

TRANSPORTATION FUTURES

Equity Dimensions of Transportation Funding in the Central Puget Sound Region May 2015

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Executive Summary

The objective of this paper is to frame the types and dimensions of equity issues in transportation funding. It does not evaluate equity of current or future funding sources, but rather provides the background basis for discussing equity and developing equity principles to be applied later in the Transportation Futures process.

1. Equity is a complex, multi-faceted issue.

Equity is related to moral ideas about fairness and justice. Since values around these ideas vary widely, there are no common, agreed-upon set of fairness or equity principles.

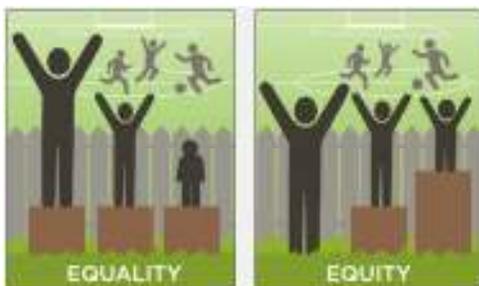
The overall context for equity is very broad and extends beyond transportation. This paper focuses more narrowly on the equity implications of transportation funding in the region. The demographics paper provides additional important information, such as the cost of housing, location of major employment centers and distribution of growth across the region.

Equity is an important issue also because of our current challenges. Washington has a regressive tax system and rising cost of living is a pressing concern. These issues related to equity will affect public acceptance of a transportation funding strategy.

Equity considerations typically also center on the decision-making process. Perceptions of equity can be affected by how decisions are made and whether the decision-making process is open and inclusive.

Improving equitable outcomes is not just about achieving benefits for certain segments of the population; research has demonstrated that equitable distribution of benefits and impacts lead to greater economic growth for society as a whole. (Benner and Pastor)

Equality is not equity. Equality is about providing individuals with the equal access to goods, services and opportunities, regardless of needs or socioeconomic status. Equity acknowledges that some groups face challenges created by deep-rooted or historical injustices that limit them from accessing what they need; thus, they require additional resources to help reduce these systemic barriers.



Source: King County ESJ Annual Report 2014

2. Equity considerations for transportation funding include socio-economic, geographic, generational and modal considerations.

Socio-economic, geographic and generational factors are the most important equity considerations for transportation funding.

Socio-economic factors that affect equitable access to transportation include lower incomes, which may be correlated with race, disability or special needs, language barriers, geographic isolation and life stage factors (elderly, youth, students).

- A regional example of transportation policies driven by consideration of socio-economic factors include King County's Orca Lift reduced fare program qualify for the reduced fare of Orca Lift. This program provides qualified low-income populations more equitable access to public transportation and other services.

Geographic equity considerations are based on the idea that transportation investments should be roughly located in the area in which revenue was generated.

- For example, today, the central Puget Sound region generates a greater share of tax revenues than it receives. In addition, today, toll rates are set in the state of Washington by the 7-member Washington State Transportation Commission, which currently includes only one representative from the central Puget Sound region.

Maintaining and expanding the transportation system to meet today's and anticipated future needs is important from a generational standpoint. Leaving a poorly implemented and maintained system for future generations is not equitable.

Using debt to finance transportation requires consideration of the burden placed on current and future generations. Is the burden placed on those who are able to pay and those who benefit fairly? Or is the burden pushed off to future generations?

Modal equity considerations focus on the diversity of the transportation system. These considerations often drive a shift away from a utilitarian focus on mobility (i.e. being able to travel) to a broader focus on accessibility. An accessibility focus considers how people can get to the destinations they need for daily life and includes not just transportation as well as land use planning. An accessibility focus also emphasizes multiple modes of travel including transit, driving, walking, and biking.

Modal equity considerations are connected to sources of transportation revenue and their appropriate use. Policy positions vary on this question. For example, many believe that funds collected as tolls and motor fuel taxes should be used only for the construction, maintenance and operation of highways. The use of these funds to pay for other modes such as transit or bicycle lanes, is regarded by some as an inappropriate use. On the other hand, others argue that transit and bicycle lanes improve the efficiency of highways and are an eligible public purpose for these revenues.

3. Paying in proportion to benefits received, paying in proportion to the ability to pay and paying to reflect location (return to source) are the three principles that drive equity considerations of transportation finance.

The benefits received principle is that equity increases when individuals pay in proportion to the benefits they receive from a service and is the conceptual foundation for user fees.

- Transit and ferry fares, and SR 520 and Tacoma Narrows bridge tolls are regional examples of user fees directly tied to a particular transportation benefit.

The ability to pay principle is that individuals with greater means should pay more for public benefits and is the conceptual basis for income and ¹property taxes.

- An example of a transportation fee that reflects the ability to pay principle is the new King County Orca Lift reduced fare program.

The return to source principle is that the amount people pay should reflect the transportation expenditure specific to where they live or pay taxes. This is the conceptual basis for geographic equity policies in transportation.

- An example of transportation policies driven by geographic equity considerations include Sound Transit's Subarea Equity policy.

4. Several current sources of transportation funding in Washington State are regressive.

A regressive tax system taxes the income of low-income households at relatively high rates. State and local governments typically adopt a mix of progressive (personal income taxes) and regressive taxes (property, sales and excise taxes). The absence of an individual income tax and heavy reliance on retail sales tax makes Washington's tax structure the most regressive in the nation.

Washington is one of only seven states without an income tax. The major components of the current state and local tax system include a retail sales tax, a business and occupation tax, and a property tax.

Washington relies heavily on retail sales taxes. In 2014, general sales taxes amounted to 52 percent of total state and local tax revenue. Nationally, the dependence on general sales taxes was only 22 percent. As a share of total tax revenue, Washington property taxes and other taxes were more or less in line with other states. (Source: Department of Revenue, Washington State)

Since 1935 the state retail sales tax rate has risen from 2.0 percent to 6.5 percent.

