



Environmental Justice Discussion

This chapter describes requirements for metropolitan planning organizations to assess 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 summary highlights regarding impacts are noted below.

6.1 Background and Documentation

In 1994, President Clinton issued Executive Order 12898, focusing federal agency attention on environmental justice issues. The order states: “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

The Final Environmental Impact Statement has been prepared pursuant to the Washington State Environmental Policy Act, which does not require preparation of an environmental justice analysis. However, the Puget Sound Regional Council (PSRC) has prepared this environmental justice analysis to promote the principles of environmental justice, continue current environmental justice efforts, and facilitate any future environmental justice analysis. This study is based on the guidance set forth in the U.S. Department of Transportation’s Order to Address Environmental Justice in Minority Populations and Low-Income Populations, subsequently referred to as the USDOT Order (USDOT, 1997).

The USDOT Order requires agencies to:

1. “...provide meaningful opportunities for public involvement by members of minority populations and low-income populations during the planning and development of programs, policies, and activities (including the identification of potential effects, alternatives, and mitigation measures).”
2. “...provide the public, including members of minority populations and low-income populations, access to public information concerning the human health or environmental impacts of programs, policies, and activities, including information that will address the concerns of minority and low-income populations regarding the health and environmental impacts of the proposed action.”

The USDOT Order provides that “[i]n making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design,



comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas.” (USDOT Order § 8(b))

Since the mid-1990s, a renewed emphasis on environmental justice has become an integral part of the transportation planning process for urban regions in the United States. PSRC has demonstrated an ongoing commitment to environmental justice in its plans and programs. Including environmental justice considerations in the planning and decision-making process is intended to:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the planning decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The purpose of this analysis is to document the efforts made to involve minority and low-income populations in the project planning and related environmental processes and to assess whether the alternative selected could result in disproportionately high and adverse effects on low-income or minority populations, taking into account mitigation measures and benefits, as appropriate. However, the planning and outreach, as well as the mitigation measures and practices discussed, are applicable to other groups that are not specifically identified in the USDOT order. This includes immigrants from other countries, as well as persons with disabilities.

6.2 Methodology

Consistent with the USDOT Order, PSRC took the following steps to conduct this environmental justice analysis:

- The study area was defined as the four-county PSRC region. The relevant census tracts located within the study area were identified using 2000 U.S. Census data.
- The 2000 U.S. Census was used to identify the locations of minority and low-income populations in the study area. The minority and low-income data were broken out into ranges to depict relative concentrations of low-income and minority residents. This was done in 2003.
- Using this data, PSRC developed additional public outreach efforts and research tasks designed to involve minority and low-income populations in the process used to define the scope for developing VISION2040, and the decision of how to incorporate environmental justice analysis in the Final Environmental Impact Statement, and in related environmental processes. See Section 6.3, community outreach.
- Based on past and present public outreach efforts, concerns and needs of minority and low-income populations were identified and are documented in the community outreach and affected environment sections of this study.
- Using the information developed through the analyses and processes described above, as well as the other information developed in the environmental review process, PSRC identified benefits, impacts, and mitigation measures to help assess whether the VISION 2040 could result in disproportionately high and adverse effects for minority and low-income populations.

6.3 Community Outreach

Providing meaningful public involvement opportunities to minority and low-income populations to involve them in the decision-making process is a key component of environmental justice. In implementing its plan development and related environmental review activities, PSRC has undertaken numerous public outreach efforts. These efforts include providing opportunities for public comment with ample notice, analyzing comments collected, and responding appropriately. Outreach efforts specifically targeting low-income and minority populations are summarized below.

6.3.1 PAST ENVIRONMENTAL JUSTICE OUTREACH

PSRC has demonstrated that its public outreach efforts have been some of the best in the nation for an organization of its kind. In fall 2003, PSRC commissioned an independent assessment to improve the agency's outreach and public involvement programs, in particular those targeted at traditionally underserved populations. The assessment found that PSRC's programs are consistent with the best outreach and involvement practices in use.

One of the five public participation goals of PSRC's regional planning work is to provide "...opportunities to heighten the participation and seek the advice and guidance of low-income and ethnic communities that do not consistently participate in the regional planning processes" (PSRC 2005a). The agency has created an "Environmental Justice Demographic Profile" to help define populations of concern regarding environmental justice issues and has addressed environmental justice issues in the development of *Destination 2030* and in the Puget Sound Regional Council 2005–2007 Transportation Improvement Plan.

Other public outreach and planning processes that preceded the VISION 2040 planning process, including efforts to specifically involve minority and low-income residents, are summarized in the appendices of several prior PSRC environmental documents, including *Destination 2030*.

6.3.2 VISION 2040 ENVIRONMENTAL JUSTICE OUTREACH

Broad and representative public involvement in comprehensive planning is a challenge for all groups, and the more abstract the policy, the more difficult it is to engage the broader community. Reaching out to environmental justice communities, however, presents additional challenges, such as cultural or historical differences that impede outspokenness about government issues, language or literacy barriers, fear of not being welcome at meetings that are attended by people who are racially different, and access to transportation to attend meetings.

Successful environmental justice efforts have taken these factors into account. Locally, planning efforts such as those for the Seattle Comprehensive Plan, Sound Transit plans and projects, the I-405 Corridor Program, and Seattle Housing's Hope VI projects have spoken to the need to use a variety of venues to get input, develop multilingual materials that inform non-English-speaking populations about project issues, speak about issues in terms that are relevant to a population group, and work within existing environmental justice community networks and media.

To help overcome language barriers, populations with limited English proficiency were identified using information on race and ethnicity and guidelines from the U.S. Department of Justice. The Department of Justice recommends that agencies consider providing language translation services if an ethnic group with a primary language other than English composes 5 percent or more of an area. Many census tracts have Asian and Hispanic populations greater than 5 percent. Additional census data confirms that the most common non-English languages spoken are Spanish and Chinese (PSRC, 2003). Other non-English languages commonly spoken in the region are Tagalog, Korean, and Vietnamese. PSRC is in the process of determining what materials will be translated into what languages. PSRC advertises in public meeting notices that translation services are provided upon advance request.

Several approaches were considered for developing an environmental justice research and outreach plan to support the development of VISION 2040. These included survey research, focus groups, key informant interviews, and community leader workshops. All of these methodologies have or will be used in developing VISION 2040.

Scoping

PSRC has made special efforts during the scoping of VISION 2040 to include the concerns of minority and low-income communities. PSRC provided notice of the VISION and of opportunities to comment and participate to over 300 community and social service organizations that provide services to and represent minority communities, persons with disabilities, and seniors. All notices were published in community newspapers with high minority and low-income readership. In addition, PSRC staff distributed special targeted notices to social service stakeholders. A mini workshop and discussion with the El Centro de la Raza leadership committee explored social justice issues.



Environmental Justice Planning Group

In fall 2004, PSRC augmented its environmental justice program with several additional steps. It formed an environmental justice planning group, composed of environmental justice experts from federal agencies, academic institutions, local jurisdictions, and the Regional Council itself. PSRC hired an outside consultant to develop an environmental justice research plan for the agency, with suggested next steps that might be taken in its environmental justice research and analysis.

PSRC will expand its Environmental Justice Planning Group to include leaders from minority and low-income communities identified during the environmental justice focus groups discussed below. The planning group will provide regular contact with an engaged group of informed citizens. It will also benefit from the ideas and input of an influential group of stakeholders who will help to communicate the outcome of the group's work to other organizations and bodies.

Prosperity Partnership Regional Economic Summit

In November 2004, PSRC convened, with several other government and business leaders, the Prosperity Partnership Regional Economic Summit, a multicounty economic development conference attended by more than 1,100 individuals. In an afternoon breakout session, about 40 participants developed the following recommendations for engaging minority and low-income communities:

- Establish guiding principles for outreach that capitalize on the strength of our diverse communities.
- Create an economic development “movement” that uses existing coalitions (including non-traditional coalitions) to reach those less involved.
- Provide clear, consistent messages that speak to the needs of all communities, all ages, and all economic groups.

These principles guided the environmental justice outreach for VISION 2040.

Environmental Justice Focus Groups

The focus group format was judged to be the most effective and productive way to ensure that the issues and concerns of low-income and minority communities were incorporated into the Environmental Impact Statement analysis. Objectives of the focus groups were to identify priority environmental justice concerns and needs, allow PSRC to leverage existing communications networks to inform and involve the broader population about VISION 2040, provide additional information that might be necessary for future research and public outreach, and identify effective communications strategies to ensure that environmental justice populations were engaged in the final phases of developing VISION 2040. Focus groups were also seen as a way to validate information obtained from secondary sources, such as the U.S. Census Bureau.

In spring 2005, PSRC conducted workshops in Pierce, King, Snohomish, and Kitsap counties. Participants included a cross-section of minority and low-income leaders active in community development, economic development, housing, environmental, and referral services for low-income residents in all four counties. The workshops addressed the following topics:

- VISION 2040 environmental justice outreach.
- Key areas of interest in VISION 2040.
- Areas in which communities could be impacted, either positively or negatively.
- Perceptions of transportation needs.
- Methods and venues for involving the broader environmental justice community.

The environmental justice workshops offered insights into the issues of environmental justice communities. Environmental justice community needs identified in the workshops are summarized below and by topic area in Section 6.4, Affected Environment.

The main interest of focus group participants was in the interrelationships between transportation, employment, and housing. Access to employment, education, and social services are all affected by the quality of transit services. Strong support was expressed for environmental protection, even though discussion did not demonstrate a high degree of environmental activism among environmental justice communities. There was a sense that low-income and minority people experience environmental impacts more severely than other people because of the location of communities, quality of housing stock, and the need to augment food supply from home gardens and with fish and shellfish from polluted areas of Puget Sound.

Concerning outreach to environmental justice populations, the groups noted that participation through traditional venues, such as public meetings, is very challenging due to competing demands. Various factors contribute to the low level of awareness and engagement, including the following:

- Public meetings — typically held during on weekdays or on weekday evenings — are often inconvenient, especially for those who are involved in shift work or who must attend to family responsibilities.
- Other than in very urban areas, the region's environmental justice communities are dispersed throughout the four counties. For those dependent upon public transportation, infrequent or nonexistent transit service can make participation in community meetings or decision-making processes challenging.
- Some countries from which recent immigrants come do not value — and sometimes even punish — civic engagement.
- Language or literacy barriers can prevent non-English-speaking people from understanding the content of public notices, advertisements, and comprehensive planning documents.
- Comprehensive planning is often somewhat esoteric to people not familiar with land use, transportation and policy planning. Many people do not make the connection between comprehensive planning and their immediate priorities.
- Minority and low-income people often do not feel comfortable or welcome in settings dominated by middle-class white people.
- Many minority and low-income people do not feel their input is desired, and can be skeptical that their input will be taken into account.
- While many immigrant and non-English-speaking populations have active advocacy and support groups that can facilitate communication with their respective communities, these groups have not been historically well connected to regional decision-making processes. These groups constitute a communications infrastructure that can serve as a trusted resource in facilitating the engagement of these groups.

Environmental Justice Public Workshops

PSRC conducted public workshops designed specifically to involve low-income and minority populations in the region. They were held in each county after the release of the Draft Environmental Impact Statement and after the release of the draft VISION 2040 document and Supplemental Draft Environmental Impact Statement. The workshops were conducted with the assistance of the agency's public affairs and communications consultants, Pacific Rim Resources. The workshops provided the ability to assess the opinions and attitudes of demographically and geographically diverse groups and generate and assess samples of regional views and attitudes. Results were communicated back on the agency Web site, in PSRC's *Regional VIEW* newsletter, and through direct mail back to participants.

6.4 Affected Environment

6.4.1 CURRENT DEMOGRAPHICS

VISION 2040 covers the entire four-county PSRC region. The environmental justice study area, therefore, is the PSRC region. PSRC identified census tracts within the study area to identify concentrations of minority and low-income populations. The PSRC region is made up of 553 census tracts. Race, ethnicity, and poverty status characteristics for the census tracts were reviewed as described below.



USDOT defines a minority as a person who is:

1. Black (a person having origins in any of the black racial groups of Africa).
2. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).
3. Asian (a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent).
4. American Indian or Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
5. Native Hawaiian or Other Pacific Islander (a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands).

Figure 6-1 summarizes the percentage of minorities by county.

FIGURE 6-1: MINORITY POPULATION SUMMARY IN 2000

County	Minority (Number)	Minority (Percent)
King	461,907	27
Kitsap	41,218	18
Pierce	167,886	24
Snohomish	100,826	17
Total	771,837	24

Source: U.S. Census Bureau, 2000

King County has the highest percentage of minorities (27 percent), followed by Pierce County (24 percent), Kitsap County (18 percent), and Snohomish County (17 percent) (Figure 6-1). The total percentage of minorities in the region is 24 percent. Census tracts with high concentrations of minority populations can be found throughout the region. The census tracts with the greatest percentages of minority residents are located in Bellevue, Bremerton, Burien, Des Moines, Everett, Federal Way, Kent, Lakewood, Lynnwood, Normandy Park, Renton, SeaTac, Seattle, Tacoma, and Tukwila. Due to the large scale of this analysis, some communities with high concentrations of minority populations may not be apparent. They are more likely to be identified in project-level analyses.

Population estimates for 2005 were compared to the 2000 census information and are listed in Figure 6-2.

