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Defining and Measuring Equitable Access to Washington Park in Portland, Oregon

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Cover image credit: Brink Communications



ABOUT EWP

Explore Washington Park helps people make decisions about how they get to and around Washington Park in Portland, Oregon., and ensure that they have what they need for a fun, enjoyable visit.

Explore Washington Park was formed as a Transportation Management Association and operates as a 501(c)3 non-profit with a license agreement with the City of Portland for transportation management in the park.

Their accomplishments include the creation and management of the free Washington Park shuttle system, which provided over 130,000 rides in 2018 and the customer service program that provided one-on-one assistance to over 30,000 people in 2018.

explorewashingtonpark.org

ABOUT TREC

The Transportation Research and Education Center (TREC) at Portland State University (PSU) is first and foremost an interdisciplinary center. Our research initiatives combine the voices and expertise of a wide range of backgrounds that collectively shape the ways we move through the world. We support collaborative research and education that provide a unique lens on transportation insight for vibrant communities. TREC is home to the U.S. DOT funded National Institute for Transportation and Communities (NITC) consortium, the Initiative for Bicycle and Pedestrian Innovation (IBPI), and other transportation grants and programs. We produce impactful research for transportation decision makers, and support the education of future transportation professionals through curriculum development and student participation in research.

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INTRODUCTION

Explore Washington Park (EWP) is a 501c3 non-profit that serves as the Transportation Management Association for Washington Park. At 410 acres, Washington Park receives over 3 million visitors each year and is home to some of Portland's most popular attractions including the International Rose Test Garden, Portland Japanese Garden, Oregon Zoo, Portland Children's Museum, World Forestry, and Hoyt Arboretum. EWP, in partnership with Portland Parks & Recreation, provides transportation management and guest services to the park and its cultural institutions with the goal of decreasing the number of vehicle trips to the park. Since beginning its work in 2014, transit ridership to the park has increased 66% and private vehicle trips have decreased 22%. EWP manages a free shuttle system that links the overflow parking and TriMet MAX station to all of the park's cultural institutions. In addition to the shuttle system, Explore Washington Park provides park information through a robust website and park brochure, and on-site customer service staff. EWP is almost entirely funded from Washington Park parking meter funds through a contract with Portland Parks & Recreation.

The EWP board adopted a Transportation Management Plan in 2016 that outlines five, five-year targets. These include decreasing private vehicle trips to the park, increasing shuttle ridership, decreasing greenhouse gas emissions from cars driving around the park, increasing user satisfaction, and increasing the number of park visitors from underserved populations. Since 2014, EWP has conducted intercept surveys each August that provide robust data to track the progress of our targets. However, the organization has struggled to track the number of visitors from underserved populations coming to the park.

The Transportation Research and Education Center (TREC) at Portland State University (PSU) partnered with Explore Washington Park (EWP) to better understand how to meet the needs of underserved populations. The research project consisted of four main parts: (1) creating an equity definition to guide EWP and TMP implementation; (2) analyzing data of park visitations to assess progress of the Transportation Management Plan goals; (3) suggesting methodology adjustments and options for improving data collection to support equity and transportation analysis; and, (4) providing recommendations for how to increase visitations to Washington Park by underserved populations. While we recognize there are multiple dimensions that delineate underserved groups, the analysis in this report focuses mainly on race and ethnicity, since income and other visitor attributes were not available in the intercept survey data, a key component of our analysis.

To accomplish this work, we gathered information from the EWP institutions about their existing equity efforts, including equity related definitions, programmatic activities, and relevant data. We also incorporated region-wide data on race, income, and transit service to better understand how current visitors reflect Portland area populations of interest and whether and where transit access might present either a barrier or opportunity for increased visitorship.

EQUITY AND UNDERSERVED POPULATIONS DEFINITION

Based on input from EWP institutions, and knowledge about other equity related definitions, we created an equity definition in order to have a consistent framework to apply equity programming across Washington Park venues. As discussed below, we recommend focusing on underserved populations to achieve equity. The goal of identifying underserved populations is to create equitable access to and enjoyment of Washington park activities.

Labels and name history

There are many different labels, names, and terms used to describe communities that experience structural barriers in the United States based on race, income, religion, differently-abled, language, etc. These terms and labels carry a great deal of meaning, and often unpleasant histories. Two common terms used to describe these historically marginalized populations include underrepresented and underserved. Though the communities in this project are underrepresented, due to the fact they have not been well-represented in EWP policy-making decisions or venue programming in the past, and/or are not well represented demographically among visitors to the park, we feel the term underserved is a better fit for the goals of this project. We recommend the term underserved because the broader societal barriers the communities face in their everyday lives will continue to have an impact on visitation and should be considered when creating future equity-focused programming.

Additionally, the City of Portland as well as other local governmental authorities, foundations, and nonprofits also use underserved to describe: “people and places that historically and currently have not had equitable resources or access to infrastructure, healthy environments, housing choice, etc. Disparities may be recognized in both services and in outcomes”.¹ By focusing on underserved communities, EWP can better align and document programmatic activities to support better engagement with these populations.

Equity definition

We recommend the following definition for underserved populations for the unique activities EWP conducts:

Underserved populations include individuals who experience financial, geographic, disabilities, or racial or cultural barriers to enjoying Washington Park venues and/or have demonstrated

¹ <https://www.portlandoregon.gov/oehr/article/581458>

disparities in utilizing Washington Park when compared to majority or dominant populations. Underserved populations include people:

1. who have financial barriers to purchasing tickets, parking, or using transit
2. who are people of color
3. who are non-native English speakers
4. who are disabled
5. with a lack of access to private cars or dependence on transit, increasing travel times to Washington Park, creating geographic and transit burden

To create these definitions and recommendations, we reviewed existing definitions and work from EWP institutions and stakeholders (see Appendix: Table 1). Our recommended definition most closely resembles the Children’s Museum’s definition. We also reviewed existing definitions about equity at major Portland metropolitan region institutions including the City of Portland, Multnomah County, Metro, Portland State University, and Meyer Memorial Trust. Lastly, we examined literature related specific to transportation and recreation.

Based on these reviews, we further the following definitions for each of the five identified underserved populations.

1. **Financial:** Families making less than Portland’s median income; receiving financial assistance

Families experiencing financial barriers, including those making less than Portland’s median income and/or recipients of financial assistance generally have less discretionary income to spend on non-essential expenses such as entertainment, spending a far greater share of their income on necessities.² In fact, “the lowest quintile spends more than 60 percent of its budget on the basics - housing, utilities, transportation, and home-cooked food - while the rich spend less than 45 percent.”³ Those who are cost-burdened are more likely to live further from Portland’s downtown core (Appendix: Figure 1).

