



CASCADIA CONNECT

Car-Free Access to the Outdoors Background Document





ACKNOWLEDGEMENTS

The Car-Free Access To The Outdoors Toolkit was prepared for Oregon Department of Transportation (ODOT), transit agencies, land managers, and the recreation industry by Oxbow Consulting. We are a student team formed as part of Portland State University's Master of Urban and Regional Planning capstone project. The Oxbow Consulting team wishes to acknowledge those who have helped make this project possible.

OREGON DEPARTMENT OF TRANSPORTATION

Kristen Stallman

Jake Warr

Naomi Zwerdling

TRAVEL OREGON (PROJECT PARTNER)

Scott Bricker

Hilary Sager

Stephen Hatfield

OREGON OUTDOOR RECREATION INITIATIVE

Dan Little

PORTLAND STATE UNIVERSITY FACULTY AND ADVISORS

Dr. Marisa Zapata

Deborah Stein

KEY INFORMANTS

LAND MANAGERS

Stan Hinatsu, U.S. Forest Service Columbia River Gorge
Dan Little, First Gentleman of Oregon
Chris Havel, Oregon Parks and Recreation Department
Scott Brown, Smith Rock Park Manager
Ben Cox, Nehalem Bay Park Manager
Bo Ensign, Ecola State Park
Rika Ayotte, Discover Your Forest
Terry Bergerson, Oregon Parks and Recreation Visitor Statistics
Clay Courtright, West Columbia Gorge Park Manager
Justin Parker, Fort Stevens State Park

TRANSIT PROVIDERS

Andi Howell, Sandy Area Metro
Teresa Christopherson, Clackamas County
Jeff Hazen, Sunset Empire Transportation District
John Ahlen, Lane Transit District
Doug Pilant, Tillamook Transportation District

INDUSTRY

Jon Tullis, Timberline Lodge
Mountain Hardware Store
Patagonia Store
Columbia Sportswear Store

FOCUS GROUP PARTICIPANTS

Vivian Satterfield, OPAL
Shanaquewa Finney, Urban League
Emily Henke, Willamette Partnership
Jeremy Robbins, Disability Community
Jessica Carrillo Alatorre, Hike it Baby
Steve Kruger, Trail Keepers of Oregon
Sean Stevens, Oregon Wild
Renee Tkach, Friends of the Columbia Gorge
Rob Sadowsky, Bark Out

FRIENDS AND FAMILY

Héctor Rodríguez-Ruiz
Yessica Avila Barojas
Bethany Lamb
Fern Lamb
Roberto Coto
Hannah Bezona
Mohammad Nasir Hotak

TABLE OF CONTENTS

Chapter 1: Introduction 6

The Problem
Vision Statement
Cascadia Connect Values

Chapter 2: Existing Conditions 11

Oregon Outdoor Recreation
Existing Transportation Service
Literature Review
Oregon Transportation Plans
Stakeholder Interviews

Chapter 3: Site Visit Research 42

Sites
Trip Planning
Transit Used
Data Collection

Chapter 4: Public Outreach 70

Focus Groups
Online survey
Stakeholder Workshop

Appendices 82



Photo credit: Christian Heeb



INTRODUCTION

Photo credit: Travel Oregon

INTRODUCTION

The State of Oregon contains vast amounts of natural attractions. From Crater Lake, to the Columbia River Gorge, to the Wallowa Mountains, the possibilities are endless. With a forecasted increase in population and a strong tourism economy focused on outdoor recreation, Oregon's recreational areas will continue to be popular destinations. However, recreational areas are accessed predominantly by private automobile, which contributes to issues such as overcrowding of parking lots, spillover of parked cars onto nearby roads, environmental degradation, and diminished visitor experience. Additionally, the focus of private vehicle use for park visits and a lack of public transportation options reinforces inequitable access to parks and limits sustainable tourism options.

The Oregon Outdoor Recreation Initiative (OORI) is a group of businesses, government agencies, land managers, conservation groups, and recreation groups committed to expanding access to outdoor recreation, creating a sustainable economic vitality for Oregon's communities and making Oregon a world-class outdoor recreation destination for all.

As a member of the OORI, the Oregon Department of Transportation (ODOT) has been tasked to develop transportation strategies to help mitigate congestion at popular outdoor recreation destinations.

To support this effort, ODOT contracted with Oxbow Consulting to conduct research and public engagement efforts. The ultimate goal of this work is to develop a toolkit to be utilized by land managers and transportation providers across the state to offer guidance on how to best manage issues related to congestion at outdoor recreation destinations, while providing opportunities for reliable, affordable, and accessible transit service to some of the most popular recreation areas. Over the course of five months, Oxbow Consulting conducted research, site visits, and public engagement to inform the toolkit (refer to Appendix A for planning process). The recommendations and solutions offer land managers and transportation providers actions to accomplish car-free access to outdoor recreation area.

THE PROBLEM

Oregon's outdoor recreation areas are some of the state's greatest resources, as they are immensely valuable to its economy, environment, quality of life, and sense of place and identity. From coastal coves and beaches to the waterfalls and basalt cliffs of the Columbia River Gorge, and from the snow-capped volcanoes of the Cascades to the fossil beds and canyons of the high desert, Oregon offers an abundance of scenery and recreation opportunities. These are increasingly becoming a draw for tourists, both from out-of-state and internationally. Furthermore, they provide for residents what economists have called "the second paycheck," or the benefits of high access to recreation that come from living and working in Oregon.

Visitation to outdoor recreation sites grows each year, largely due to population increase, word-of-mouth, social media, and the successful marketing of outdoor amenities through print media and tourism agencies like Travel Oregon. Yet with increased visitation comes a series of burdens on recreation sites and the agencies that manage them.

Most crucially for this project, the majority of visitors arrive at recreation sites using private automobile, leading to heavy traffic on access roads and a host of parking issues. At popular sites, parking areas may be over capacity even on weekdays or during the low season, leading visitors to park dangerously or illegally along access roads; these visitors then must walk long distances along these roads just to reach their intended point of origin. Heavy traffic damages access roads, and land managers face difficult decisions of whether to maintain these roads and expand parking with limited budgets and resources. Just like overcrowding in a recreation site, vehicle congestion and clogged parking lots diminish visitor experience.

Those without access to a car or without the ability to drive one face a transportation barrier in accessing recreation areas. Low income households may not own a car, and even if they do, costs of fuel and wear on the car may dissuade them from driving long distances to a beach or waterfall. Seniors, youth and differently-abled people may not have a driver's license. A number of people forego vehicle ownership for ethical reasons, or because ownership is impractical in a city. And tourists who do not want to deal with the costs of a rental car are limited in their access to the outdoors.

VISION

Oxbow Consulting seeks to inspire and inform transportation planners, transit providers, land managers, tourism agencies, non-profits, and private-sector interests to pursue car-free access to outdoor recreation sites.

Successful car-free options are those that are economically, environmentally and socially sustainable. They balance the needs of both tourists and locals, without significant last-mile obstacles for either user. They are comfortable, reliable, and convenient. They ultimately reduce reliance on automobiles and expand the recreation options of transit-dependent users and underrepresented communities.

Most importantly, car-free options reduce vehicle congestion at recreation sites and increase access for all users, particularly those who have historically been excluded from the outdoor recreation opportunities.

CASCADIA CONNECT VALUES

After months of research, our team compiled our detailed findings into four overarching values. These values consist of common themes heard within each phase of our project, and act as a guiding framework for future planning of public transportation to outdoor recreation areas.



Viable Transit Operations

This value addresses challenges to operating a stable transit or other car-free services. When accessing outdoor recreation areas, transit and other transportation providers operate across large, low-density rural areas. These routes often intersect county and regional boundaries, and there are many barriers to inter-agency cooperation, sustainable funding models, and a stable revenue stream. They must balance the needs of locals and tourists, and maintain ridership despite seasonal fluctuations.



Low-Impact Recreation

This value largely addresses the concerns of land managers and outdoors enthusiasts. These tools offer several environmental and infrastructure remedies that transit helps provide. However, transit may contribute to increased visitation at recreation sites, which can place additional stress on natural resources and existing infrastructure. As such, transit projects should work to promote eco-friendly recreation and transportation practices, but also coordinate with land managers to mitigate visitation concerns associated with environmental degradation and strain on infrastructure.



User Experience

This value addresses user needs in terms of safety, comfort, convenience/luggage, and others. Potential riders require incentives and assurances if they are going to choose a car-free option. Risks need to be minimized, such as missing a transfer or getting stranded at a destination. Bus destinations, schedules, and storage space must be compatible with a number of outdoor users and activities. A positive rider experience should present many advantages over using a car.



Access for All

This value addresses equity and access to the outdoors. A number of institutional, cultural, and economic barriers exclude people of color, low-income communities, differently-abled people, youth, seniors, and families from the outdoors. Furthermore, an entire class of transit-dependent people are excluded when recreation sites can only be accessed by car. Barriers including cost, safety concerns, convenience, and lack of marketing must be addressed in order to promote access for all.



EXISTING CONDITIONS

OREGON OUTDOOR RECREATION

Outdoor recreation accounts for the second most popular form of tourism in Oregon, just behind more general sightseeing¹ but ahead of urban trips, shopping, special events, theme parks, casinos, and other trip types. Of the 33.2 million overnight trips taken in 2015, 23 percent were for outdoor recreation. Of the 49.8 million day trips, 21 percent were outdoors-oriented, compared to a national average of 13 percent.² Given its prominent place in the state's tourism industry, outdoor recreation is an increasingly important economic driver.

For the existing conditions portion of this project, various methods of data collection and analysis were employed to understand congestion at outdoor recreation areas and public transportation-related barriers, inform alternative strategies, and address these challenges. Such methods included geographic information system (GIS) map analysis of existing public transportation routes and popular recreation sites, literature review, Oregon transportation development and system plan and funding review, and phone interviews with land managers and transit providers. Our existing condition findings in the following section informed a number of car-free strategies to limit the number of private vehicles accessing parks by promoting transit, private shuttle, rideshare, and other modes capable of carrying several visitors.

1 Oregon 2015 Visitor Report. Longwoods Travel USA. 2015. <http://industry.traveloregon.com/content/uploads/2016/11/Oregon-2015-Visitor-Final-Report.pdf>

2 "Oregon Office of Outdoor Recreation (version 20171022)." Oregon State Parks. 2017. Oregon Office of Outdoor Recreation (version 20171022)

OREGON'S MOST VISITED PARKS

Before delving into the relationship between Oregon's existing transportation services and outdoor recreation areas, it's best to have a broad understanding of the most visited Oregon parks (Table 1).

