4 MARKET ANALYSIS

The existing and potential markets for transit in the Columbia River Gorge area were analyzed using two methods: (1) a series of stakeholder focus groups and (2) an online survey distributed to the general public. The results from each outreach effort are described below and key findings are summarized.

STAKEHOLDER FOCUS GROUPS

The project team conducted eight focus group meetings on December 8th and 9th, 2015 with key stakeholders interested in the Columbia River Gorge and the potential for new transit service in the area. The goal of the meetings was to collect information and develop a better understanding of the region's perspective on the following topics:

- Current transportation challenges and opportunities
- Effectiveness of current transit services
- Potential markets for transit to, from, and within the region
- Components of a successful transit service

A total of 40 stakeholders participated in the focus group meetings. Meeting participants were identified by Oregon Department of Transportation staff or referred by other participants during the invitation process. Not all stakeholders who were invited were able to participate. Participants with similar backgrounds were grouped into the same meeting to focus the discussion. The types of focus groups and organizations interviewed are outlined in Figure 4-1.

Figure 4-1 Focus Group Outline

#	Focus Group Name	Organizations Represented
1	Public Transit Providers	TriMet
		Clackamas County Mt. Hood Express
		Ride Connection, Inc
		Hood River County Trans District (Columbia Area Transit)
		Skamania County Public Transportation
2	Recreation / Tourism	Port of Cascade Locks
		Travel Portland
		Trail Keepers of Oregon
		U.S. Forest Service
		Travel Portland
3	Local Government / Elected Officials	City of Troutdale
		City of Cascade Locks

#	Focus Group Name	Organizations Represented
		Regional Solutions, Governor's Office
		City of Hood River
		City of The Dalles
		Senator Merkley's Office
4	Regional Planning	Mid-Columbia Economic Development District
		FHWA, Western Federal Lands Division
		USFS, Columbia River Gorge National Scenic Area
5	Tourism	West Columbia Gorge Chamber of Commerce
		USACE, Bonneville Dam
		Friends of the Historic Columbia River Highway
		Multnomah Falls Lodge
		Oregon State Parks
		Mid-Columbia Bus Company
6	Local Government / Elected Officials	Hood River County
		City Manager of Mosier
		City of Hood River
		Senator Wyden's Office
7	Private Transit Providers	Gray Line Tours
		Greyhound
		Martin's Gorge Tours
8	East Gorge Congestion	Northeast Multnomah County Community Association
		Historic Columbia River Highway Advisory Committee
		Friends of the Gorge / Towns to Trails
		Historic Columbia River Highway Advisory Committee
		Multnomah County Sheriff

Key Findings

Key findings from the stakeholder focus group sessions are documented below; a complete account of the focus groups can be found in Appendix B.

Gorge Transportation Issues

Stakeholder focus groups identified issues that are partially motivating the development of transit service and/or are important to be cognizant of in the development of transit service.

Congestion and Capacity

- The Columbia River Gorge is an increasingly popular destination with growing traffic congestion

- Recreation facilities are over capacity for visitors, which is threatening to damage the facilities and natural resources and negatively impact the visitor experience
- Multnomah Falls gets the most attention and advertising in the Gorge, which may contribute to congestion; people may not be aware of other recreation opportunities available
- Viaducts are choke points on Historic Columbia River Highway
- The busy season used to be limited to the summer months, but the season has recently expanded to February – October, due in part to unusually warm and dry weather in 2015. Before recent growth in popularity, busy season in the Gorge was considered to be Memorial Day – Labor Day
- Parking facilities in popular areas are over capacity and people are parking illegally along the Historic Columbia River Highway and State Route 14, which exacerbates congestion
- Capacity at recreation facilities has historically been controlled by limiting parking spaces; if transit increases the number of people visiting a site, stakeholders expressed a concern that the resource could be damaged further; other capacity controls may need to be implemented
- ODOT's variable message sign at Troutdale notifies people when the Multnomah Falls parking lot is full
- It is difficult to manage parking in the Gorge because parking rules are different depending on which agency manages the land; people may avoid parking in areas where there is a parking fee
- Traffic is worse eastbound than westbound – people tend to use the Historic Columbia River Highway to reach the waterfalls then take I-84 back to Portland
- There is a lack of parking and growing congestion in downtown Hood River

Access

- Transit services get requests to cross the Hood River Bridge because there is no pedestrian traffic allowed on the bridge
- It is difficult to manage access to recreational destinations in the Gorge because important transportation corridors run through it (e.g., I-84)

Safety and Enforcement

- There is not enough enforcement of parking and traffic violations on the Historic Columbia River Highway
- Sheriffs used to tow illegally parked vehicles, but that caused more problems as people were stranded in the Gorge
- Cars are broken into in parking lots
- Illegal parking along the Historic Highway creates a safety hazard due to limited pedestrian infrastructure
- Parking tickets does not seem to discourage illegal parking

Gorge Transit Challenges

Stakeholder focus groups identified key challenges that will need to be addressed during the development of Gorge transit service alternatives.

Desired Services

- Locals using transit for the commute or to access services have different destination preferences than recreationist/tourist markets – locals likely would not want to spend time stopping at recreation locations

- Transit schedules need to be appropriate for the destination – people do not want to feel stuck
- Stops need to be accommodating to people without cars who are waiting for a bus – restrooms, lights, shelters, benches
- Transit should have the ability to carry recreation gear like bicycles
- Park and ride locations are needed

Funding

- There is limited availability of funding for both short term and long term transit solutions
- Cost per rider is high in rural areas due to lower population density and higher number of miles driven

Awareness and Information Distribution

- People do not know what transit services are available
- Resources need to be put into marketing transit service so people know how to use it
- Capitalize on existing communications channels such as Travel Oregon, Travel Portland, MCEDD, and Friends of the Gorge

Barriers to Transit

- It is difficult to increase ridership if people do not have to pay for parking at their destination
- People do not have a compelling reason to give up individual flexibility that comes with driving their own car
- Jurisdictional boundaries of transit systems could pose a challenge
- People in rural areas may not want to transfer service lines to reach their destinations
- People with disabilities have trouble planning trips with transit – they need to know every barrier they may face from starting point to destination

Transit Logistics

- The Gorge has small roads, steep hills, and sometimes icy conditions
- Large buses cannot access some tourist sites like Vista House or could add to congestion on Historic Columbia River Highway
- Bonneville Dam area may be a challenging place to find a bus stop and turnaround point
- Need to identify potential park and ride locations for riders from Portland metro area and inter-city stops in the Gorge
- Services that depend on cellular data do not function well in the Gorge due to lack of data coverage

Opportunities

Stakeholders identified opportunities for transit service alternative development and implementation.

Funding

- New transportation funding is available through Federal Lands Access Program
- Tourism organizations, recreation groups, and local businesses may be willing to contribute to congestion solution

Awareness and Information Distribution

- Find a venue for real-time information that will help people plan their trips – tell people which parking areas are full, which areas are busy, and recommend where they should go and how they should get there
- Gorge TransLink compiles information on transit service in the Gorge and could be a venue for future Gorge transit information
- Positive messaging can be used to provide travel information when people are planning their trips while simultaneously reminding people to be a good steward when they recreate
- The Gorge should be marketed as a single region – do not divide it into two states
- Park and rides could also have a "Trail Concierge" to help guide people to less busy areas of the Gorge

Desired Outcomes

- Use transit as a tool to spread out congestion and avoid heavy use of single areas
- Avoid damaging Gorge facilities and natural resources by relieving capacity issues
- Increase mobility and access of low income populations
- Limit private cars on Historic Columbia River Highway at particular times

Service Requests and Destinations

- The region could be served by an express transit service that travels along I-84 and stops at hub points, where smaller shuttles with more frequency could deliver people to sites along Historic Columbia River Highway. Hubs could be designed as a place where people can wait comfortably for less frequent service.
- There may be an opportunity for the private sector to fill the transit gap on the Historic Columbia River Highway that could connect to Gorge transit on I-84.
- People want to get from Portland International Airport to the Gorge without a car.
- People want to get dropped off at trailheads, do a multi-day hike through the Gorge, and get a ride back.
- People want to cycle through the Gorge and take a one-way transit trip back.
- People want better connection throughout the Gorge on both sides of the Columbia River.
- Troutdale is at the hub of several trail systems between the Portland metro region and the Gorge.
- Historic Columbia River Highway Advisory Committee is trying to get people to start their Gorge trips from urban centers through Gorge Hubs program, primarily serving cyclists; proposed hubs: The Dalles, Mosier, Hood River, Cascade Locks, Troutdale, Wood Village
- Towns to Trails is developing a network of European style trails connecting urban areas in the Gorge. Most waterfalls are already connected, working on connections between Washougal – Stevenson and Hood River – The Dalles
- Park and ride locations should also have good access to other transit so people do not have to drive
- There is seasonal employment on Mt. Hood in the winter – Mt. Hood Meadows operates a shuttle from Hood River for employees; people in Hood River want a shuttle to Mt. Hood Meadows for recreation