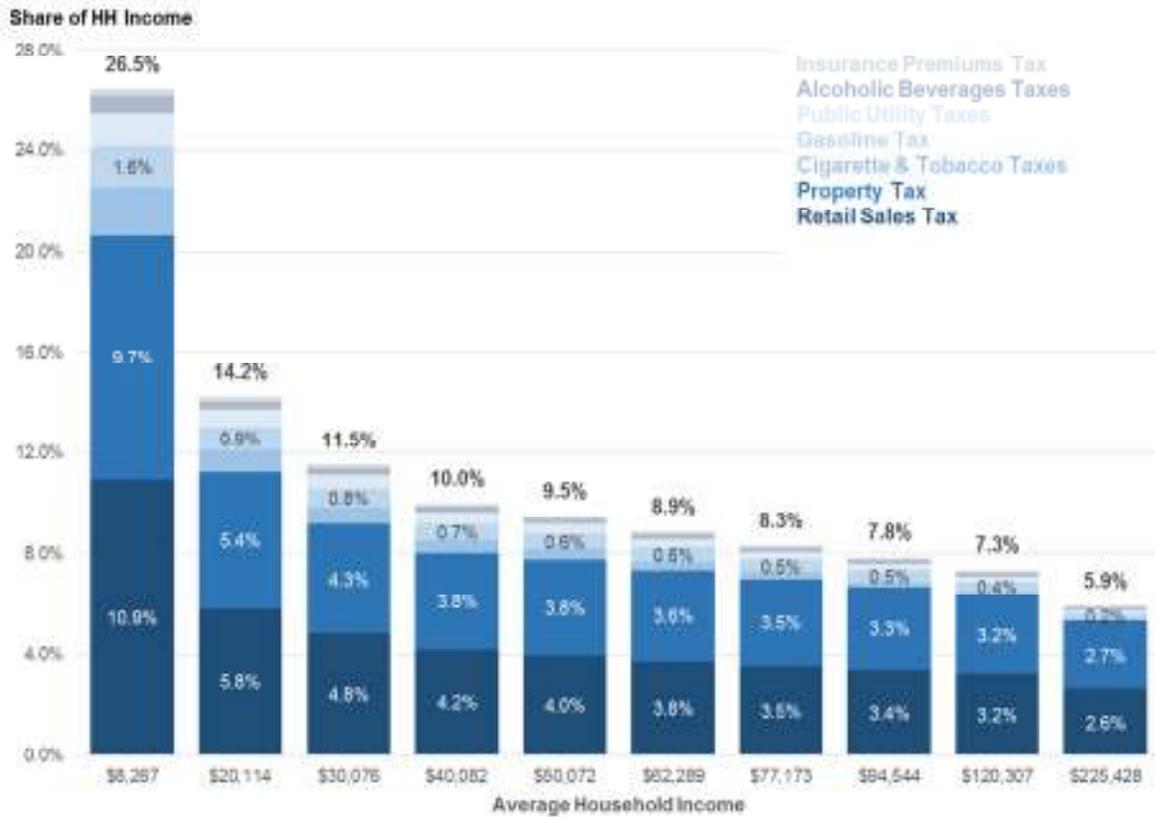
Sales taxes are considered to be very regressive because low-income households spend a disproportionately large share of their income on goods subject to the sales tax.

For instance, Figure 1 below shows the relative proportion of household incomes that will be dedicated for taxes in 2015 in Washington State. 26.5 percent of the income of the lowest-income households will go to sales, property, and other taxes. In contrast, the tax burden on the highest-income households will only be 5.9 percent. 10.9 percent of the income of the lowest-income

¹ Another basis for the use of property taxes as a source of transportation revenue is the benefit transportation provides in the form of access to property, which raises the utility and value of the property.

households will go to sales tax. In contrast, the sales tax burden on the highest-income households will only be 2.6 percent.

Figure 1 Share of Household Income Paid to Taxes, Washington State, 2014



Source: Washington State Department of Revenue, 2014; CAI, 2015

5. Of the available sources for transportation funding, user fees have the potential to be more equitable. The degree to which these fees are equitable depends on how the user fees are implemented and on how the revenue is used.

Overall user fees have the following characteristics:

User fees preserve the link between the people who pay for the service and those who benefit from it.

They can induce changes in travel behavior to manage demand and optimize system performance and efficiency.

New technology allows very fine application of user fees (based on time of travel, mode, path, and destination) and decreases unintended burdens.

User fees can be designed so different classes of vehicles pay proportional to the government and public costs of providing these vehicles with the opportunity to travel.

- For example, trucks cause a greater burden on transportation infrastructure due to their weight and size than cars do.

Tolling and road pricing as user fees include several equity considerations. An evaluation of the equity implications of either of these new sources depends to a large degree on how they are implemented and the nature of the transition. Factors that affect equity include:

- Mode of travel and rates of car-ownership among low-income individuals and households
- Positive and negative impacts to travel times due to pricing. For example, lower income travelers may choose to drive farther to avoid fees and incur longer commutes as a result
- Breadth of the pricing application: broad applications result in lower charges per user which may be more equitable than narrow applications such as tolling a few key roadways which may result in higher charges to fewer individuals
- The use of pricing revenue: if road pricing revenue is used to provide better lower cost alternatives (such as transit), equity can be increased by providing lower income travelers a cheaper alternative to paying the toll when feasible, while still allowing those users access to pay the toll when needed.

6. There is no universal definition of an equitable transportation system

At its most basic definition, equity is about ensuring that all people have access to resources and opportunities to thrive. So far, there is no universally shared definition of what makes an equitable transportation system.

Equity considerations in transportation involve complex tradeoffs between efficiency, cost-effectiveness, environmental impacts, demographic needs, and the geographic distribution of costs and benefits.

Equity in transportation funding, while more narrow than overall transportation equity, ties to specific issues of who pays, who benefits, and who is harmed.

Section 1:

Equity Considerations in Transportation

1.1 Introduction

At its most basic definition, equity is about ensuring that all people have access to resources and opportunities to thrive. Equity is a complex, multi-dimensional concept related to moral ideas of fairness and justice and encompasses a broad range of inter-related considerations. Social policy researchers have identified three main theoretical approaches to equity. These concepts form the framework for policy concerns and positions on equity:

Egalitarian: goal is that everyone has equal benefits from a service.

