, facilities might be unable to meet demand without expansions or new facilities and services, and increases in maintenance. The increased use has potential to adversely impact some visitors' experiences, while also potentially enlivening the parks.
- Under all alternatives, park acreage-to-resident ratios decline because the alternatives do not include any additions of parks. Adequacy of the ratios varies among counties, and depends on potential access to major public lands and open spaces.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Potential need for increased maintenance and programming in metro cities parks. • Potential need for new parks in unincorporated urban and rural areas, or other approaches for ensuring adequate access and supply of parks. • With increased use due to growth, potential need for cities to continue to assume operation of county parks in less developed areas.	• Highest potential need for increased maintenance and programming in metro cities and then core cities. • Increased competition for land in metro cities could make park development and acquisition more difficult.	• Potential need for increased maintenance and programming in larger and then core cities parks. • Potential need for new parks in larger cities. • Increased competition for land in larger cities could make park development and acquisition more difficult, but probably to lesser extent than under Metropolitan Cities.	• Potential need for new parks in smaller cities, and unincorporated urban and rural areas or need for other approaches. • With increased use due to growth, potential need for cities to continue to assume operation of county parks in less developed areas. • Increased competition for land much less a factor for these cities and areas for park development.
• Estimates of parks proximity (population and employment within ¼ mile of existing locally owned parks) are the second lowest with 4,300,000 people living and working close to these resources.	• Proximity to parks estimated to be highest, with over 300,000 more people living and working near these resources than under Growth Targets Extended.	• Proximity to parks estimated to be second highest with over 270,000 more people living and working near these resources than under Growth Targets Extended, but 30,000 less than under Metropolitan Cities.	• Proximity to parks estimated to be the lowest, with 210,000 fewer people living and working near these resources than under Growth Targets Extended and about 510,000 fewer than under Metropolitan Cities.

5.9 — Environmental Health

Contents and Analysis

This chapter focuses on how the growth distribution alternatives can impact the possibility of encountering potentially hazardous materials. Other environmental health topics, such as active living, noise, and air quality are also discussed. Some highlights are noted below regarding potential impacts.

Impacts Common To All

- All of the alternatives would likely lead to redevelopment or development activities that could potentially occur in the presence of hazardous materials. This could increase the risk of exposure or the spread of contaminants. Contaminated sites are most concentrated in established urban areas.
- When new development occurs in areas with previous releases, cleanup and management of the sites would benefit the environment, but the costs to redevelop a contaminated property could be higher.
- Higher intensity urban development could increase human health impacts due to biological, chemical, and social factors. This includes greater numbers of people in areas with higher levels of air pollution, noise, and other forms of pollution. More dense urban forms can also promote higher rates of physical activity, which provides health benefits.
- Existing regulations are likely to significantly limit any additional releases and the creation of new sites. Therefore, under all the alternatives, there is limited potential for creation of new sites.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Moderate level of potential to encounter hazardous sites, similar to Larger Cities. • Second highest potential for cleanup of sites and development of "brownfield" lands, enabled through economies of scale and the need for developable land.	• Highest potential to encounter hazardous sites, given their location in older, urbanized areas. • Highest potential for cleanup and brownfields development (economies of scale).	• Moderate potential to encounter hazardous sites, similar to Growth Targets Extended. • Second lowest, but still higher, potential for cleanup and brownfields development (economies of scale).	• Lowest potential to encounter hazardous sites. • Limited potential for brownfields redevelopment.

5.10 — Energy

Contents and Analysis

This chapter discusses energy issues focusing on the main types of energy in the region, which are electrical power, natural gas, and petroleum. For each of these types, this chapter discusses consumption, sources and availability, and conservation and renewable sources. Some highlights are noted below regarding the potential for impacts to energy under the growth distribution alternatives.