Table 1: Top 15 Most Visited Parks in Oregon

Rank	State and National Parks	2017 Visitation
1	Harris Beach State Recreation Area	1,725,423
2	Yaquina Bay State Recreation Site	1,605,374
3	Sunset Bay State Park	1,476,745
4	Fort Stevens State Park	1,460,408
5	D River State Recreation Site	1,377,276
6	Silver Falls State Park	1,352,210
7	Oswald West State Park	1,48,714
8	Pilot Butte State Scenic Viewpoint	1,253,804
9	Nehalem Bay State Park	1,134,409
10	South Beach State Park	973,652
11	Maples Rest Area	902,332
12	Samuel H Boardman State Scenic Corridor	814,998
13	Crown Point State Scenic Corridor	795,076
14	Smith Rock State Park	767,596
15	Crater Lake National Park	756,344

**Note: Visitation estimates for some parks may be inflated due to their location along high volume travel corridors, thereby serving more as rest areas than recreation destinations.

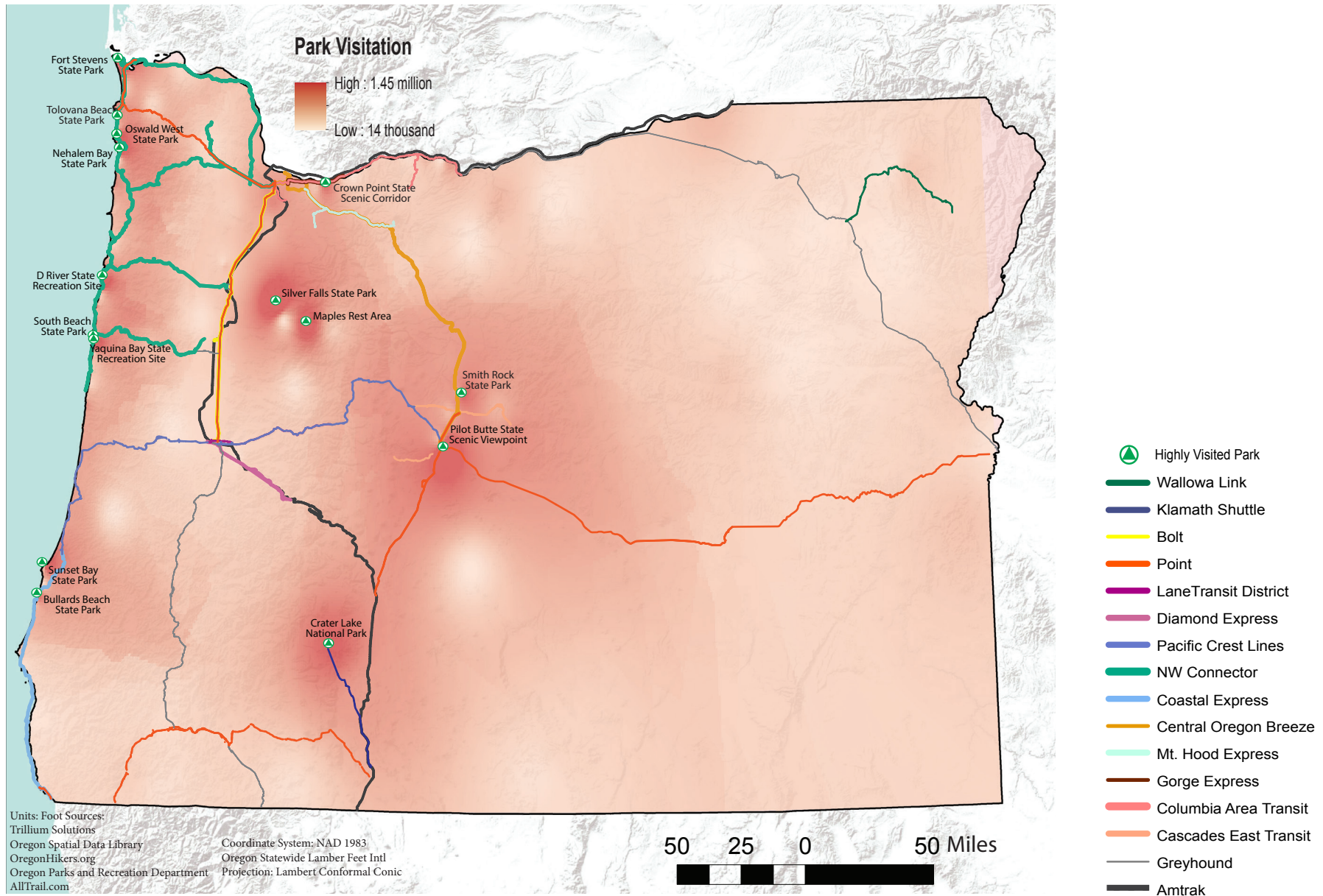
The transportation services and recreation area map on page 14 (map 1) was created using state park data obtained from the Oregon Department of Parks and Recreation, which included day-use and overnight-use visits. The day-use was determined by traffic counts that used a multiplier to estimate the total number of people visiting. The overnight-use was likely more accurate than the day-use because it was estimated by permit registration records. Both these figures were combined to determine the total visitation (day and overnight) for each state park from 2017. The national parks and monument visitation was obtained from the National Park Service (NPS) statistical reports via their website. The figures from both state and national parks were combined and used to generate the heat map on page 14 (map 1).

POPULAR HIKING TRAILS

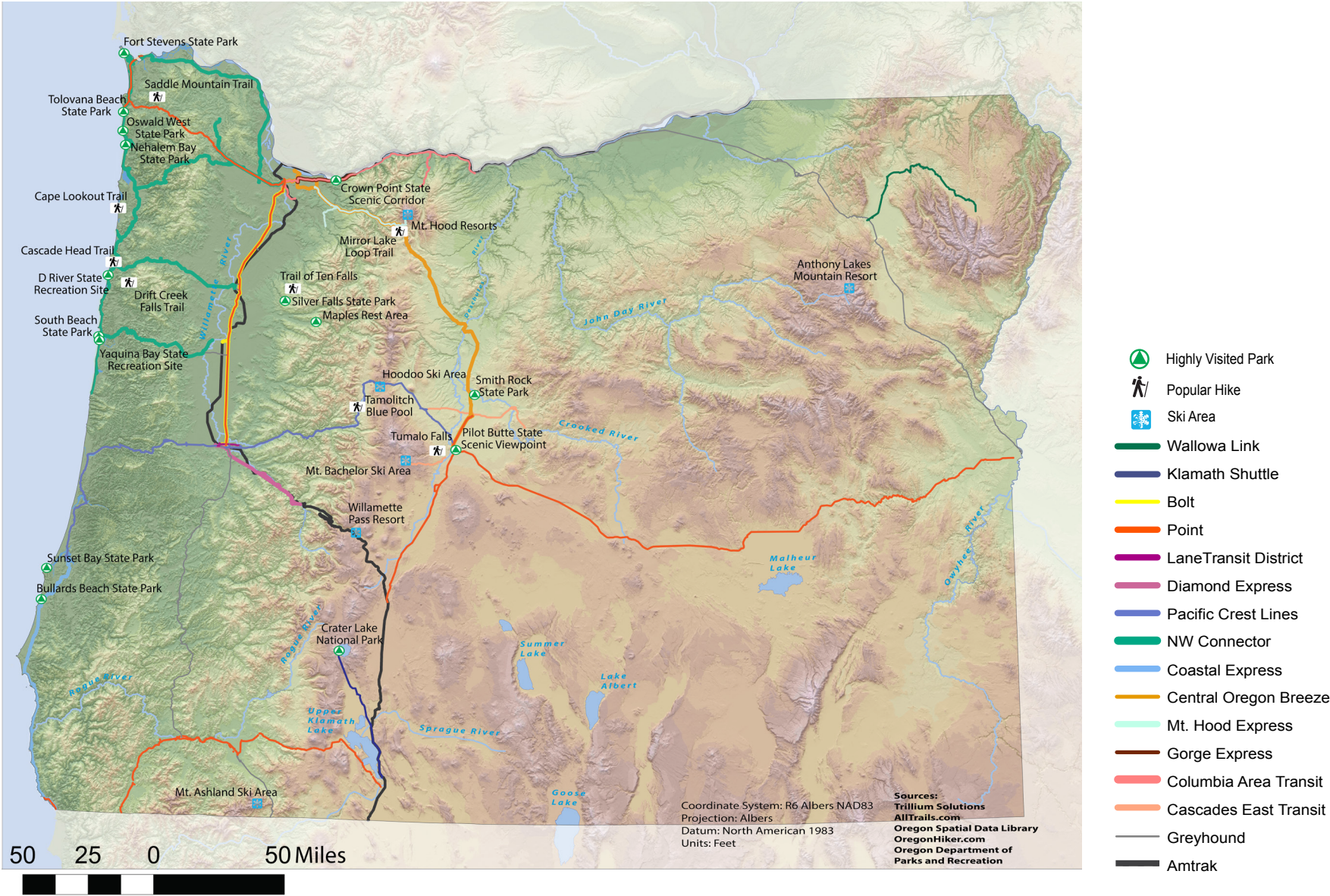
Map 2 (page 15) of most popular hiking trails was created to identify areas with high potential for new or expanded transit services as a means to alleviate private-vehicle congestion. The most popular hikes were derived from user-generated data from AllTrails.com. The website uses algorithms based on positive reviews, recorded visits, average ratings, and several other variables to determine Oregon's top hikes. These top hikes were combined with mapping of transit routes and other top outdoor destinations (e.g. ski areas, top parks, major cities/recreation towns, etc.) and are displayed as zoom maps 3-6.

One concern with popular outdoor recreation sites and private vehicle congestion is lack of adequate parking spaces and the spillover vehicles utilizing the side of the road, potentially damaging vegetation. To assess the relationship between congestion and potential environmental degradation, designated National Wildlife Refuges and National Wilderness Areas were also mapped with the existing transit routes, as shown in Map 7 (map of wilderness areas and wildlife refuges). These data sets were obtained from the Oregon Spatial Data Library. Displaying these areas together with the state's regional transportation services may help land managers and transportation providers identify sites that would benefit from new or improved bus services.