Utilitarian: goal is to maximize the total welfare of society as a whole.

Rawlsian: goal is distribute public goods equally, unless unequal distribution is in favor of people who are least-advantaged in society. This leads to a needs-based approach to planning for public services and goods.

Transportation planning involves complex tradeoffs between equity and efficiency (including cost-effectiveness and environmental protection). This paper identifies equity considerations associated with transportation based on socioeconomic, modal, geographic, and generational factors, with a focus on the equity issues raised by revenue sources.

Two existing federal programs that require a focus on equity by recipients of federal funding (transit agencies for example). These include Title VI of the 1964 Civil Rights Act and the Environmental Justice Orders. Title VI bars discrimination based on race, color, or national origin, while Environmental Justice (EJ) Orders further amplify Title VI by requiring federal agencies to identify, and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. These regulations focus on impacts and are typically considered during project development.

1.2 Equity Considerations in Transportation

1.2.1 Socioeconomic Factors

Demographic and economic factors affect equitable access to transportation. Factors range from lower incomes, which may be correlated with race, disability or special needs, and language barriers, to geographic isolation and life stage factors (elderly, youth, students). Equity related considerations include the following questions:

How can the transportation network connect historically disadvantaged populations to jobs, services and other opportunities?

How can transportation services address barriers to mobility, and reduce disproportionate impacts for populations that have limited transportation options?

How can communities be engaged in decision-making, especially around transportation planning?

Equity considerations focus on the disparate benefits and impacts of transportation investments and funding sources on different socioeconomic populations, and outcomes that repair inequities of past transportation decisions. Improving equitable outcomes is not just about achieving benefits for certain segments of the population; research has demonstrated that equitable distribution of benefits and impacts lead to greater economic growth for society as a whole. (Benner and Pastor)

1.2.2 Geographic Factors

Geographic equity considerations are based on the idea that benefits of transportation investments should be roughly located in the area in which revenue was raised. Geographic equity is related to the spatial distribution of the costs and benefits of transportation and typically involve inter-jurisdictional equity considerations. Geographic equity considerations are also important in decision-making. To cite a local example of geographic equity questions, today, the central Puget Sound region generates a greater share of tax revenues than it receives. In addition, today, toll rates are set in the state of Washington by the 7-member Washington State Transportation Commission, which currently includes only one representative from the central Puget Sound region.

Transportation policies based on geographic equity considerations presents several tradeoffs. For example, transit service that spans suburbs, cities, and rural areas to ensure geographic distribution equity may not serve demographic need, especially people who are most transit-dependent, who may need a greater level and concentration of service than geographic equity provides.

Geographic equity may also be secondary to access when accessibility needs cross geographic boundaries such as access to employment or specialized healthcare.

1.2.3 Generational Factors

The extent and state of the transportation system left to future generations can create a generational imbalance. If the current system needs and repairs are not executed, a poorly maintained transportation system will be turned over to the next generation.

Also, the extensive use of debt for transportation investments can burden future generations that may not benefit. The important factor here is how the debt is designed to be repaid. Bonds repaid with property or sales tax revenues can lack a nexus with transportation improvements versus those to be repaid with user fees. Implications are related to who pays, how much, when, and how often. For instance, tolling the Tacoma Narrows Bridge has allowed expansion of the bridge capacity directly benefiting current and future users, who will pay tolls over a number of decades. However, the debt structure forces much higher toll rates on future users which may be considered inequitable.

1.2.4 Access to All Modes

Modal equity consideration take into account access to convenient and reliable transportation options including public transit, walking, carpooling and biking in addition to driving.

Equity considerations related to mode types implies a shift from a utilitarian focus on increasing mobility to a model that emphasizes accessibility. An accessibility focus considers how people are able to reach their desired destinations, using multiple modes such as transit, driving, walking, and biking. The accessibility focus is on creating a diverse transportation system that provides access

to essentials, including emergency services, public services and utilities, health care, basic food and clothing, education and employment, mail and package distribution, freight delivery as well as social and recreational activities.

For instance, widening of SR 520 may decrease auto congestion (directly benefitting drivers) and have a secondary effect of lowering transit travel times. However, designating a lane in each direction for high occupancy vehicles and transit allows for even better equity for transit and transit users.

(An accessibility focus also includes approaches that are not solely transportation, such as land use planning for proximity. However, land use planning is not a primary consideration for the Transportation Futures effort, but rather is handled through PSRC's regional land use planning exercises.)

Modal equity consideration also relate to the source of transportation revenue and their appropriate use. Policy positions vary on this question. For example, many believe that funds collected as tolls and motor fuel taxes should be used only for the construction, maintenance and operation of highways. The use of these funds to pay for other modes such as transit or bicycle lanes, is regarded by some as an inappropriate use. On the other hand, others argue that transit and bicycle lanes improve the efficiency of highways and are an eligible public purpose for these revenues.

1.3 Transportation Revenue Sources

Three main ideas about equity drive debates about transportation funding. These are concepts of benefits received, ability to pay, and return to source.

The benefits received principle is that equity increases when individuals pay in proportion to the benefits they receive from a service and is the conceptual foundation for user fees.

The ability to pay principle is that individuals with greater means should pay more for public benefits and is the conceptual basis for income and property taxes.

The return to source principle is that the amount people pay should reflect the transportation expenditure specific to where they live or pay taxes. This is the conceptual basis for geographic equity considerations in transportation.

Since the 1920s, transportation funding in the United States has relied heavily on 'user fees.' User fees charge those who travel for the benefits they receive. They come in many forms, with the most common being indirect user fees such as fuel and vehicle taxes and direct user fees such as tolling and transit fares. While user fees form a large source of funding for transportation, cities, counties and transit agencies have increasingly turned to other forms of funding to keep up with growing costs. These funding mechanisms are typically voter-funded, local government initiatives that are based on sales tax. They are gaining popularity because it allows greater local control over how the revenue is used, are typically linked with specific projects, and are levied over short timeframes.