2. **Racial:** People of Color

People of color experience barriers at a higher rate than non-people of color to accessing many recreational activities due to systematic, institutional, and interpersonal racism. It is a widely accepted concept that “by addressing the barriers experienced by people of color, we

² Bureau of Labor Statistics’ Consumer Expenditure Survey <http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2016/03/household-expenditures-and-income>

³ Bureau of Labor Statistics’ Consumer Expenditure Survey

will effectively also identify solutions and remove barriers for other disadvantaged groups.”⁴ We recommend you use the inclusive racial categories adopted by the State of Oregon to identify people of color.⁵ The recommendations suggest that all race data should be reported in the following categories: White (non-Hispanic); Black or African American (non-Hispanic); American Indian or Alaska Native (non-Hispanic); Asian or Pacific Islander (non-Hispanic); and Hispanic. People of color would include people who identify as something other than White non-Hispanic, including people who are mixed race.

3. **Cultural:** English as a second language

Limited English proficiency individuals are more likely to live in East Portland (Appendix: Figure 3) and therefore, experience barriers when accessing Washington Park. TriMet’s Title VI (Executive Order 13166) requires “meaningful access to programs, services and benefits for persons with limited English proficiency, or LEP.”⁶

By focusing on these identity categories that have experienced historic inequitable usage rates and barriers to recreational areas, EWP can advance equity and increase the number of underserved people accessing its institutions.

4. **Disabled or Differently-Abled:** Individuals who require disability-related assistance, including on and off ramps, wheelchairs or scooters, service animals, or sensory items such as headphones, less crowds etc.

Visiting public venues such as those offered by Washington Park create barriers for disabled individuals. Federal ADA law, under Title II, lays out protections in areas of employment, services and public accommodations, and may help guide Explore Washington Park in creating a similar framework:

“The City of Portland works to ensure that every program, service, benefit, activity and facility operated or funded by the City of Portland is accessible to people with disabilities. The City

⁴ Oregon Metro: Strategic Plan to Advance Racial Equity, Diversity and Inclusion
<https://www.oregonmetro.gov/sites/default/files/2016/11/15/Strategic-plan-advance-racial-equity-diversity-inclusion-exec-summary-17063-20160613.pdf>

⁵ https://www.oregon.gov/ohcs/OSHC/docs/HSC-2016/030416_HSC_LIFT_CARE-report.pdf;
<https://www.oregon.gov/oha/OEI/Policies/Race-Ethnicity-Language-Disability-Data-Collection-Standards.pdf>

⁶ TriMet - Title VI Update - Language Assistance Plan

strives to eliminate barriers that may prevent persons with disabilities from accessing our facilities or participating in City programs, services and activities.”⁷

5. **Geographic:** Individuals living more than 30 minutes by car; or who are transit dependent and more than an hour by transit from Washington Park, increasing travel costs and creating a greater burden on lower income visitors

Due to citywide housing affordability, more lower-income individuals and families are moving further from Portland’s downtown core, and into East Portland neighborhoods (Appendix: Figure 2). Due to a lack of car ownership and relative affordability of transit fares, public transportation plays a vital role in the mobility of lower-income riders. The movement of lower-income communities further from downtown creates a geographic barrier and increases the overall cost and travel time of these individuals to Washington Park.

TriMet defines low-income as households living with incomes at or below 150% of the Federal Poverty Level.⁸ Lower-income individuals make up 42% of transit trips on TriMet, and those identifying as Black Non-Hispanic are more likely to live within a ½ mile of bus or MAX service, than other racial/ethnic groups.⁹

⁷ City of Portland website: <https://www.portlandoregon.gov/oehr/66522>

⁸ TriMet; *Title VI Update - Ridership Characteristics and Demographic*

⁹ TriMet; *Title VI Update - Ridership Characteristics and Demographic*

INTERCEPT SURVEY DATA ANALYSIS

To understand the current racial makeup of Washington Park visitors and to explore how visitation rates and experiences might differ across groups of interest, we linked several datasets for analysis: 1) Washington Park visitor intercept surveys, 2) American Community Survey data from the US Census, 3) public transit service data from TriMet, and 4) several spatial variables constructed in a Geographic Information System (GIS). Data were used primarily to understand both existing and potential (latent) demand for use of the park and to explore potential differences and barriers to accessing the park.

Data sources overview

Unless otherwise noted, data used for analysis presented here were drawn from annual intercept surveys at the park (2014-2017) and the American Community Survey (ACS 5-year, 2013-2017). Intercept surveys were conducted from mid-August to early September each year, almost all conducted on Fridays and Saturdays. Demographic items were limited to respondents' self-identified race/ethnicity, age, gender, and home zip code. No direct information on income was available. Census data at the region and zip code levels were used both as points of comparison and to augment the intercept survey data. Transit service data and GIS-constructed spatial variables were added to better understand spatial access differences.

Because the sample sizes of individual racial/ethnic identities were often limited, most analysis reports only two categories: people of color (abbreviated as POC, includes anyone who marked a non-white identity, including Latinx/Hispanic) and white (alone). Where we noted important differences among subgroups, we try to provide that information, acknowledging that these groupings are imperfect.

Intercept surveys provide useful data on those already using a service or area, but they do not provide any direct information on those who are not, whether by choice or exclusion. For a regional attraction like Washington Park, we can get some idea of those groups missing or under-represented among visitors by considering demographics of potential visitors throughout the region.

We divided responses into those visiting from within and from outside the region based on provided zip codes. We omitted responses for which region could not be determined due to missing or invalid zip codes (n=326, 7.6%).

Visitor survey demographics

We examined survey respondents' self-described race/ethnicity by regional and out of region visitors. We also compared the race/ethnicity distribution to that of the broader Portland region.

Surveyed visitors were less likely to identify as people of color than the regional population at large (Table 1). Region-wide, just under 26% of residents identify as something other than white, while just over 19% of surveyed visitors from 2014-2017 did. Visitors from outside the region were somewhat more diverse. Those identifying as Latinx and African-American were particularly underrepresented compared to the region as a whole, along with those specifying a race not offered on the survey. Regional visitors identifying as Asian, Native American, Pacific Islander, or Multiple Races were surveyed at close to their regional shares of the population.