Impacts Common To All

- The population and employment growth in all alternatives will increase overall regional energy consumption compared to today, with more concentrated growth having potential to somewhat reduce consumption levels. Under all the alternatives, more energy sources and expanded energy delivery systems will likely be needed.
- Effects on amount of energy used are based primarily on population, and will therefore vary by county and service area for each alternative (meaning, localized differences). This may result in the need to extend facilities into currently underserved areas.
- For electricity and natural gas, the alternatives are relatively similar in terms of how much increase in consumption is estimated. Differentiations exist among the alternatives for petroleum energy use, primarily having to do with amount of vehicle miles traveled and hours of delay and the impact these have on usage.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Potential need for upgrades and retrofits of infrastructure in metro cities. • Potential need for extending infrastructure to unincorporated urban and rural areas. • Highest total daily vehicle miles traveled and highest total daily hours of delay. • Highest potential energy use.	• Highest potential need for upgrades and retrofits of infrastructure in metro cities. • Second lowest vehicle miles traveled and second lowest delay. • Second lowest energy use.	• Potential need for upgrades of infrastructure in larger cities. • Lowest vehicle miles traveled and lowest delay. • Lowest energy use.	• Highest potential need for extending infrastructure to unincorporated urban and rural areas. • Second highest vehicle miles traveled and second highest delay. • Second highest energy use.

5.11 — Historic, Cultural, and Archeological Resources

Contents and Analysis

The central Puget Sound region has a long cultural history, beginning with indigenous peoples, who lived here in a rich ecosystem. The tools, structures, record of their existence, and of the settlers who came after them, are the Puget Sound region's historic and cultural resources. Some highlights are noted below regarding the potential for them to be impacted under the growth distribution alternatives.

Impacts Common To All

- Growth under all the alternatives near these resources has the potential to adversely impact resources, while also potentially exposing more residents and employees to these resources. Both public, and especially private, development can threaten or remove these resources, making recognition and preservation actions important.
- Alternatives that focus growth in or near older urban areas, waterways, and agricultural lands are more likely to have impacts because historic, cultural, and archeological properties are most commonly associated with these areas.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Allocations to metropolitan cities create second highest potential impact to urban resources through redevelopment. • Second highest potential impact to rural and agricultural area resources through development on these lands. • Given appropriate incentives, increased potential for restoration or reuse of urban historic resources, enabled through economies of scale (but lower than Metropolitan Cities).	• Highest potential impact to urban resources. • Lowest potential impact to rural and agricultural area resources, with smallest allocations to incorporated and unincorporated areas outside contiguous urban growth area. • Highest potential for restoration or reuse.	• Second lowest potential impact to urban resources. • Second lowest potential impact to rural and agricultural area resources. Somewhat higher than Metropolitan Cities given allocations to incorporated cities near edge of contiguous urban growth area. • Lesser potential for restoration or reuse than Growth Targets Extended.	• Lowest potential impacts to urban resources (and lowest potential for restoration or reuse). • Highest potential impacts to rural and agricultural area resources, but highest potential for discovery of new sites and for acquisition.

5.12 — Visual Quality and Aesthetic Resources

Contents and Analysis

For many people, the region is defined by its mountains, water, and abundant greenery as well as the inherent aesthetic qualities characterized by visually diverse, stimulating views of rural landscapes, towns, cities, and prominent structures. Some highlights are noted below regarding potential impacts to the visual setting of the region under the growth distribution alternatives.