FIGURE 6-2: MINORITY POPULATION ESTIMATES IN 2005

County	Minority (Number)	Minority (Percent)
King	533,963	30
Kitsap	44,954	19
Pierce	196,488	26
Snohomish	131,260	20
Total	906,665	26

Source: Claritas, 2005

The estimates suggest that the percentage of minorities in each county of the region has increased by 1 to 3 percent since 2000. According to estimates, the overall percentage of minorities in the region has increased to 26 percent.

Figures 6-3 to 6-6, shown on the following pages, depict the minority population percentages in each census tract (by range) in the region.

FIGURE 6-3: MINORITY POPULATION IN KING COUNTY

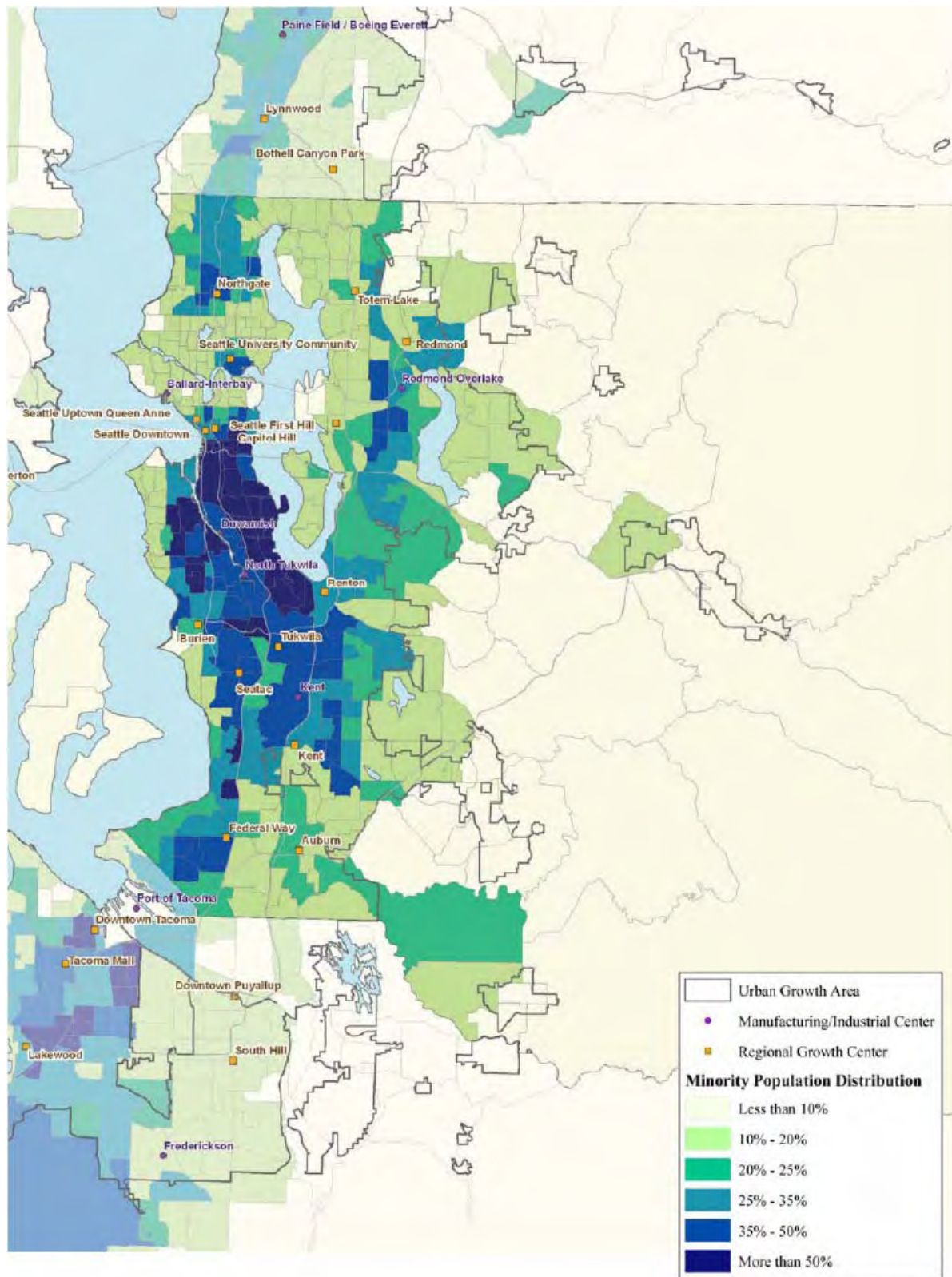


FIGURE 6-4: MINORITY POPULATION IN KITSAP COUNTY

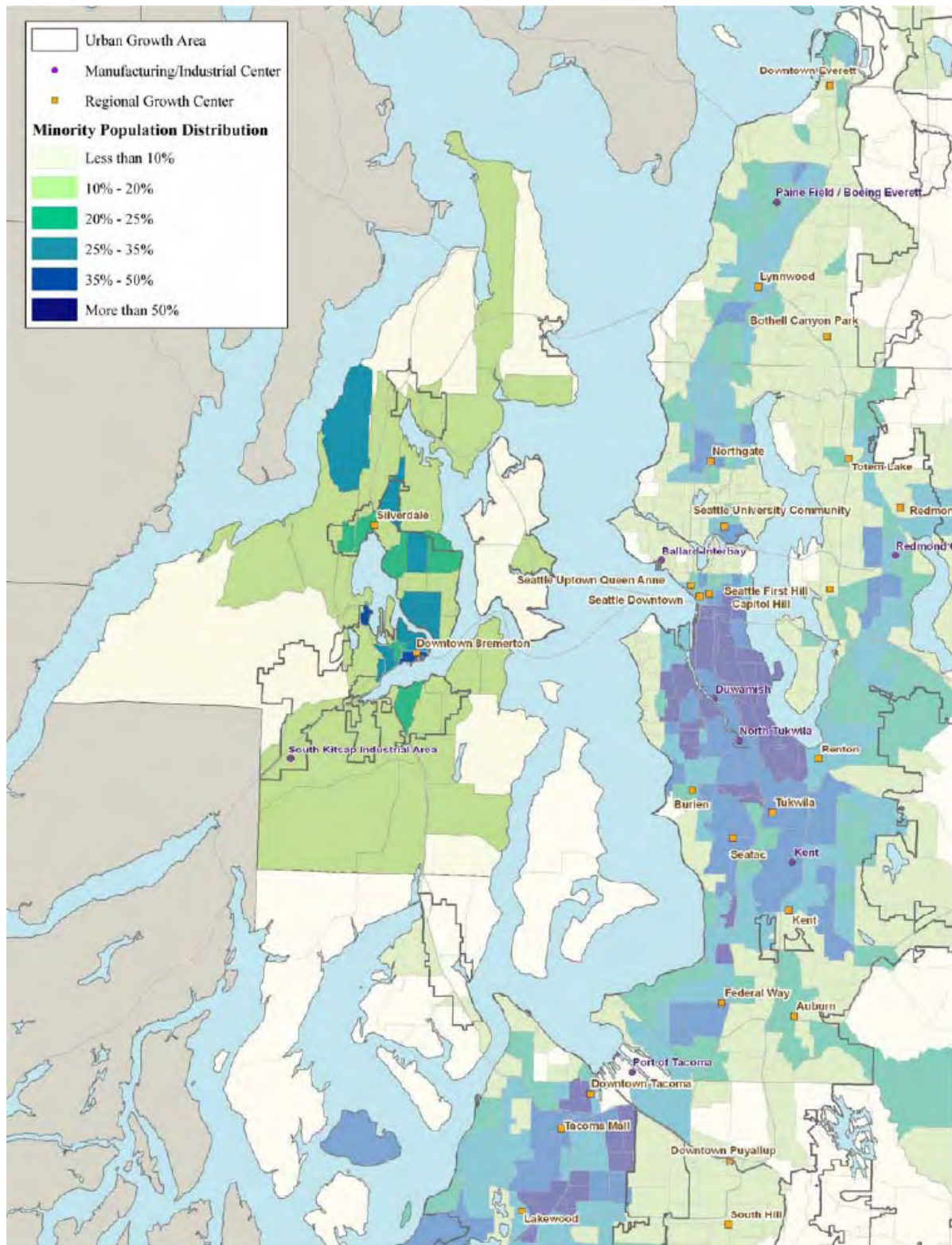


FIGURE 6-5: MINORITY POPULATION IN PIERCE COUNTY

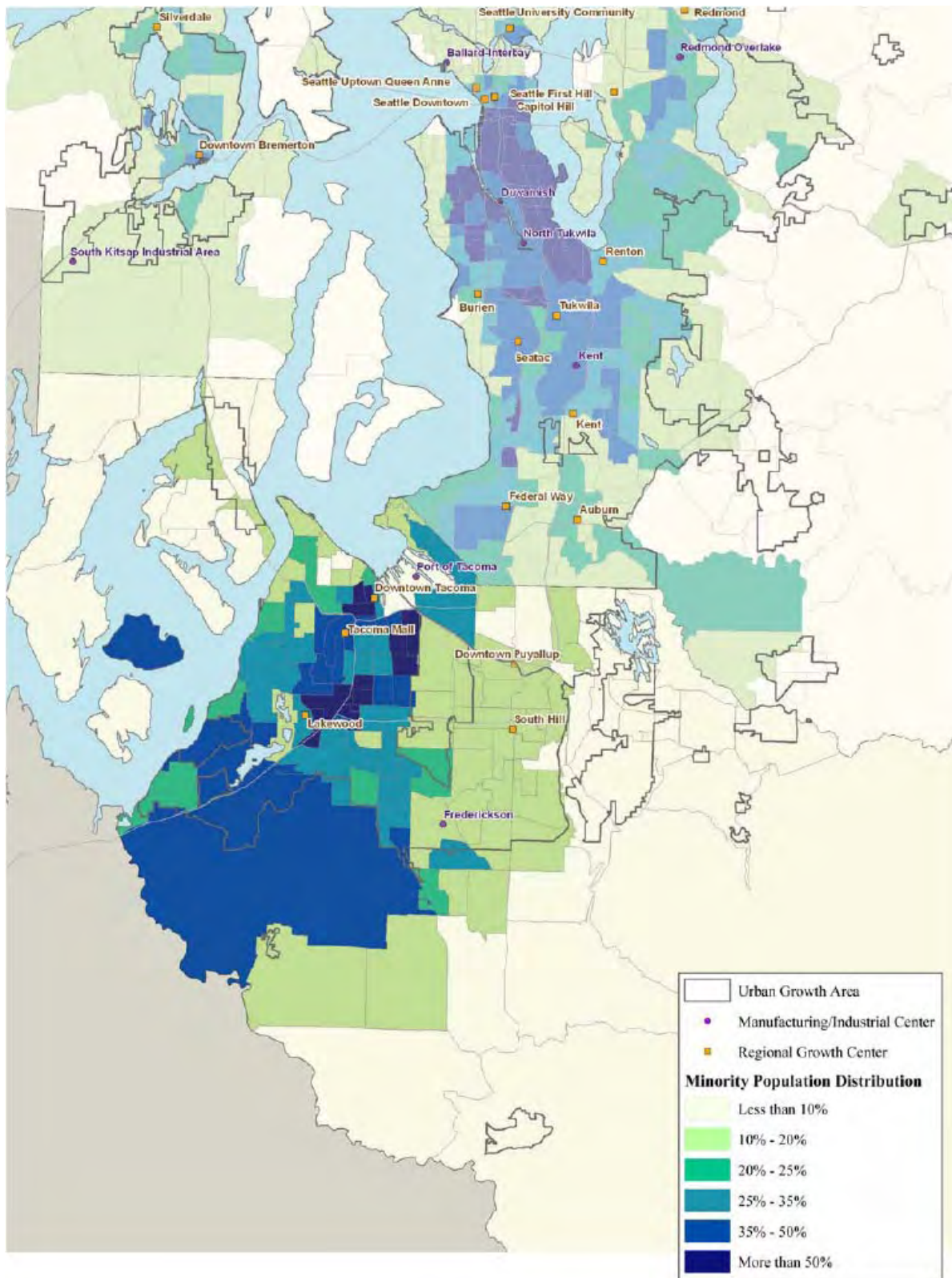


FIGURE 6-6: MINORITY POPULATION IN SNOHOMISH COUNTY

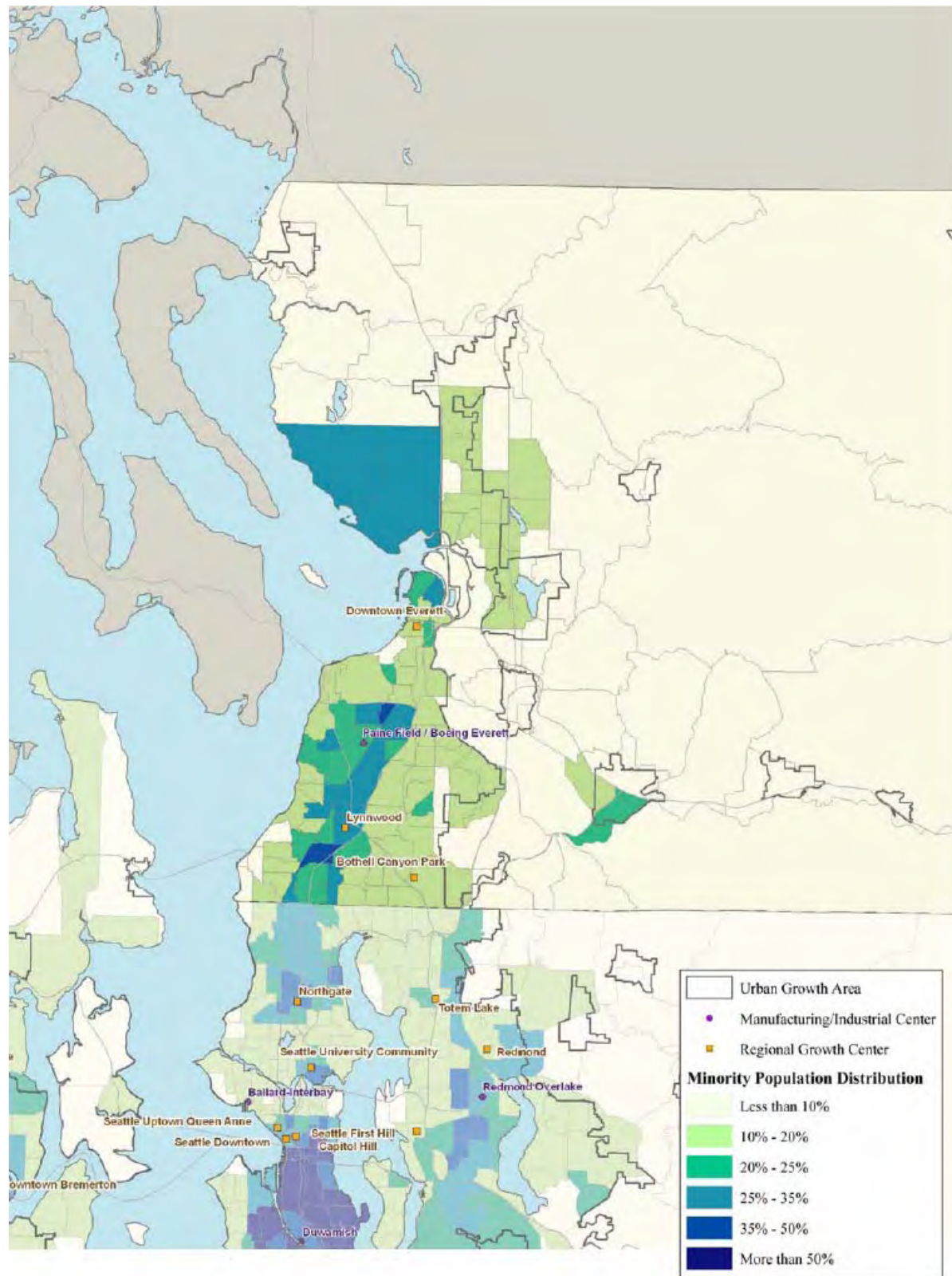


Figure 6-7 summarizes the percentage of low-income populations by county. Low-income is defined by the USDOT as a person whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines. Census data on poverty status was used to identify low-income populations. In response to public comments, low-income was divided into the two categories described below.

- Very low-income: individuals living below the poverty level. Following the Office of Management and Budget's Directive 14, the Census Bureau uses a set of money income thresholds that varies by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being below the poverty level.
- Low-income: individuals living at or near the poverty level (between 1 and 1.99 times the poverty level).

FIGURE 6-7: LOW-INCOME POPULATION SUMMARY BY COUNTY IN 1999

	Very Low-Income ¹ (Total)	Very Low-Income ¹ (Percent)	Low-Income ² (Total)	Low-Income ² (Percent)	Combined ³ (Total)	Combined ³ (Percent)
King	142,546	8	191,879	11	334,425	20
Kitsap	19,601	9	33,583	15	53,184	24
Pierce	71,316	10	105,718	16	177,034	26
Snohomish	41,024	7	68,969	12	109,993	18
Total	274,487	9	400,149	12	674,636	21

¹ Very low-income indicates the number or percentage of individuals living below the poverty level.

² Low-income indicates individuals living between 1 and 1.99 times the poverty level.

³ Combined indicates the number of individuals living below two times the poverty level, representing both low-income and very low-income populations.

Source: U.S. Census Bureau, 2000

In 1999, the region had 9 percent very low-income populations and 12 percent low-income populations (Figure 6-7). Pierce County has the highest percentage of very low-income populations (10 percent) and low-income populations (16 percent), followed by Kitsap County with 9 percent very low-income and 15 percent low-income. The subsequent figures (figures 6-8 through 6-15) depict percentages, by census tract, of (a) very low-income populations in order to show overall poverty status, and (b) a combination of both low-income and very low-income populations.

The figures show that most census tracts have less than 20 percent low-income and very low-income populations. The census tracts with the greatest percentages of low-income and very low-income residents are located in Auburn, Bremerton, Des Moines, Everett, Kent, Lakewood, Seattle, Sumner, and Tacoma. Due to the large scale of this analysis, some communities with high concentrations of low-income and very low-income populations may not be apparent. They are more likely to be identified in project-level analyses.