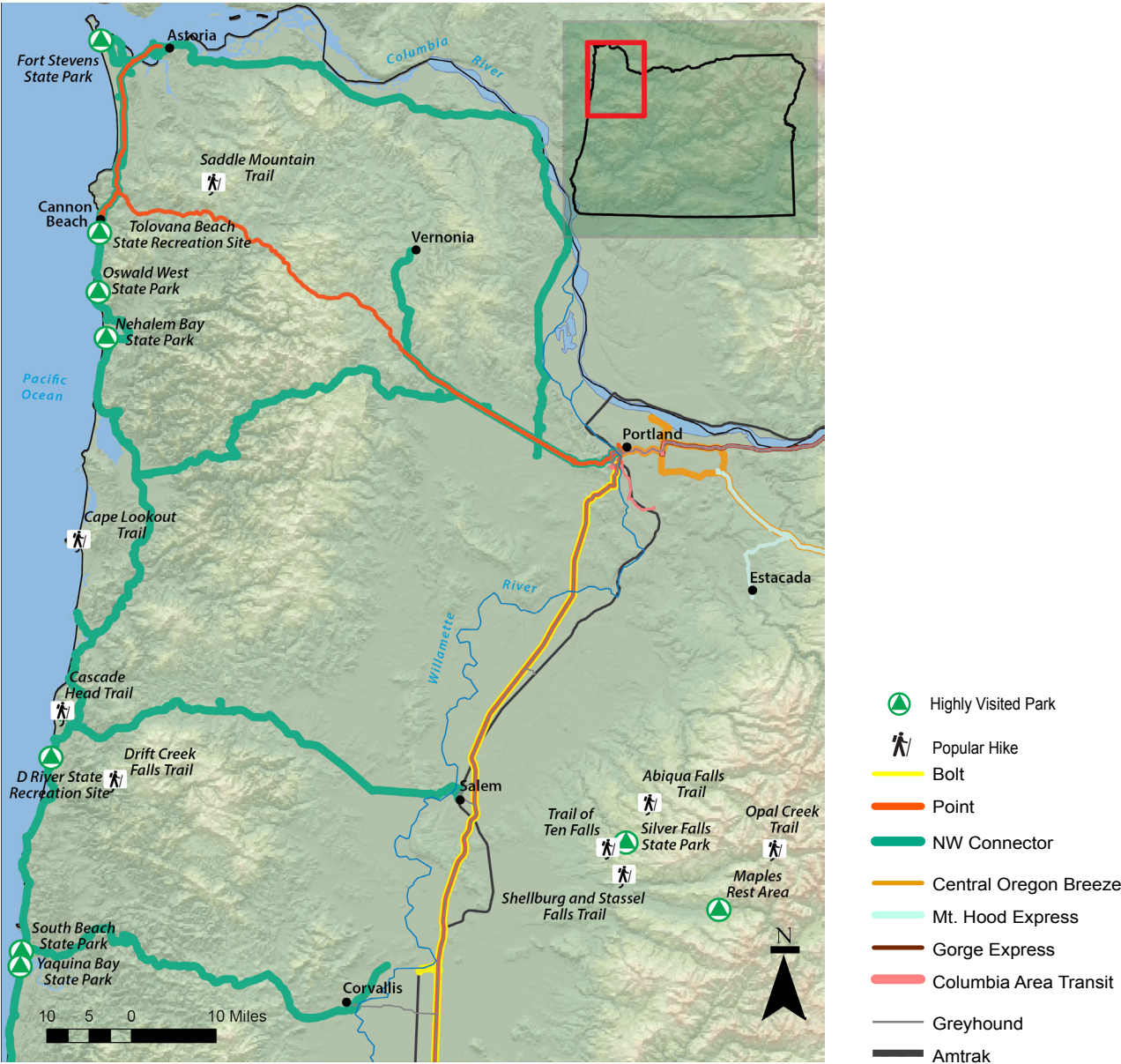
Map 1: Visitation to State and National Parks and Statewide Transit Lines



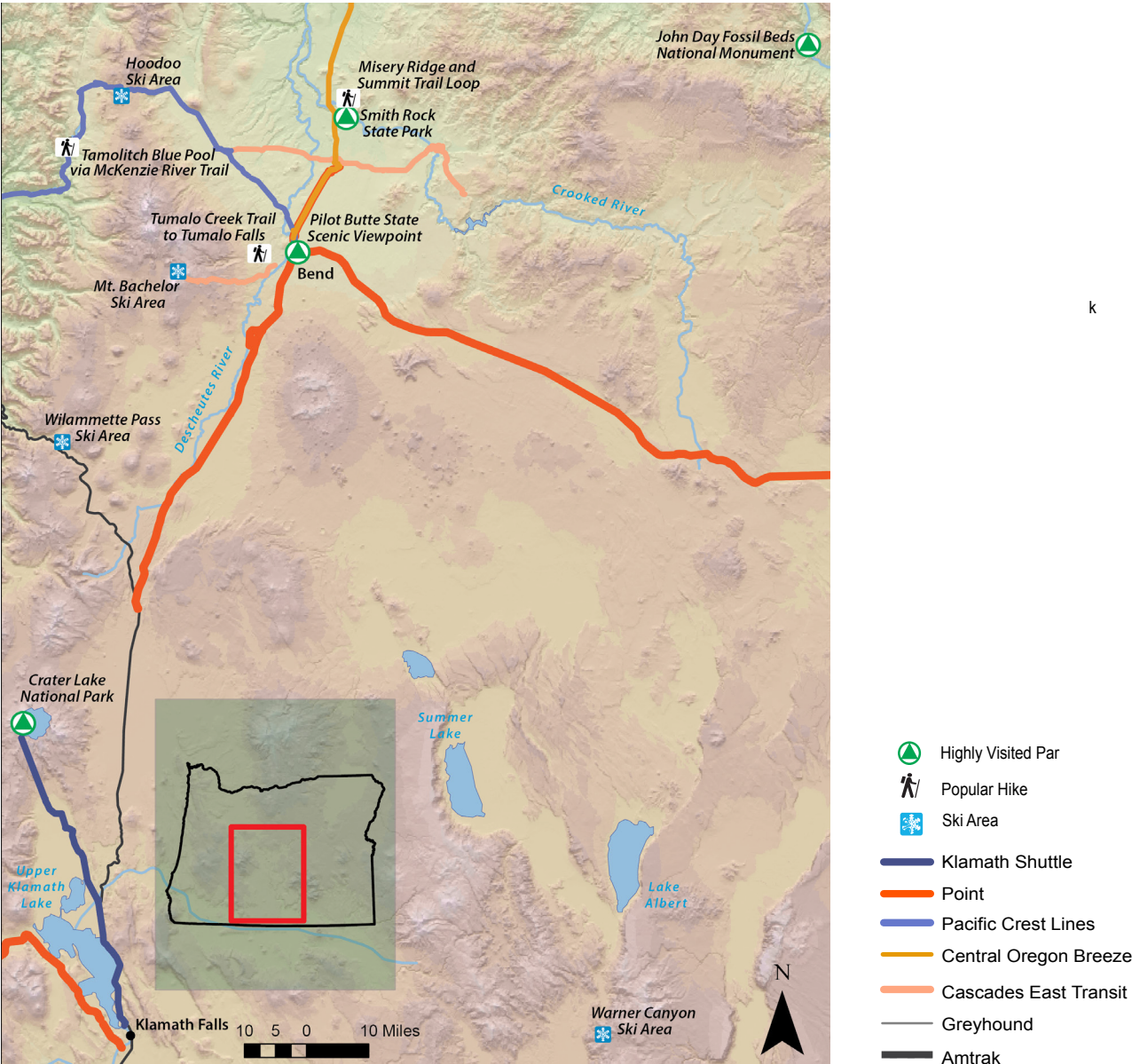
Map 2: Statewide Transit Routes and Top Outdoor Recreation Destinations



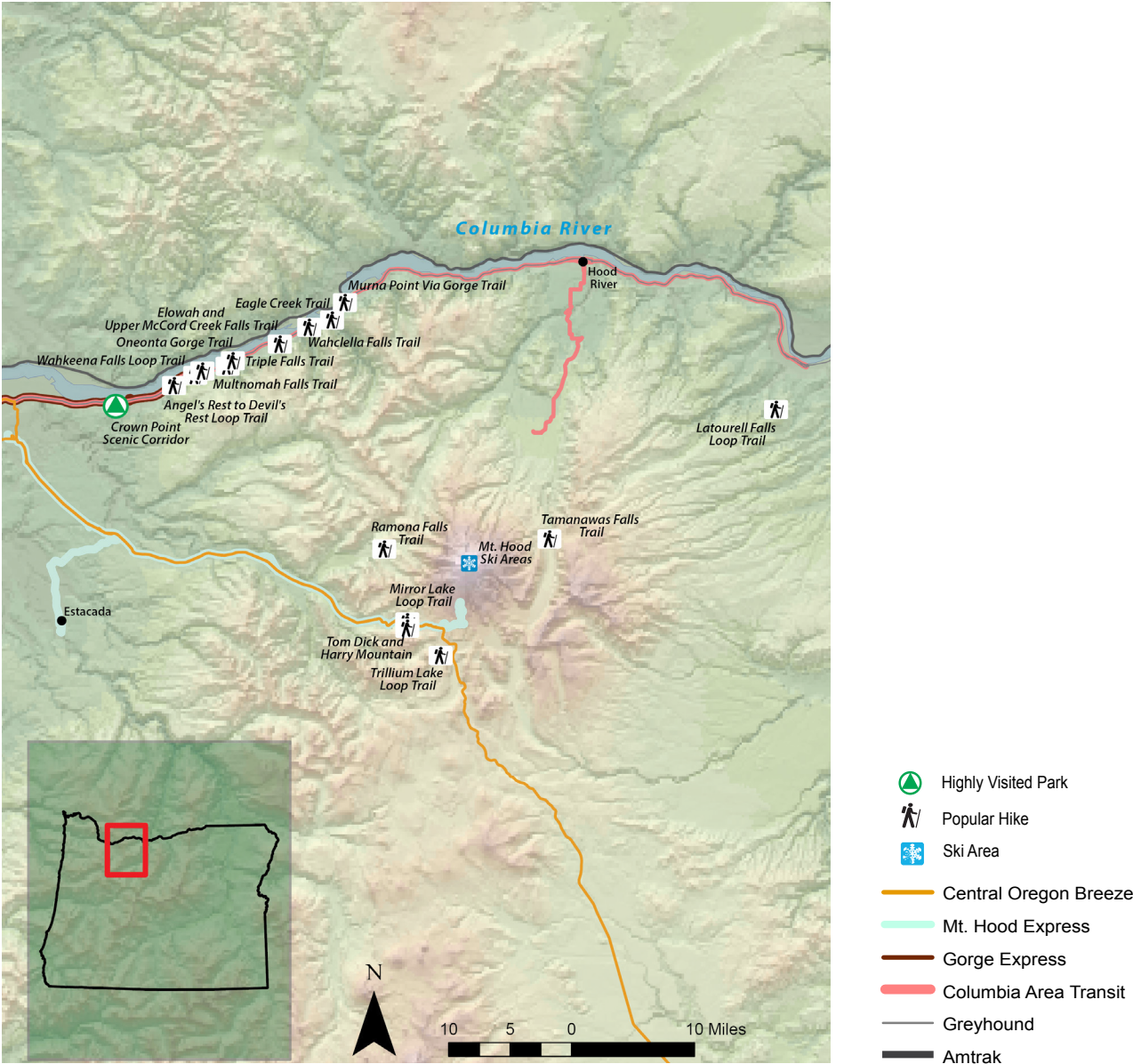
Map 3: Popular Outdoor Destinations in Northwest Oregon