Table 1 Washington Park Visitor Survey (2014-2017) Race/Ethnicity Groups versus Region

Surveyed Visitors (2014-2017)			Portland Region (ACS, 2013- 2017)
Race / Ethnicity	All	Regional	
% White	78.0%	80.9%	74.3%
% People of Color (all)	22.0%	19.1%	25.7%
...Latinx	...6.3%	...5.2%	...11.6%
...African-American	...1.5%	...1.5%	...2.7%
...Asian	...7.3%	...6.3%	...6.3%
...Native American	...0.8%	...0.6%	...0.5%
...Pacific Islander	...0.6%	...0.5%	...0.5%
...Other	...2.3%	...1.9%	...0.2%
...Multiple	...3.2%	...3.2%	...3.9%
Total (n)	3,837	1,942	2,382,037

Over time, surveyed visitors from within the Portland region have been getting more diverse (Table 2). The increased share of POC from 2014-2017 is statistically significant (z-test, $p < 0.05$). Given the small sample sizes of particular racial/ethnic groups within POC, we could not reliably identify whether any in particular might be driving the upward trend.

Table 2 Washington Park in Region Visitors Race/Ethnicity Trend Over Time

Surveyed in Region Visitors				
Year	2014	2015	2016	2017
% People of Color	15.6%	16.6%	20.8%	22.0%
% White	84.4%	83.4%	79.2%	78.0%
Total (n)	500	368	437	637

Among all visitors, families of color were about 10% less likely to include no children (z-test, $p < 0.05$); however, the difference was not significant among regional visitors (z-test, $p > 0.05$). Families of color were significantly more likely to have older children (6+), whether they were from within or outside the region (z-tests, $p < 0.05$).

Distance from home to park

One potential explanation for the somewhat lower than expected share of visitors of color is that POC tend to live farther from the park. Straight-line distance was measured from respondents' home zip code to the Rose Garden Visitor Center in Washington Park. There was no significant difference in proximity to the park between POC and white visitors (t-test, $p < 0.05$), and, measured at zip code level, we noted that, region-wide, areas with higher shares of POC overall actually tended to live closer to the park. However, two POC subgroups did tend to live farther from the park: Latinx and Native Americans. Latinx visitors came from zip codes about one-half mile farther, on average, and the difference was significant (one-way ANOVA, $p < 0.05$). Given that Latinx also visited less often than expected, this suggests further study on their accessibility to the park. This analysis was limited to straight-line distance, ignoring differences in network distance and travel speed by various modes.

Figure 1 displays the share of white and POC visitors by home zip code.

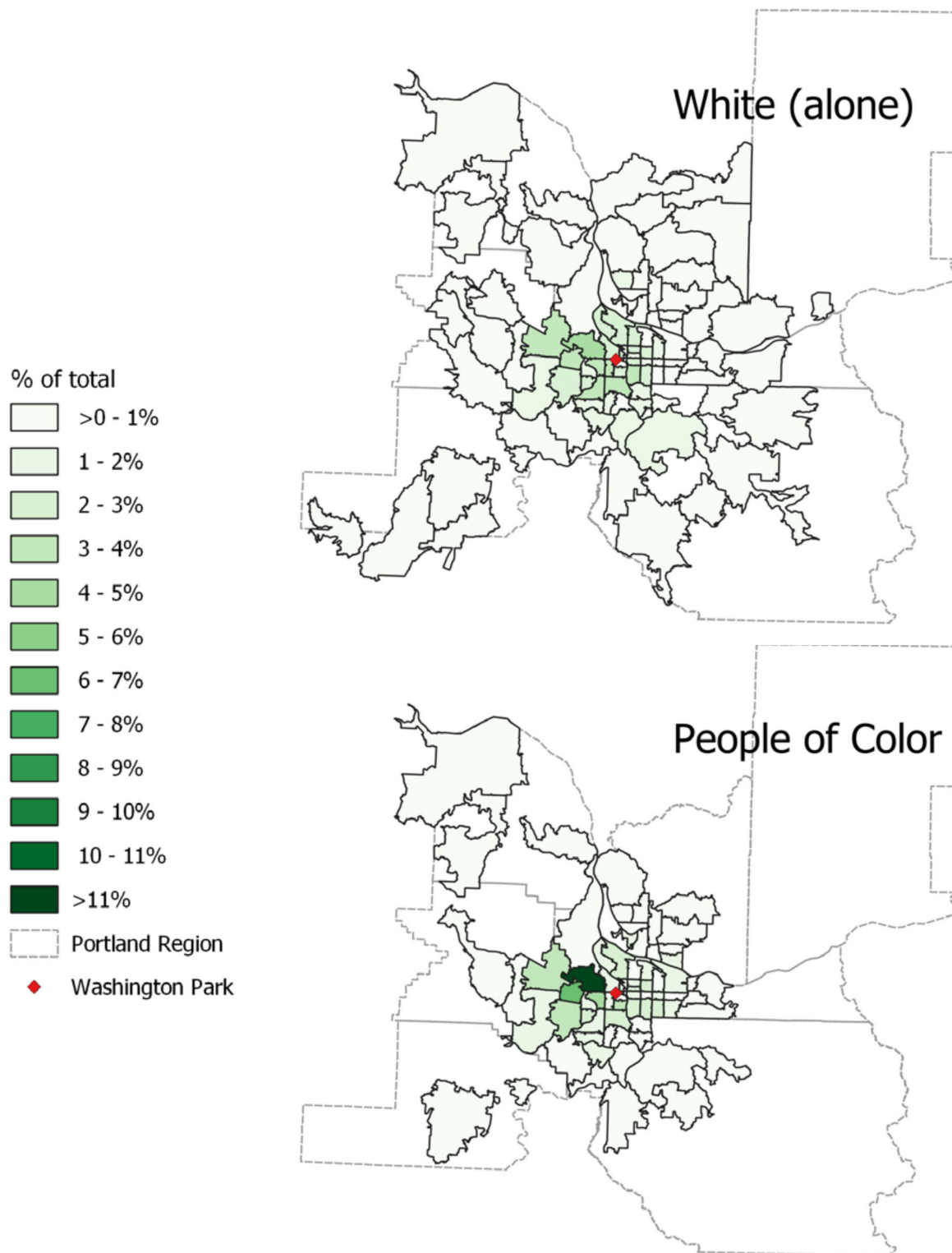


Figure 1 Distribution of surveyed regional visitors by home location

Income

The visitor survey did not ask for household income, another potentially important barrier to park access. We noted that POC who did visit the park came from zip codes with higher incomes than the regional median, and higher than those of white visitors, though the difference was not significant (ANOVA, $p>0.05$).