Potential Starting Points (Regional transit connectivity and park and ride)

- Gateway Transit Center
- Gresham Transit Center
- Halsey-Weidler Corridor locations
- McMenamins Edgefield
- Troutdale Airport
- Columbia Gorge Outlet Mall
- Troutdale
- Rooster Rock State Park
- Gorge urban centers
- Dodson/Ainsworth
- Benson State Recreation Area

Potential Destinations (Stops)

- Historic Columbia River Highway State Trail
- Portland Women's Forum
- Vista House
- Latourell Falls
- Bridal Veil Falls
- Angel's Rest
- Rowena Crest Trailhead
- Multnomah Falls
- Ainsworth State Park
- John B. Yeon Trailhead
- Larch Mountain
- Bonneville Dam and Fish Hatchery
- Eagle Creek
- Cascade Locks – Pacific Crest Trail connection
- Hood River
- Mt. Hood Meadows
- Starvation Creek
- The Dalles
- One-way trips: John Yeon to Cascade Locks, Starvation Creek to Viento State Park, Hood River to Mosier
- Connection to Fruit Loop
- Line between Hood River and The Dalles

Potential Rider Markets to Serve

- Senior citizens
- People with disabilities
- Low income populations
- Commuters traveling to urban centers
- Millennials who do not want to use cars
- Hikers trying to reach trailheads
- Cyclists
- Recreationists
- Tourists who do not want to drive
- Families

PUBLIC SURVEY

An online survey was conducted during January 2016 to understand the market for transit in the Columbia River Gorge. 1,732 total responses were received between January 11th and January 31st, 2016. Responses to all questions are summarized and analyzed below; key market findings from the analysis are then presented. Question and answer text for the survey is documented in Appendix C.

Respondents Description

The following results describe the types of people that took the survey. The survey was non-scientific[21] and so the group of respondents that took the survey was partially a result of the outreach methods used and self-selection bias[22]. This could affect the interpretation of the results, and so it is first important to describe the respondents that took the survey.

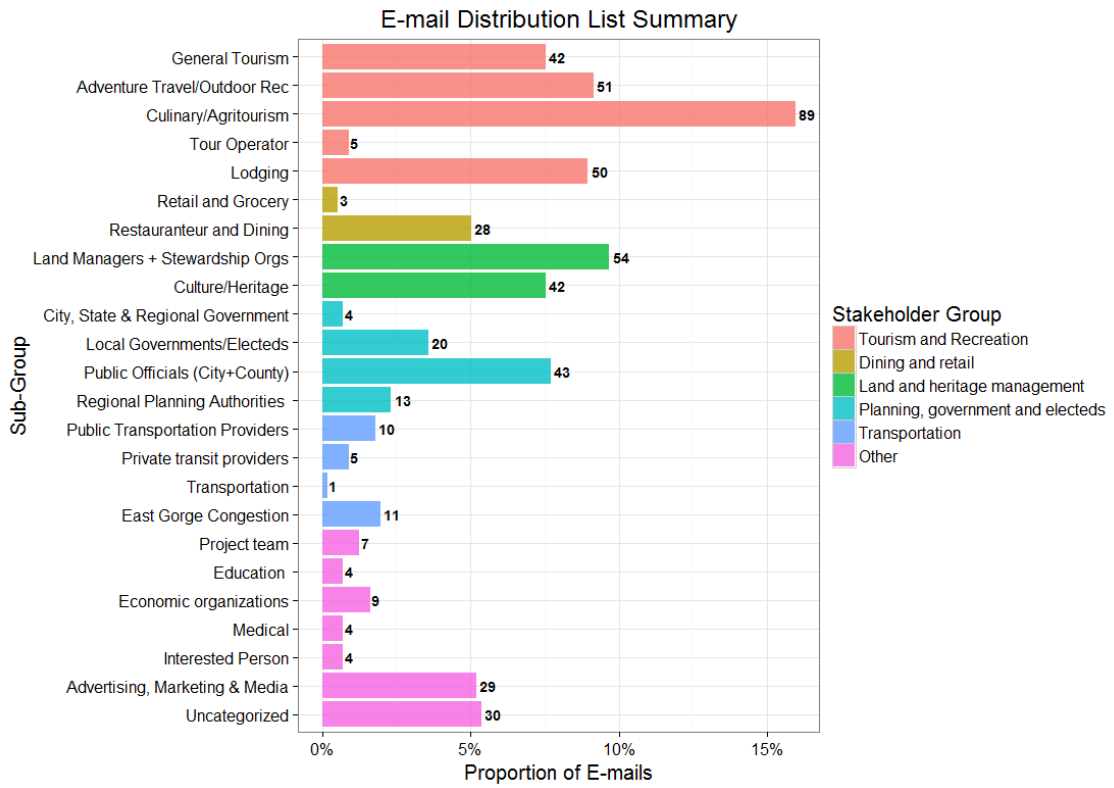
Survey Distribution

The survey was distributed by ODOT to the general public using e-mail lists, a news release, social media, and physical mailers. The numbers of different e-mails (i.e. persons) that were in each stakeholder group distribution list utilized are illustrated in Figure 4-2. Tourism and recreation comprise the largest group of e-mails the survey was distributed to.

[21] The sample of respondents was a convenience sample (obtained using ODOT's outreach channels) and not wholly representative of the population of Gorge visitors and residents.

[22] Those that took the survey were likely more interested in the Columbia River Gorge and/or transit and so results may be biased towards the interests of that group.

Figure 4-2 E-mail Distribution List Breakdown by Stakeholder Group



Responses over Time

Figure 4-3 and Figure 4-4 illustrate the number of responses received over the survey period. Survey responses were received in two significant spikes: (1) the days around January 12th when the survey was initially distributed and (2) the days around January 26th when ODOT utilized additional outreach efforts.

Figure 4-3 Responses per Day over Survey Period

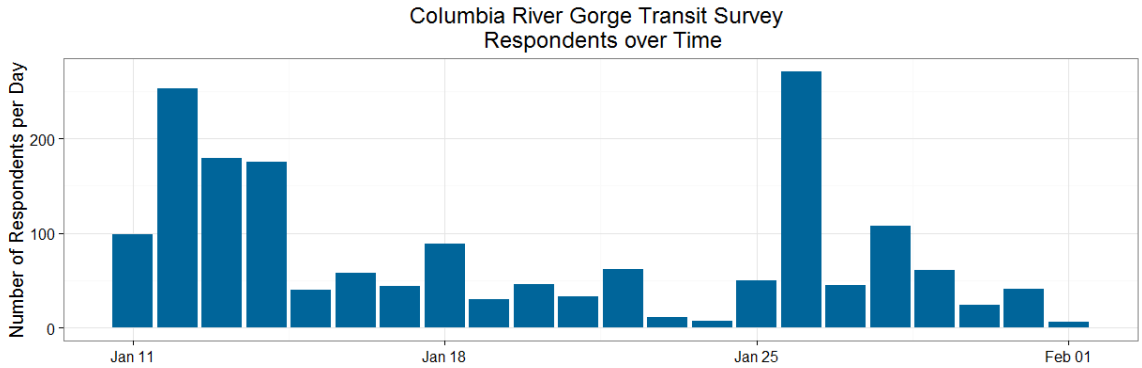
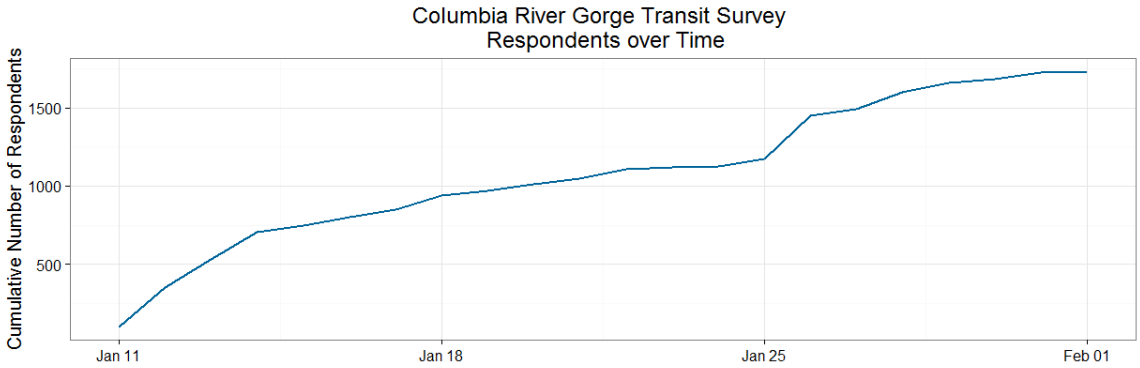