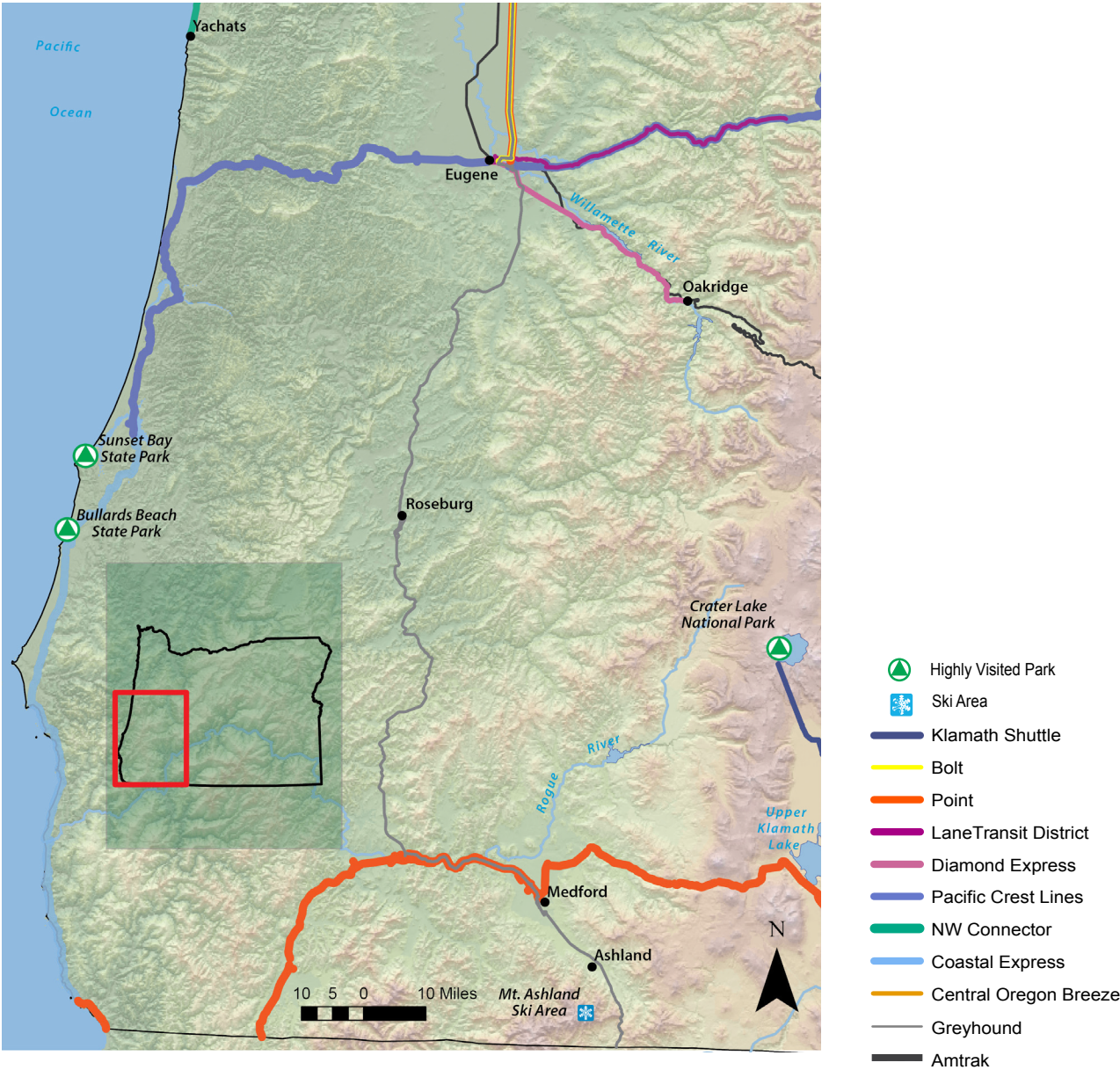
Map 4: Popular Outdoor Destinations in Central Oregon



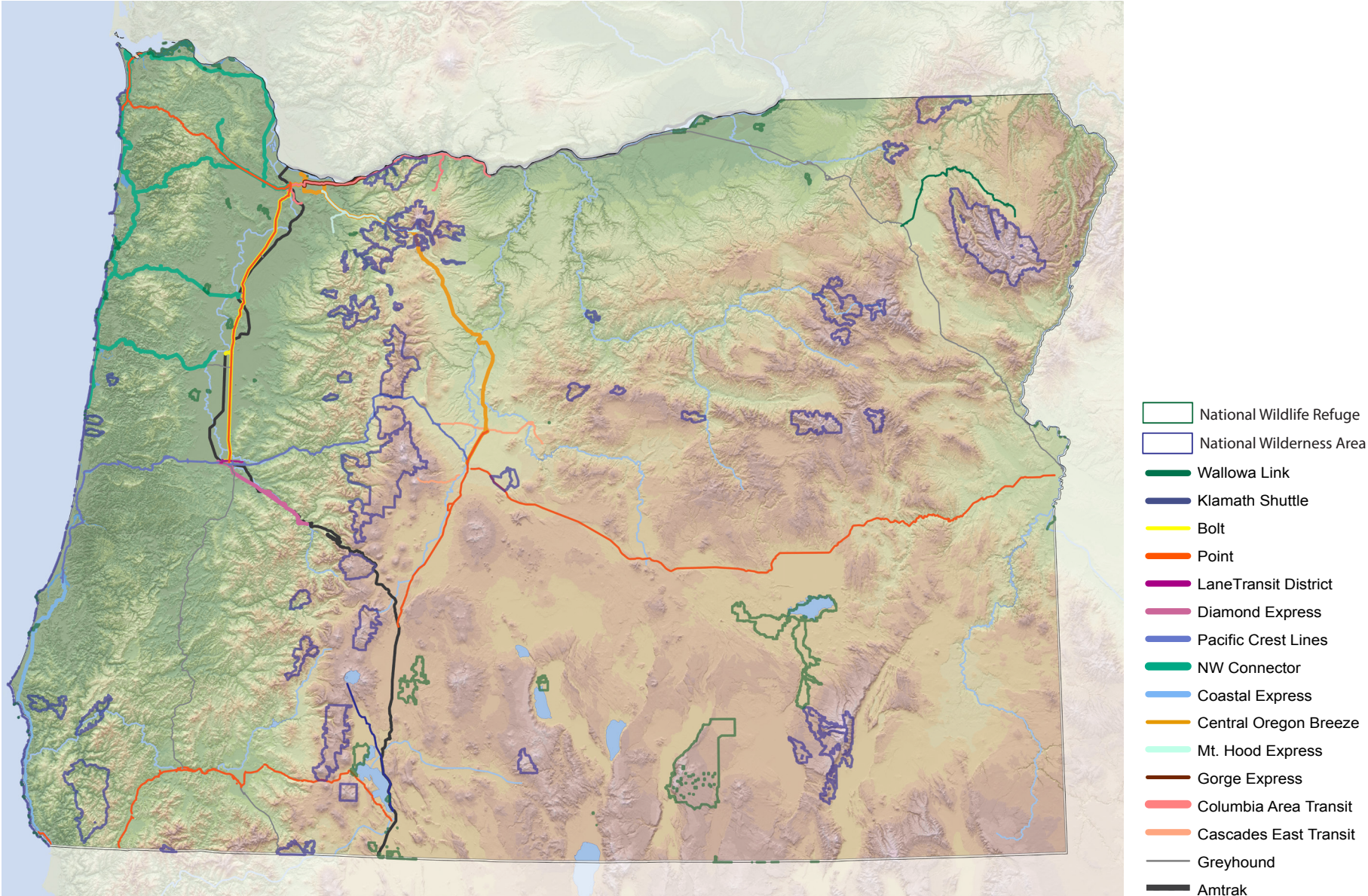
Map 5: Popular Outdoor Destinations Around Mt. Hood/The Gorge



Map 6: Popular Hiking Trails in Southwest Oregon



Map 7: National Wilderness Areas and National Wildlife Refuges



LITERATURE REVIEW

We consulted a number of academic studies and resources, as well as government and nonprofit reports or plans. These sources helped inform our approach to addressing congestion, transportation planning, and the current state of equity in the outdoors.

CONGESTION EVALUATION

Congestion evaluation mechanisms and management tools are generally geared toward urban areas. As such, much of the existing tools and models developed by local, state, and federal transportation agencies are targeted toward cities. Some of the commonly used models for measuring congestion include, travel time index, travel time reliability, and delay per person.³ Considering there is little mention of the use of such technical modeling techniques in transportation planning literature for recreation areas, identification of congestion likely relies on anecdotal evidence. Such anecdotal evidence could come in the form of user and visitor feedback, as well as first-person experiences or observations from transportation providers and land managers.

³ Systematics, Cambridge. Traffic congestion and reliability: linking solutions to problems. No. FHWA-HOP-05-004. United States. Federal Highway Administration, 2004.



CONGESTION MANAGEMENT TOOLKIT

The United States National Parks Service (NPS) is the foremost authority on vehicle congestion in the country's outdoor recreation areas. In 2014, the NPS developed their Congestion Management Toolkit (CMT), which is a valuable resource for any land manager and/or transportation provider seeking to alleviate congestion challenges in their respective outdoor recreation areas. It is important to note the purpose of the NPS CMT coincides with only one of the Car-Free Access To The Outdoors Toolkit goals – alleviating congestion at outdoor recreation sites. As such, the tools we adapted from the NPS CMT were selected based on their ability to also advance our key project goals, or value areas – Viable Transit, User Experience, Low-Impact Recreation, and Access For All.

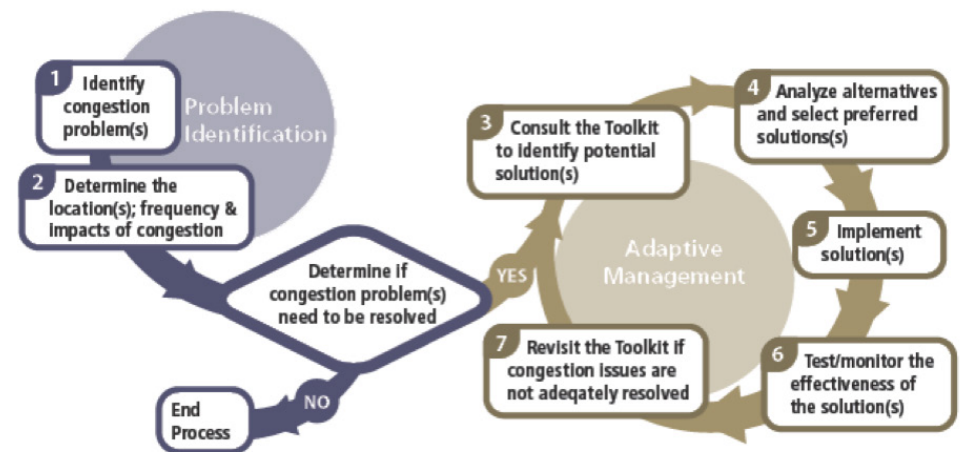
According to the CMT, the initial steps in addressing vehicle congestion are to identify the nature of the problem and determine the location(s), frequency, and impacts caused by the congestion (figure 1). The CMT's framework for addressing congestion has two elements, “problem identification” and “adaptive management”. These identification and management processes are a useful starting basis if land managers or transportation providers determine congestion needs to be resolved. This framework, along with the various tools offered throughout the CMT, helped to inform the approach for developing the Car-Free Access To The Outdoors Toolkit.⁴

⁴ National Park Service. Congestion management toolkit. U.S. Department of Interior, 2014.