Very Low-Income Populations

FIGURE 6-8: VERY LOW-INCOME POPULATION IN KING COUNTY

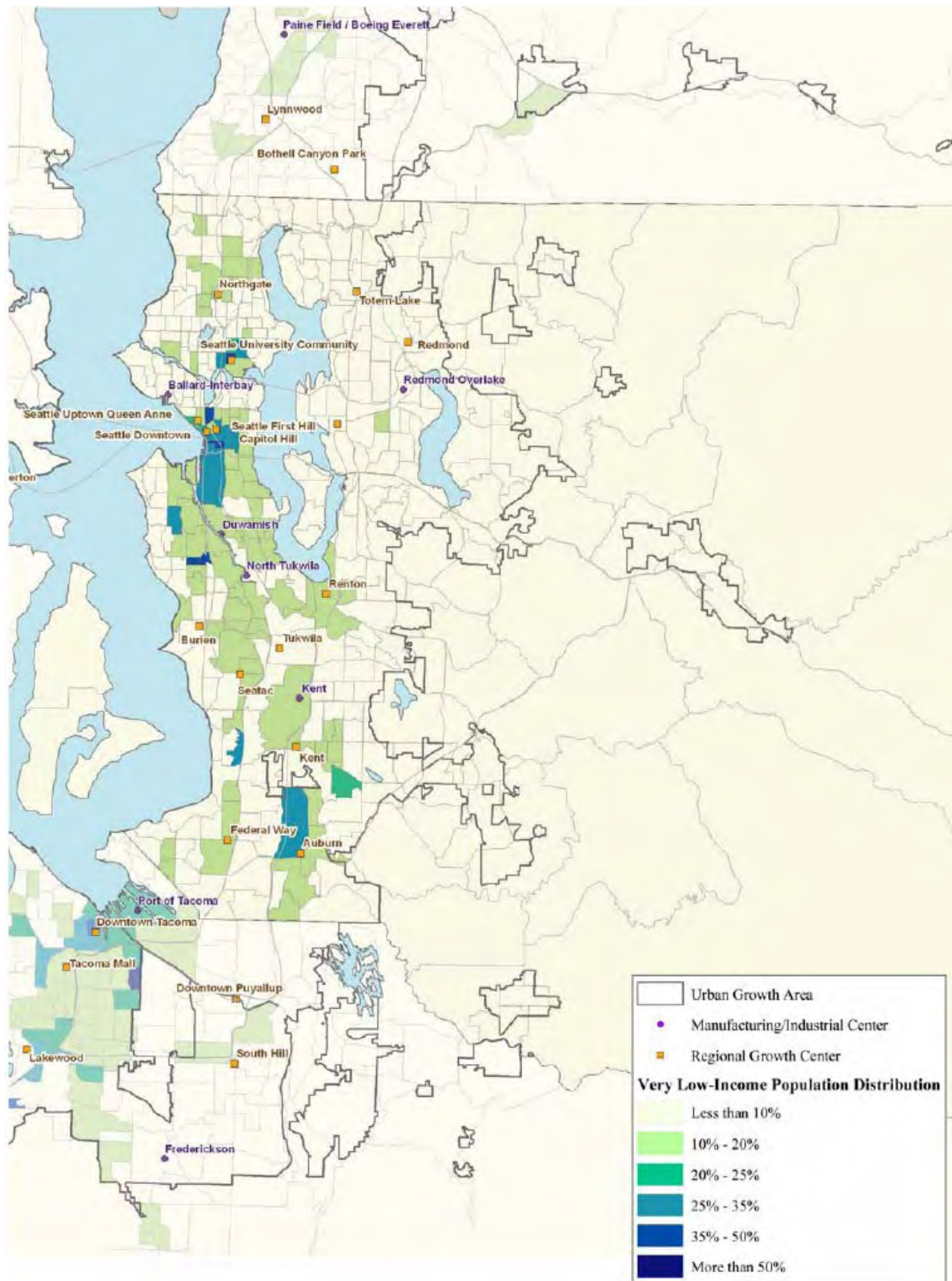


FIGURE 6-9: VERY LOW-INCOME POPULATION IN KITSAP COUNTY

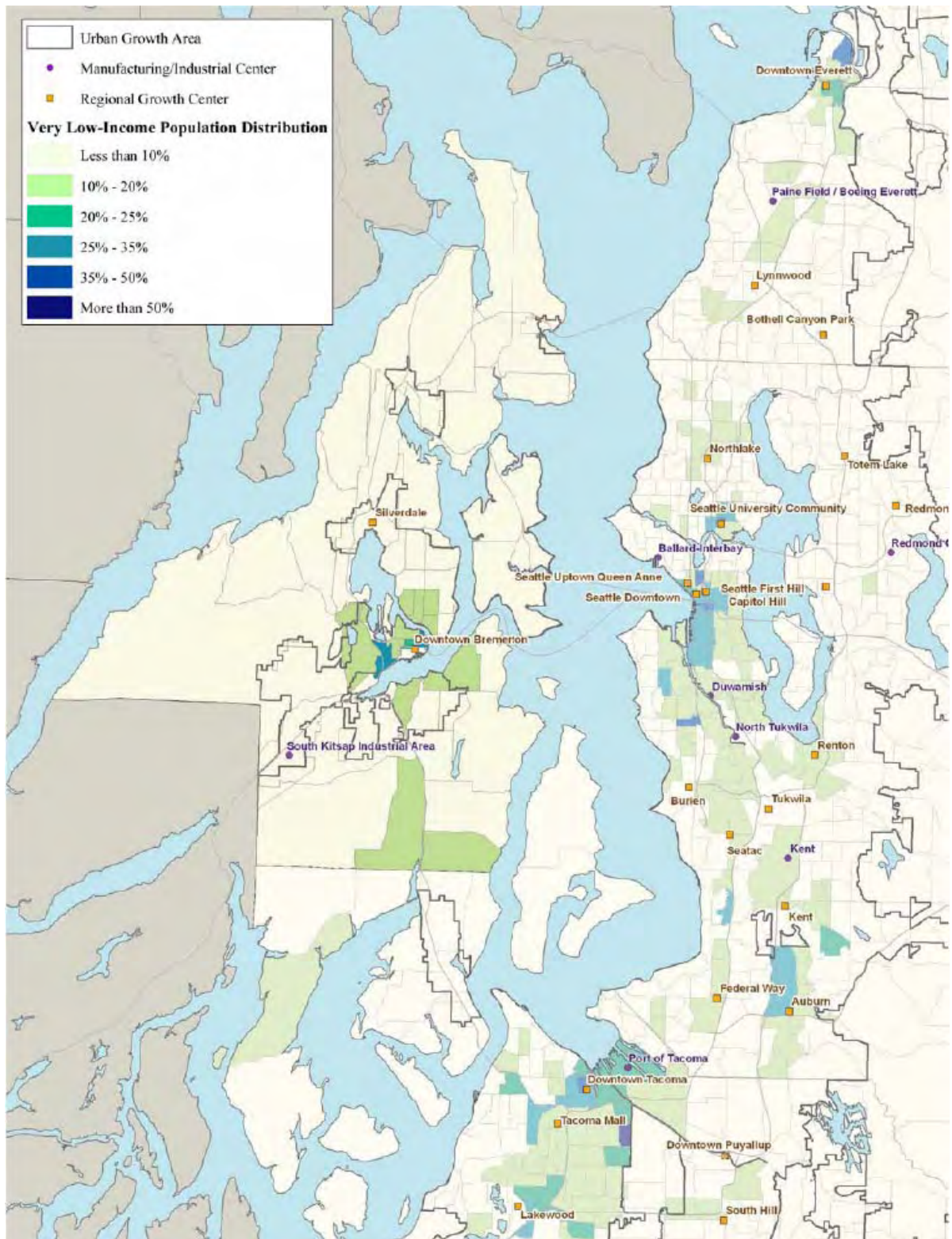


FIGURE 6-10: VERY LOW-INCOME POPULATION IN PIERCE COUNTY

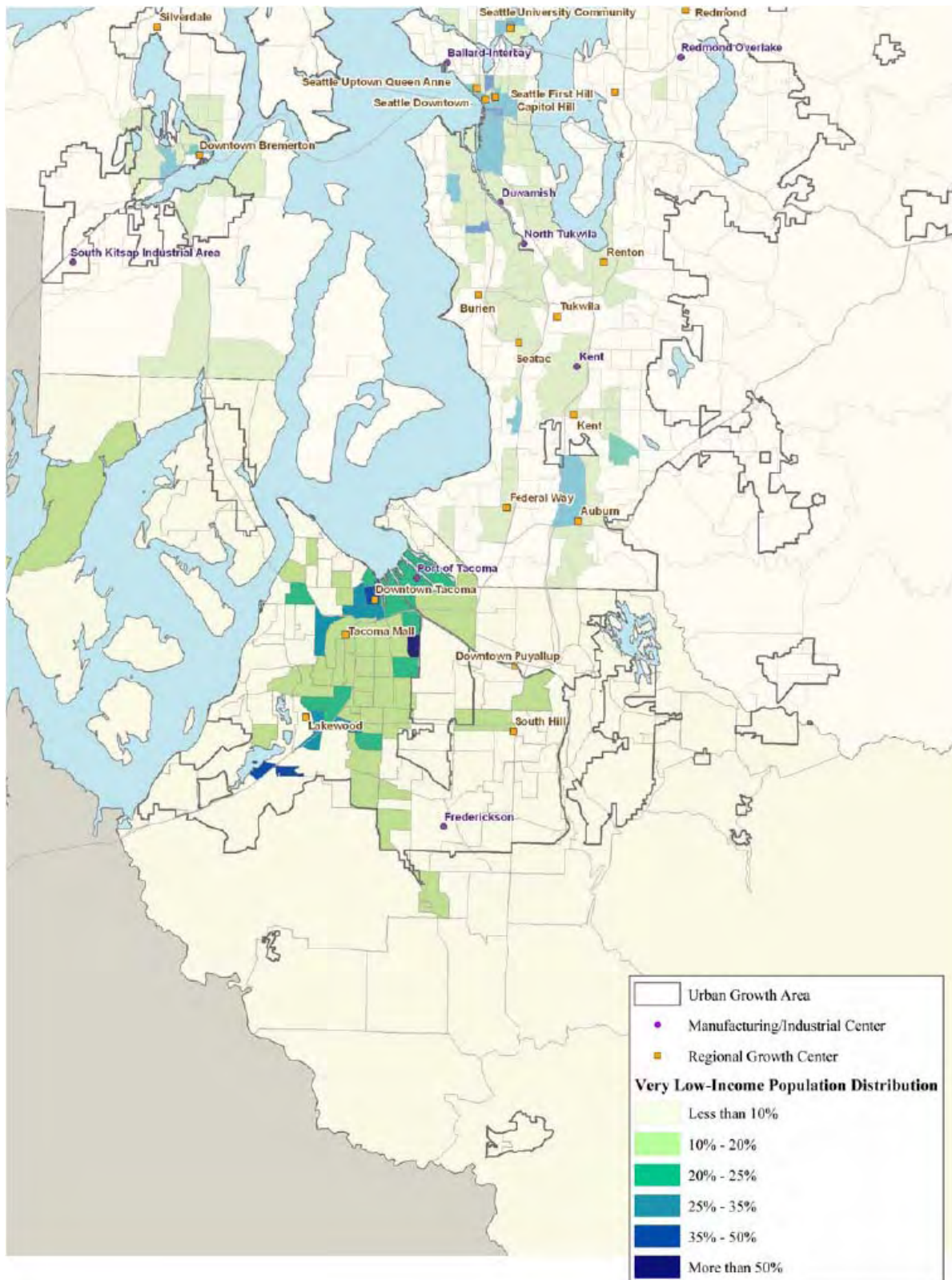
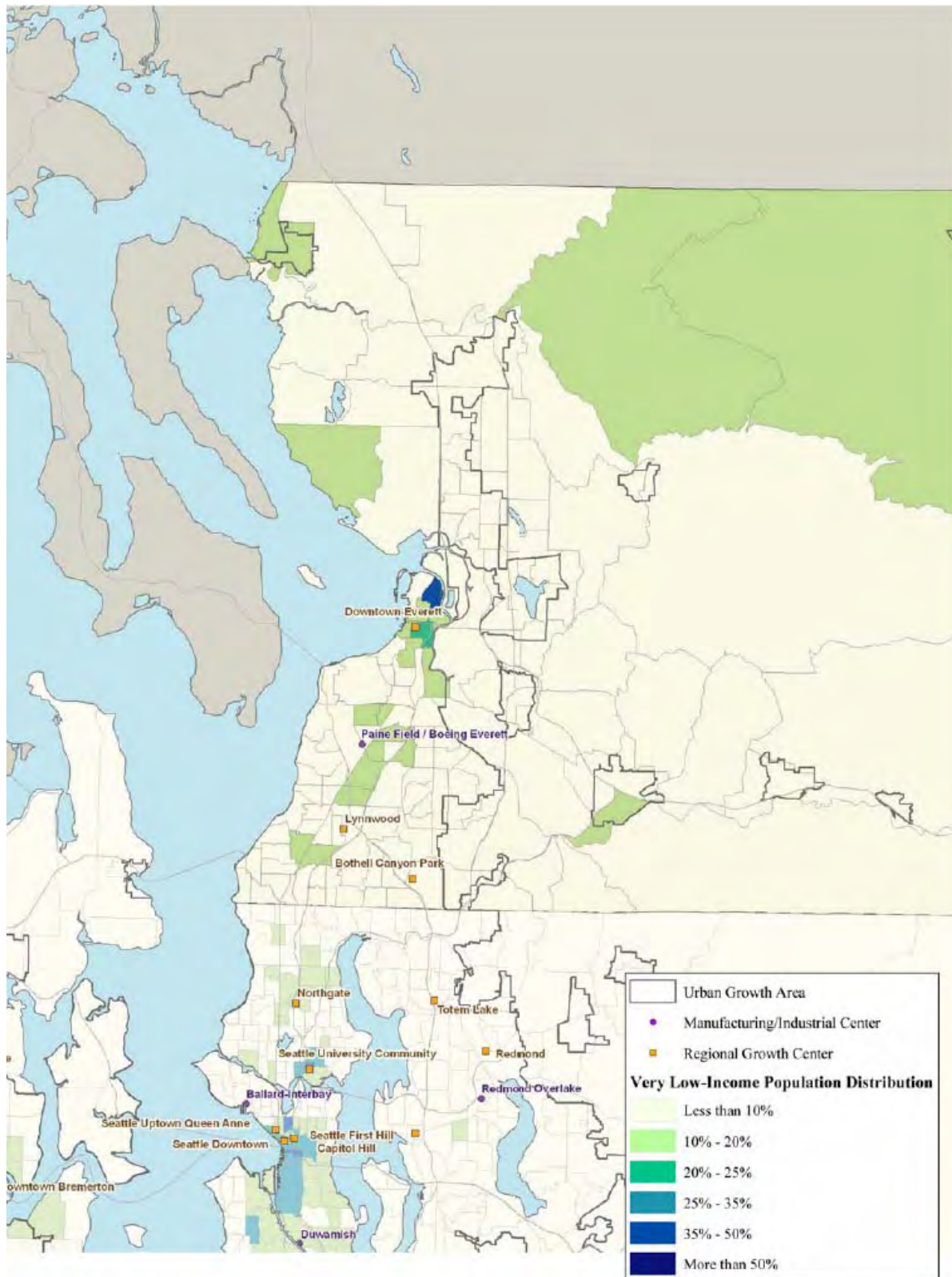