In Washington State many of the sources of transportation funding are quite regressive, such as property and sales and excise taxes (Figure 1). While both user fees and sales tax are considered to be regressive taxes, user fees may be more equitable than sales tax-based funding sources. This is because user fees based funding mechanisms preserve the link between the people who

pay for the service and those who benefit from it while sales tax burdens both users and non-users. User fees, such as tolls, may also induce changes in transportation behavior that increase the efficiency of the overall system.

Figure 2 lists the various types of funding currently used in the region. (For more information on the use of these funding sources, see the Overview of Transportation Funding, April 2015 whitepaper prepared for the Task Force.) There are several “direct” User Fees such as transit and ferry fares and tolls which have a clear connection between payment in exchange for transportation services provided. Somewhat less strong are the connection between vehicle fees, which include registration/licensing and inspection, as well as the rental vehicle fees and taxes and the roadways provided.

General Taxes do not have a direct connection with transportation service and are more regressive, including property tax and general sales tax. Under Sales/Use Taxes, special use sales taxes (such as the Sound Transit sales tax used to build the Link system) have the same regressive issues as general sales tax, but are dedicated to a specific project. Excise Tax as a category covers the gas tax, whose equity relies upon the type of travel mode being made. It has a closer nexus to car travel, but is still regressive given the large proportion of low income household resources that go to transportation.

Local Special Use Taxes / Fees need to be examined carefully because, while they usually are designed to collect funds from those who benefits, they can still be inequitable if they over burden lower income households. For instance, if a special assessment is made for road improvements in a low income area while general revenues from property taxes are used to improve roads in wealthier areas.

Figure 3 summarizes the equity implications of these funding types.

Figure 2 Transportation Revenue Streams, Central Puget Sound Region, 2015

Revenue Stream	Examples
User Fees	Transit fares Vehicle fees Registration/license fee (autos and trucks) Title fee Inspection fees “New wheels” fee Tolled facilities (all lanes tolled) Managed lanes (HOT and express lanes with variable pricing) Rental vehicle surcharge fee/tax
Property Taxes	Property tax Land transaction tax (recording deeds, mortgages, etc.)
Sales/Use Taxes	Special use sales tax Sales of vehicles
Excise Tax	Motor vehicle fuel tax and special fuel tax

Figure 3 Equity Implications of Transportation Revenue Streams, Central Puget Sound Region, 2015

Revenue Stream	Equity Implications
User Fees	<p>User fees have the potential to be more equitable than other sources of transportation finance because of the following:</p> <ul style="list-style-type: none"> • They preserve the link between the people who pay for the service and those who benefit from it. It imposes on travelers both direct costs of the system as well the indirect costs of resource depletion, air pollution, and other transportation externalities. • They can induce changes in travel behavior to optimize system performance and efficiency. • New technology allows very fine application of user fees (based on time of travel, mode, path and destination) and decreases unintended burdens. • User fees can be designed so different classes of vehicles, such as trucks, pay proportional to the public costs of providing these vehicles with the opportunity to travel.
Property Taxes	<p>Tolling and road pricing as user fees include several equity considerations:</p> <ul style="list-style-type: none"> • Mode of travel and rates of car-ownership among low-income individuals and households • Pricing impacts on travel times • Breadth of pricing application • Use of pricing revenue <ul style="list-style-type: none"> • Low and middle-income families pay a greater proportion of their income on these taxes. • Typically these taxes have no effect on changing behavior in favor of more efficient or socially responsible use of the transportation system. WA state however has a sales and use tax partial exemption for new electric vehicle purchases which may have some impact on changing people's purchasing behavior.
Sales/Use Taxes	<ul style="list-style-type: none"> • Low and middle-income families pay a greater proportion of their income on sales taxes. • Unlike individual income taxes that leave a record and are totally transparent, sales taxes are only partially transparent. According to the Washington State Tax Structure Study Committee, most households are unaware of their annual sales tax burden (despite knowing the sales tax on an individual purchase). • The use of sales taxes for transportation also reduce their availability for essential services such as libraries or schools, for which user fees may not be desirable or possible to use.
Excise Tax	<ul style="list-style-type: none"> • Gas taxes, both state and federal, are only loosely tied to use. Differences in fuel efficiency create wide variance in how the tax affects travelers. • Lower-income residents may be less likely to afford efficient vehicles or adapt to fuel price changes, and may be disproportionately affected.

Section 2:

Socioeconomic Factors that Impact Transportation Choices

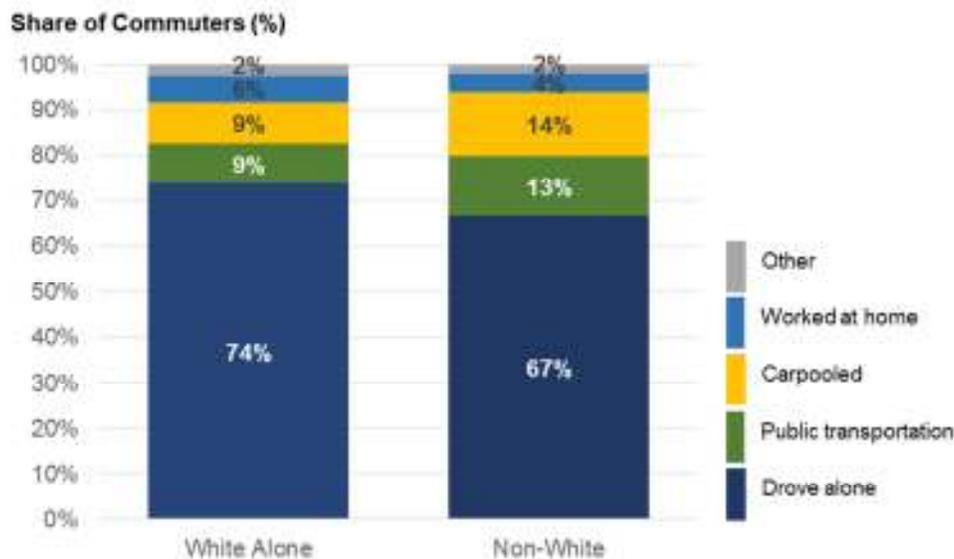
People may be limited in their transportation options due to a variety of socioeconomic factors. These include incomes, physical disability, lack of English-language proficiency, and age. Of these, income is the most salient factor.