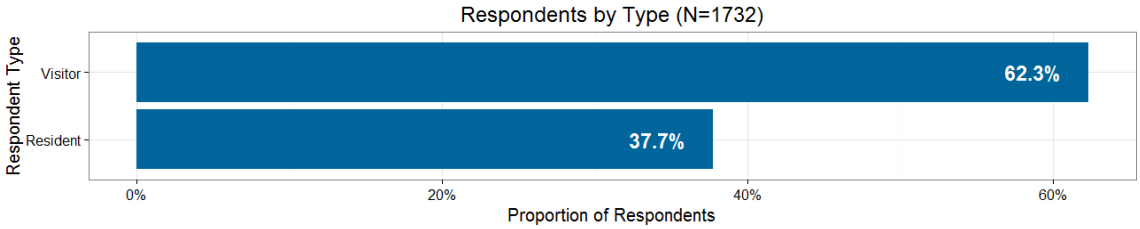
Figure 4-4 Response Pool Growth over Survey Period



Respondent Types

Survey respondents were asked if they primarily identified as a visitor or a resident of the Columbia River Gorge. The distribution of respondent types is illustrated in Figure 4-5. Visitors (tourists, recreationalists) comprised a larger portion of the respondent pool at 62%.

Figure 4-5 Types of Survey Respondents

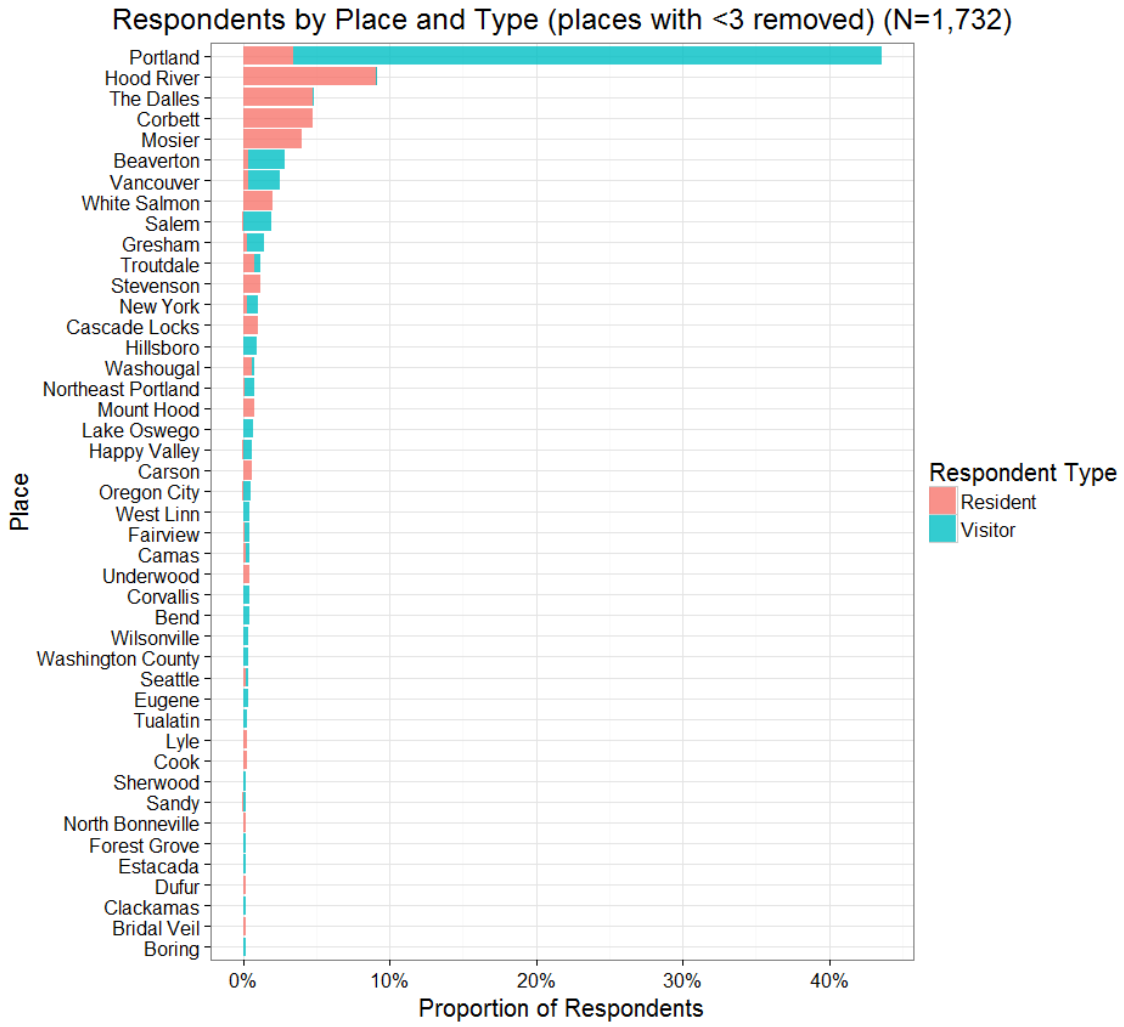


Respondents by Geography

Respondents were asked which ZIP code they currently reside in, which could be used to identify approximate geographic locations of respondents. The distribution of respondents by place (as geocoded using the Google geocoding API) is presented in Figure 4-5; respondent types are also identified within each place. Over 40% of respondents resided in Portland. 25% of respondents resided within the Gorge communities of Hood River, Corbett, Mosier, The Dalles, or White Salmon. The remainder of respondents generally resided in other Oregon and Washington communities, with a small proportion of respondents living in other states or countries.

Some respondents either did not understand the resident/visitor question or answered incorrectly, as illustrated by the proportion of Portland, Beaverton, and Gresham residents who indicated they were residents of the Columbia River Gorge.

Figure 4-6 Respondent Distribution by Place and Type



The distribution of respondents by place is illustrated geographically by maps in Figure 4-7 and Figure 4-8. Respondents were concentrated in the Portland metropolitan area and the Columbia River Gorge area communities.