FIGURE 6-11: VERY LOW-INCOME POPULATION IN SNOHOMISH COUNTY



Low- and Very Low-Income Populations

FIGURE 6-12: LOW- AND VERY LOW-INCOME POPULATION IN KING COUNTY

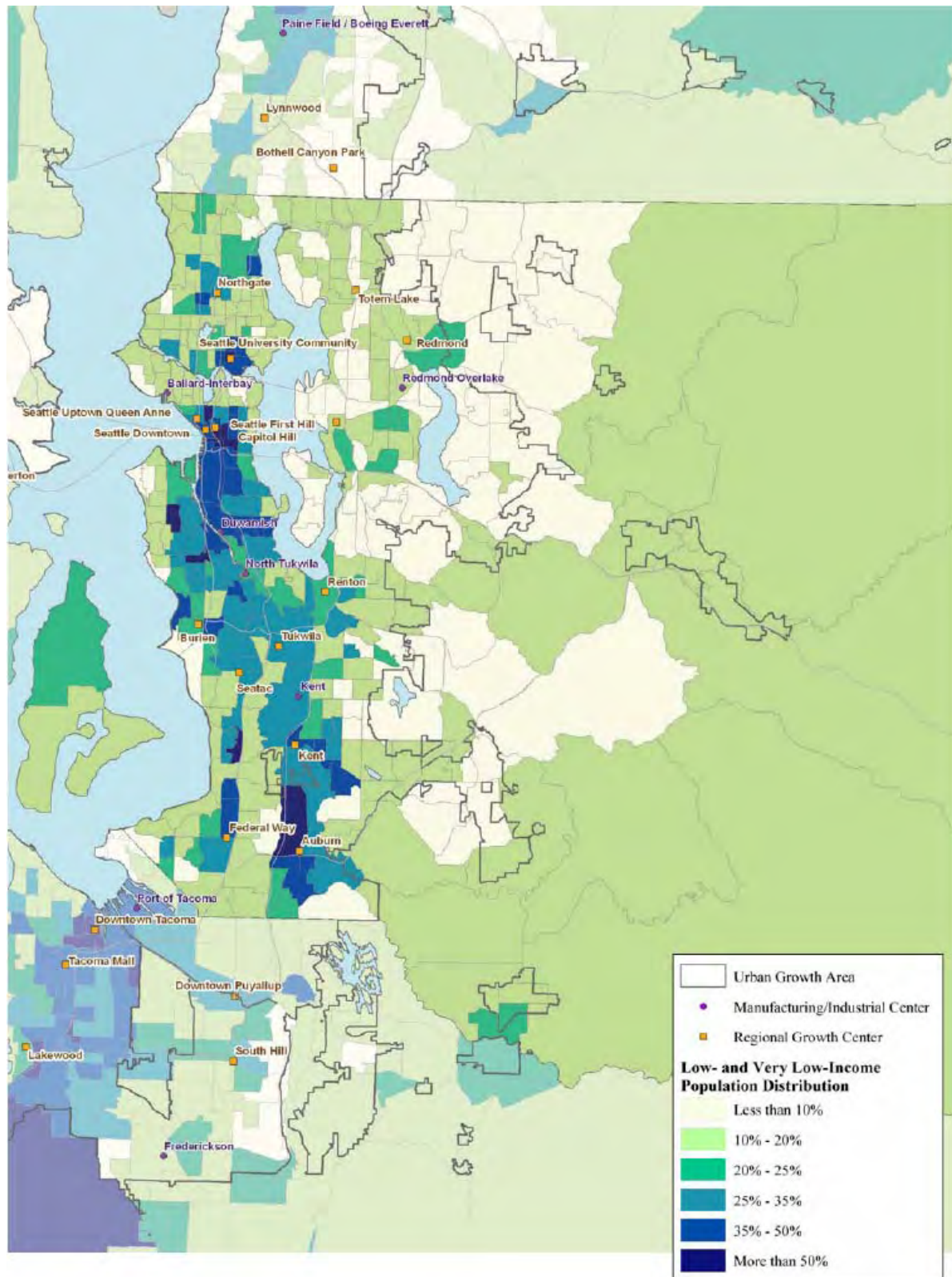


FIGURE 6-13: LOW- AND VERY LOW-INCOME POPULATION IN KITSAP COUNTY

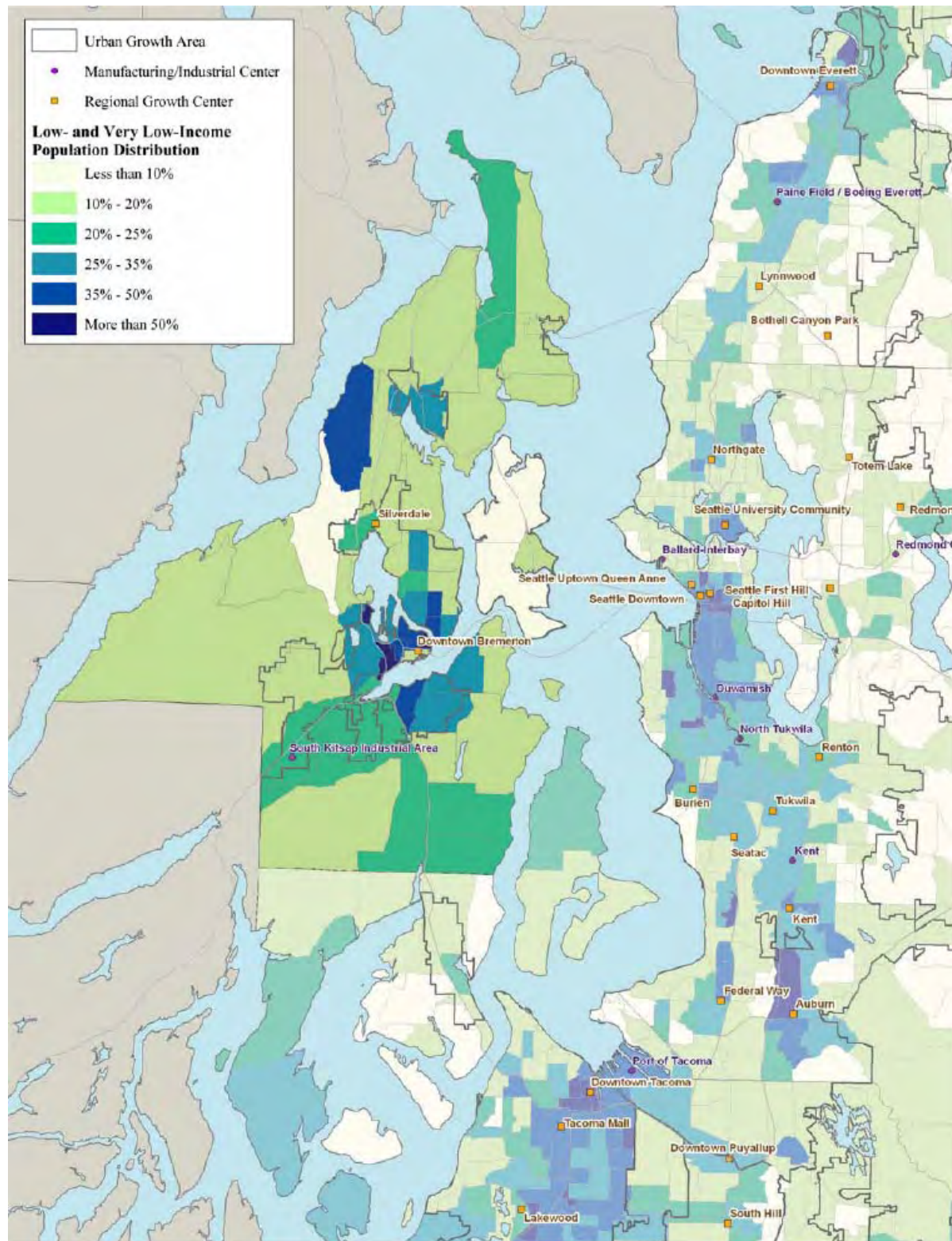


FIGURE 6-14: LOW- AND VERY LOW-INCOME POPULATION IN PIERCE COUNTY

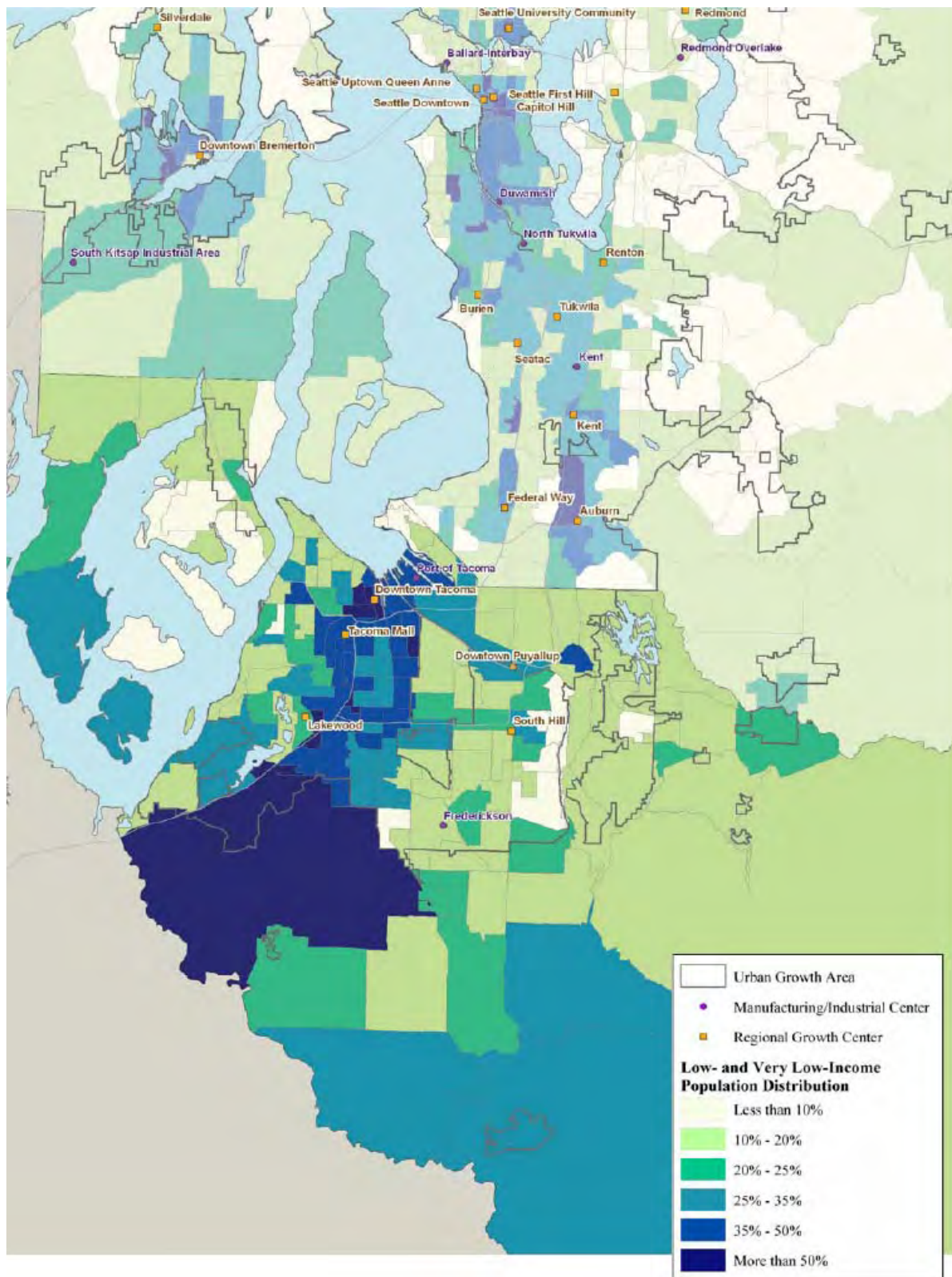
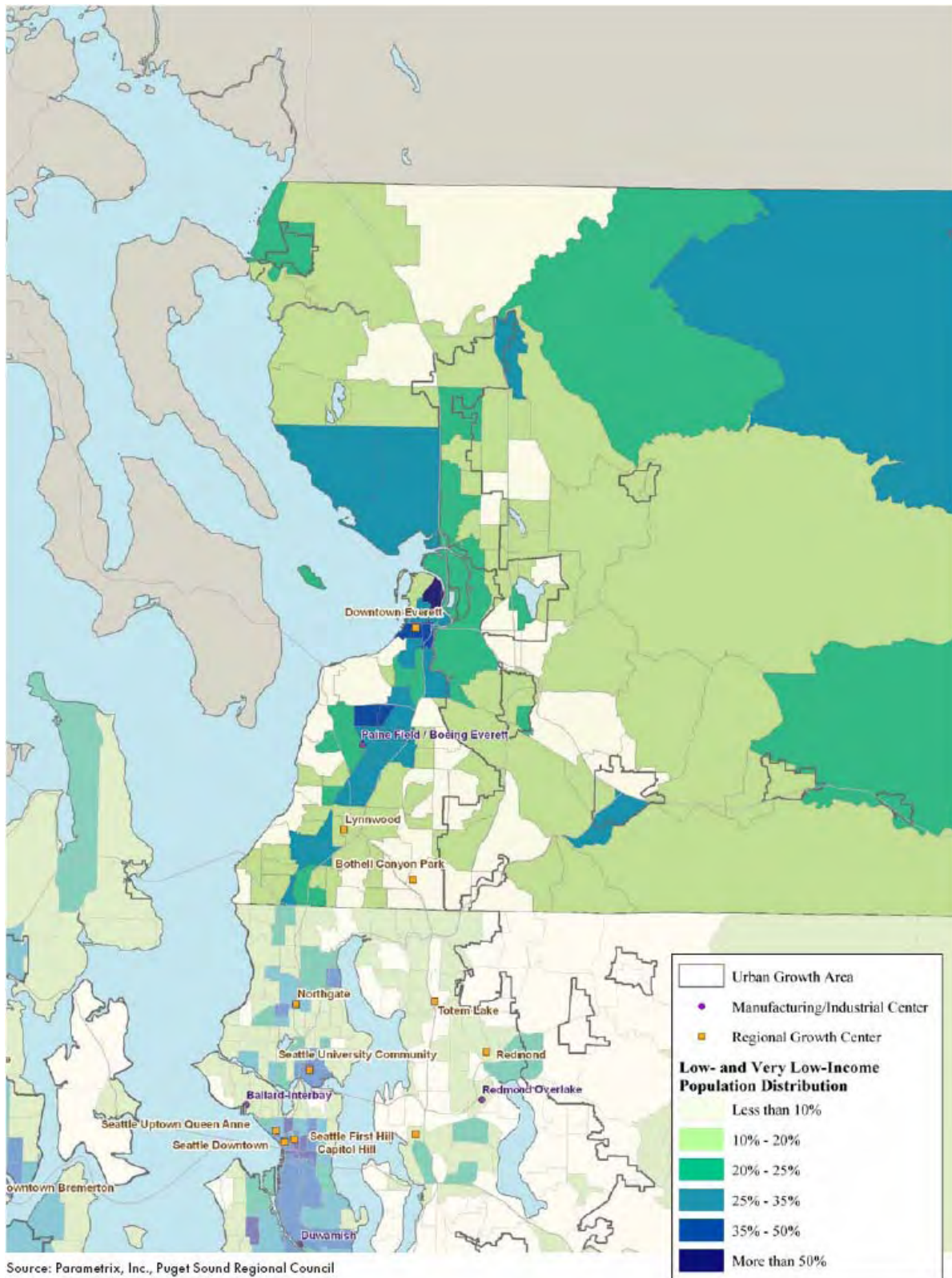


FIGURE 6-15: LOW- AND VERY LOW-INCOME POPULATION IN SNOHOMISH COUNTY



Source: Parametrix, Inc., Puget Sound Regional Council



6.4.2 DEMOGRAPHIC TRENDS

Minorities have historically composed a smaller share of the central Puget Sound region's population in comparison to many other major U.S. metropolitan areas and the nation (PSRC, 2005b). However, the region's racial and ethnic diversity increased between 1990 and 2000. In 1990, minorities represented 15 percent of the regional population, and in 2000 they represented 24 percent. This increase occurred not only at the urban core, but throughout its suburban communities as well. In particular, the Asian/Pacific Islander and Hispanic/Latino groups have grown. The Asian/Pacific Islander population grew from 6 percent in 1990 to 9 percent in 2000. The Hispanic/Latino population in the region grew from 3 percent in 1990 to 5.3 percent in 2000. This trend of increasing diversity for the region is also supported by the 2005 minority population estimates discussed in Section 6.4.1.¹