2.1 Income Levels Are Correlated to Race and Education

Income influences key decisions about where people live and how they travel for their daily needs. Transit dependency is strongly correlated with lower incomes and lack of access to a private vehicle. This is because the costs associated with owning a personal vehicle can be prohibitively high for low-income individuals, causing them to be more dependent on public transportation. (Figure 9)

Incomes are strongly associated with educational attainment and race. Race and ethnicity appear to be associated with transit use at the national level, based on results of the recent TransitCenter study. Survey responses revealed a marked difference between white and non-white as well as Hispanic and non-Hispanic respondents. Those who identified themselves as non-white or Hispanic were around three times more likely to use transit occasionally than whites or non-Hispanics. This national pattern appears to hold true for the region, as a greater share of non-white commuters in the central Puget Sound region tend to carpool or take public transportation to work as compared to white commuters (Figure 4).

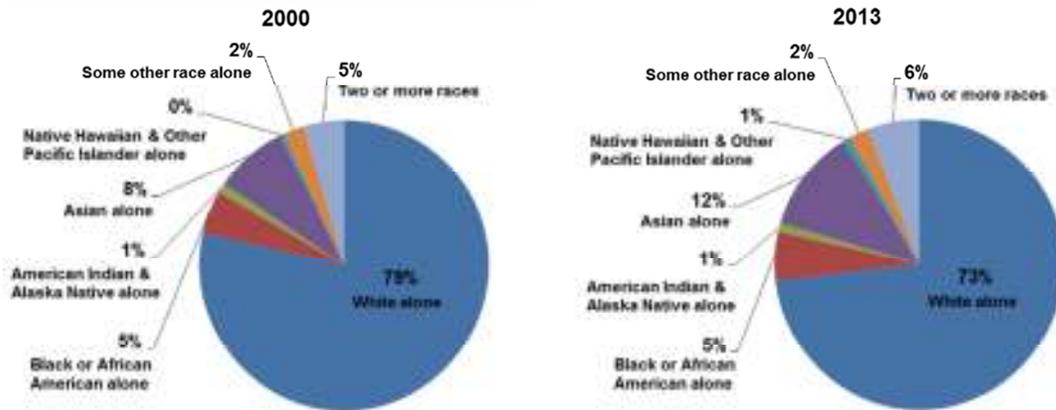
Figure 4 Transport Mode Split by Race, Central Puget Sound Region, 2013



Source: U.S. Census Bureau ACS (1-Year Estimates), 2013

Figure 5 illustrates the increase in racial diversity in the central Puget Sound region since 2000. Those identifying as white alone has decreased 6% while the share identifying as Asian alone increased 4%. This change in regional racial composition, given the current data on transport mode split, has implications for how future residents in the region will prefer to commute.