The following CMT tools were considered as potential strategies for reducing congestion at Oregon's top outdoor recreation areas via transit:

- Implement Transit or Shuttle Services and Operations
- Adding Capacity to the Transit System
- New or Expanded Park-and-Ride Facilities
- Rail
- Reserved Travel Lanes for Transit Operation
- Ridesharing or Vanpools
- Transportation Technology Applications
- Encourage Visitation to Less Congested Areas
- News Media or Social Media and Mobile Device Apps
- Promote No-Car Park Access Options
- Promote Tour Bus Use

Figure 1: Steps to Address Congestion



Source: National Park Service Congestion Management Toolkit

In addition to these tools, the CMT summarizes the ongoing maintenance/management component of the strategies offered in the toolkit into four basic components of the lifecycle of a transportation system: planning, implementation, operations/maintenance, and replacement/expansion. The implementation framework and ongoing maintenance/management from the NPS CMT also informed the structure and solutions provided in our toolkit.

While the NPS CMT provides an extensive list of strategies for reducing congestion, there is little mention of available funding sources for these types of projects. The Pacific West Region Long Range Transportation Plan (PWR-LRTP), however, suggests a variety of funding mechanisms that some of the tools offered in the CMT would likely be eligible. Some of these sources include Congestion Mitigation and Air Quality Improvement (CMAQ) funds, Federal Lands Access Program (FLAP) funds, and several others.⁵

⁵ National Park Service. Pacific West Region Long Range Transportation Plan. U.S. Department of Interior, 2015.

⁶ Transit Resource Center. YARTS short range transit plan volume I: service, institutional and financial plan. Transit Marketing LLC., 2011.

⁷ Biton, Anna, and Michael Kay. Denali National Park: bus shuttle system analysis. No. DOT-VNTSC-NPS-14-01. 2013.

EXAMPLES OF TRANSIT IN NATIONAL PARKS

Denali National Park Bus System & YARTS

Two very useful case studies of transit services to and within recreation areas include Denali National Park's bus system and the Yosemite Area Regional Transportation System (YARTS). Land managers and transportation providers seeking to implement transit services to recreation areas within their respective jurisdiction would find it useful to consult both these services as examples of prosperous operations.

Denali National Park's bus system and the YARTS both provide cases on innovative funding strategies and partnerships formed outside the NPS system that contributed to their success. For example, YARTS has partnered with Amtrak, and as a result the Yosemite area has one of the most robust transit systems for an outdoor recreation area in the nation.⁶ Similarly, Denali partnered with Alaska's largest private land owning company in order to develop their financially and environmentally sustainable transit system.⁷ Ultimately, these cases offer strategies for recreation areas to pursue, which may not otherwise have access to general funding sources available to national parks or federal lands.



EQUITY AND RECREATION VISITATION

An emerging body of literature has been written surrounding access to recreation areas by race, class, gender, and ability. Many of these studies focus on how visitation is higher among white and middle-to-high-income populations than among people of color (POCs) or low-income populations. Jin-Hyung et. al. conducted a statistical analysis on visitation using 3,000 survey responses in Texas; they found that white males with a college degree were statistically the most likely demographic to engage in outdoor recreation, while non-white females without a college degree were statistically the least likely demographic. They argue that it is the responsibility of land managers to improve their outreach and catering of facilities to a diverse audience. They do note, however, that land managers face major challenges in operating under a limited budget, and therefore they have tendencies to engage existing rather than future users.⁸

Krymkowski et. al., study how marginality and discrimination impact outdoor recreation use. Moreover, they take the findings one step further by studying national data. They reviewed data from the 2008–2009 National Park Service Comprehensive Survey of the American Public (NPSCSAP), and found that during the past two years, 35 percent of whites visited a national park, while 13.9 percent of African Americans and 30.3 percent of Latinos. Consequently, race and ethnicity, were found to be the greatest factor in determining recreational use differences.

8 Lee, Jin-Hyung and David Scott. "Structural Inequalities in Outdoor Recreation Participation: A Multiple Hierarchy Stratification Perspective." *Journal of Leisure Research* 33:4, 2001. 427-449.

9 Krymkowski, Daniel H. "Race, ethnicity, and visitation to national parks in the United States: Tests of the marginality, discrimination, and subculture hypotheses with national-level survey data." *Journal of Outdoor Recreation and Tourism* 7, 2014 35-43.

In their discussion, they hypothesize that low African American visitation is due not to cost or perceived lack of safety, but a history of national parks being coded as "white space". They did find, however, that African Americans make up a large share of visitation at cultural sites in the national parks system that are specific to African American history. They recommend wider national park designation to sites with specific cultural or historic meaning to communities of color (CoCs), as well as better transportation options and marketing of natural areas.⁹

Much of the academic literature focuses on how park distribution in a region impacts overall access to these destinations. Floyd and Johnson (2002) study this finding through an environmental justice lens, suggesting that outdoor recreation opportunities are an unevenly distributed social benefit, just as environmental hazards are an unevenly distributed burden. Much of this inequity is geographic or distributional, with communities of color, or low-income communities unable to access recreation areas due to spatial barriers. Johnson also explores how park investments and planning tend to be influenced by and reinforce by white, middle-class values, leading to recreation sites that do not offer amenities appealing to a range of cultures.¹⁰ Huhtala and Puta (2009) expand on the geographic distribution of parks hypothesizing that preserving more close-in parklands in Metro areas and expanding the acreage of existing parklands, would increase low-income visitation to recreation areas.¹¹

10 Floyd, Myron F. and Cassandra Y. Johnson. "Coming to terms with Environmental Justice in Outdoor Recreation: A Conceptual Study with Research Implications." *Leisure Sciences* 24, 2002. 59-77.

11 Huhtala, Anni and Eija Puta. "Benefit Incidence of Public Recreation Areas—Have the Winners Taken Almost All." *Environ Resource Econ* 43, 2009. 63-79.

If geographic distribution of parks is an issue, then clearly there are existing inequities experienced by transit-dependent populations. However, little has been published on the relationships between transportation, equity, and outdoor recreation. A recent (2015) study by Elizabeth Perry et. al. uses survey data to explore visitation trends by Whites, Blacks, and Latinos, and the impact improved transportation options would have on their visitation. Black respondents reported transportation options would have on their visitation. Black respondents reported the lowest visitation, while Latinos were most likely to provide responses suggesting that transportation barriers prevented them from visiting NPS sites. When asked what improvements would best increase their visitation, Latinos responded that more public transportation options, better existing transit service, and cheaper fares were the best solutions. Just as in Krymkowski et. al's study, Perry et. al. found that culturally/historically relevant sites were a better predictor of visitation for Black respondents.¹²

¹² Perry, Elizabeth E. et. al. "Barrier or bridge? The role of transportation in national parks visitation by racial and ethnic groups." *World Leisure Journal* 57:3 2015. 173-184.

¹³ "Regional Park Use Among Select Communities of Color a Qualitative Investigation." March 2014 <https://metro council.org/Parks/Publications-And-Resources/PARK-USE-REPORTS/Park-Use-Among-Communities-of-Color-2014.aspx>

¹⁴ "Regional Park Use Among Select Communities of Color a Qualitative Investigation." March 2014 <https://metro council.org/Parks/Publications-And-Resources/PARK-USE-REPORTS/Park-Use-Among-Communities-of-Color-2014.aspx>

INEQUITABLE PARK USE STUDY

A study by the Twin Cities Metropolitan Regional Council conducted a set of focus groups to understand inequitable park use.¹³ The overall focus group participants consisted primarily of people of color.¹⁴ The Metro Council found disproportionate or inequitable park use was due to a set of ten barriers.

TOP 11 BARRIERS

1. Lack of Awareness
2. Time
3. Fear/Safety Concerns
4. Lack of transportation Options
5. Language Barrier
6. Weather
7. Cost
8. Map Challenges
9. No Companions
10. Cultural or Religious Insensitivity / Discrimination*
11. No Desire*

*Items tied.

EQUITY AND RECREATION BARRIERS

In recent years, Oregon published the Statewide Outdoor Recreation Plan (SCORP) to guide outdoor recreation funding and policies decisions over the next five years.¹⁵ Discussing access to Oregon's outdoor recreation sites requires an understanding of racial breakdown of current visitors. The SCORP report found "Ninety-two percent of Oregonians participated in at least one outdoor recreation activity in Oregon during the past year, but two-thirds of visitors to National Forest lands in Oregon were white males."¹⁶ The SCORP research findings offer a better understanding of who is enjoying the outdoors, and how to increase access for underrepresented populations. In 2007, SCORP conducted a mail-survey and focus group to better understand participation and opportunities, focusing on Hispanics and Asians.

With our focus on increasing public transportation options to outdoor recreation sites, it's important to note a lack of transportation options is a barrier. Furthermore, a few of the other barriers on this list overlap between transportation constraints, including lack of awareness, transit related safety concerns, language barriers, cost, and discrimination. This study provides valuable insight because increasing access isn't solely about providing transit, but must include the overall comfort while getting to and recreating in the outdoors.

KEY SURVEY THEMES INCLUDE:

- The most commonly recommended facilities for development in parks were picnic tables, followed by trails and campgrounds. There were some differences across groups, with Hispanics being more likely than Asians to suggest additional sports fields.
- In terms of information sought by respondents, practical information on activities, facilities, and location was the most common response, followed by information on cost. Overall, the internet was most frequently noted as the desired information outlet.

KEY FOCUS GROUP THEMES INCLUDE:

- Develop facilities (such as picnic areas) large enough for extended families. Participants explained that they prefer to recreate with their children and extended families, including elders. They mentioned frustration with visiting areas without such facilities.
- Target marketing information for specific racial/ethnic groups in the appropriate media platforms and languages, including websites.
- Create trust and build relationships with key informants within the communities.

¹⁵ Bergerson, Terry et. al. 2013-2017 Oregon Statewide Outdoor Recreation Plan. Oregon Parks and Recreation Department. 2017.