Figure 4-7 Geographic Respondent Distribution

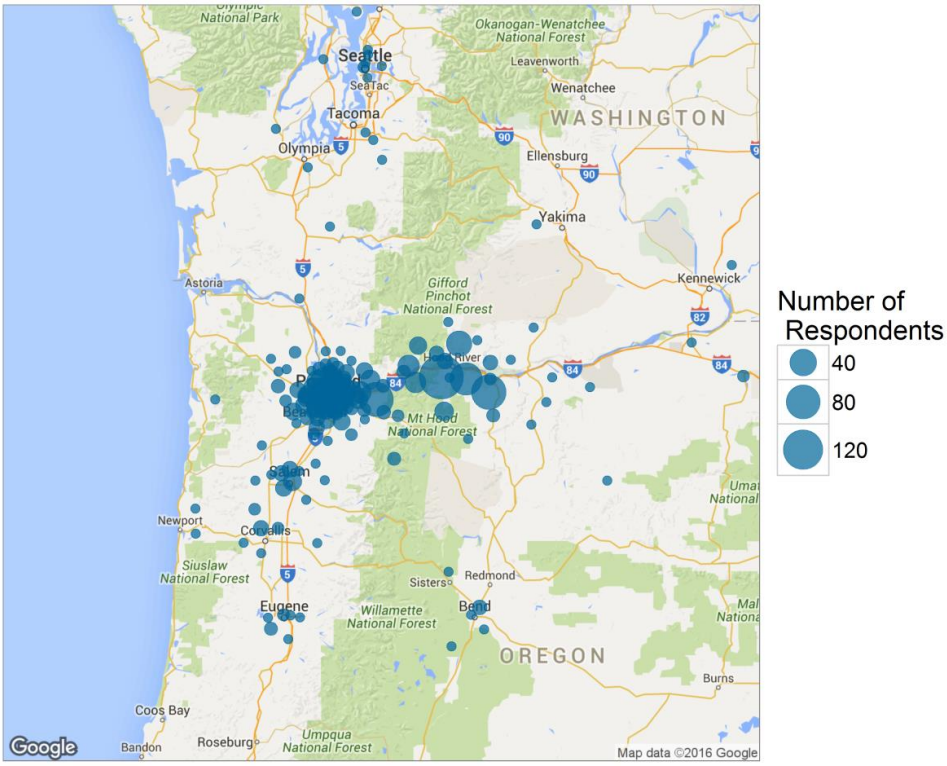
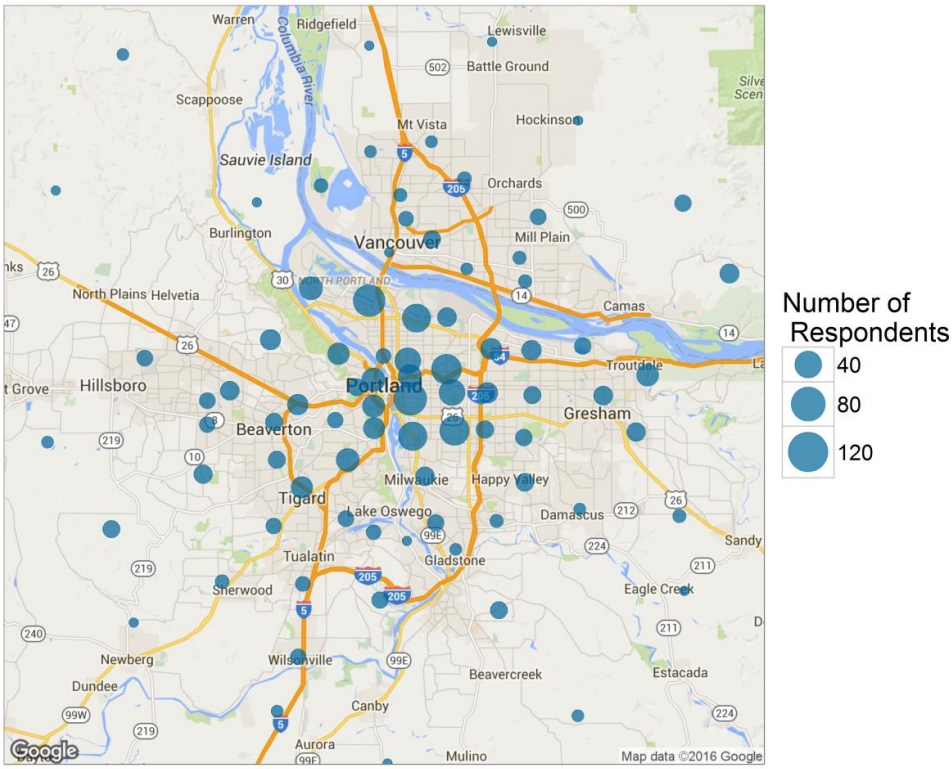


Figure 4-8 Geographic Respondent Distribution (Portland Area)



Respondent Demographics

Respondents were asked a series of demographics questions in order to understand the types of people taking the survey. Respondents were primarily white and concentrated in the 30-65 year age range. They also generally belonged to higher-income households and the majority were not disabled.

Figure 4-9 Respondent Ethnicity

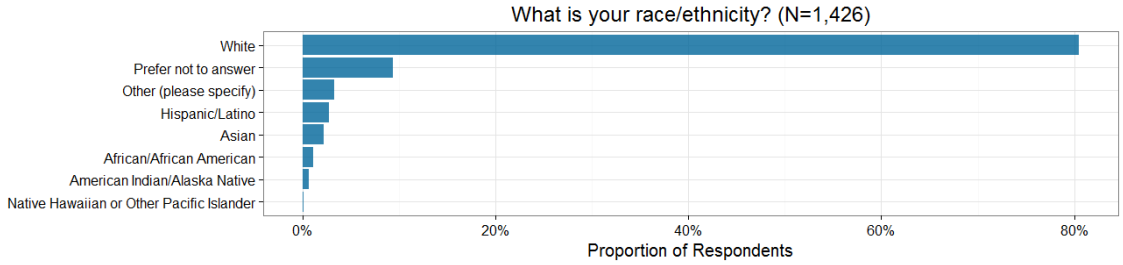


Figure 4-10 Respondent Age

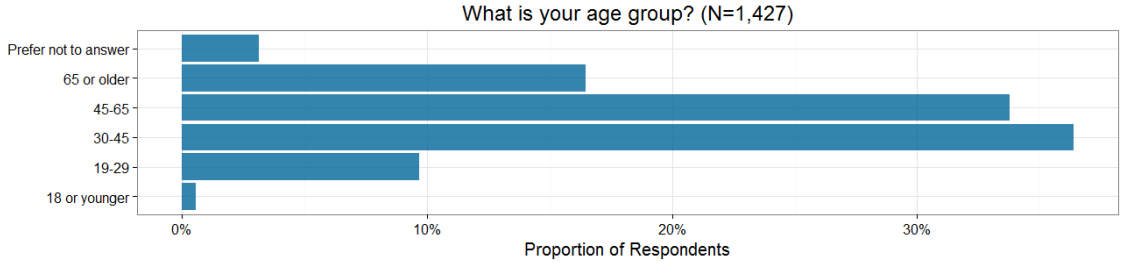


Figure 4-11 Respondent Income

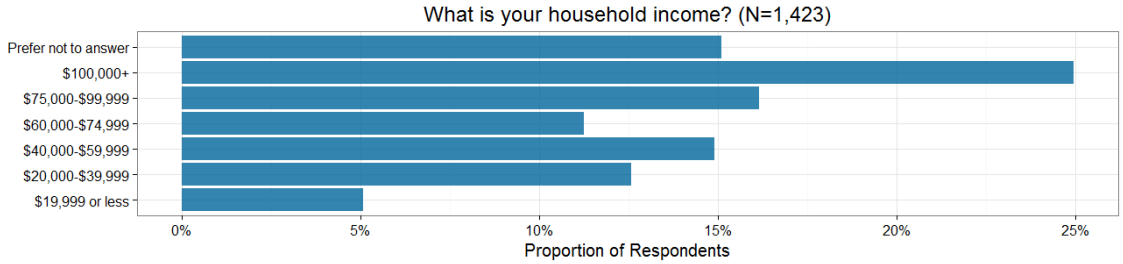
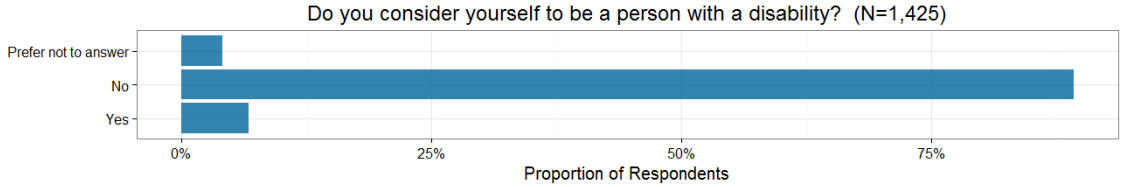


Figure 4-12 Respondent Disability Status



Visitors

Trip Preferences

Visitors were asked to describe their typical trips to the Gorge through a series of questions.

Figure 4-13 shows the distribution of visit duration among respondents who visit a particular location. The majority of visitors to Multnomah Falls stay at least one hour, which was surprising given the anecdotal knowledge that most Multnomah Falls visits are short – this may be a result of the respondent pool.