Impacts Common To All

- All of the alternatives would require higher levels of development that could add, alter, or remove current visual features in regional and local landscapes.
- Intensification of development in all areas is possible under alternatives, but levels and locations of impacts vary. Intensification could impact vegetation and open spaces, scale and bulk, and the character (mix of uses) of lands, communities, and neighborhoods.
- All alternatives have the potential to enable the development of civic spaces and downtown cores in both larger and smaller cities.
- Many jurisdictions have implemented design programs – from guidelines to advisory boards. New development and redevelopment will occur under these programs, which have the potential for high quality design, and perhaps improvements to existing aesthetic qualities in some areas.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Intensification in scale in currently most-developed areas. • Intensification in scale in unincorporated urban and rural areas. • Impacts to rural character and resources through intensification, including high potential for loss of vegetation and landscapes in rural areas.	• Highest intensification in scale in currently most-developed areas. • High potential for loss of vegetation and open space in metro cities and core cities.	• Second highest intensification in scale in currently most-developed areas. • Potential for loss of vegetation and open space in larger cities and core cities. • Change in scale and character of larger cities, with these cities having much higher levels of employment.	• Highest intensification in scale in smaller cities, and unincorporated urban and rural areas. • High potential for loss of vegetation and landscapes in rural areas. • Change in scale and residential character of these cities and areas, with them having much higher employment levels.

5.13 — Earth

Contents and Analysis

This chapter analyzes the growth distribution alternatives in relation to the region's geologic features, which include earthquakes, landslides/erosion, volcanic hazards, flooding, and coal mine subsidence. Each could cause a disaster, however, the severity of the impact and number of people and properties affected could depend on where and how growth is distributed under the different alternatives. Some highlights are noted below regarding impacts.

Impacts Common To All

- Hazards exist throughout the region. Earthquakes can impact every part of the region, and localized risks may vary. Floodways are more prevalent in agricultural areas, and volcanic hazards are more prevalent adjacent to Mt. Rainier in Pierce County.
- Alternatives that concentrate growth in urban areas expose more population and employees to impacts from localized events. However, urban areas also potentially have higher service levels and greater redundancy of services. Allocations to rural areas spread the risks, but also reduce the potential for higher levels of services.
- Development in rural areas may be near steep slopes, potentially increasing the risk for landslides and erosion.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Allocations to metro cities mean higher risks for impacts from liquefaction resulting from a seismic event, especially in industrial areas. • Allocations to rural areas and second highest amounts of growth to Pierce mean higher potential risks from volcanic activity.	• Allocations to metro cities mean highest risks for impacts from liquefaction resulting from a seismic event, especially in industrial areas.	• Dispersal of growth within urban area lessens the risk for impacts from liquefaction in industrial areas resulting from a seismic event, as compared to Metropolitan Cities.	• Largest allocations to rural areas and highest amounts of growth to Pierce mean highest potential risks from volcanic activity. • Allocations to rural areas have potential to impact or increase development in floodzones.

Distinct Impacts *(continued)*

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Allocations to rural areas have potential to impact, or increase development in, floodzones (see *5.6 – Water Quality*).			

5.14 — Noise

Contents and Analysis

This chapter discusses noise impacts based on past noise modeling performed in the region and on other relevant noise information. It focuses on transportation-related noise sources as well as ambient noise characteristics under different development patterns. Some highlights are noted below regarding potential noise impacts under the growth distribution alternatives.

Impacts Common To All

- Urbanization affects noise exposure through proximity (crowding, adjacency to noisy land uses, concentrated transportation activity) and through physical changes such as the replacement of vegetation with paved surfaces and buildings. Noise decreases with distance from the source, making mitigation and design important.
- With growth, there would be more noise from sources such as transportation, construction, maintenance, and other commercial and industrial operations. Noise levels would also increase where the physical environment changes, such as when vegetation is replaced with paved surfaces and buildings.
- The highest noise levels are currently in the most developed areas and this would likely continue under all of the alternatives. The differentiation would be in the number of people located, and therefore exposed, to these higher levels of noise under the different alternatives.
- Noise increases begin to be noticeable when levels double, and become readily perceivable when levels triple. It is less known how different noise levels impact wildlife.

6 — Environmental Justice Discussion

Contents

This chapter describes requirements for metropolitan planning organizations to asses whether actions have disproportionate impacts on minority and/or low-income populations in the region. The chapter describes existing locations and trends for minority and/or low-income populations, and assesses the alternatives to determine if there are disproportionate impacts. Some highlights are noted below regarding impacts.