Poverty rates are lower in the central Puget Sound region than in the nation overall (PSRC, 2005b). While poverty decreased across the state and nationally from 1989 to 1999, it increased slightly in the region overall. Overall poverty in King and Snohomish counties increased from 1989 to 1999. Overall poverty in Kitsap and Pierce counties decreased from 1989 to 1999.

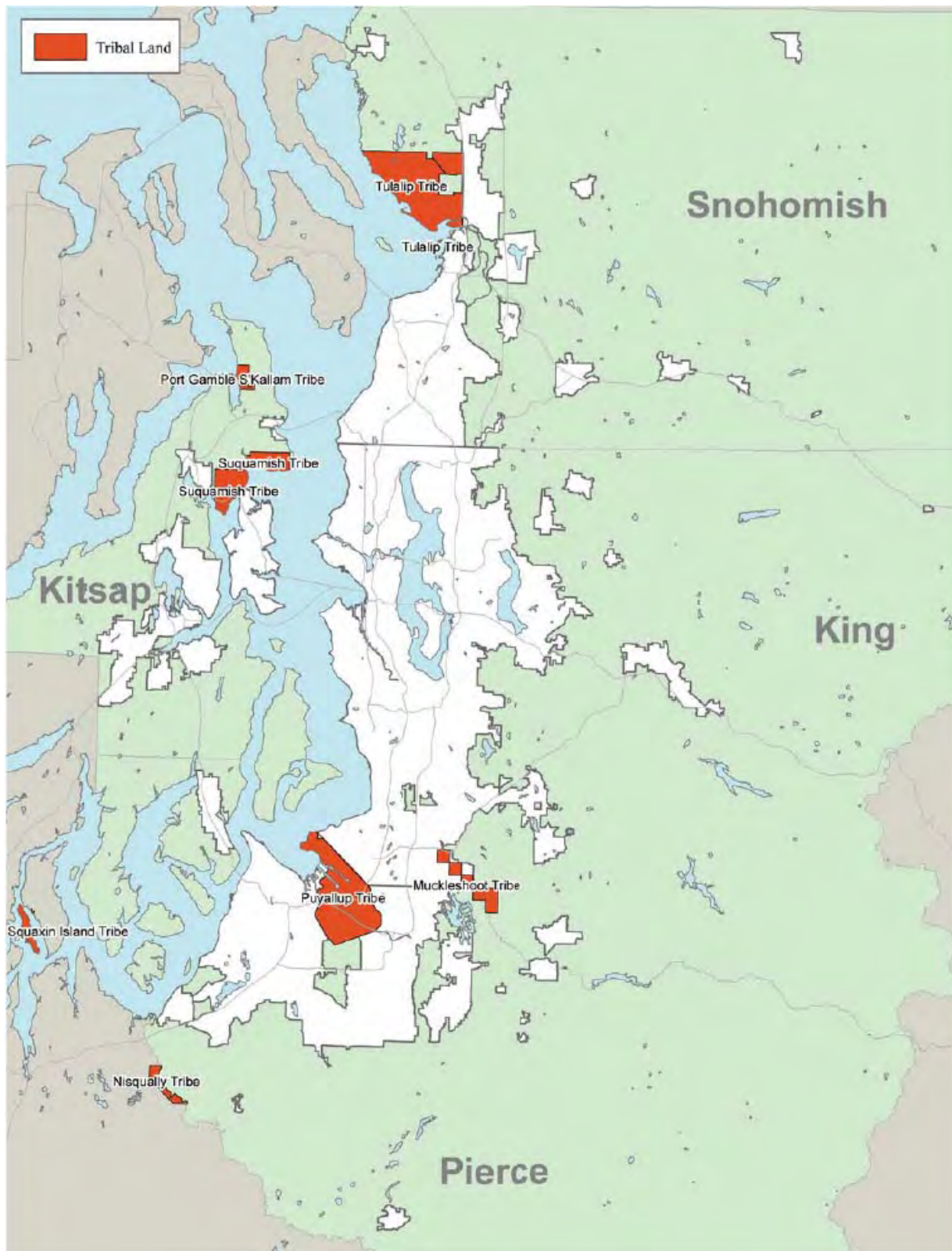
6.4.3 TRIBES

All of the tribes in the region could be affected indirectly by VISION 2040 through the provision of employment opportunities and transportation projects and impacts to usual and customary tribal areas located within the region. These potential issues related to tribal lands and resources are identified through coordination with the tribes. PSRC is consulting with the Duwamish Tribe, Muckleshoot Tribe, Port Gamble S'Klallam Tribe, Puyallup Tribe, Sauk-Suiattle Tribe, Snohomish Tribe, Snoqualmie Tribe, Steilacoom Tribe, Stillaguamish Tribe, Suquamish Tribe, and Tulalip Tribes. American Indians are included in the race/ethnicity demographic information summarized above. Figure 6-16 shows the locations of Indian tribal reservations in the region. The Puyallup, Muckleshoot, and Tulalip Indian Reservations are partially located within the region. Many of the tribes listed above have tribal resources in the study area but do not have reservations in the region.