Figure 4-13 Visitor Destinations and Length of Visit

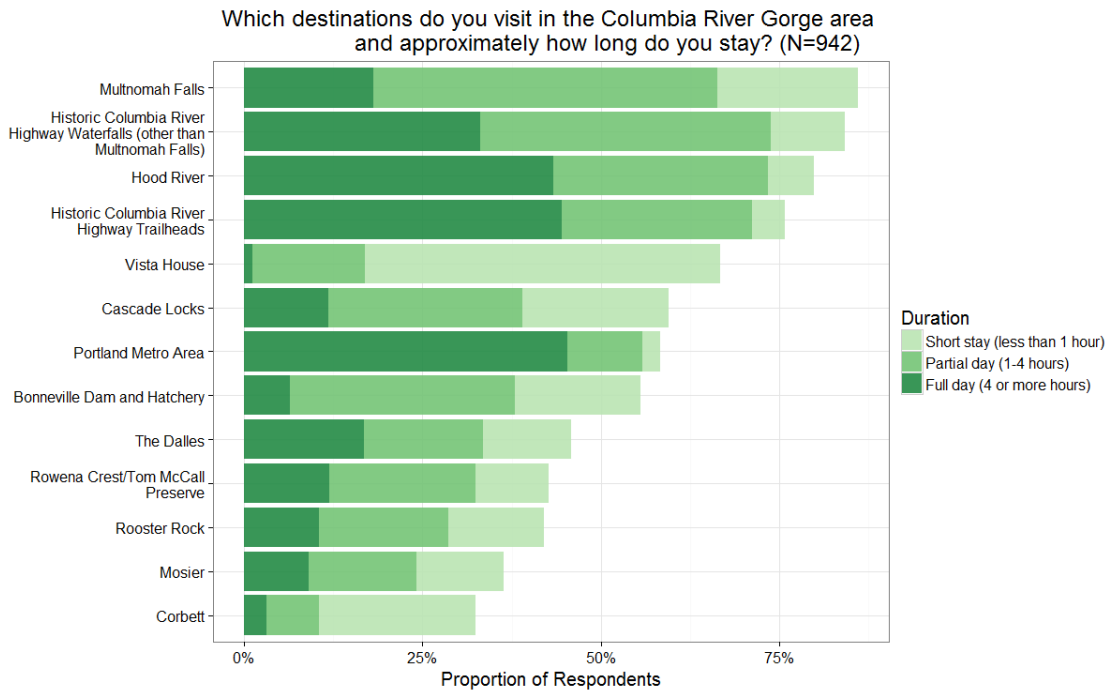
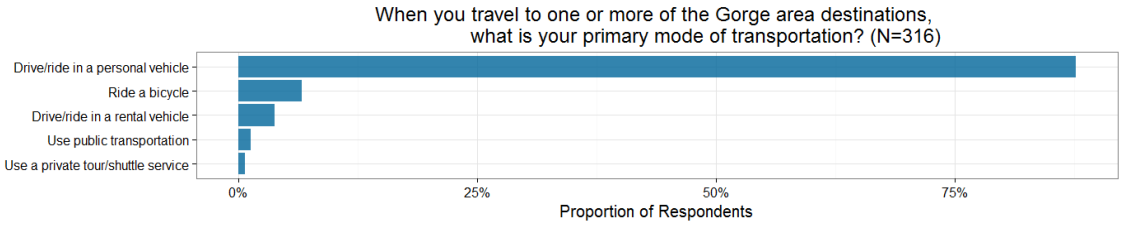


Figure 4-14 shows the mode of transportation that respondents identifying as visitors generally use to visit the Gorge. 88% of respondents typically drove in a personal vehicle. 7% of respondents indicated they rode a bicycle, which is likely inflated due to bias in the respondent pool (Portland's commute bicycle mode share is ~7%[23] for comparison), but nonetheless illustrates the desire for bicycle access in the Gorge.

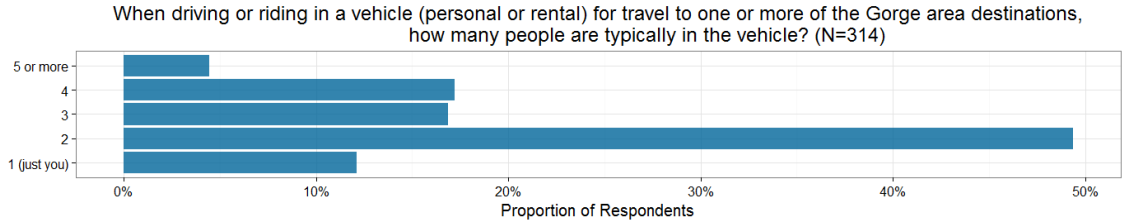
Figure 4-14 Mode of Transportation (Visitors)



Nearly half of respondents travel in groups of two, as illustrated in Figure 4-15. Only 12% of respondents travel alone, with the remainder traveling in groups of three or more.

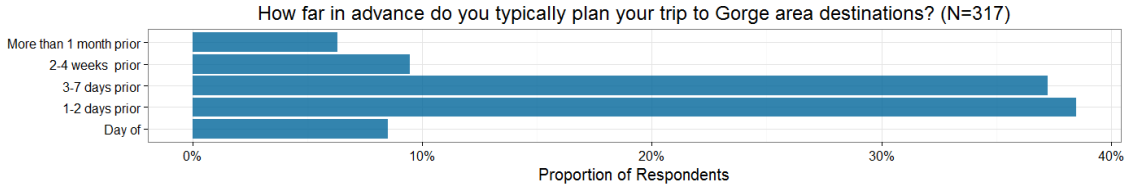
[23] 2014 American Community Survey 1-Year Estimate

Figure 4-15 Group Size (Visitors)



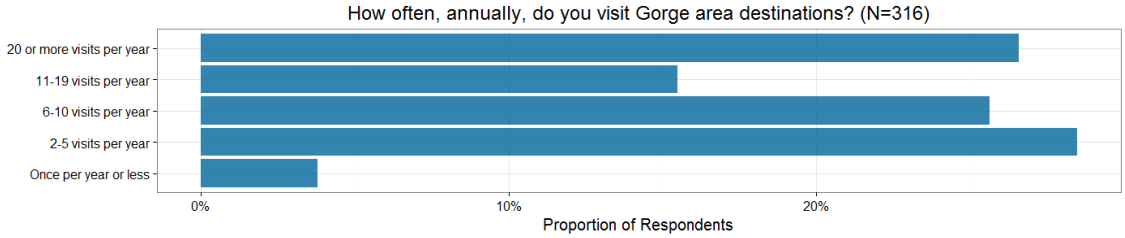
The majority of Gorge visits (84%) are planned seven days or less in advance as illustrated in Figure 4-16. This result shows that many Gorge visits (within the respondent pool) are relatively casual or spontaneous occurrences, rather than trips planned weeks or months in advance.

Figure 4-16 Visit Lead Time (Visitors)



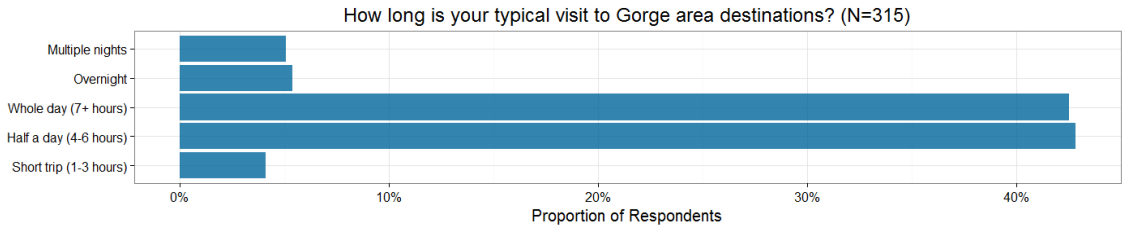
Many of the respondents visited the Gorge frequently as illustrated in Figure 4-17; approximately one quarter each fell into the 2-5, 6-10, or 20 or more visits per year categories. With such a high average number of visits per year, there is a greater potential for some of those auto trips to be replaced by transit.

Figure 4-17 Visit Frequency (Visitors)



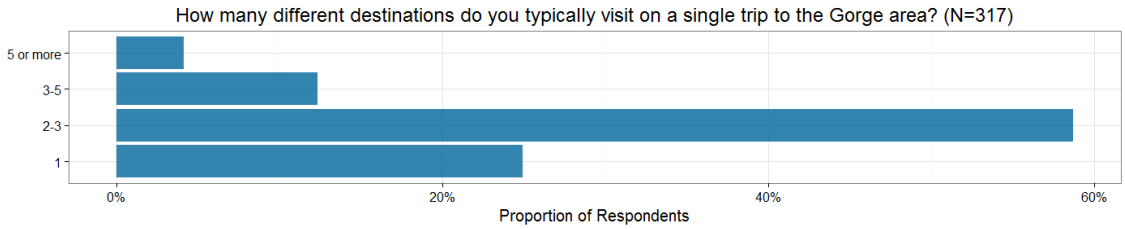
Most respondents spent at least four hours on a trip to Gorge area destinations, as illustrated in Figure 4-18.

Figure 4-18 Visit Duration (Visitors)



More than three quarters of respondents visit multiple destinations on a trip to the Gorge, as illustrated in Figure 4-19. This indicates that trip chaining is a prevalent behavior among Gorge visitors in the respondent pool.