We also considered income by testing whether the share of visitors from a given zip code was related to median income, controlling for distance and zip code population. In other words, were surveyed visitors less likely to come from lower-income parts of the region, other things being equal? Models suggested that indeed visitors were less likely to come from lower-income zip codes (negative binomial count model, $p<0.05$). While we observed that visitors were less likely than expected to be POC, the share of POC in a zip code was not significantly related to the number of visitors to the park, controlling for proximity, population, and income (negative binomial count model, $p>0.05$).

Current travel to the park

There has been a significant reduction in personal auto trips from 2014-2017 (Table 3, z-test, $p<0.05$). Most of these trips appear to have switched to public transit and, especially among visitors from outside the region, ride-hailing services. Active travel to the park varies considerably from survey to survey, but continues to make up a larger share of trips than ride-hailing and other minor modes among local visitors. The small sample size of POC leads to more variability in mode shares from year to year, but in general trends seem broadly similar, with reduced use of personal autos.

Table 3 Washington Park Visitor Survey (2014-2017) Transportation Choices

	All Visitors				Regional Visitors			
	2014	2015	2016	2017	2014	2015	2016	2017
% Auto	79.3%	75.9%	63.6%	65.3%	81.7%	79.8%	71.4%	72.1%
% Transit	12.4%	15.9%	18.1%	20.3%	10.7%	15.3%	17.2%	21.8%
% Active	7.1%	4.7%	10.1%	7.1%	7.4%	4.3%	9.0%	4.4%
% Other (incl. ride-hailing)	1.2%	3.5%	8.3%	7.3%	0.2%	0.5%	2.5%	1.7%
Total (n)	927	723	846	1326	497	367	437	637

Looking at mode shares across all years, among visitors from outside the region, no significant differences were noted in mode choice between POC and white respondents. Among local visitors, POC were significantly less likely to use active modes to get to the park (3.5% vs. 6.8%, $p < 0.05$). Visitors of color were also more likely to use transit (19.7% vs. 15.9%, but the difference was not significant ($p > 0.05$)).

Transit access to the park

As noted in the [Introduction](#), those with lower-incomes and POC are more likely to use and to live near public transit. Although no significant difference in transit use among current visitors was apparent, lack of good transit connections may pose a barrier for those not visiting, or not visiting as often as they might like. To understand the how transit service to the park aligns with lower-income and POC groups in the region, we conducted a zip code-level transit network service analysis. Using tools developed at Portland State University, we measured the expected time to reach Washington Park (Rose Garden and Zoo) by transit and walking on a Saturday between 10a and 2p (Figure 2).¹⁰ Also included in Figure 2 are zip code overlays showing areas with higher shares of POC, lower-income households, or both.

¹⁰ Specifically, we considered the time to reach the park from any given point to be the sum of walking access time, waiting time (half the route headway), travel time on transit, and walking egress time. Walking speed was assumed to be 3 mi/hr. Average transit headways and speeds were calculated from TriMet's General Transit Feed Specification (GTFS) data. Unlimited transfers were allowed, but each was subject to the cost of walking between stops (if any) and additional waiting time (half the headway). We also tested a Friday over the same time period but found little difference in travel times due to similar frequency of the major lines serving the park. Note that only TriMet regular service is included.