¹⁶ "2013-2017 Oregon Statewide Outdoor Recreation Plan"



LITERATURE REVIEW KEY THEMES

The National Park Service (NPS) offers several useful resources relating to congestion management and transportation planning as it relates to outdoor recreation. The NPS Congestion Management Toolkit provides a wide range of specific strategies or solutions to address traffic challenges in national parks, while the NPS Pacific West Region Long Range Transportation Plan includes higher level, long-term funding and policy strategies for transportation projects or systems. Useful case studies to consult include the Yosemite Area Regional Transportation System (YARTS) and Denali National Park's transit system.

Outdoor recreation users is overwhelmingly composed of those who are white, middle to upper-class, and able-bodied. In addition to inequitable access to outdoor recreation, the barriers underrepresented communities face to accessing the outdoors also has environmental justice implications. This is largely due to the various health benefits associated with outdoor recreation and exposure to natural areas. As such, ability to reach these spaces should be accessible and comfortable to all. Many scholars have noted that greater participation in outdoor recreation among underrepresented groups would be advanced through more accessible and affordable transportation options.

OREGON TRANSPORTATION PLANS AND FUND

We researched Oregon-specific transportation development and system plans, as well as funding options to provide a foundation for transit service implementation to outdoor recreation areas.

TRANSPORTATION DEVELOPMENT PLANS

Transportation Development Plans identify strategies to meet transportation needs over a 20-year horizon. They are useful in strengthening coordination between transit providers and partnering agencies, and in connecting the various processes between the two. They also increase the opportunity to obtain funding and support for transit projects. The Oregon Department of Transportation (ODOT) published a Transit Development Plan Guidebook in January 2018, the bulk of which serves to assist planners through explanation of key components to include examples from plans statewide. The guidebook also defines TDPs and their relationship to TSPs.

Transit Development Plans (TDPs), also called transit master plans in Oregon, are developed at the regional level and are specific to addressing transit needs. TDPs generally work alongside transportation system plans (TSPs), which are produced by municipalities, counties, and regions, and encompass all modes of transportation. Oregon has a statewide Transportation Planning Rule (TPR), which requires TSPs to include a transit plan and meet a specific set of criteria.

The rule allows for TDPs and other applicable transit plans to be incorporated into a TSP by reference or in full. For some planning authorities like Hood River County or Bend Metropolitan Planning Organization, it is a matter of selecting a location or forming partnerships with businesses or organizations with underutilized parking lots. Seasonal park-and-ride lots are an example of a solution for congestion and access challenges considered in TDPs.

In examining TDPs, it is apparent that not all plans explore transit as a means for accessing outdoor recreation site, and some plans make the distinction between the types of users in describing how to best serve their needs. TDPs reflect the transit conditions and needs of a particular place, and so transit districts with heavy tourism traffic include it within their scopes. An example is Tillamook and Lincoln Counties, which are coastal areas in the NW Connector service network. Both jurisdictions recognize tourism as an economic driver and a source of transportation challenges in Transit Development Plans. Additionally, local and visiting users use transit services differently, and respond differently to fares, information materials, schedules, routes, and more. Solutions like tourist-oriented transit routes, detailed signage, park-and-ride lots, and metered parking are found in plans in places where there are many seasonal visitors.

STATE TRANSPORTATION INVESTMENT FUND (STIF)

The State Transportation Investment Fund (STIF) is a new and dedicated funding source for public transit in Oregon. The funding package was passed into law in 2017, and collects funds through a payroll tax. Ninety percent of funds are distributed through a formula to qualified entities, which includes transit and transportation districts, counties without transportation districts, and federally recognized Native American tribes. Applicants may apply alone or in partnership with other qualified entities. The formula distributes funds based on taxes collected within a geographic area with a minimum of \$100,000 per year. The other ten percent of STIF funding goes toward a discretionary fund (5 percent), intercommunity discretionary fund (4 percent), and a statewide technical resource center (1 percent) to administer STIF and assist rural communities. Funds may be awarded for public transportation projects with the following criteria:

- Coordinate providers and reduce fragmentation of services
- Increase frequency, reach of bus service, or reduce fares in communities with a high proportion of low-income households
- Increase frequency or reliability in connecting communities inside and outside a service boundary
- Procure buses that are powered by natural gas in areas of 200,000 or more people

FEDERAL LANDS ACCESS PROGRAM (FLAP) FUNDING

The Federal Lands Access Program (FLAP) was established to improve transportation facilities that are within Federal Lands or provide access to them. The program is designed to be flexible for a variety of project types nationwide and in Puerto Rico, with an emphasis on heavy-use areas and economic generators. Eighty percent of funds are distributed to the 12 states (including Oregon) that contain 1.5 percent of the nation's federal lands, and the other 20 percent of funds are distributed to the other 38 states, Washington D.C., and Puerto Rico. FLAP funding allocations authorized by the Fixing America's Surface Transportation (FAST) Act are \$250 million for 2015 with a \$5 million per year increase ending at \$270 million in 2020.¹⁷

¹⁷ "Federal Lands Access Program." U.S. Department of Transportation/Federal Highway Administration, 8 Feb. 2016.

TRANSPORTATION PLANS AND FUNDING THEMES

TRANSPORTATION SYSTEM PLANS

Transportation system plans (TSP) are broad in scope, while transit development plans (TDP) are specifically focused on transit and are often a component of TSPs. Transit projects offering service to outdoor recreation areas would likely have to consult TSPs and TDPs, and would likely have to be incorporated into their respective jurisdiction's plan updates.

STATE TRANSPORTATION INVESTMENT FUND

The State Transportation Investment Fund (STIF) is a major funding source for public transit in Oregon, and the Federal Lands Access Program (FLAP) offers funding for transportation infrastructure or services that enter or provide access to federal public land. Both of the funding sources are promising opportunities for financing, in part or in whole, transit projects to outdoor recreation areas.



STAKEHOLDER INTERVIEWS

We conducted phone interviews with land managers, transit providers, and individuals in the nonprofit and private sectors to gain insight into existing congestion problems at specific recreation sites, and to learn more about existing local and regional transit operations that serve recreation areas. Additionally, interviewees were able to convey strategies and practices that have worked in Oregon for both relieving congestion and increasing car-free access to recreation sites. Interviews were able to provide rich qualitative data that highlighted Oregon-specific challenges not explored in the literature.

Eleven interviews were conducted; half with land managers, and the other half with directors of transit agencies. Two additional interviews were held with the director of a nonprofit and a private lodge operator in order to gain their unique perspectives. See Appendix B for the list of interviewee participants.

Interviews were conducted over the phone rather than in-person due to time and geographic constraints. Though in-person interviews would have been preferred, we still found that participants were willing to share details and stories over the phone. Interviews lasted anywhere from 20 minutes to an hour, depending on participants' availability and the extent to which their work was related to our research topic. Separate sets of questions were prepared for land managers and transit providers, but interviewers often deviated from these questions due to differences in experience.

CRITERIA FOR SELECTING LAND MANAGERS TO INTERVIEW

1. Geographic diversity across Oregon
2. Management of a recreation areas, sites that see heavy visitation, and sites considered as iconic
3. Management of areas or sites that are served or could potentially be served by transit.

CRITERIA FOR SELECTING TRANSIT OPERATORS TO INTERVIEW

1. Geographic diversity
2. Transit that operates on a regional, rather than urban, level
3. Transit that currently or could potentially serve recreation sites and areas

LAND MANAGER INTERVIEW FINDINGS

DEFINING AND MEASURING CONGESTION PROBLEMS

Interviews revealed that congestion is defined, measured, and experienced in different ways depending on the individual park and regional contexts. Land managers pointed to two broad types of congestion; the first being an abundance of private vehicles in parking lots or on access roads, and the second being congestion of visitors inside the park or recreation site. Congestion in recreation areas (Table 2) can be described using four categories:

Table 2: Congestion in Sample Recreation Areas

	Lower Visitation	Higher Visitation
Lower Vehicles	Cottonwood Canyon Blue Mountain	Rooster Rock Fort Stevens
Higher Vehicles	Historic Columbia Highway Trails	Smith Rock Park Multnomah Falls

1. LOW VEHICLES AND LOW VISITATION: These are sites that do not experience congestion, and land managers at these parks are actively trying to attract new visitors. These sites are often in remote or inaccessible places, and transit service to these areas would likely be financially unsustainable. None of the land managers we spoke with work on this type of site, but Scott Brown referred to Cottonwood Canyon State Park and the Blue Mountain Management Area as examples.

2. LOWER VEHICLES AND HIGH VISITATION: These parks generally have infrastructure that can support heavy visitation arriving by private vehicle. Parking spaces are abundant and access roads are traffic free, so they are generally capable of supporting high visitation without noticeable congestion. Rooster Rock State Park and Fort Stevens State Park were highlighted as great examples.

3.HIGH VEHICLES AND LOWER VISITATION: These sites are of great interest to users, but due to few parking spaces and narrow access roads, congestion is high even when relatively few users access them. Many sites along the historic highway in the Gorge have parking areas that have not been expanded in several decades. Lack of parking caps access, but congestion on roadways is still experienced.

4. HIGH VEHICLES AND HIGH VISITATION: These are sites where both aspects of congestion are felt. Parking areas can accommodate hundreds of vehicles, leading thousands of visitors to use the park at once, with noticeable congestion. Individual recreation sites in this category include Smith Rock State Park and Multnomah Falls. Furthermore, entire management areas can experience this kind of congestion, such as Oregon’s North Coast.

In general, land managers expressed far more concern with the impacts of heavy visitation than those of congestion. From an environmental perspective, foot traffic creates a heavier burden on natural resources than vehicles accessing the site. At Smith Rock, growing popularity of the park with climbers and hikers has led to native vegetation being trampled, and degradation of the rock walls. In the Columbia Gorge, hikers are known to bring in invasive species, as well as cause erosion from going off-trail. Such erosion and a high presence of people often contributes to point and nonpoint source pollution entering an area's freshwater resources.

Furthermore, the prospect of a park having to expand its sewer or septic system to accommodate visitors can cause an array of negative environmental impacts, such as additional pollution sources, wildlife attractants, and ground or soil disturbances. The environmental impacts of vehicles, while apparent in the form of roadkill, stormwater runoff in parking areas, and the erosion impacts of parking on shoulders, are considered to be lesser because vehicles do not access the most ecologically sensitive areas of a recreation site, whereas pedestrians and other users do. Land managers also face challenges of improving and expanding visitor infrastructure (restrooms, picnic areas) with increased visitation.