Figure 4-19 Number of Destinations per Visit (Visitors)



Congestion Issues

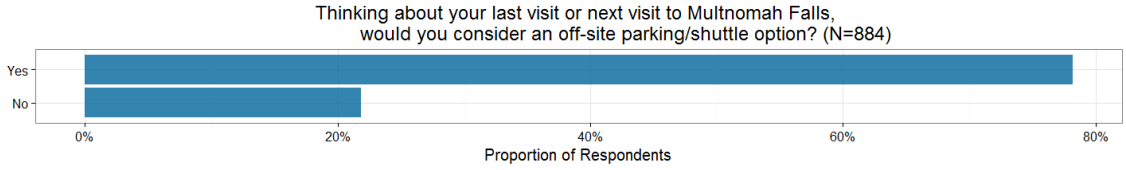
Respondents were asked to describe the location and nature of congestion related issues they experienced while traveling in the Gorge. A word frequency analysis (illustrated using a word cloud in Figure 4-20) reflects congestion issues related to traffic congestion and parking availability, especially near Multnomah Falls (and other waterfalls) and trailheads.

Figure 4-20 Congestion Issues Word Cloud (Visitors)[24]

Next after asking about congestion issues, survey participants were asked if they would consider using parking shuttle to reach Multnomah Falls; approximately 80% of respondents indicated they would (Figure 4-21).

[24] Size and color of words are scaled to word frequency. Larger words with darker colors indicate higher frequency words in the survey responses.

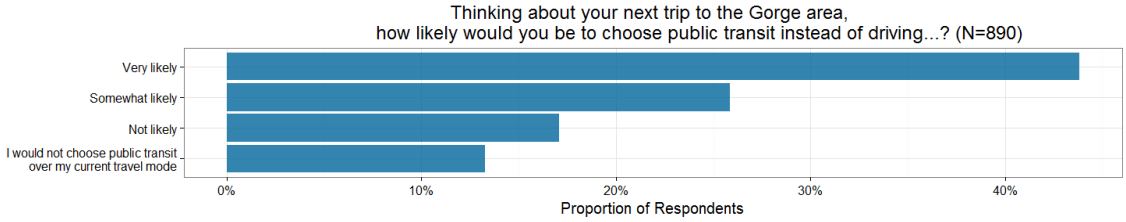
Figure 4-21 Parking Shuttle Willingness (Visitors)



Transit Service

Respondents were asked how likely they would be to use public transit; approximately 70% of respondents (Figure 4-22) were very or somewhat likely to use public transit instead of driving if it were available.

Figure 4-22 Public Transit Willingness (Visitors)



Respondents ranked potential locations for accessing Gorge transit service based on convenience; the results are illustrated in Figure 4-23. Respondents gave Downtown Portland the most '1' convenience rankings, but (as presented in Figure 4-24), Gateway Transit Center was the highest potential connection location ranked on average.

Figure 4-23 Stop Convenience Ranking (Visitors)

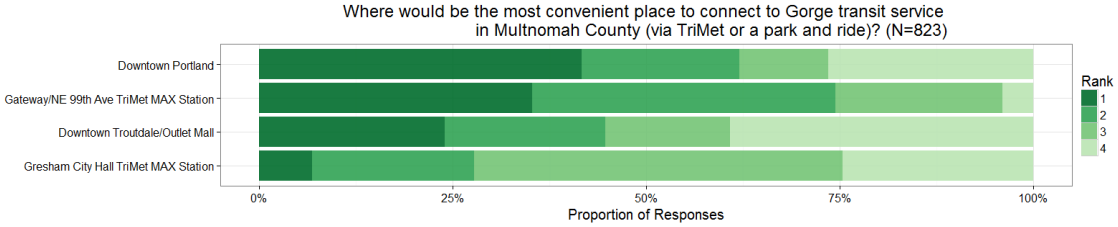


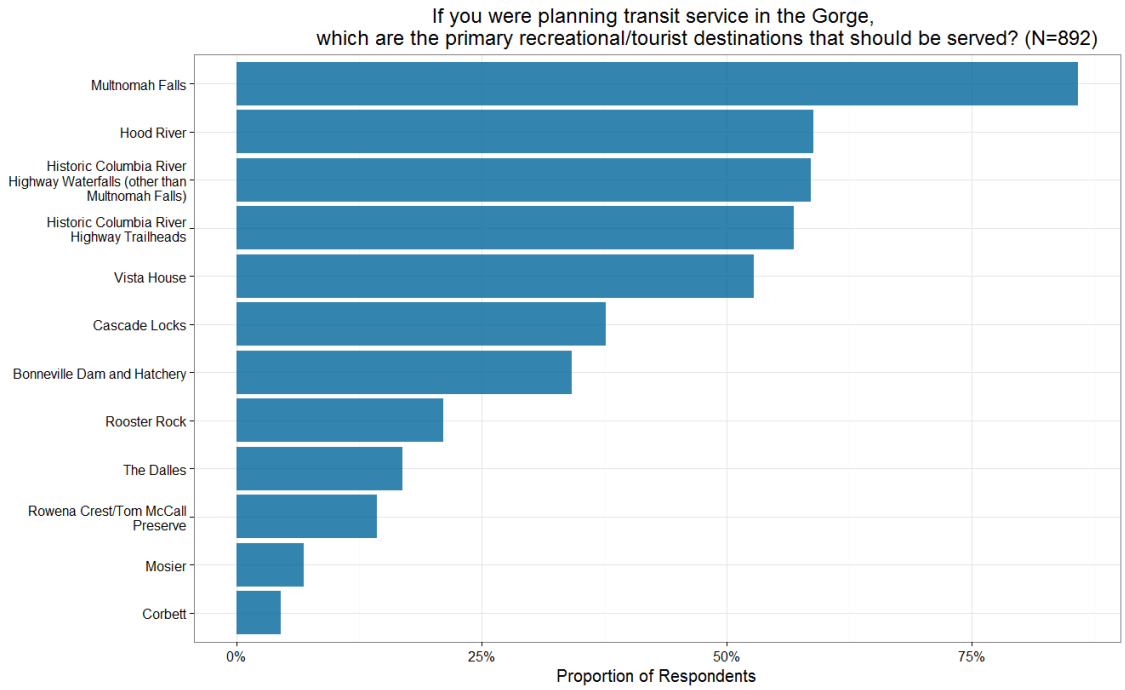
Figure 4-24 Stop Convenience Ranking – Average Scores (Visitors)

Location	Average Score[25]
Gateway/NE 99th Ave TriMet MAX Station	3.06
Downtown Portland	2.77
Downtown Troutdale/Outlet Mall	2.30
Gresham City Hall TriMet MAX Station	2.10

[25] Rank 1 = 4 Points, Rank 2 = 3 Points, Rank 3 = 2 Points, Rank 4 = 1 Point

Respondents also selected the primary destinations that they would like to see served by transit, as illustrated in Figure 4-25. Multnomah Falls, Hood River, and the Historic Columbia River Highway waterfalls and trailheads were the top 4 destinations.

Figure 4-25 Destination Preferences (Visitors)



Local Residents

Residents of Gorge area communities were asked a series of questions in order to understand how improved transit mobility might be useful to them as well as visitors.

Residents were first asked to select their regular or occasional destinations within the Gorge area and then indicate their visit frequency and typical trip purpose. As illustrated in Figure 4-26, residents' top three destinations were the Portland Metro Area, Hood River, and The Dalles. Historic Columbia River Highway trailheads and waterfalls were also cited as destinations by residents at higher proportions than other Gorge area communities, though reported visitation frequencies were significantly lower for these destinations. Figure 4-27 presents trip purpose when traveling to those destinations.