Figure 5 Race, Central Puget Sound Region, 2000 and 2013

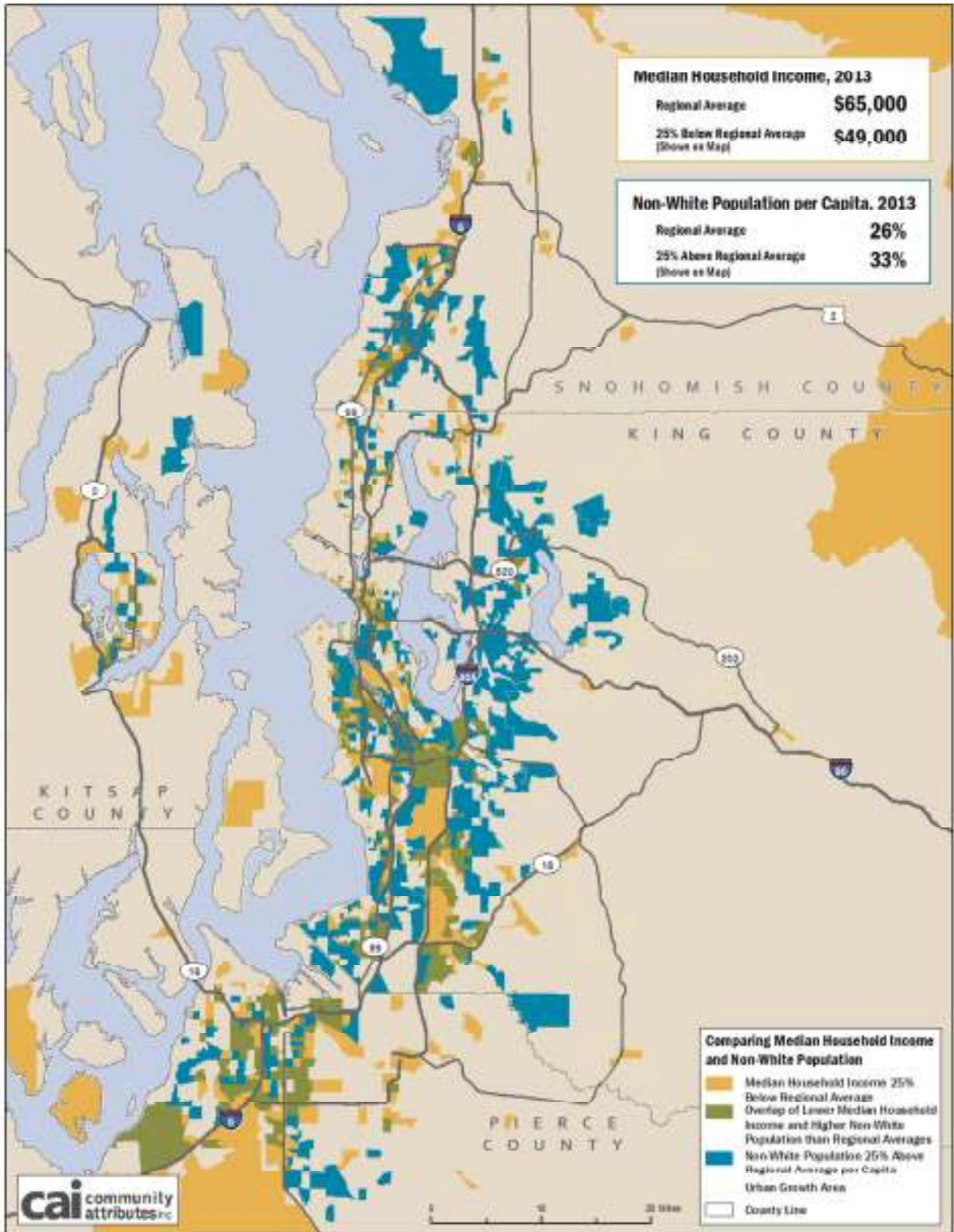


Source: U.S. Census Bureau ACS (1-Year Estimates), 2013

The region’s residents as a whole are earning higher incomes and becoming more educated. Nevertheless, some parts of the region lag behind with larger proportions of people with lower incomes and educational attainment than the region as a whole. These areas span both urban areas such as South King County and rural areas such as parts of Pierce County.

Locations in the region with 25% lower household income and 25% higher non-white population versus the regional average show a pattern (Figure 6) with concentrations of both in certain areas of south King County and Pierce County, as well as limited pockets in North King and Kitsap counties. These areas are likely in need of additional assistance to achieve equitable transportation access.

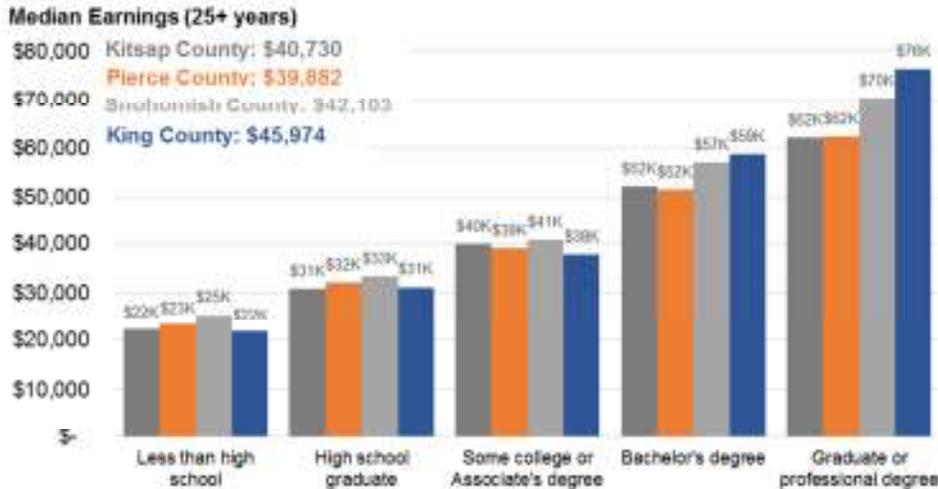
Figure 6 Median Household Income and Non-White Population, Central Puget Sound Region, 2013



Source: U.S. Census Bureau ACS (5-Year Estimates), 2013; Community Attributes Inc., 2014

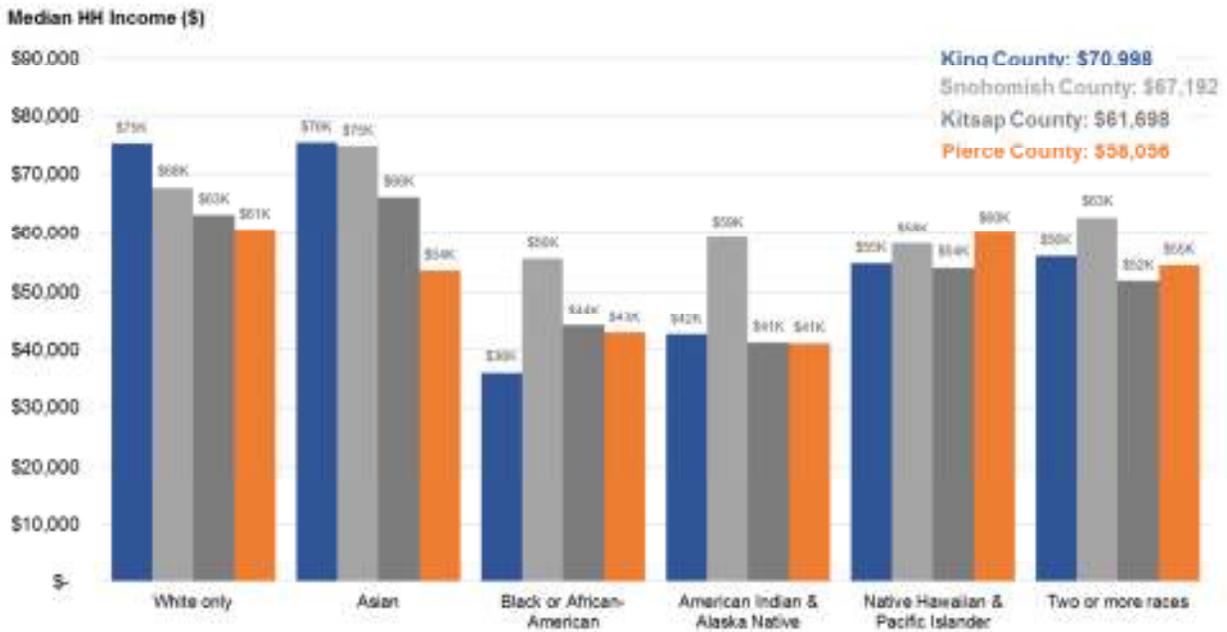
Those with lower educational attainment earn less income (Figure 7). Additionally, race is correlated with income. Asians and White households have the highest median incomes in the central Puget Sound region, while African-American households tend to have much lower incomes (Figure 8). Consequently, these disadvantaged groups will likely need help to achieve equitable transportation access.