This poses a challenge for expanding transit and other forms of car-free access to recreation areas and sites. If transit were to bring in more visitors rather than converting existing users to transit riders, it would likely cause further resource strain for land managers. Several of the land managers supported transit as a means of access, but they were hesitant to introduce a service that would increase visitation. When asked if they believed transit would provide more equitable access, they agreed with the sentiment and strongly supported increasing equitable access, but still remained reluctant to increase visitation. Some insisted that transit access would have to be met with a reduction of parking spaces, specifically referencing Smith Rock, to offset the new visitors arriving by bus. Others advised that transit in the Columbia River Gorge should serve under-used sites and trailheads in order to more evenly distribute visitors.

VISITOR BEHAVIOR AND BARRIERS

All land managers confirmed the vast majority of recreation areas are primarily accessed by private vehicle, even those served by transit or other car-free modes of transportation. The strongest exception is Stub Stewart State Park, which is served by Columbia County Rider (a branch of the NW Connector) and lies on the popular Banks-Vernonia bike path. In this popular site, transit service is only lightly used, and a local land manager estimated that 25 percent of visitors arrive by bike. Other exceptions include Multnomah Falls and Rooster Rock, where visitors use the Columbia Gorge Express bus for access. However, this only accounts for a small fraction of visitors, and even if transit were to better serve recreation areas, land managers suggested much effort would need to go into changing visitor behavior.

One participant explained that transit is effective at transporting people, but not gear or equipment. This is a key barrier to increased ridership, as many recreationists are not simply traveling with a daypack, but are bringing overnight camping gear, mountain bikes, surfboards, picnic supplies, climbing gear, and other equipment. Some transit can accommodate a few bikes or a limited amount of equipment, but buses quickly become overcrowded if a large number of passengers have gear in tow.

Another behavior barrier brought up is a perceived lack of control when using transit. Most transit serving recreation areas operates on a limited schedule, and there is an inherent sense of risk of becoming stranded if a visitor misses their bus. An example is Smith Rock, where only two Central Oregon Breeze buses arrive and depart from nearby Terrebonne per day. Once at the Terrebonne stop visitors must then walk or rideshare two miles to and from the state park, and run the risk of missing their return bus if they stay in the park too long. In the Columbia River Gorge, many visitors appreciate the control and flexibility a private vehicle offers in letting them drive from waterfall to waterfall, rather than having to stick to a transit itinerary.

INFRASTRUCTURE BARRIERS

Several land managers mentioned that expanding transit access to recreation sites would in many cases require a redesign of park entrances and parking areas. While some newer parks (e.g. Stub Stewart) developed alongside county and regional transit services, many parks haven't seen entrance or parking upgrades since the 1950s. Many of these sites may not be able to handle bus flow and turnaround, particularly with larger tour buses. At some sites with suitable pullouts, restrooms and covered bus stops would need to be built.

At Smith Rock, parking spaces would need to be removed in order to accommodate a bus pull-in and turnaround, and improvements would need to be made to ensure that buses could easily and safely pull off and onto the busy county road that accesses the park. In Ecola State Park, the 3-mile access road itself to popular Indian Beach is too rough and narrow to safely handle bus traffic. Larger buses could also contribute greater wear and tear on access roads, parking areas, and other infrastructure.

Several land managers discussed financial barriers faced by transit agencies in servicing recreation areas, especially rural transit routes, and many lack the funding to expand. Furthermore, visitation is highly seasonal, peaking in the summer on the Oregon North Coast and the Columbia River Gorge, and in Spring and Fall at Smith Rock. Any financially sustainable transit service to these areas would likely need to expand during the high season and contract during the low season.



LAND MANAGER INTERVIEW THEMES

TRANSIT SERVICE ON WEEKDAYS

Land managers at popular sites are hesitant to increase visitation on weekends, but these same sites could easily absorb more visitors on the weekdays. Therefore, weekday transit service during the high season is desirable. Though it would not extend access to much of the working public, visitors on vacation could take advantage of this service.

DISPERSING VISITORS

In places like the Columbia River Gorge, visitors could be distributed to underused sites in order to better distribute the burdens of visitation. Such strategies may be welcome news to land managers struggling to attract visitors.

NONPROFIT PARTNERSHIPS

Nonprofits are capable of providing support in areas that government agencies have difficulty with, such as marketing and outreach. Discover Your Forest has a unique contract arrangement with Deschutes National Forest and transit providers.

EQUITY

Many land managers have a conflicted relationship with access and equity. While they see transit as a great opportunity for bringing transit-dependent users to recreation sites, they are also hesitant to implement changes to recreation sites, which might encourage heavier visitation at popular destinations.

BEHAVIOR SHIFTS AMONG VISITORS

Visitors may continue to access recreation sites by private vehicles out of habit, or they may see too much risk or loss of control in using transit. Transit must be reliable, flexible, and accommodating of gear to change visitors' behavior.

VISITATION CONCERNS

Heavy concentration of visitors, not private vehicles themselves, is a land managers' greatest congestion concern. Heavy use leads to environmental degradation, strains on infrastructure and resources, and diminished visitor experience – more so than vehicle traffic. Land managers are wary of bringing in more visitors, but see transit as an opportunity to better distribute visitors across a larger recreation area, thereby helping mitigate heavy use challenges. Transit agencies, however, want heavy use of potential services to recreation sites to ensure sustainability.

PUBLIC-PRIVATE PARTNERSHIPS

From a land manager perspective, a desirable partnership may involve a private party operating a parking lot and shuttles servicing parks. Staff at Smith Rock have explored a public-private partnership in which the park contracts with a nearby landowner to park cars and operate a shuttle to and from the park. Since cars would be parked off-site, the expansive parking area at the park could be restored to its natural state. Parks officials could work with the landowner to cap the number of parking spaces in order to limit visitation to its current capacity. This strategy would work well at a place like Smith Rock, which is surrounded by rangeland and well suited for a parking area on private land. This would be much more difficult near parks on the coast or in the Columbia River Gorge, where private land is limited and geographic constraints make most land unsuitable for a large parking area. There is potential for a partnership with the City of Cannon Beach to provide parking and a shuttle service to Ecola from downtown. One exception on the coast is Fort Stevens, which partnered with a nearby property owner to park cars and shuttle visitors during the annual Civil War reenactment event.

TRANSIT PROVIDER INTERVIEW FINDINGS

SANDY AREA METRO (SAM) & MT. HOOD EXPRESS

These two services link to form transit service from Portland Metro Area to Government Camp and Timberline Lodge on Mt. Hood. SAM runs from Gresham to Sandy, where riders can transfer to the Mt. Hood Express bus. Service began in 2004-2005 under the leadership of a local community group that noticed youth relying on hitchhiking to get to and from school and work along the Mt. Hood Corridor. Originally extending from Sandy to Rhododendron, the Mt. Hood Express became eligible for Federal Transit Administration (FTA) 5311 funding, and asked for the assistance of Clackamas County in expanding and continuing to implement the service. Clackamas County does not have a transit department, and the service is housed in the Social Services Division since it operates in part for seniors and youth.

Clackamas County and community groups sought to expand the service, since many users still had to hitchhike from Rhododendron up the mountain to get to their jobs at various Mt. Hood resorts. The Mt. Hood Express is unique because it does not operate under a local payroll tax or utility surcharge structure, due to the service primarily operating in unincorporated areas. The Social Services Division had to be strategic and innovative to secure funding. They were one of the first transit projects in the nation to use Federal Lands Access Program (FLAP) funding, which is typically applied to infrastructure such as roads and rest areas. The project continues to be financed by FTA and ODOT grants, public-private partnerships with Skibowl and Timberline Lodge resorts, and in the future through matching funds from Mt. Hood Meadows.

Mt. Hood Express now operates a commuter service throughout the villages in the Mt. Hood Corridor, as well as an express service to Timberline Lodge. Fares have remained low (\$2 one-way or \$5 for a day pass) with the goal to make it as affordable as possible for commuters, who make up 40 percent of ridership. In the interest of serving low-income riders, there are no plans to change these fares. The service is also very popular with recreation users, primarily skiers in the winter and mountain bikers in the summer; as “ski-boxes” are attached in winter and bike trailers in the summer to accommodate gear. Ridership has grown from 20,000 annually to 64,000 rides in 2017, despite a weak advertising approach. It was noted that the budget for the system is so lean that it doesn’t feel right to divert money to advertising. The downside is that many in the Portland Metro region have not been exposed to Mt. Hood Express.

Mt. Hood Express coordinates with SAM using an Intergovernmental Agreement (IGA). The two services contract with the same company for buses and drivers, and they coordinate service to make it as seamless as possible across jurisdictional boundaries. Interview participants stated that the successful IGA was not a result of a strong prior relationship between Clackamas County and SAM, but was purely a relationship made and reinforced on an individual level, between key players. Relationship building was highlighted as a key to implementing transit systems that cross jurisdictional lines in serving rural areas.

NW CONNECTOR

The NW Connector is the product of an intergovernmental agreement (IGA) between five transit agencies on Oregon's North Coast, providing north-south service along Highway 101, as well as connecting to Portland and Salem. Though NW Connector routes pass many beaches and other recreation sites, it is primarily a local commuter service that accesses city centers and residential neighborhoods. NW Connector agencies have conducted a few rider surveys, most recently in August 2015, which found 30 to 40 percent of riders used the service for recreation trips. This survey was taken during peak-tourism season, and annual recreation user-ridership is likely much lower. According to the survey respondents, the service does a good job of getting people relatively close to recreation sites, but there is a "last-mile" issue where users would have to walk along roads or use bikes to access their final destination.

Funding and tourist demand has historically been an issue, although both have grown over the past decade. Infrastructure is also a key issue, since many roads to recreation sites are damaged and hard on equipment, including several state, county, and park access routes that are in active landslide zones. NW Connector agencies would have to partner with land managers and ODOT in order to repair or improve this infrastructure before transit service could be expanded. Finally, marketing tourism opportunities on the NW Connector has been a challenge. Their website offers various recreation itineraries using transit, but there is a lean budget for outside marketing

Interviewees provided recommendations about how a transit service on the coast could adequately serve recreation sites if the following were provided:

- Real-time scheduling and dispatching
- Software that constantly assigns and reassigns trip requests
- Getting riders directly to their final destination point

Oregon's North Coast is spread across 1,000 square miles, and operating an efficient and affordable transit service will require a more dynamic approach.

DIAMOND EXPRESS

The Diamond Express runs from Eugene to Oakridge, a small city near the Cascades and home to abundant hiking and mountain biking opportunities. The planned Yachats Connector is a pilot project that will run from Florence to Yachats on the coast, closing the last gap of Highway 101 not currently served by transit.

The Diamond Express is currently not a huge tourist draw, and the majority of users are commuters using the service for work or school or to access health care. The route passes through county, state, and federal land with a number of recreation sites, including parks and trailheads, and seems to have much potential in expanding service to these. In addition, the City of Oakridge hopes to use the bus to draw in tourists as part of its tourism and economic development strategies. Recently, Lane Transit District (LTD) aligned the Diamond Express with Amtrak, so that visitors from Seattle and Portland can more easily access Oakridge by transit.