Figure 4-26 Gorge Destinations by Duration (Residents)

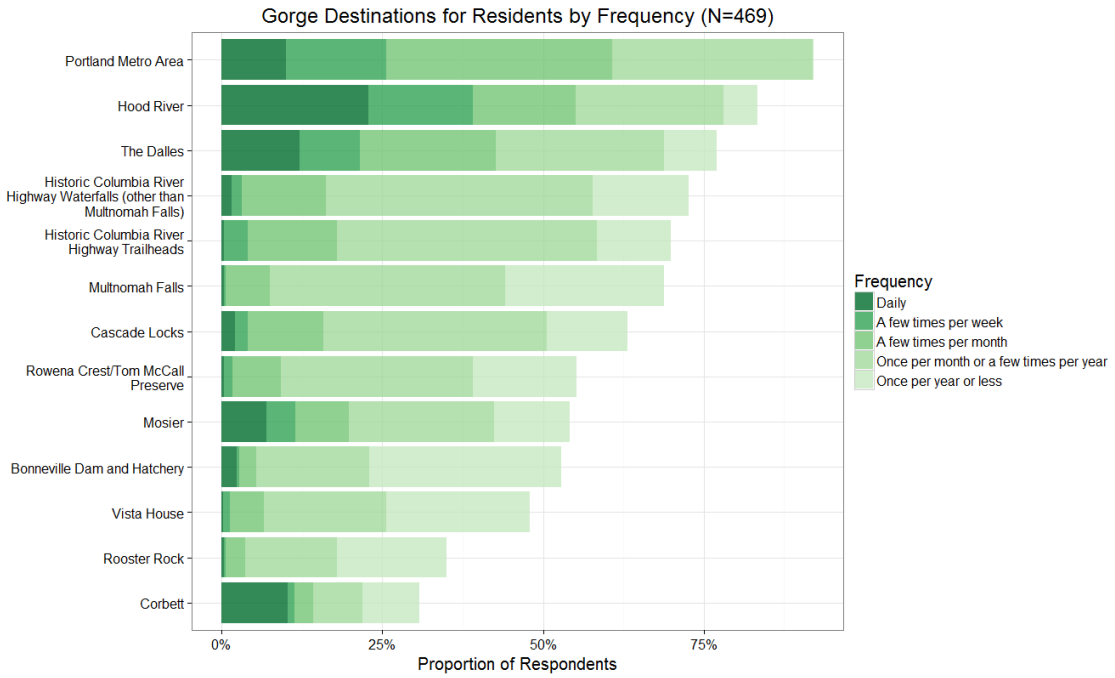
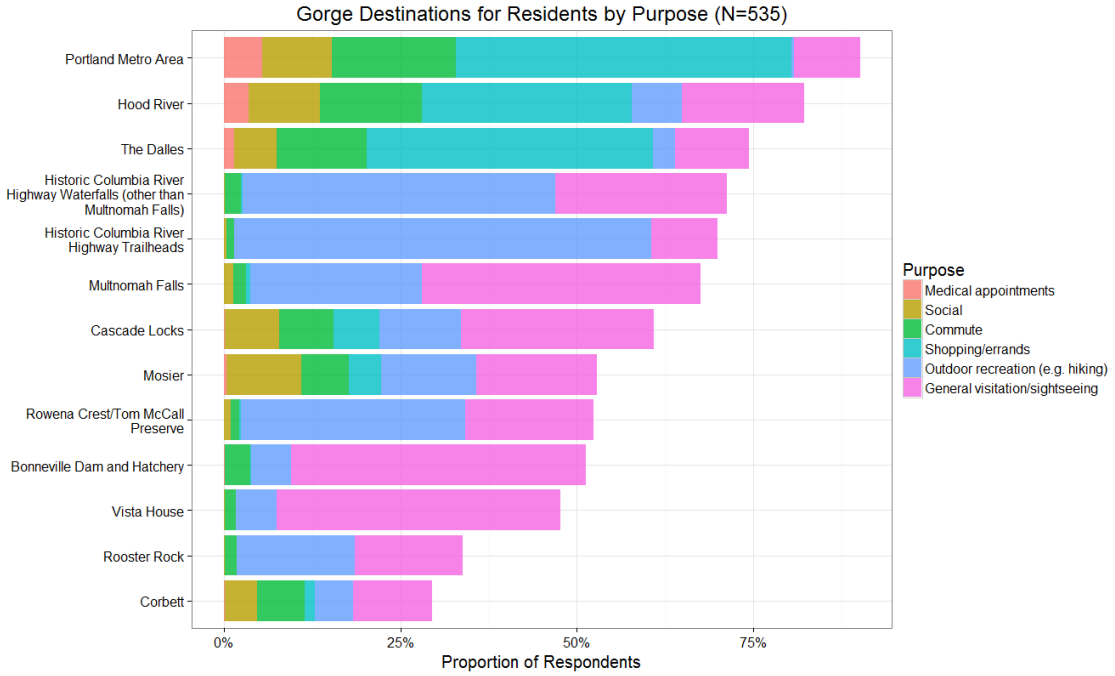


Figure 4-27 Gorge Destinations by Purpose (Residents)



To clarify the preferences of residents of the two largest Gorge area communities (Hood River and The Dalles), plots of destination trip frequencies and purposes by city of residence are presented in Figure 4-28 and Figure 4-29. Residents of either community make most of their trips within their communities, with some infrequent trips to the other community (e.g., Hood River residents traveling to The Dalles), the Portland area, or other destinations. The Dalles, Hood River, and

Portland are primarily destinations for shopping/errand trips (for residents of Hood River or The Dalles).

Figure 4-28 Resident Destinations by Trip Frequency (for Hood River and The Dalles Residents)

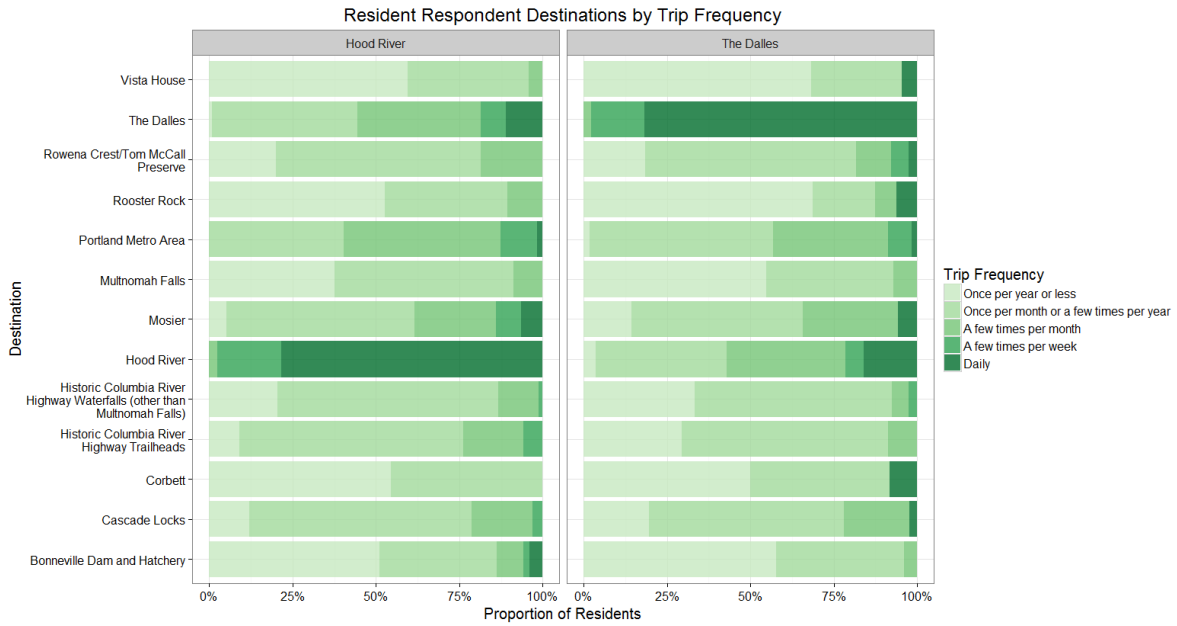


Figure 4-29 Resident Destinations by Trip Purpose (for Hood River and The Dalles Residents)

Residents indicated their travel preferences, auto availability, and transit awareness in Figure 4-30, Figure 4-31, and Figure 4-32, respectively. Most residents drove alone, though a considerable proportion of residents indicated they typically traveled by carpooling, walking, or bicycling. Most residents (over 85%) had their own vehicle. Over 50% of residents were aware of transit in the Gorge, but did not use it, and over 40% of residents were not aware of transit service in the Gorge.