In order to include tribal members in the scoping process, PSRC sent letters to the governments of the tribes listed above. The letter notified them of the process and invited them to the public open houses held in each county.

¹ The "two or more" race category was included on the federal decennial census questionnaire for the first time in 2000. Direct comparison between 1990 and 2000 U.S. Census Bureau data may be skewed, as individuals who chose (or would have chosen) "two or more races" in 2000, chose (or would have chosen) a single race category in 1990. The "Asian and Pacific Islander" race category was split into two race categories, "Asian" and "Native Hawaiian and Other Pacific Islander," in 2000.

FIGURE 6-16: INDIAN RESERVATIONS IN THE REGION



Source: Parametrix, Inc.



6.4.4 FOCUS GROUP FINDINGS

Transportation

Transportation-related findings from the environmental justice focus group are listed below. There was consensus among all four focus groups that the availability of transportation to and from low-income housing sites is not convenient for users of that system, particularly disabled individuals. Need was expressed for more express buses to and from low-income areas, more frequent buses, later bus times, and greater access to transit. One participant in Snohomish County, for example, reported that many low-income people are so completely cut off from transit that they can't get into Everett for services and employment. Intercity and intercounty connections were also said to be difficult for transit users.

Similarly, some in the King County focus group said that even when employers were willing to pay workers a living wage, transportation to and from affordable housing was still prohibitively difficult, with long commutes contributing to rising child-care costs. A professor at Everett Community College commented that her students often cannot afford the transportation costs associated with school and have to drop out. The groups mentioned that while some agencies have bus tickets available for free, that information is not widely disseminated. Participants agreed that outreach needs to be improved, so people know what services are available to them.

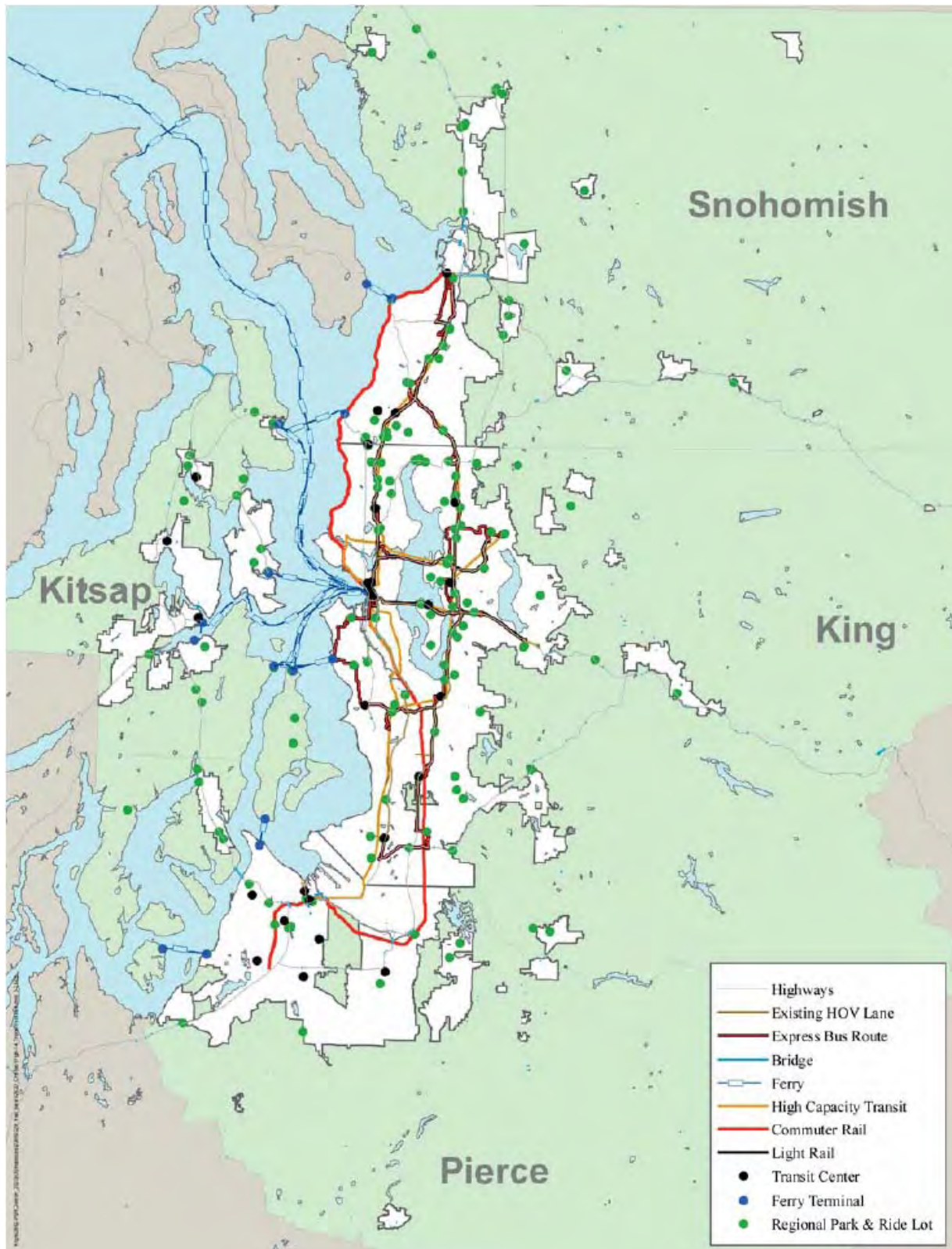
The focus groups noted that lower-income people are experiencing reduced access to transit as they are displaced to less dense or rural communities (due to loss of affordable housing in formerly affordable communities). This is particularly true of access during off-peak hours and for shift workers.

The focus groups said that access to jobs, health care, and other social services is important for minority and low-income populations. Other populations of concern that need improved access are seniors, disabled people, youth, people with HIV/AIDS, those just released from prison, recovering addicts, and people with bad credit. Strong support was expressed for increased transportation funding, including for tolls — if accompanied by good transportation alternatives. The need for more frequent, off-peak, and rural transportation alternatives was strongly supported.

National studies support the focus groups' emphasis on transit. Improvements to transit are especially beneficial to minority and low-income populations, because they are more likely to use transit than other groups. Analysts of the National Household Travel Survey found that minority and low-income households account for 63 percent of the nation's transit riders (Pucher and Renne, 2003).

Figure 6-17 shows transit facilities such as transit centers, park-and-ride lots, ferries, commuter rail lines, light rail lines, and other high-capacity transit lines in the region. By comparing the locations of minority and low-income populations to the locations of these transit facilities and bus system maps, it is possible to identify block groups with high concentrations of minority and low-income populations that do not have access to transit. King and Snohomish counties have extensive transit service, and there are no block groups with high percentages of minority and low-income populations that are not served by transit in those counties. According to some participants in the environmental justice focus groups, some low-income populations in Snohomish County do not have access to transit. Some block groups with high percentages of minority and low-income populations in southeast Pierce County are not currently served by transit. Although regular bus routes do not cover much of Kitsap County, the Kitsap County Dial-a-Ride program provides service to all riders in the county. PSRC has estimated that 62 percent of the regional population is within one-quarter mile of a transit route. About 80 percent of workers are within one-quarter mile of a transit route (PSRC, 2005d). As noted in comments above, although a majority of the population has access to transit, the transit service may not be frequent or convenient enough for many people's needs.

FIGURE 6-17: TRANSIT FACILITIES IN THE REGION



Source: Parametrix, Inc., Puget Sound Regional Council



Housing

This section identifies findings regarding housing affordability from the focus groups. Housing is also generally discussed in *Chapter 5.1 – Population, Employment, and Housing*. Housing is a major issue for minority and low-income populations. Among the public scoping comments, there was a strong emphasis on the importance of addressing affordable housing more fully and more concretely. Several respondents called for establishing affordable housing targets throughout the region. Other comments called for providing housing closer to jobs and services.

The environmental justice focus groups had observations on affordable housing in the region. Focus group participants noted that housing is becoming increasingly expensive, with requests for rent and mortgage assistance rising steeply. A major concern for the focus groups is the lack of affordable housing in core urban areas, leading to the growing distance between jobs and residences as low-income households have moved to more dispersed locations in search of affordable options. Development capacity in urban areas is an issue, and participants supported allowing taller buildings on existing land to increase urban capacity.

Concerns were expressed by the focus groups that the terms “urban village” and “mixed use” were buzzwords associated with higher-income populations. Low-income housing was said to be an undesirable living situation that carried a social stigma. Several participants expressed the opinion that zoning requirements can isolate low-income residents from members of other socioeconomic groups in the community. Such a situation breeds crime, and safety concerns keep the communities from being livable and walkable.

The Growth Management Act and VISION 2040 call for providing a variety of housing types and densities, and Census data provide evidence that the region is making some progress in diversifying its housing stock (PSRC, 2005c). The traditional detached single-family home continues to be a vital component of the housing stock. But non-traditional single-family housing, townhomes, and other multifamily housing options, which offer greater affordability and promote the efficient use of urban land, composed nearly half (45 percent) of the new units built in the region between 1990 and 2000. More jurisdictions are passing ordinances and zoning changes to allow for innovative infill, small lot single-family, multifamily, and mixed-use developments.

Despite these positive trends, the region continues to face a number of housing challenges, particularly in terms of affordability. Housing represents the largest basic monthly cost borne by most households. Housing is generally defined as being unaffordable when costs exceed 30 percent of a household’s gross monthly income. Census data show that the region’s households have to dedicate more of their income to cover housing costs, leaving less for other basic needs and amenities. In 1999, over 27 percent of homeowners spent 30 percent or more of their gross monthly income on housing costs. This represents a substantial upward shift in housing cost burdens from a decade earlier, when 55 percent of homeowners spent less than 20 percent of their income on housing, and only 18 percent spent 30 percent or more. Housing cost burdens did not shift noticeably for renters over the same decade. But 38 percent spent 30 percent or more of their gross monthly income on rent.

Rents rose rapidly during the late 1990s, although they have stabilized in recent years as a result of the 2001 recession. Home prices and property values continued to climb despite the onset of the recession, as demand was bolstered by buyers seeking to take advantage of low mortgage rates, and investors turning to real estate as an alternative to stock market investment. For many, the increase in home prices and rents exceeded income gains, raising the housing cost burden, particularly for lower-income households. Housing affordability data for all buyers show that declining mortgage rates did boost housing affordability for the typical homebuyer between 1995 and 2004, although the indices begin to show a decline in affordability from 2003 to 2004. First-time and low-income homebuyers also benefited, though not to the same degree as the average buyer. But first-time homebuyers indices indicate that each of the region’s counties suffers from a shortage of housing affordable to lower- and moderate-income households.

Homeownership represents a primary vehicle for many households to build equity and wealth. Federal policies and programs encouraging homeownership, in combination with declining mortgage rates, produced a noticeable rise in homeownership rates across the nation as well as in the Puget Sound region from 1990 to 2000. Yet homeownership rates in King and Pierce counties lag behind the national average. Moreover, while homeownership rates for non-white minorities showed significant improvement from 1990 to 2000, they still remain well below the average rates for all households. And, in a troubling trend, Hispanic/Latino homeownership rates declined in all counties except Kitsap, perhaps reflecting the tenure characteristics of recent immigrants.