Figure 7 Median earnings by educational attainment, Central Puget Sound Region, 2013



Source: U.S. Census Bureau ACS (3-Year Estimates)

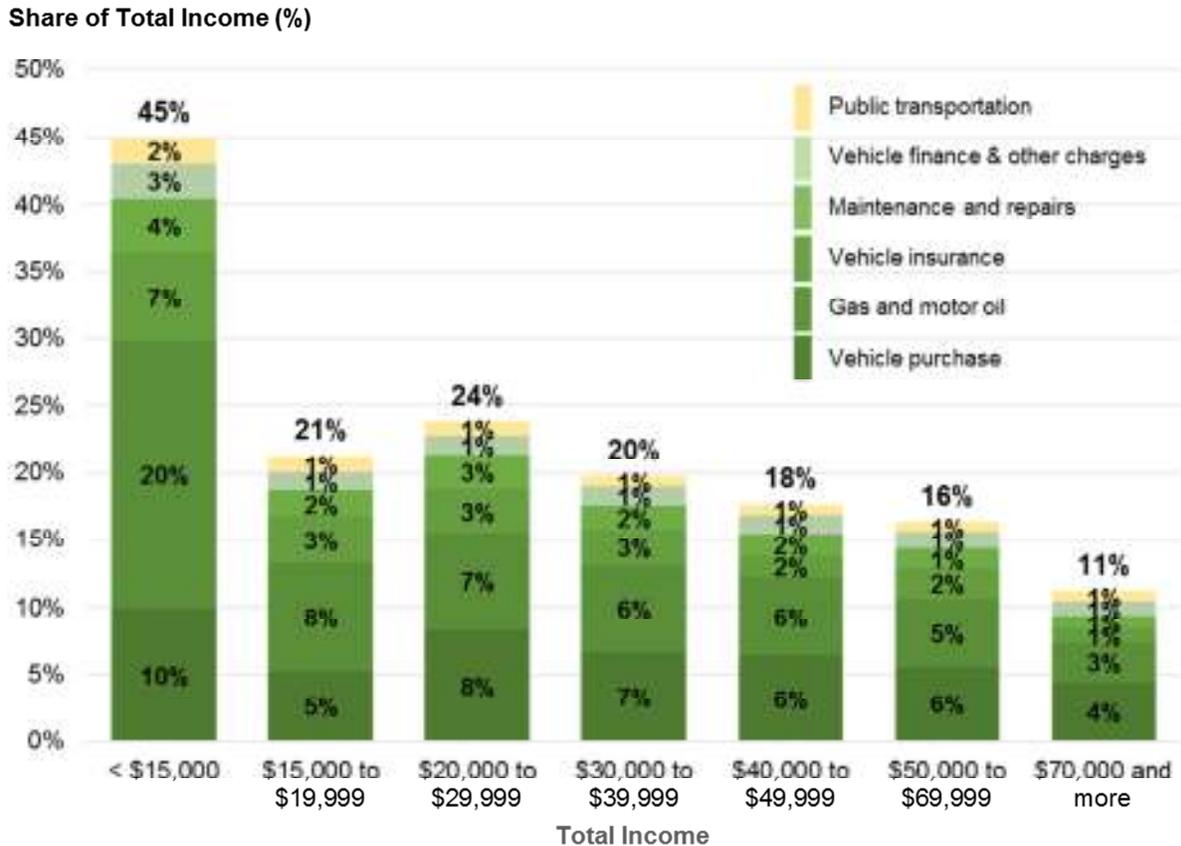
Figure 8 Median household income by race, Central Puget Sound Region, 2013



Source: U.S. Census Bureau ACS (3-Year Estimates)

Nationally, low income households spend a disproportionate amount on transportation costs as compared to those with higher incomes, especially in regards to personal vehicles (Figure 9). For those with particularly low incomes, the burden of transportation costs can reach 45% of total income, whereas for high income households, those same costs only account for 11%.

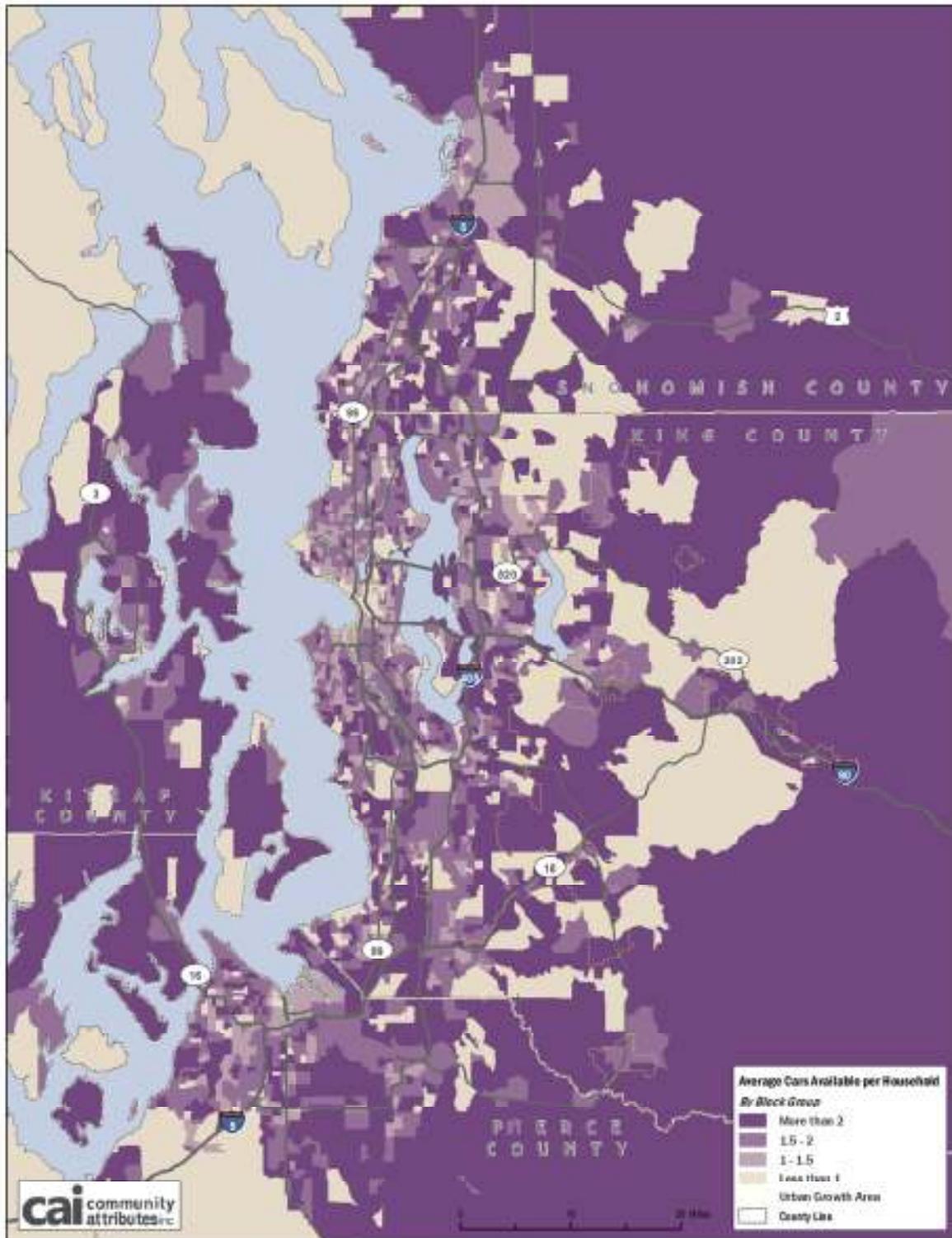
Figure 9 Transportation costs, share of total household income, United States, 2013