Figure 4-30 Mode of Transport (Residents)

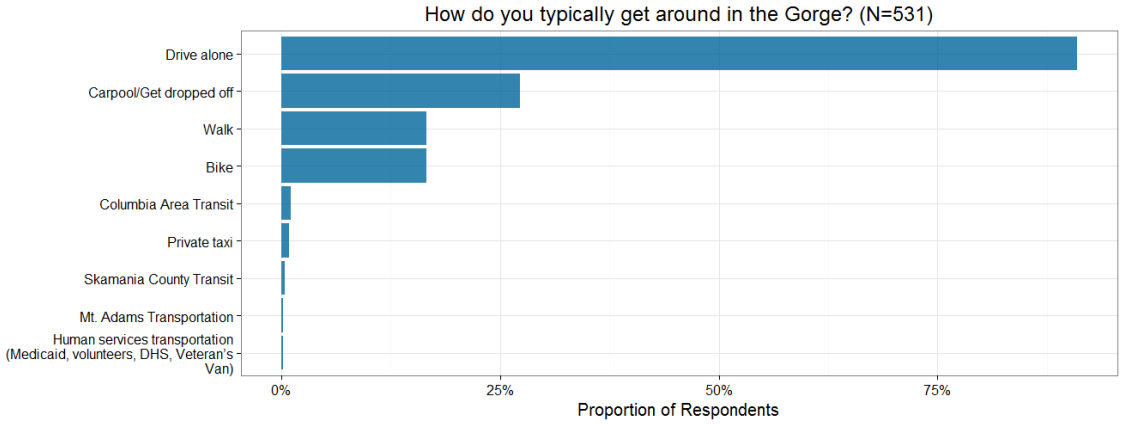


Figure 4-31 Car Availability (Residents)

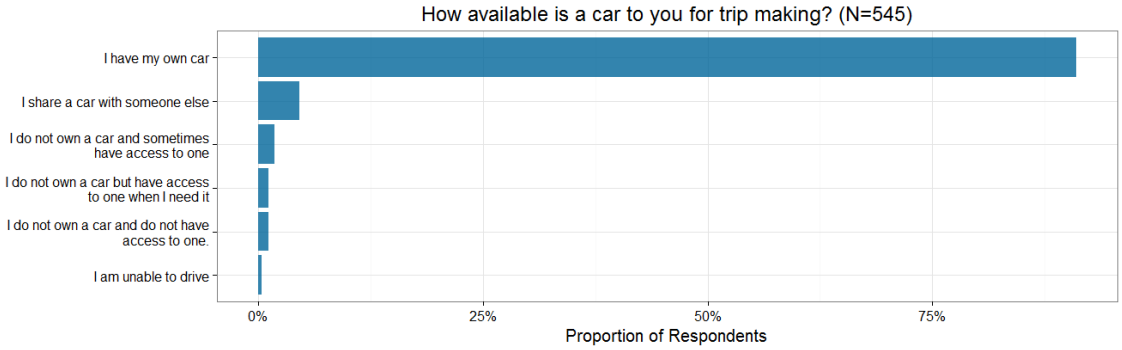
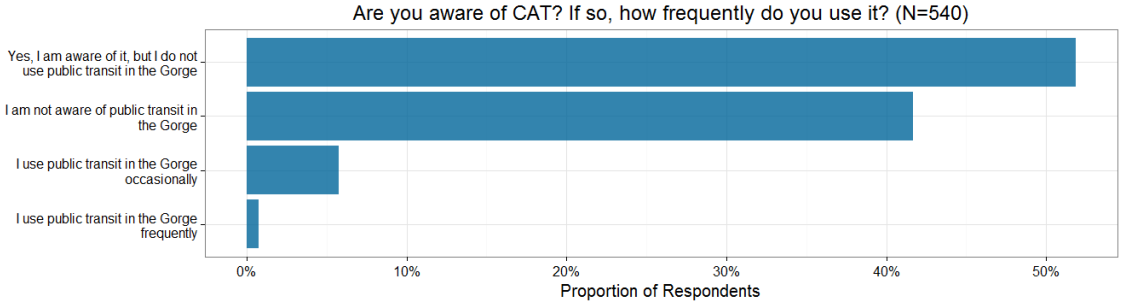


Figure 4-32 CAT Awareness (Residents)



Residents indicated why and where they would take transit; these results are illustrated in Figure 4-33 and Figure 4-34. One-third of residents said they would use transit for recreational trips, and over a quarter of residents said they would use transit for shopping/errand trips. Less than 30% indicated they would not use transit, which means over 70% of residents would consider using transit for some trip type. The Portland area was the most desired destination for transit (even with connections to other transit services to complete the trip), with Hood River and The Dalles being the second and third most popular, respectively.

Figure 4-33 Transit Trip Purposes (Residents)

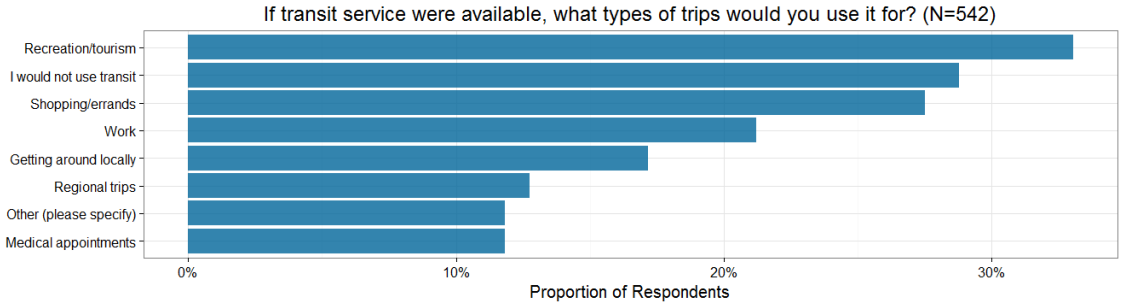
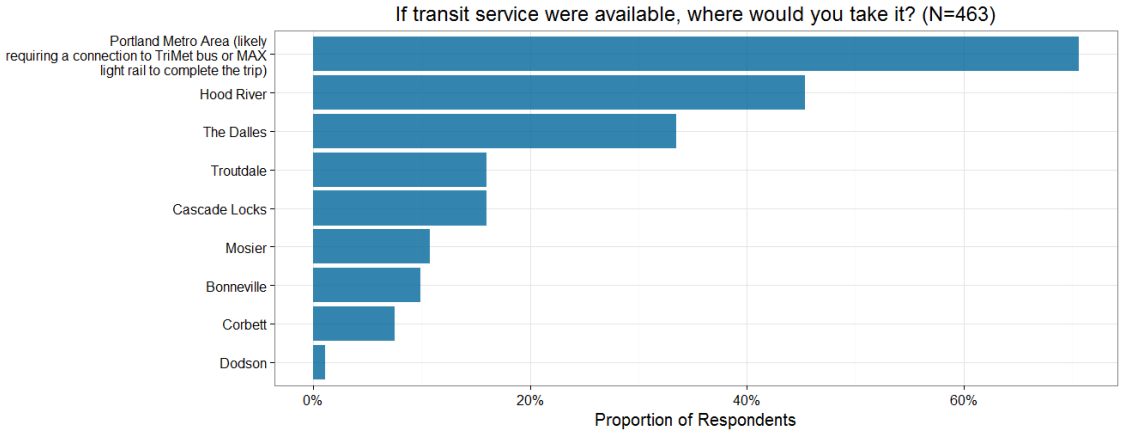


Figure 4-34 Transit Destinations (Residents)



Key Findings

All Respondents

- Respondents were generally concentrated in the Portland metropolitan area and the Columbia River Gorge communities, suggesting the survey reached the geographically targeted audience.
- The demographics of respondents were generally not those of typical transit-dependent populations, suggesting that the respondent pool is primarily made up of discretionary riders. Transit service will likely need to be relatively high performing to be utilized by these types of riders.

Visitors

- Traffic congestion and parking availability issues are most acute at Multnomah Falls (and other waterfalls) and trailheads. This aligns with the general consensus around congestion issues in the Gorge area.
- 70-80% of respondents indicated they would consider using a parking shuttle or public transit to reach Gorge area destinations. This lends support to the viability of recreational transit service.
- The majority of visitors travel in groups of two. Small groups may be the target audience for transit service, as large groups would likely making driving more convenient.

- Visitors generally take trips to multiple destinations over a total duration of several hours or more. Transit service would need to support this desire to be viable.

Residents

- The vast majority of resident responses make daily trips only within their own community. This indicates, at least among respondents, that intercity commuting is not the norm among Gorge residents.
- Approximately 70% of resident responses indicated a willingness to use transit for various trip making activities. Over 90% were either aware of and don't use or not aware of public transit in the Gorge. These results imply there is unmet demand for transit among residents.
- The result that residents would take transit to the Portland Metro Area was not surprising. The surprising part was that the question clearly stated that the service would likely require a transfer to TriMet MAX LRT, indicating a willingness to make quality connections to the regional system