In summary, Census and other data suggest that the region is showing progress in meeting one key component of the regional housing policy by increasing the diversity of available housing types and densities. But the region continues to struggle with the goal of providing an adequate supply of housing for all economic segments of the population. A significant share of renter households, low-income renters in particular, must dedicate more than 30 percent of their income toward rent. There has been a substantial upward shift over the last decade in how much owner households are paying monthly toward housing costs. And it remains extremely difficult for low- and even moderate-income starter households to purchase their first homes.

There are numerous available strategies that help promote housing affordability, and PSRC has developed a compendium of “Best Housing Practices,” which lists specific techniques and approaches. Many of these practices have contributed to the addition of affordable housing in the region, yet some of these practices are not being implemented at all, and most are not being consistently implemented across the region (PSRC, 2005c).

Employment

Additional comments on employment from the environmental justice focus groups are listed below. As discussed above in the transportation section, the focus groups considered access to jobs for minority and low-income groups a major issue. Kitsap County participants were particularly concerned about the way workers and jobs were matched up. They expressed concerns with nepotism, saying that jobs often go to people with connections, rather than the most qualified candidates. They also expressed concerns that companies often don’t do sufficient outreach to minority populations. Even in the midst of a nursing shortage, new immigrants with health care qualifications are unable to practice due to policy-related problems with the transfer of foreign credentials.

Urban centers and manufacturing/industrial centers, which are considered to be major employment centers, are labeled on Figure 6-18. From this information it is possible to compare the locations of minority and low-income populations to employment centers. In general, the block groups with the highest concentrations of minority and low-income populations tend to be near urban centers and manufacturing/industrial centers. Town centers, secondary centers, activity nodes, and redevelopment corridors are subregional centers that also provide employment, but are not included on Figure 6-18.

As mentioned above, access to jobs for minority and low-income populations was a concern consistently cited in the PSRC spring 2005 focus groups. The transportation section examined the proximity of transit services to minority and low-income populations. A comparison of Figure 6-17 (transit facilities), Figure 6-18 (regional growth and manufacturing/industrial centers), and transit agency bus maps reveals that most urban centers and manufacturing/industrial centers can be accessed by transit, with the exception of Fredrickson in Pierce County. Some subregional centers in Pierce County that may provide employment are also not accessible by transit. Subregional centers in King, Kitsap, and Snohomish counties are currently accessible by transit.



FIGURE 6-18: REGIONAL GROWTH AND MANUFACTURING/INDUSTRIAL CENTERS



Source: Puget Sound Regional Council, 2005

6.5 Analysis of Alternatives (Long-Term Impacts)

The following discussions focus on the primary impacts, by topic area, that could have an effect, positive or negative, on environmental justice populations. The analysis is based on the findings of *Chapter 5*, and reflects the broad patterns of distribution of environmental justice populations in the region according to the 2000 Census. The types of impacts described could apply to populations that may, in the future, emerge in locations other than where such populations are today. While the analysis of alternatives does not attempt to speculate about future changes in patterns of distribution, recent trends (1990 to 2000) have shown that increasing numbers of environmental justice populations are located outside of the traditional core cities, such as Seattle, Everett and Tacoma, and such trends are expected to continue.

6.5.1a LAND USE AND POPULATION

According to the environmental justice focus groups, VISION 2040 policies are perceived to be supportive of efforts to meet the needs of environmental justice populations, but focus group participants have recommended that the policies need to be augmented to avoid negative impacts on environmental justice communities. For example, urban density is sensed as positive and necessary to support the viability of both communities and transit, but participants suggested it must be accompanied by effective mechanisms to assure that affordable housing is available in urban areas at the same time urban density is being promoted. Participants reported that a lack of affordable housing in dense urban areas has in some cases pushed low-income people out to unincorporated urban and rural areas. Furthermore, some people who have been living in more affordable urban communities report that they are starting to become displaced by higher income households seeking relief from rising housing costs in other urban areas or traffic congestion in suburban areas. Some jurisdictions are trying to mitigate this trend by implementing affordable housing practices. This is especially important because federal housing subsidies are shrinking.

It has been assumed that the trend for minority and low-income populations to increase in proportion to the general population will continue at a similar rate as recent trends under all alternatives (see section 6.4.2, Demographic Trends). The rate of change in poverty may occur differently depending on socio-economic conditions and other factors, but is unlikely to be affected by urban growth patterns alone. The trend for low-income households to relocate to less developed, more rural areas may be influenced by the alternative implemented and its effect on housing costs, as some alternatives may be more likely to result in affordable housing than others (see section 6.5.2, Housing). Depending on where low-income and minority populations choose to locate throughout the region, lack of access to transit, services, and jobs is a concern.

- ***The Preferred Growth Alternative*** directs the majority of growth under the Preferred Growth Alternative is focused in the metropolitan and core cities, areas which have a higher level of environmental justice populations. Directing growth into already built urban areas where there is less vacant developable land could encourage and increase the potential for infill, redevelopment, and higher density development to accommodate growth. Increased development activity could likely bring new business opportunities, jobs, and a greater variety of housing choices to these communities. Redevelopment and infill have the potential to increase the quality of housing stocks and commercial structures, and to remediate existing environmentally degraded conditions.

The Preferred Growth Alternative also has the potential to increase demand for land and building sites, and therefore raise rents and land values. Improved housing conditions and physical infrastructure also carries the potential for the displacement of low-income populations in urban activity centers by higher income residents. Conversely, with more growth concentrated in urban activity centers, low-income and minority communities in the remainder of the region could encounter less development and redevelopment pressure. The Preferred Growth Alternative, by providing a closer jobs-housing balance than current plans, could also be expected to better serve minority and low-income communities.

- ***The Growth Targets Extended Alternative*** directs more concentrated growth than the Larger Cities Alternative to the region's metropolitan cities, but also directs significantly more dispersed growth than the Larger Cities Alternative to the region's small cities, unincorporated urban areas, and rural areas. Growth Targets Extended could produce more density in urban activity centers in metropolitan cities than the Larger Cities Alternative, but also less density in the region's core and larger cities, as well as a larger degree of low-density development in the region's outlying areas. Growth Targets Extended directs the largest amount of residential growth to rural areas of any of the alternatives. Rural areas have historically provided inexpensive land and



affordable housing opportunities. Increased demand and limits to density due to rural development restrictions could likely increase rents and land values.

- ***The Metropolitan Cities Alternative*** represents the most concentrated growth approach with the majority of population and employment growth directed to existing urban activity centers in the region's metropolitan cities and core cities. Directing growth into already built urban areas where there is less vacant developable land could encourage and increase the potential for infill, redevelopment, and higher density development to accommodate growth. Increased development activity could likely bring new business opportunities, jobs, and a greater variety of housing choices to these communities. Redevelopment and infill has the potential to increase the quality of housing stocks and commercial structures, and to remediate existing environmentally degraded conditions. This alternative also has the potential to raise demand for land and building sites, and therefore rents and land values. Improved housing conditions and physical infrastructure also carries the potential for the displacement of low-income populations in urban activity centers with higher income residents. Conversely, with more growth concentrated in urban activity centers, low-income and minority communities in the remainder of the region could encounter less development and redevelopment pressure.
- ***The Larger Cities Alternative*** also directs growth in a concentrated manner, but primarily to existing urban activity centers in core and larger cities. This could likely result in regional development and land use patterns similar to the Metropolitan Cities Alternative, but with less infill, redevelopment, and density in urban activity centers in the region's metropolitan cities, and increased development and redevelopment in urban activity centers within core and larger cities.
- ***The Smaller Cities Alternative*** represents the most dispersed growth approach, with the majority of population and employment growth directed to the region's outlying small cities, unincorporated urban areas, and rural areas. Development patterns in such areas, where there is considerably more vacant developable land, could likely see the most low-density single-family housing built at greater distances from existing large employment concentrations in the region's largest urban activity centers in metropolitan and core cities. However, local urban activity centers could develop in the region's small cities, offering some increased local job and housing opportunities.

Low-income and minority populations could likely benefit most from development patterns under the Metropolitan Cities, Preferred Growth, and Larger Cities Alternatives that direct the majority of population and employment growth to existing urban communities that are closer to major employment centers and are better served by transit. As minority and low-income communities have historically been more dependent on public transportation than the regional population as a whole, these alternatives could offer more and better access to a greater variety of housing and employment opportunities, and could likely improve the quality and condition of urban neighborhoods that have historically been the locations of concentrated minority and low-income communities. These more concentrated alternatives could also place less pressure on low-income and minority communities in other parts of the region.

6.5.1b EMPLOYMENT

Metropolitan Cities, Preferred Growth, and Larger Cities alternatives could likely have the greatest employment benefits for minority and low-income populations because they would direct employment growth to urban activity areas where these populations are already somewhat concentrated, where a larger stock of affordable housing exists, and where transit services are already available.

On the other hand, the Smaller Cities Alternative would result in the greatest dispersal of job growth across the region, resulting in commercial land use patterns that are difficult to serve by transit. As noted earlier, low-income and minority communities have historically been more dependent on public transportation for access to jobs and services than the population as a whole. The Growth Targets Extended and Larger Cities alternatives could result in commercial development patterns somewhere in between the most concentrated (the Metropolitan Cities Alternative) and most dispersed (the Smaller Cities Alternative) employment growth alternatives.

6.5.2 HOUSING

The most critical housing concern for low-income populations is the potential for lower income residents (both renters and homeowners) in a neighborhood to be displaced by higher income households. Areas that are most susceptible to this effect are those with access to job centers (freeways, public transit, reverse commutes), comparatively low housing values, and high architectural values. Given an increase in overall travel demand, worsening traffic conditions are likely

to raise demand for housing in neighborhoods closer, or with good access, to major employment centers. A related critical housing concern for low-income populations is the potential for lower income residents (both renters and homeowners) in a neighborhood to be displaced by higher income households. While this displacement process could be mitigated by the creation of affordable housing at a variety of income levels, displacement is a concern for all of the alternatives.

Development and land use patterns under the Metropolitan Cities and Preferred Growth Alternatives are likely to have the greatest potential for the construction of multifamily apartments, condominiums, and townhomes through infill and redevelopment (e.g., the conversion of older single-family homes to higher density developments) within urban areas. As such, it could promote more opportunities for non-traditional homeownership than the other alternatives. The Smaller Cities Alternative is likely to produce the highest amounts of traditional low-density single-family housing options in outlying communities in the region's small cities, unincorporated urban growth areas, and rural areas. The Growth Targets Extended, Preferred Growth, and Larger Cities alternatives could result in development and land use patterns somewhere in between the highest density (the Metropolitan Cities Alternative) and lowest density (the Smaller Cities Alternative) alternatives.

Low-income and minority populations could likely benefit most from development patterns under Metropolitan Cities, Preferred Growth, and Larger Cities alternatives that produce the greatest diversity of new housing opportunities in existing urban communities that are closer to major employment centers and are better served by transit. However, larger families may require housing with greater square footage than what is typically available from multifamily and other non-traditional housing options.

There are trade-offs in housing costs related to development and land use patterns under the various alternatives. Land costs are higher in dense existing urban communities, and lower in outlying undeveloped areas. Also, in already-built urban communities, the potential complexities associated with infill and redevelopment projects may add to the cost of housing. However, the costs of building new or added infrastructure are higher in undeveloped areas, which adds to the cost of housing. Furthermore, transportation costs for households living in areas farther out are likely to be higher than for households in existing urban communities. All else held constant, land and development costs can often be lower per multifamily unit than per single-family unit.

Under all alternatives, growth in population and economic activity could likely produce additional pressure on housing costs. Given an increase in overall travel demand, worsening traffic conditions are likely to raise demand for housing in neighborhoods closer, or with good access, to major employment centers. These are currently located in the region's metropolitan and core cities. There is the potential for low-income households in affordable urban neighborhoods to be displaced by higher income households seeking relief from traffic congestion and housing costs in more expensive areas, unless adequate affordable housing opportunities are provided. The potential for such displacement to occur tends to rise during periods of rapid economic growth, when housing construction often lags behind the demand created by the influx of new workers and their families. The displacement process can be mitigated by active efforts to preserve and build affordable housing opportunities in areas experiencing such cost pressures.

The successful implementation of best housing practices could mitigate loss of affordable housing by preserving and creating low-income housing options. This assumes that housing is preserved and created for a variety of income levels, so that people in the lowest income brackets are not left out. Research suggests that areas that have implemented a regional strategy and implemented best housing practices consistently across their region have been the most successful in providing affordable housing (see the *VISION 2040 Issue Paper on Housing – Compendium of Best Housing Practices, FEIS Appendices - Appendix I-F*).

6.5.3 TRANSPORTATION

The Larger Cities Alternative is estimated to result in the lowest regionwide vehicle miles traveled in the year 2040. This projection is consistent with the nature of this alternative, which emphasizes centralized growth in the metropolitan and core cities where employment and other activities could be generally concentrated in relatively close proximity to residential areas - a benefit to all residents, particularly so for residents that have limited access to personal automobiles. The Metropolitan Cities Alternative has the second lowest regionwide vehicle miles traveled, followed by the Preferred Growth, Smaller Cities and Growth Targets Extended alternatives.



Although the total number of regional person trips is fairly consistent among alternatives, mode share proportions highlight differences. The Metropolitan Cities Alternative is anticipated to have the lowest number of single-occupant-vehicle and high-occupancy-vehicle trips, while the Smaller Cities Alternative is projected to have the highest number of single-occupant-vehicle and high-occupancy-vehicle trips. Again, these are key issues for residents with limited access to personal automobiles.