Source: Bureau of Labor Statistics, 2015

Figure 10 shows the rate of car availability in the region and indicates that not all areas of low car ownership are located in growth centers where transit, jobs and everyday needs are located. Some low car ownership areas are in more suburban and rural locations raising the challenge to provide alternative transportation to these areas. The cost of transportation has a broad context and includes the availability and affordability of housing as well.

Figure 10 Cars Available Per Household, Central Puget Sound Region, 2013



Source: U.S. Census Bureau ACS (1-Year Estimates), 2013; Community Attributes Inc., 2014

Populations burdened by housing cost (paying 30% or more of their total income on rent) are also spread throughout the region. Transportation costs may have a disproportionate impact on the ability of these households to afford other life necessities. While housing costs relative to income have been the traditional means by which an area's affordability may be assessed, combining costs of transportation and housing can provide a more complete picture.² Generally, these two basic needs together should represent no more than 45% of total income.

People with lower incomes may choose to live far away from urban centers because housing costs less. They, however, tend to spend more on transportation and may face longer commute times. The ability of transportation systems and services to recognize these challenges is an important equity consideration. As such, a neighborhood with relatively expensive rents that has excellent access to a variety of transportation options may emerge as a more affordable alternative than a location with low rent that requires a vehicle for commuting.

2.1.1 Disability

In addition to the aforementioned implications of an ageing population and transportation mode preferences, physical limitations may also contribute to older people relying more heavily on SOVs.

2.1.2 Other Demographic Challenges

Language barriers (immigrants) – While most public transit systems strive to provide access to non-English speaking materials for their riders, it is inherently hard to provide barrier free access to those who cannot read the everyday information available.

Isolation (remote location) – Remote areas tend to have fewer services and job and social opportunities, making travel a must. However, isolated locations are poorly served by transportation systems, and expensive auto travel over long distances is often necessary.

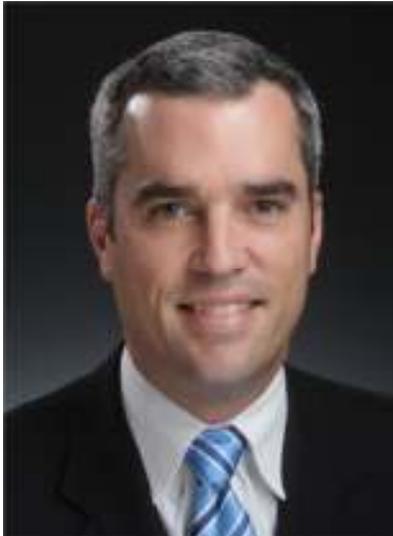
Age (elderly or very young) – Elderly people and the very young often have difficulty accessing alternative transportation and often do not drive, putting them at a disadvantage. This disadvantage is exacerbated in areas with poor access to everyday needs (schools, doctors, shopping), resulting in inequitable access.

2.2 Conclusion

Equity principles span socio-economic, geographic, and generational considerations. Equity in transportation funding, while more narrow than overall transportation equity, ties to specific issues of who pays, who benefits, and who is harmed. In Washington State, a variety of sources fund transportation. Several of these sources (such as sales and excise taxes) are regressive because they consume a much larger proportion of household income of low income households relative to higher income households. Of the available sources of funding, user fees have the potential to be more equitable. User fees may be more equitable because they preserve the link between the

² Typically, affordable housing is defined as housing costs that consume no more than 30% of a household's income. This measure, however, ignores transportation costs—typically a household's second-largest expenditure. Based on research in communities ranging from large cities with extensive transit to small areas with limited transit options, The Center for Neighborhood Technologies (CNT) found 15% of the Area Median Income (AMI) a reasonable goal for transportation affordability. By combining this 15% level with the 30% housing affordability standard, CNT recommends a new view of affordability, one in which combined housing and transportation costs consume no more than 45% of household income.

people who pay for the service and those who benefit from it, they can induce changes in travel behavior to optimize mobility, and new technology allows very finely calibrated applications based on time of travel, type of vehicle, travel path and destination. Nevertheless, the precise nature of their impact on equity will depend on how these fees are implemented.



Chris Mefford

Chris Mefford, AICP, is President and CEO of Community Attributes Inc., an award-winning community and economic development consulting firm based in Seattle. With more than 20 years of experience in the Puget Sound area and an expertise in regional economies, he is known for bringing data to life in engaging ways to understand business and social challenges. Chris excels at working with jurisdictions on planning projects, providing market and feasibility analyses, economic and financial analyses, land use and transportation policymaking, and utilizing geographic information systems (GIS) data modeling and mapping. Chris is currently leading a study on the region's industrial land supply, demand and economic importance. Research analysts Michael Jellicoe, Diana Haring, Yolanda Ho, and Radhika Nair participated in the preparation of this paper.

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