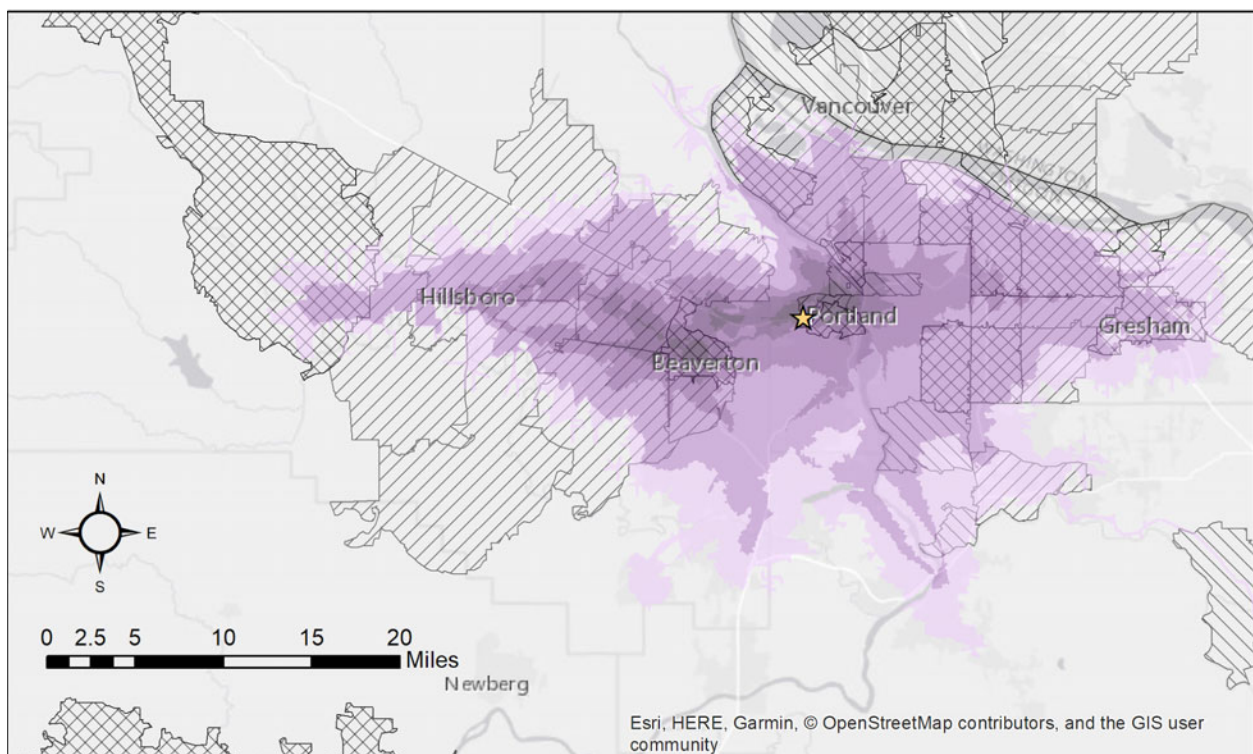
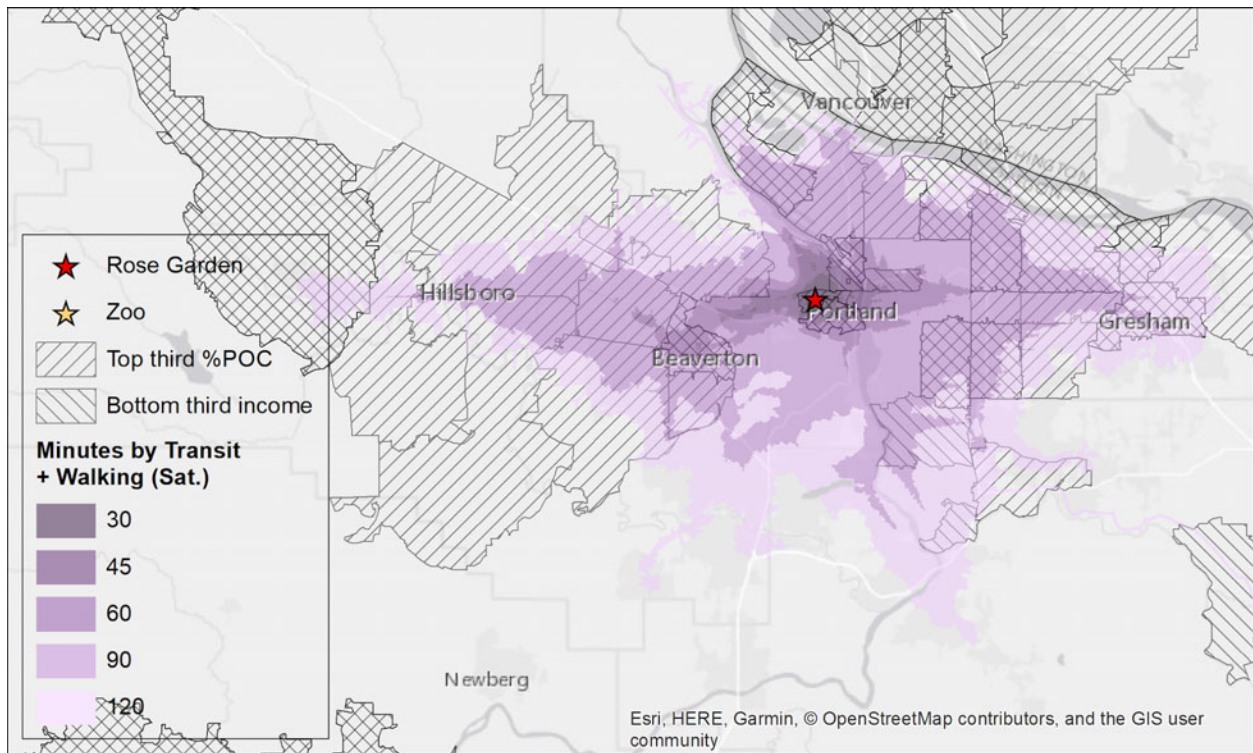


Figure 2 Expected time to reach Washington Park by transit and walking on a Saturday between 10a-2p

Transit service from east to west is considerably better than north-south, and service is generally better to the Zoo than the Rose Garden, due to the MAX Zoo stop. The portion of the region within half an hour by transit is restricted to a small area around the park, parts of downtown Portland, and Beaverton (Zoo only). Many residents would face a total travel time of more than an hour (Table XX). Focusing on the socio-demographic overlays reveals broad areas with equity populations just out of reach of quicker service. Increased frequency of the 63-Washington Park bus and perhaps exploration of additional direct routes to the park from areas in North and East Portland might provide more equitable access. The analysis also suggests that lower-income and high POC areas just south of downtown Portland, inner Northeast Portland, and central Beaverton might be worth considering for outreach to existing lower-income transit riders, since service is already reasonably good.

Table 4 summarizes transit access to Washington Park midday Saturday based on Census population estimates and transit service at the zip code level. By this estimate, less than 5% of residents live within 30 minutes of either park venue by transit. White residents are 10-20% more likely than POC to live within an hour of park venues by transit and walking; however, white residents are more likely to live in areas with very poor transit access (more than 2 hours). Travel times to the Rose Garden should be interpreted with caution, as they do not include the option of taking MAX light rail to the Zoo and then using the Washington Park Shuttle.

Table 4 Estimated Transit Travel Time to Washington Park for Zip Codes within TriMet Service Area (Saturday 10a-2p)

	Rose Garden			Zoo		
Total Minutes	POC	White	All	POC	White	All
0-30	1.5%	2.6%	2.3%	3.6%	3.1%	3.3%
30-60	6.0%	7.1%	6.8%	22.6%	25.6%	24.7%
60-90	47.9%	42.9%	44.4%	51.4%	43.4%	45.7%
90-120	39.9%	37.0%	37.8%	20.8%	22.7%	22.1%
>120	4.8%	10.4%	8.8%	1.7%	5.2%	4.2%
Total Population	454,234	1,113,307	1,567,541	454,234	1,113,307	1,567,541

Notes: Calculated from each zip code within the TriMet service area

Numbers may not add to 100% due to rounding

See footnote 10 for additional detail on the methodology

Venues and intra-park travel

We also considered differences in attractions visited by home region and equity group among those surveyed (Table 5). While patterns of park use were broadly similar between whites and POC, a few differences emerged. Regional visitors of color were significantly more likely to report visiting the Rose Garden and Playground, and less likely to visit the World Forestry Center (z-test, $p < 0.05$). While we can't speak directly to income or cost considerations, it is worth noting that both former attractions are admission free. Regional visitors of color were also significantly more likely to report visiting multiple attractions as part of their visit (z-test, $p < 0.05$).