The difference between the number of single-occupant-vehicle trips associated with these two alternatives is relatively small (5 percent), as is the number of high-occupancy-vehicle trips (5 percent). The higher number of single-occupant-vehicle and high-occupancy-vehicle trips associated with the Smaller Cities Alternative can be partly explained by the need for people to travel longer distances to reach their destinations, fewer travel options, and greater auto dependency.

In contrast, with more centrally focused growth (Metropolitan Cities, Preferred Growth, and Larger Cities alternatives), the need for automobile dependency decreases because land use density is more concentrated and more travel options such as transit services, walking, and bicycling are generally more available and feasible.

Contrasting patterns are also apparent when comparing transit and walk/bike trips among alternatives. The Smaller Cities Alternative is estimated to result in the lowest number and percentage of transit and walk/bike trips, and the Metropolitan Cities Alternative is forecasted to have the highest number and percentage of transit and walk/bike trips. While the transit mode share percent is similar for all alternatives, ranging from a low of 3.3 percent (the Smaller Cities Alternative) to a high of 4.6 percent (the Metropolitan Cities Alternative), the increase in the number of regional transit trips among alternatives compared to existing conditions does show differences, with the Metropolitan Cities Alternative having the highest number of regional transit trips and the Smaller Cities Alternative having the lowest number of regional transit trips.

Because of the proximity of population and jobs, and because of the improved high-occupancy-vehicle shares, the focused growth alternatives (Metropolitan Cities, followed by the Larger Cities, and then the Preferred Growth) would likely have the most transportation benefits for minority and low-income populations.

6.5.4 AIR QUALITY

Densities and development patterns associated with the Growth Targets Extended and Smaller Cities alternatives are estimated to result in the greatest amount of vehicle miles traveled. Projected emissions of carbon monoxide, nitrogen oxide, volatile organic compounds, and the smallest particulate matter (PM_{2.5}) are highest under the Growth Targets Extended and Smaller Cities alternatives. Projected vehicle miles traveled and emissions are lowest under the Larger Cities Alternative, followed by the Metropolitan Cities Alternative, with the Preferred Growth Alternative falling in the middle of the range. However, larger particulate matter (PM₁₀) is projected to have higher emissions within the three maintenance areas under the Metropolitan Cities Alternative than under any of the other alternatives because the growth in metropolitan and core cities could lead to concentrated construction activities. Construction dust is a major source of PM₁₀ emissions. The Growth Targets Extended Alternative has the next highest PM₁₀ emissions in maintenance areas, followed by the Preferred Growth, Larger Cities and Smaller Cities Alternatives.

The Metropolitan Cities Alternative is most likely to result in the location of sensitive receptors such as schools, residences, bicyclists, and pedestrians near air pollution sources such as freeways and busy highways and roads. Urban streets flanked by buildings on both sides, commonly called urban canyons, are of particular concern for exposure to traffic air pollutants. Studies in the United States, the United Kingdom, and the Netherlands have found that children living within 100 meters of major roads are more likely to have respiratory problems such as asthma. Additionally, adults living near major roads have a higher risk of cardiovascular disease (Sandlin, 2005). Although the Metropolitan Cities Alternative promotes the most compact urban growth, any of the alternatives could potentially result in the location of sensitive receptors near air pollution sources. Air-quality-compatible land use planning, technological advances to reduce vehicle pollutants, air filtration systems, buffer zones, and building design for crosswind removal of pollutants are some strategies to mitigate air quality impacts in urban areas. See *FEIS Appendices - Appendix I-F: Microscale Informational Paper*, for more information on air quality research.

6.5.5 ECOSYSTEMS

Effects of the VISION 2040 alternatives on ecosystems, plants, and animals are not anticipated to affect minority and low-income populations differently than non-minority and non-low-income populations.

6.5.6 WATER QUALITY AND HYDROLOGY

Effects of the VISION 2040 alternatives on water quality and hydrology are not anticipated to affect minority and low-income populations differently than non-minority and non-low-income populations.

6.5.7 PUBLIC SERVICES AND UTILITIES

Population and proximity are the major factors influencing the anticipated impacts and demand for utilities. As the population of the central Puget Sound region increases, demand for all utilities will also increase, most likely increasing the cost of utilities.

The Growth Targets Extended and Smaller Cities alternatives, which encourage dispersed growth, will likely require more utility infrastructure in order to extend service to presently underdeveloped areas. Improvements and retrofits to existing electrical utility infrastructure will be needed under all alternatives, but more so under the Metropolitan Cities, Preferred Growth, and Larger Cities alternatives, which encourage concentrated growth in developed urban centers, which could have the greatest impacts on existing systems. Development where pre-existing utilities are located generally help keep housing costs down, which benefit low-income populations in particular.

With an increase in population, the need for more services, such as schools, libraries, and medical facilities, will increase as well. Under the Growth Targets Extended and Smaller Cities alternatives, a greater number of people may not live within a reasonable distance of existing facilities; thus construction of new facilities could be necessary under these alternatives. Enhancements and expansion of existing facilities could be especially necessary under the Metropolitan Cities, Preferred Growth, and Larger Cities alternatives as well as construction of new facilities in order to accommodate an increase in population. More public services are currently located in metropolitan and core cities, where high concentrations of minority and low-income populations live, so the Metropolitan Cities, Preferred Growth, and Larger Cities alternatives are the most likely to meet the service needs for these populations.

6.5.8 PARKS AND RECREATION

Effects on recreational resources generated by population increases could include competition for limited facility space, need for increased maintenance, increased capital expense, conflicts between different types of recreational users, degradation of natural resources, displacement of undeveloped open space, and diminished convenience of access. The envisioned location of growth in the Growth Targets Extended and Smaller Cities Alternative could likely be accompanied by development of new neighborhood parks and athletic complexes, and land for these facilities could be available and relatively affordable. As a result, the Growth Targets Extended and Smaller Cities alternatives are not anticipated to greatly affect this type of facility. However, outdoor recreation that relies on natural resources, such as undeveloped private land or undisturbed natural areas, may be affected by displacement of these resources, or because population brings a higher level of use that impacts the quality of visitors' experiences.

Parks and recreation facilities in metropolitan cities could likely experience a higher level of use that could affect the quality of the average visitor's experience. This crowding effect could be most prominent under the Metropolitan Cities Alternative and could occur to a much lesser degree under the Growth Targets Extended and Smaller Cities. However, the Metropolitan Cities and the Preferred Growth Alternative could provide the best access to parks and recreational facilities due to the location of these resources near transit services and high concentrations of minority and low-income populations. Active use of parks facilities can also improve safety, and the attractiveness of the facilities themselves, as they become more vibrant, active places with a wider variety of users.

6.5.9 ENVIRONMENTAL HEALTH

All alternatives would indirectly result in redevelopment or development activities that could potentially occur in the presence of hazardous materials, and all of the alternatives could involve urban activities that could involve the use of hazardous materials. Given the historic presence of industry in the part of the region first developed (such as the



metropolitan and core cities), the alternatives that focus the most growth into these cities would increase the potential for exposure to hazardous materials.

When growth occurs in areas with lower to no potential for past releases, there could be an increased potential for new contamination to occur. This could likely occur more under the Growth Targets Extended and Smaller Cities alternatives. However, with increasingly stringent regulations, the potential for harm is lower than in the past. The possibility of cleanup and redevelopment of contaminated sites is most likely under the Metropolitan Cities Alternative, followed by the Preferred Growth and Larger Cities Alternatives, because there is a greater likelihood that development and redevelopment could encounter contaminated sites with these alternatives. When growth is focused in areas with previous releases, cleanup and management requirements could result in an environmental benefit, although the costs of development could be higher for a cleaned property. Minority and low-income populations in neighborhoods where contaminated sites have been cleaned up could benefit from this process.

For all alternatives, there are health disparities that low income and minority groups are likely to experience, in part because of environments that do not promote physical activity or that expose them to air pollution. The Preferred Growth Alternative and alternatives that focus people into more compact communities can often create more opportunities for walking and recreation, although air pollution exposure could also increase.

6.5.10 ENERGY

Effects of the VISION 2040 alternatives on energy are not anticipated to affect minority and low-income populations differently than non-minority and non-low-income populations.

6.5.11 HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES

Traditional cultural properties in the central Puget Sound region are primarily associated with Native American tribes. Both federally and non-federally recognized tribes are allowed to identify traditional cultural properties. Consultation with the appropriate tribe is done at the project level by the lead agency with the assistance of the Department of Archaeology and Historic Preservation and the Washington State Governor's Office of Indian Affairs to avoid or minimize impacts to traditional cultural properties (Sound Transit, 2005). With proper planning, all of the alternatives have the potential to avoid or minimize effects on traditional cultural properties. Because of this, effects of the VISION 2040 alternatives on these resources are not anticipated to affect minority and low-income populations differently than non-minority and non-low-income populations.

6.5.12 VISUAL QUALITY AND AESTHETIC RESOURCES

Redevelopment of areas with aging infrastructure, poor maintenance, or that are visually incompatible with adjacent land uses might improve the visual and aesthetic environment. This redevelopment is likely to occur in areas where there are already high concentrations of minority and low-income populations. It could occur with any of the alternatives, but is most likely with the Metropolitan Cities Alternative. The Preferred Growth, Growth Targets Extended and Smaller Cities alternatives could have a similar level of this type of redevelopment. The Smaller Cities Alternative could be least likely to have this type of redevelopment.

6.5.13 NOISE

The Growth Targets Extended and Smaller Cities alternatives are most likely to need added capacity in the form of new or expanded transportation facilities. New facilities are likely to cause noise impacts on nearby land uses. Most growth under the Metropolitan Cities, Larger Cities, and the Preferred Growth Alternatives could be near existing transportation infrastructure, and fewer new sources are likely to be created. The Metropolitan Cities Alternative could have the greatest number of urban centers with noticeable sound level increases, and due to its emphasis on compact urban growth, is most likely to result in sensitive noise receptors near freeways and busy highways and streets. Consequently, the Metropolitan Cities Alternative could have the greatest effects on minority and low-income populations, although all alternatives could have the potential to affect these populations. Noise-compatible land use planning, buffer zones, noise barriers, and quieter road paving materials and tires are some strategies to mitigate noise impacts in urban areas (Sandlin, 2005).

6.5.14 EARTH

Effects of the VISION 2040 alternatives on soils, topography, and geologic features are not anticipated to affect minority and low-income populations differently than non-minority and non-low-income populations.

6.6 Cumulative Effects

The affected environment section reflects past and present cumulative effects on minority and/or low-income populations. Future cumulative effects on minority and/or low-income populations could vary depending on the alternative. Other regional plans and actions have the potential to further increase the demand for and on resources. The alternatives that concentrate growth (the Metropolitan Cities, Preferred Growth, and Larger Cities alternatives) in areas with relatively high concentrations of minority and low-income populations could have greater cumulative impacts if adequate coordination and mitigation measures are not implemented. Transportation plans could likely be implemented to complement the VISION alternative selected, providing cumulative benefits and impacts to all populations, including low-income and minority populations.

6.7 Potential Mitigation Measures

Measures to mitigate environmental impacts are discussed by topic area under each element of the environment in *Chapter 5*. Some additional measures specific to environmental justice are discussed above by topic area.

- In order to avoid impacts to minority and low-income populations as local plans and projects are implemented that carry out the regional VISION, jurisdictions and project proponents should have an awareness of the locations of these populations and make efforts to involve community members in decision-making. This can be accomplished by doing demographic analyses similar to those presented previously under section 6.4, affected environment.
- Interviews with social service providers can help verify the demographic analyses and gain an understanding of the specific local needs of these populations and effective methods for outreach and public involvement.
- Additional and ongoing outreach to involve minority and low-income populations is recommended, and an environmental justice analysis may be desirable or necessary for certain projects.
- Local and regional governments and other agencies can use demographic analyses and outreach results to prevent new or expanded uses and other public infrastructure from having a disproportionate impact on environmental justice populations.
- Interdisciplinary planning and design efforts can help improve areas where living conditions and land uses erode good health through lack of safe and affordable housing, living wage jobs within reasonable commute distances, grocery stores, or lack of recreational and transportation facilities.
- Related programs identified as mitigation measures for specific environmental topics could also benefit low income and minority populations, including programs to maintain and expand the supply of affordable housing in the region.

Information on conducting environmental justice outreach and analysis is available from many agencies and organizations, including the Environmental Protection Agency, the Federal Transit Administration, and the Federal Highway Administration.

6.8 Significant Unavoidable Adverse Impacts

Significant unavoidable adverse impacts are discussed by discipline under each element of the environment in *Chapter 5*. Outreach to minority and low-income populations helped to identify loss of affordable housing and reduced access to employment, services, and transit as the most important issues for these populations. Although disproportionately high and adverse effects on housing, employment, services and transit are not anticipated under any of the alternatives, these



impacts could be most likely to occur under the Smaller Cities and Growth Targets Extended alternatives where different types of activity are more likely to be widely dispersed, which outweigh the potential improvements in affordable housing.

6.9 Environmental Justice Determination

None of the alternatives are anticipated to result in disproportionately high and adverse effects on minority or low-income populations. Although there are tradeoffs with each, the Metropolitan Cities Alternative, and to a lesser extent the other focused growth alternatives, could be the ones most likely to improve access to employment, services, and transit — the most important issues for minority and low-income populations — although it could also require jurisdictions to provide for more affordable housing and an effective level of public services. Additional environmental justice analyses should be completed as a part of future project-level planning and environmental review.