Analysis and Impacts Common To All

- Nationally and regionally, higher levels of growth in minority and/or low-income populations are predicted in proportion to the general population. While minority and low-income populations are found throughout the region, some historic concentrations exist in older urban areas.
- None of the alternatives is anticipated to result in disproportionately high and adverse effects on minority and/or low-income populations, although the alternatives may vary in the intensity of growth-related impacts that could occur in localized areas.
- Focus groups conducted in 2005 identified affordable housing and the availability of sufficient transit to access employment and services as the most important issues for minority and/or low-income populations.
- Alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) that concentrate growth in metropolitan cities and core suburban cities are likely to have higher potential positive and adverse impacts. Impacts range from displacement, different housing and potential transportation costs, to better access to employment and services using transit.
- Alternatives (such as Smaller Cities and to a lesser extent Growth Targets Extended) that disperse growth throughout the region, and farther away from areas that have traditionally had the highest concentrations of minority and/or low-income populations are likely to have fewer impacts. For example, while there could be less pressure for displacement, there could also be less access to jobs and services using transit.
- An overall assessment is that minority and/or low-income populations benefit the most from alternatives that direct new growth into areas that are closer to major employment centers and are better served by transit.

Housing

Analysis and Impacts Common To All

- All the alternatives will produce price pressure on housing costs. However, costs for housing, and affordable housing, are based on a complex set of site-specific factors, including unit costs, land costs, costs of associated infrastructure, and more (see *5.1 – Housing*).
- For low- and very low-income populations, full cost-of-living considerations must be taken into account, making the analysis of the alternatives more complex and variable.
- All alternatives have varying levels of potential for displacement of minority and/or low-income populations through gentrification, especially if they increase traffic congestion and lead to more market pressure for movement to closer-in areas.
- Displacement is a key issue, particularly for areas that have good access to job centers, comparatively low housing prices, and high architectural values – all of which are more typically found in older urban areas (where minority and/or low-income populations are most concentrated), as compared to suburban and exurban locations.

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Growth allocations to metro cities could result in a high potential for displacement. • Housing development in metro cities could likely include more non-traditional housing types, such as multifamily, townhouses, and condominiums, which could provide additional home ownership opportunities.	• Similar to Growth Targets Extended, growth allocations to metro cities have a high potential for displacement. • Similar to Growth Targets Extended, there is potential for more non-traditional home ownership opportunities than under the other two alternatives.	• Displacement is likely to be a lesser issue given the more limited concentration of minority and/or low-income populations outside of the metro cities and core cities areas, unless traffic congestion leads to more market pressure in closer-in areas.	• Displacement is likely to be a very minor issue under this alternative, unless traffic congestion leads to more market pressure in closer-in areas.

Employment

Distinct Impacts

Growth Targets Extended Alt.	Metropolitan Cities Alternative	Larger Cities Alternative	Smaller Cites Alternative
• Second highest concentration of employment within the region, potentially providing better access to jobs for minority and/or low-income populations. • Development in metro cities could bring new employment opportunities. • Residential growth is spread through the region, likely reducing (although not erasing) the potential positive impacts of concentrated employment growth in areas with higher transit levels.	• Highest concentration of employment within the region. • Greater potential for housing to be close to employment centers, potentially providing better access to jobs for minority and/or low-income populations. • Development in metro cities and core cities could bring new employment opportunities.	• Second highest dispersion of employment within the region. • Allocations result in a commercial land use pattern that is difficult to serve by transit (more than under Growth Targets Extended and Metropolitan Cities, but less than under Smaller Cities), which could create challenges for minority and/or low-income populations. • Development in larger cities and core cities could bring new employment opportunities.	• Highest level of dispersion of employment within the region. • Allocations result in a commercial land use pattern that is the most difficult to serve by transit, creating the most challenges for minority and/or low-income populations. • Development in smaller cities and unincorporated urban areas could potentially lead to the creation of new local activity centers, which might increase employment opportunities.