Venues visited

Table 5 Washington Park Visitor Survey (2014-2017) Race/Ethnicity Groups versus Region

Surveyed Visitors				
	In Region		All Visitors	
Attraction ^{1,2}	% of White	% of POC ³	% of White	% of POC ³
Oregon Zoo	29.0%	31.9%	27.4%	31.8%
Children's Museum	25.9%	28.1%	19.3%	18.3%
Hoyt Arboretum	23.4%	20.0%	20.2%	17.2%
Rose Garden	18.5%	23.2%	35.6%	39.1%
Other	17.3%	18.6%	14.6%	15.3%
Japanese Garden	15.6%	17.8%	31.8%	35.9%
World Forestry Center	9.9%	5.9%	9.7%	7.2%
Wildwood Trail	9.0%	10.3%	7.9%	7.2%
Playground	2.5%	4.6%	2.3%	3.4%
Multiple	41.5%	47.6%	51.4%	55.1%
Total (n)	1,571	370	2,991	845

¹ Some attractions omitted due to small numbers selecting: 4T Trail, Vietnam Memorial, Tennis Courts, Holocaust Memorial, Archery Range

² Respondents could select multiple attractions

³ Bold indicates significant difference between race/ethnicity groups ($p < 0.05$)

Venue membership

Controlling for in and out of region residence, no significant differences in membership rates to the various venues were noted (z-tests, $p>0.05$).

Shuttle use

Visitors of color reported using the Washington Park Shuttle significantly more often than white visitors (Table 6, z-test, $p<0.05$). Regional POC surveyed also reported significantly more past use of the park shuttle (z-test, $p<0.05$). Whether higher shuttle use is driven by a preference for visiting multiple venues (as noted above, Table 5) or vice versa could not be determined from the data. Shuttle users of color rated its quality slightly higher on average (3.8 vs. 3.7 out of 5), but the difference was not significant (t-test, $p>0.05$).

Table 6 Washington Park Shuttle Use

Surveyed Visitors				
	In Region		All Visitors	
Item	% of White	% of POC ¹	% of White	% of POC ¹
Used shuttle today	12.3%	18.8%	17.2%	23.5%
Total (n)	1,553	367	2,940	831
Used shuttle in past	22.8%	32.0%	17.0%	20.4%
Total (n)	843	231	1661	510

¹ Bold indicates significant difference between race/ethnicity groups ($p<0.05$)

RECOMMENDATIONS

The consistent collection of data via intercept surveys is extremely valuable for evaluating changes in visitor profiles over time. While maintaining consistency, future efforts should strive to capture additional variables beyond race/ethnicity to support a more robust definition of equity. Key additional components (suggested variables) identified here include: financial (income), cultural (language), abilities (disabled/differently-abled), and geographic.

Recent research in low-income, high POC areas in other cities has shown that a majority of people are willing to provide household income information (87% response).¹¹ We would recommend aligning income range options with Census/ACS categories. We have also had good success with a qualitative measure of income sufficiency, with even higher response rates (Appendix Figure A1). The combination of financial and race/ethnicity information would allow a more nuanced look at equity outcomes.

The intercept survey currently captures geography by zip code. While useful, a more precise location item would greatly benefit transportation analyses for regional visitors, particularly for active modes and transit. Finer-grained location would also allow linking to higher resolution ACS/Census estimates at block group level. We have had reasonable success asking for a street intersection near home (67% response).¹²

In terms of transportation to the park, it would be helpful to understand mode combinations better. For example, it is important to know whether visitors made their trip directly from home or not. If not, we would want to know about where the park trip itself originated, and whether different modes were used on each leg. For example, a family might drive downtown and park, then take the MAX to the Zoo. Currently, this would likely be coded as a transit trip, but we would assume it was taken all the way from home. Some demographic information about visitors' transportation options would also aid analysis; for example, do they have a car? Bike? Transit Pass that they or their employer pays for?

A key limitation of park intercept surveys to capture equity outcomes is the inclusion of only those already visiting the park. This self-selected group has by definition overcome barriers to access, at least for the particular visit. To the extent possible, surveying potential visitors from underrepresented groups in the region would add considerable depth to future analyses. This is particularly true for better understanding barriers and preferences for accessing and visiting park venues. This potentially could be accomplished by targeting mail surveys to specific areas of interest or by convening focus groups with different populations of interest.

¹¹ [Breaking Barriers to Bike Share: Insights from Residents of Traditionally Underserved Neighborhoods](#)

¹² [Breaking Barriers to Bike Share: Insights from Bike Share Users](#)

Despite limitations of the existing data, the analysis presented here does suggest some potential strategies for outreach, policy, and further evaluation:

- Those identifying as African-American or Latinx are most underrepresented relative to their share of regional population and may require additional, targeted outreach.
- Analysis suggests that visitors, and especially visitors of color, are coming from higher-income areas on average. While overall racial diversity trends have been positive, it is possible that lower-income households may still be left out.
- POC are visiting the park from a more concentrated portion of the region, suggesting specific outreach to this set of zip codes might be effective.
- Transit access to the park is challenging and uneven. Focusing on improving service in targeted areas or encouraging potential visitors from areas with reasonable transit access could be promising strategies.
- POC who currently use the park tend to visit more attractions per visit and make more use of free admission venues (e.g. Rose Garden, Playground). Combined entrance passes and/or reduced or free days might be options worth pursuing.
- Visitors of color are using the park shuttle at significantly higher rates than other visitors. It would be useful to learn more about what specifically is attracting their use.
- It is essential to consider visitors from within and those from outside the region differently, particularly when defining and assessing equity outcomes.

CONCLUSIONS AND NEXT STEPS

This report presented: (1) an equity definition to guide EWP and TMP implementation; (2) an exploratory analysis of four years of park visitor survey data to assess progress of the Transportation Management Plan goals; (3) suggested methodologies and options for data collection and analysis to support equity and transportation goals; and, (4) some specific recommendations for how to increase visitations to Washington Park by underserved populations. Key findings of the analysis included:

- People of color (POC) are under-represented among visitors coming from within the Portland region, but the trend has been improving 2014-2017
- POC visit the park from areas about the same distance away on average as white visitors in the region; however, there are considerable differences in the distributions of regional visitors by group
- Lower-income areas in the region have lower rates of park visits than expected visitors, even after controlling for proximity
- There's been a significant reduction in personal auto use by park visitors, and a significant increase in transit use since 2014
- Transit access to the park is challenging, but there are promising areas of overlap where lower-income and high POC areas have reasonable transit service to the park
- Those POC who do visit the park use it somewhat differently, including visiting more (and more free entrance) attractions and also using the park shuttle at higher rates

The analysis presented here merged intercept survey data with data from the ACS/Census, TriMet, and GIS-derived variables to extend previous work. Equity focus was on race/ethnicity and (area-level) income. Future analysis might further consider other aspects of equity such as age, ability, and household or individual-level resources and preferences. Most pressing is the need for data from those not currently visiting the park, or not visiting as often as they would like, especially for traditionally underserved groups in the region.

APPENDIX

Table A1: Barriers to Alternative Transportation POC vs White Alone 2017

Survey question: What benefits do you enjoy from taking alternative transportation (not driving) to Washington Park?

	Time	Access	Cost	Child	Safety	Errands	Un-familiar	Distance	Habit	None	Other	Total
POC	2 (3.8%)	5 (9.6%)	1 (1.9%)	5 (9.6%)	5 (9.6%)	8 (15.4%)	2 (3.8%)	10 (19.2%)	5 (9.6%)	5 (9.6%)	4 (7.7%)	52 100%
White Only	24 (12.1%)	19 (9.6%)	7 (3.5%)	18 (9.1%)	16 (8.1%)	27 (13.6%)	1 (0.5%)	26 (13.1%)	30 (15.2%)	21 (10.6%)	9 (4.6%)	198 100%
Total	26 (10.4%)	24 (9.6%)	8 (3.2%)	23 (9.2%)	21 (8.4%)	35 (14.0%)	3 (1.2%)	36 (14.4%)	35 (14.0%)	26 (10.4%)	13 (5.2%)	250 100%

Table A2: Transit Benefits POC vs White Alone 2017

Survey question: What benefits do you enjoy from taking alternative transportation (not driving) to Washington Park?

Transit Benefits	POC	White Alone	Total
Saves time	2 (3.5%)	5 (2.2%)	7 (2.5%)
is more convenient	6 (10.5%)	15 (6.7%)	21 (7.5%)
saves money	3 (5.3%)	8 (3.6%)	11 (3.9%)
I don't have to worry about parking	2 (3.5%)	36 (16.1%)	38 (13.6%)
I can avoid traffic congestion	8 (14.0%)	46 (20.6%)	54 (19.3%)
I contribute less air pollution and CO2 emission	16 (28.1%)	51 (22.9%)	67 (23.9%)
I have time to be productive on transit	7 (12.3%)	25 (11.2%)	32 (11.4%)
none of the above	10 (17.5%)	25 (11.2%)	35 (12.5%)
other benefits	3 (5.3%)	12 (5.4%)	15 (5.4%)
Total	57 100%	223 100%	280 100%

Table A3 Family type by children POC vs White Alone, 2017

Survey question: Including yourself, how many people are in your group?

- Young children: number of people in group under 6
- Older children: number of people in group between 6 and 17
- Adult only: number of people in group that are adults

	Young Children Only	Young and Old Children	Old Children Only	Adult Only	Total
POC	77 (23.6%)	50 (15.3%)	42 (12.9%)	157 (48.2%)	326 100%
White Only	285 (26.2%)	90 (8.3%)	129 (11.9%)	585 (53.7%)	1089 100%
Total	362 (25.6%)	140 (9.9%)	171 (12.1%)	742 (52.4%)	1415 100%

Table A4 Family Type by Children by Race, 2017

Survey question: Including yourself, how many people are in your group?

- Young children: number of people in group under 6
- Older children: number of people in group between 6 and 17
- Adult only: number of people in group that are adults

	Young Children Only	Young and Old Children	Old Children Only	Adult Only	Total
Native American	0 (0%)	6 (30.0%)	4 (20.0%)	10 (50.0%)	20 (100%)
African American/Black	11 (28.2%)	8 (20.5%)	5 (12.8%)	15 (38.5%)	39 (100%)
Pacific Islander	3 (42.9%)	1 (14.3%)	0 (0%)	3 (42.9%)	7 (100%)
Asian	33 (26.0%)	10 (7.9%)	20 (15.8%)	64 (50.4%)	127 (100%)
White only	285 (26.2%)	90 (8.3%)	129 (11.9%)	585 (53.7%)	1089 (100%)
Latinx	20 (23.8%)	21 (25.0%)	10 (11.9%)	33 (39.3%)	84 (100%)
Other	10 (20.8%)	3 (6.3%)	3 (6.3%)	32 (66.6%)	48 (100%)
Total	362 (25.6%)	139 (9.8%)	171 (12.1%)	742 (52.5%)	1414 (100%)

Figure A1 Example of an income sufficiency question

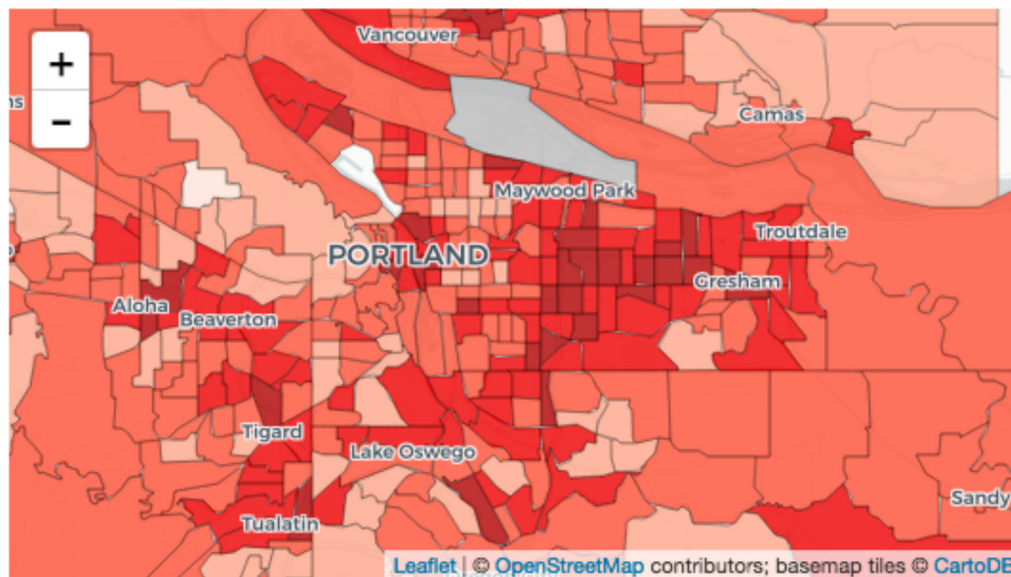
Which one of the following four statements best describes your ability to get along on your household income?

- ☐ 1 I/we can't make ends meet
- ☐ 2 I/we have just enough, no more
- ☐ 3 I/we have enough, with a little extra sometimes
- ☐ 4 I/we always have money left over

Figure A2

Portland-area cost-burdened households, 2015

This map shows the percentage of households per Census tract paying more than 30 percent of income on housing. Click on a tract for more info.