Transportation

Analysis and Impacts Common To All

- Minority and/or low-income populations are, in general, more transit-dependent than other residents. Alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) that provide better adjacency and transit access between employment and housing sites have more potential to better serve minority and/or low-income populations.
- Vehicle miles traveled, average trip times, hours of delay, and congestion are likely to impact minority and/or low-income populations similarly to other residents.
- See *5.3 – Transportation*, for more information on transit access and other transportation performance results.
- See *5.2 – Land Use*, for more information on estimates regarding transit proximity.

Air Quality

Analysis and Impacts Common To All

- Regional-level air quality impacts are the lowest under alternatives that minimize vehicle miles traveled, delay, and maximize transit and walk/bike mode shares (such as Metropolitan Cities and to a lesser extent Larger Cities).
- Local-level air quality impacts are location-dependent. While minority and/or low-income populations are located throughout the region, the highest concentrations are in King County and in older urban areas in the other counties. Alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) that concentrate growth into these areas are likely to have higher potential exposure to air quality emissions than alternatives (such as Smaller Cities and to a lesser extent Growth Targets Extended) that disperse growth.
- See *5.4 – Air Quality*, for more information on air pollution results.

Services/Facilities

Analysis and Impacts Common To All

- All alternatives could likely require additional infrastructure. For minority and/or low-income populations, the impacts primarily relate to access and cost.
- Alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) that focus development in areas that have existing infrastructure, or are already planning for additional infrastructure, are generally more likely to provide better access to services and facilities. These types of alternatives have the potential for minimizing the need for new infrastructure and potential for meeting increased demand by augmenting existing facilities and services.
- Understanding the cost implications of retrofitting or expanding existing infrastructure versus building new infrastructure is complex. Generally, the literature suggests that new infrastructure is more expensive, and that the environmental impacts of new infrastructure are likely to be much higher than upgrades to existing infrastructure.
- See *5.7 – Public Services and Utilities*, for more information.

Environmental Health and Noise

Analysis and Impacts Common To All

- Local-level exposure to hazardous waste sites and to noise and noisy land uses are location-dependent. While minority and/or low-income populations are located throughout the region, the highest concentrations are in King County and in older urban areas in the other counties (which is where the highest concentrations of hazardous waste sites and noisy land uses are located), increasing the potential impacts.
- Alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) that concentrate growth into these areas are likely to have higher potential exposure to hazardous waste emissions and to noise than alternatives (such as Smaller Cities and to a lesser extent Growth Targets Extended) that disperse growth.
- For hazardous waste sites, alternatives (such as Metropolitan Cities and to a lesser extent Larger Cities) have greater potential than the others to lead to the cleanup of brownfields or other polluted sites. This would provide an environmental and health benefit to minority and/or low-income populations.
- See *5.9 – Environmental Health*, for more information on results regarding hazardous waste sites and locations.
- See *5.14 – Noise*, for more information on results regarding noise related impacts.

D. Next Steps

After the release of the Draft Environmental Impact Statement, the Regional Council will engage in the following steps.

Public Comment Period on Draft Environmental Impact Statement

The public comment period will last 60 days, with the Regional Council doubling the required period in order to encourage additional comments.

Supplemental Draft Environmental Impact Statement with Preferred Alternative and Draft VISION Document

Following public review, the Growth Management Policy Board will work with staff and consultants to incorporate changes, select a preferred growth alternative, and publish a Supplemental Draft Environmental Impact Statement. The preferred growth alternative will be selected from the range of alternatives examined in the Draft Environmental Impact Statement (including the potential for a hybrid of the alternatives) and will be analyzed alongside the other alternatives. A draft VISION document containing revised multicounty planning policies will accompany the Supplemental Draft Environmental Impact Statement. Both are tentatively scheduled for release for additional public comment in mid 2007.

Final Environmental Impact Statement and Final VISION Document

After the second public review period, the Regional Council's boards will work with staff and consultants to incorporate changes and publish a Final EIS and Final VISION document. The tentative schedule is to release the Final EIS and revised VISION in 2008.

Final Review and Action

The Regional Council's policy boards and committees will review and take final action to recommend approval to the Executive Board. The Executive Board will, in turn, make its recommendation to the Puget Sound Regional Council's General Assembly. The Regional Council's General Assembly is scheduled to take action on the updated VISION in 2008 (see *Chapter 3 – Introduction and Background*).

E. Overview of Contents in the Draft Environmental Impact Statement

The Draft Environmental Impact Statement represents a major milestone in the development of a revised and enhanced regional strategy. The primary purpose of the document is to describe and analyze the potential environmental effects of four growth distribution alternatives. The document is not a draft strategy, but rather a tool to help the region's policymakers develop a draft strategy in the coming months.

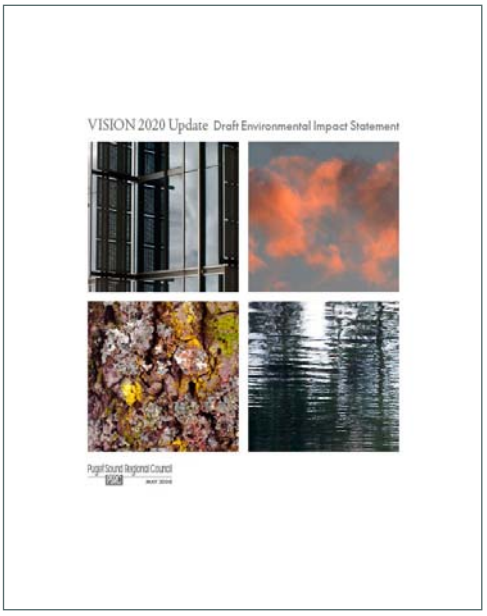
The Draft Environmental Impact Statement is a plan-level, or non-project, environmental impact statement and is prepared consistent with the State Environmental Policy Act. Due to the scope of a regionwide proposal that spans a 35-year timeframe, the document is complex, but it is structured to allow the reader to understand the most significant and vital information concerning the proposed action, alternatives, and impacts without turning to other documents.

The content of the Draft Environmental Impact Statement is consistent with the requirements of the State Environmental Policy Act for non-project actions (Washington Administrative Code 197 11 440 and WAC 197 11 442) (see *Chapter 1 – Purpose and Need*).

The contents are as follows:

Table of Contents

This includes a table of contents, a list of appendices, and a list of figures.



Fact Sheet

This describes the proposed action, the project proponent and lead agency for EIS review, names the Regional Council's SEPA Responsible Official and contact person, lists necessary licenses and approvals, principal contributors, the date of issue, information regarding the comment period and how to comment, dates of project actions, next steps, related documents, and options for acquiring the document.

Executive Summary

The content of the stand-alone *Executive Summary* is identical to the one in the full Draft Environmental Impact Statement, except the stand-alone version contains a separate comment form.

1. Purpose and Need

This describes the purpose of the VISION 2020 update, the need to update, and the need for environmental review.

2. Regional Environmental Baseline

The Regional Council recognizes that we live in a fragile and interconnected global and regional environment. The Regional Council desires to help provide leadership and stewardship in protecting the region's environment. While not required by the State Environmental Policy Act, the Draft Environmental Impact Statement contains a Regional Environmental Baseline chapter that draws together the regional environmental picture, raises the level of regional environmental analysis, and is meant to be useful for other planning efforts.

The baseline discussion is organized around the following questions: (a) What is the nature of the region's environment? (b) What has been happening to the region's environment over the past 150 years? (c) Who are the region's environmental actors and what are they doing? and (d) What can VISION 2020 contribute? This section does not address future impacts, but instead focuses on what we know today.

3. Introduction and Background

This chapter provides background information regarding the region and the Regional Council. It describes the update process, the role and structure of a preferred growth alternative, and presents the evaluation criteria that will be used for its selection.