Portland metro area

Households spending more than 30 percent of income on housing

Renters: **163,835 49.5%**

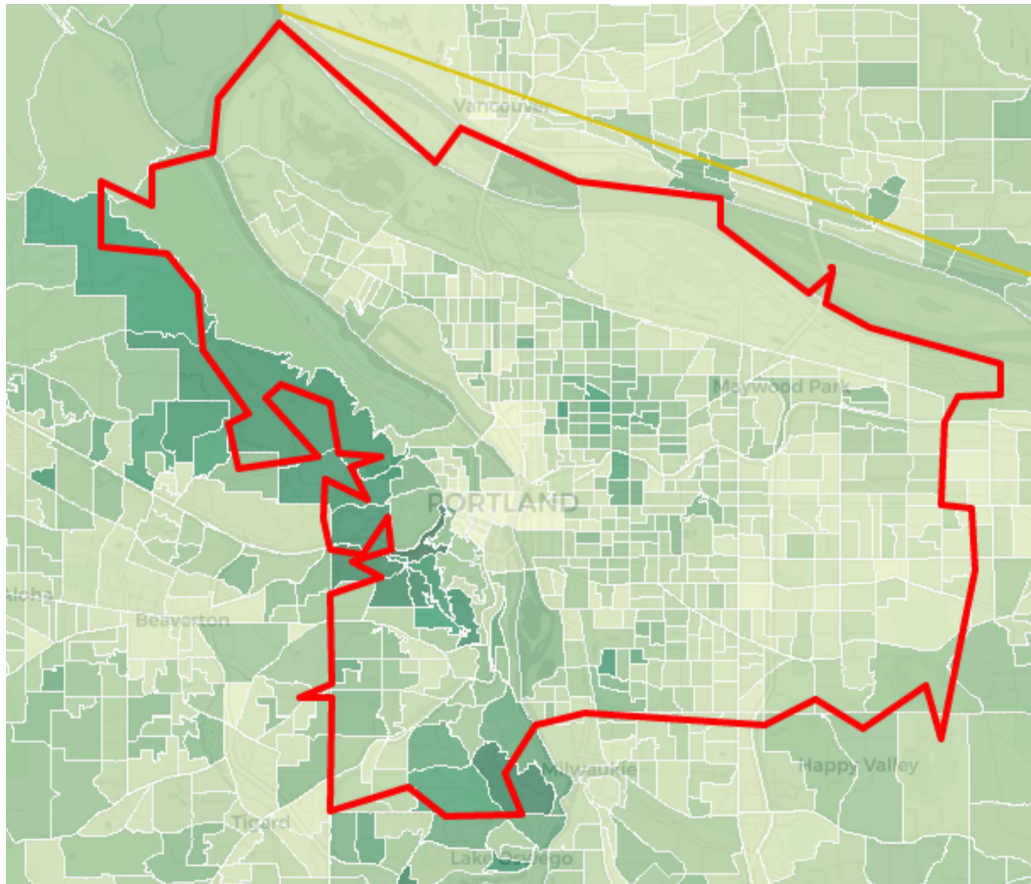
Owners: **145,537 29.2%**

Total: **309,372 37.3%**

Interactive by Mark Friesen/Staff

Source: U.S. Census Bureau's American Community Survey, 2011-2015

Figure A3



Source: City Data <http://www.city-data.com/income/income-Portland-Oregon.html>

Figure A4

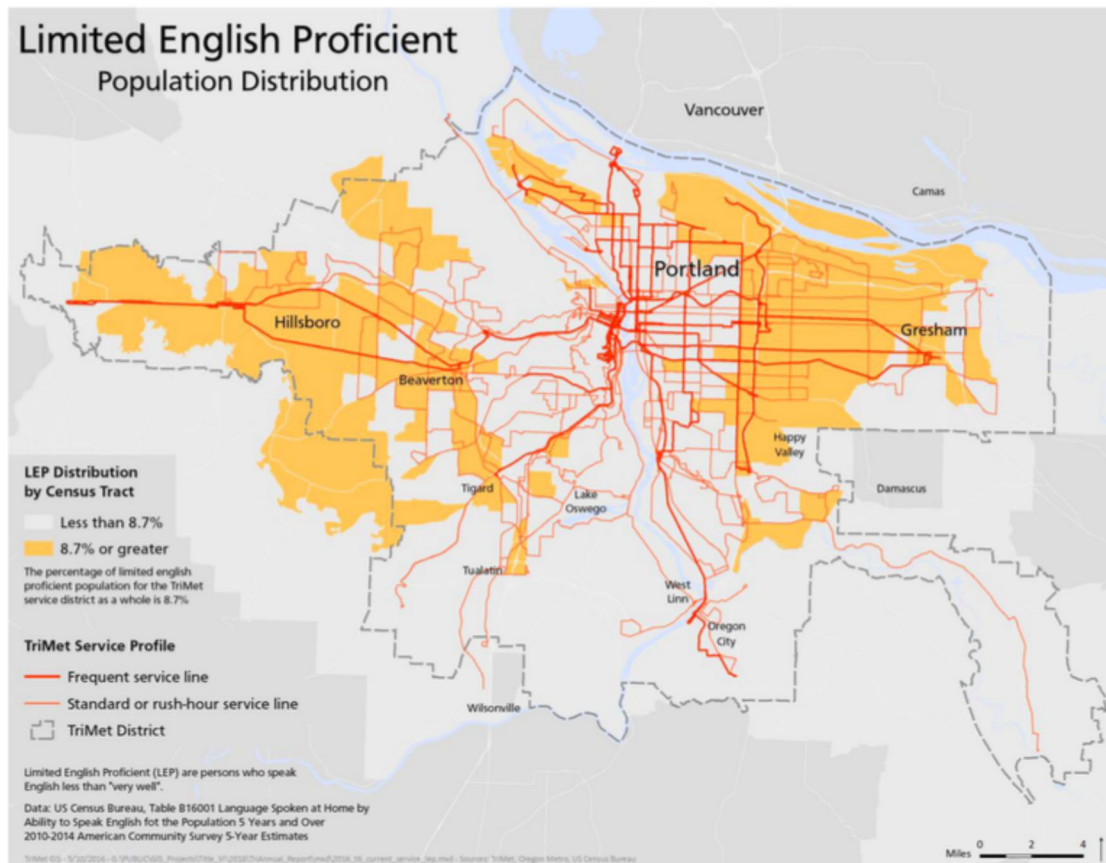


FIGURE I-1: LEP POPULATION AND TRIMET DISTRICT