4. Definition of Alternatives

This chapter defines the four growth distribution alternatives that are analyzed in the Draft Environmental Impact Statement. The chapter discusses the process to develop the alternatives (the Regional Geographies), and then describes the alternatives in text, map, and tabular formats.

5. Environment Effects and Mitigation

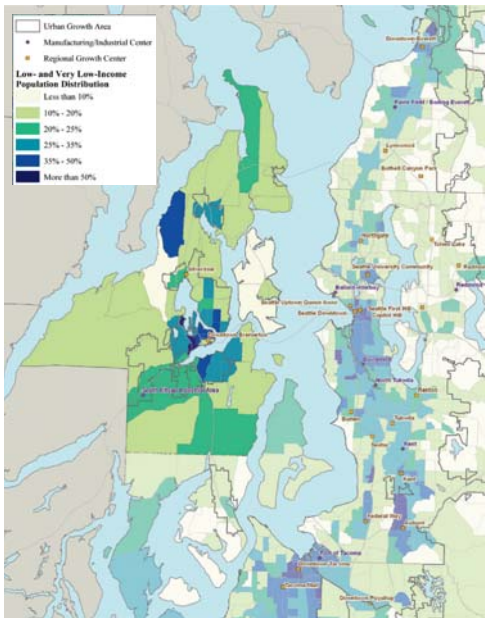
This chapter represents the majority of the Draft Environmental Impact Statement. It provides an overview of the impact analysis approach for a plan-level review. All of the elements of the environment (WAC 197 11 444) are addressed and, pursuant to provisions allowing for additional flexibility for non project proposal environmental impact statements (WAC 197 11 442), are combined in a manner that best supports regional scale analysis of the four alternatives. These include the following:

- *Population, Employment and Housing*
- *Land Use*
- *Transportation*
- *Air Quality*
- *Ecosystems*
- *Water Quality and Hydrology*
- *Public Service and Utilities*
- *Parks and Recreation*
- *Environmental Health*
- *Energy*
- *Historic, Cultural, and Archaeological Resources*
- *Visual Quality and Aesthetic Resources*
- *Earth*
- *Noise*

Discussion of all of the elements of the environment contain the following parts: (a) the affected environment, (b) analysis of alternatives' potential long term impacts, (c) cumulative effects analysis, (d) potential mitigation measures, and (e) potential significant unavoidable adverse impacts.

Note: A summary of the findings of *Chapter 5* is shown in Section C of this *Executive Summary*.

COUNTY-LEVEL ENVIRONMENTAL JUSTICE ANALYSIS



6. Environmental Justice Discussion

While not required by the State Environmental Policy Act, the Draft Environmental Impact Statement contains an analysis of the potential benefits and impacts on minority and lower-income populations (referred to as "environmental justice" populations in federal legislation). This chapter is based on federal guidance, builds on current environmental justice efforts, and contains the following: (a) background on environmental justice statutes and past analysis by the Regional Council, (b) an analysis of the potential impacts of alternatives for defined populations, and (c) a discussion of how to continue to involve minority and lower-income populations in the update process.

Note: A summary of the findings of *Chapter 6* is shown in Section C of this *Executive Summary*.

7. Discussion of Multicounty Planning Policies

The analysis of the four alternatives in the Draft Environmental Impact Statement is part of a process that will lead to an updated VISION 2020 strategy, complete with updated multicounty planning policies. This chapter discusses the existing policies, along with possible revisions for the updated VISION.

Comment Form

To facilitate public comment, the Regional Council has enclosed a comment form at the end of the stand-alone *Executive Summary* and the Draft Environmental Impact Statement.

Appendices

The following appendices are provided:

A. References

B. Glossary/Acronyms

C. Evaluation Criteria for Selecting a Preferred Alternative

D. Overview of Key Models and Output Data

E. Compilation of Issue Papers and Informational Papers

F. Existing Multicounty Planning Policies

G. List of Preparers

H. Distribution List