YACHATS CONNECTOR

The Yachats Connector is a partnership with Lincoln County, and LTD hopes to partner with tribes, local businesses, and ODOT to ensure the service's success beyond the pilot phase. The service would also need to rely on a payroll tax or grant funding in order to ensure sustainability. The route will pass by many recreation sites, but like the NW Connector, infrastructure is a major barrier to accessing these areas. The route runs along steep cliffs prone to landslides, and there are few places along the 25 mile stretch for a bus to safely pull out. Currently, LTD is not coordinating with land managers, but may in the future if the pilot is successful. If the service does extend to recreation sites, the process will be driven mainly by community members, rather than tourism interests, as the primary goal of the Yachats Connector is to serve local needs.

The LTD interviewee had unique insights on making transit accessible for seniors and differently-abled riders. Demand already exists from these populations to access recreation sites, and lack of transportation can often be the greatest barrier. Presently, some use the Diamond Express for recreation, but it was noted current or future stops at recreation sites often do not have ADA compliant infrastructure, such as accessible restrooms, outlets for charging wheelchairs, and accessible deboarding areas. It was recommended that the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and Public Rights-of-Way Accessibility Guidelines (PROWAG) guidebooks be consulted for ADA-compliant transit stop design at recreation sites.



TRANSIT PROVIDER INTERVIEW THEMES

INTERGOVERNMENTAL COORDINATION

Adequate rural transit service often crosses jurisdictional lines. This requires multiple transit agencies to coordinate to provide effective, seamless service. Intergovernmental Agreements (IGAs) have been used effectively to coordinate service with the Mt. Hood Express and NW Connector.

RELATIONSHIP BUILDING

Healthy IGAs are entirely dependent on interpersonal relationships. The people within the institutions, not institutions themselves, must have the initiative to form relationships, build trust, and maintain these over time. Coordination between transit providers and land managers has been limited, and these relationships will be crucial in strengthening transit access to recreation areas.

CREATIVE FUNDING SOLUTIONS

In order to be financially sustainable and keep fares low, especially for rural transit service, providers must find innovative sources of funding. FLAP funding and public-private partnerships are key examples. Providers may be able to pursue HB 2017 funding to provide transit access to recreation areas.

PUBLIC-PRIVATE PARTNERSHIPS

The Mt. Hood Express relies on a partnership with ski resorts on Mt. Hood, which match grant funding. Having a solid relationship with a desirable tourist destination on the route could boost rider interest.

INFRASTRUCTURE CHALLENGES

Not all recreation sites are equipped to handle heavier bus traffic, and site redesigns may be necessary at some. Transit providers cite narrow or poorly maintained access roads and pull-outs as an infrastructure barrier.

BALANCING NEEDS OF LOCALS AND TOURISTS

Some existing transit (Mt. Hood Express) began to provide commuter service for locals, while others (NW Connector) began as a tourist service that is heavily used by locals as they commute and run errands. Many services have the opportunity to serve rural transit needs while also offering recreation opportunities, and must balance the needs of locals and tourists alike. This includes keeping fares low as not to become a barrier for locals and low income residents, while also guaranteeing there is adequate seating during peak tourism.

FLEXIBLE TRANSIT SERVICE

Tourism in many parts of Oregon is seasonal, and in some areas transit service may need to expand during the high season and contract during the low season. New technologies to better respond in real-time with scheduling and dispatching, and flexibility of pick-up locations and destinations should also be considered.

NONPROFIT AND PRIVATE SECTOR FINDINGS

Interviews with staff from Discover your Forest and Timberline Lodge were conducted to understand their partnerships with existing transit services.

DISCOVER YOUR FOREST

Discover your Forest is a nonprofit partner of Deschutes and Ochoco National Forests. Their arrangement with the Forest Service is unique – the nonprofit is based on the “Friends” group model, and fundraises on behalf of the Forest Service as well as running interpretive services, including trail signage, conservation education programs, and sustainable recreation programs. These are areas the Forest Service generally struggles in, and the partnership has proved vital for Forest Service communication and outreach.

Recently, Discover Your Forest has partnered with Cascades East Transit (CET) to provide a shuttle service at the Lava Butte site in Newberry Volcano National Monument. Having a Discover Your Forest sign a contract with CET, rather than the Forest Service, helped to streamline and expedite the process. The relationship requires Discover Your Forest to cover the gap between operating costs and revenue, and any profits are split 50/50 by the nonprofit and CET.

The shuttle runs from the visitor center at the base of Lava Butte to the top of the butte, where cars are not allowed. Much of the success of the service is because there is a captive audience at the park unable to drive to the top, and therefore, relies on the service.

If this captive audience were not in place, the project would have been fiscally risky, and CET and the Forest Service would have been unlikely to support it. If visitors have the option to drive, they likely will not choose a bus service. Lava Butte was seen as “low-hanging fruit” for providing bus service. Currently, there is interest in providing service to Tumalo Falls, closing the parking area at the base of the falls, with a bus service operating from Skyliner Sno-Park, two miles away.

TIMBERLINE LODGE

Timberline Lodge is a historic hotel and ski resort on the slopes of Mt. Hood. To operate, Timberline Lodge contracts with the Mt. Hood National Forest. This partnership allows the Mt. Hood Express to extend service from Sandy to Timberline, and they donate \$45,000 a year to match Clackamas County’s grant funding to operate the service.

The shuttle has been successful in bringing skiers and other visitors to the resort. Many of the resort’s employees are dependent on the shuttle, and contributes to employee retention at Timberline and other Mt. Hood resorts. The service would like to expand to Mt. Hood Meadows and other recreation sites in the area. One long-term goal is to build a park-and-ride at Government Camp and eliminate visitor parking entirely at Timberline Lodge.

Timberline Lodge staff believe land managers should be leading the push for car-free access to sites, since congestion occurs on their lands. However, barriers exist because relationships between land managers and potential transit providers are limited or nonexistent.

NONPROFIT AND PRIVATE SECTOR INTERVIEW THEMES

CREATIVE PARTNERSHIPS

Nonprofit and private sector partnerships offer a unique model of partnerships, especially when one entity can strengthen another's weaknesses or gaps, similar to how Discover Your Forest helps the Forest Service with signage or educational programming etc.

RELATIONSHIP BUILDING

Timberline Lodge staff understand the importance of relationship building with land managers in order to solve congestion challenges, and that partnering will allow both parties to be more successful in their long-term goals.

BALANCING NEEDS OF LOCALS AND TOURISTS

The Mt. Hood Express is successful for both locals and tourists, however, as recreational sites become more popular, solutions to balance local needs and tourist needs will be necessary. For example, ensuring there are guarantee seats on buses for locals and tourists to take the last bus and riders are not stranded.



SITE VISITS

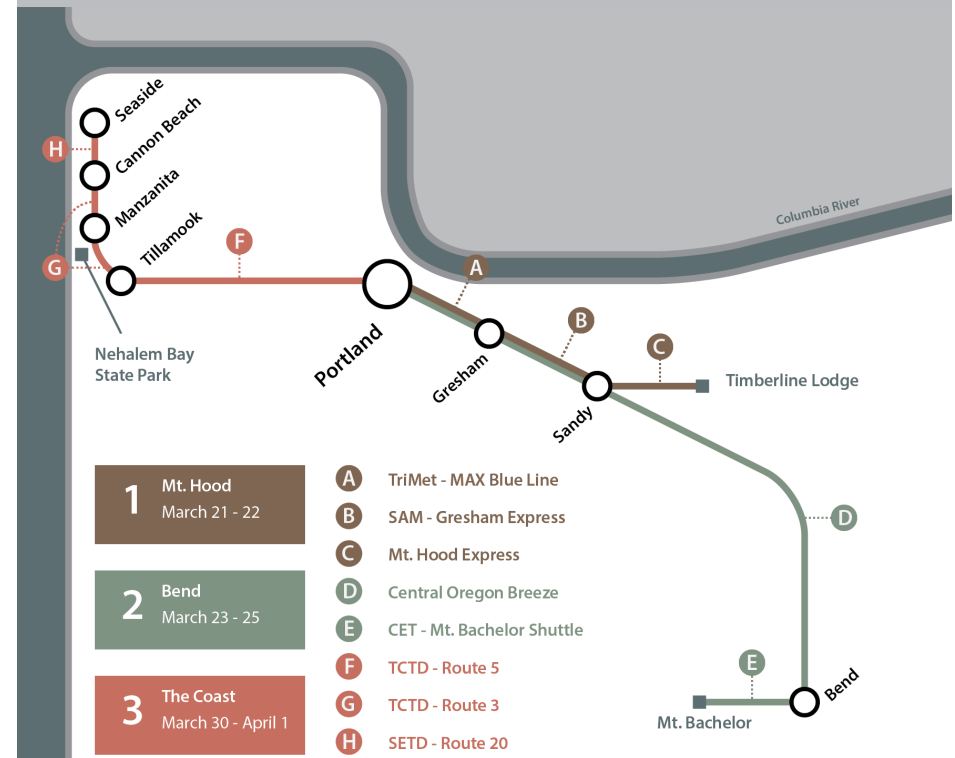
SITE VISIT RESEARCH

To supplement the existing conditions our team conducted qualitative research by riding some of the existing transit services to outdoor recreation sites. The purpose of the bus service research was to better understand the overall effectiveness of the service options to outdoor recreation sites, including ease of scheduling and transfers, trip length, on-board amenities, (e.g. restrooms, gear, luggage, bicycle racks etc) and overall comfort of the bus service. Additionally, we wanted to understand the passenger experience – who takes the service and why, and how the bus network provides access, or barriers, to outdoor recreation sites. Our findings helped us determine solutions in our toolkit.



SITE SELECTION

Though our client is ODOT, a statewide agency, our scope only covered a three-hour range outside of the Portland metropolitan region, which meant we had a multitude of sites spanning from the Oregon Coast to the Cascade Range. Within this area we selected sites in the Mt. Hood region, Central Oregon, and the North Oregon Coast to conduct analyses. We chose to visit Tamanawas Falls, Timberline Lodge, Mt. Bachelor, Kings Mountain, Nehalem Bay State Park, as well as nearby towns on the North Coast. Sites chosen were determined by the project scope, popularity, and variety that each site offered.



TRIP PLANNING

A key element of the ground truthing research was trip planning for each site visit. Planning for each trip required numerous sources of information and took anywhere from one to three hours to conduct research, data compilation, and information dissemination. Considerations for various degrees of comfort in, exposure to, and best practices knowledge of outdoor recreation were taken into account when providing information to team members. Custom travel guides for each of the three sites were created from transit websites, hiking websites, outdoor retail blogs, state parks websites, lodging websites, social media, skill-building blogs, and existing team knowledge (Appendix C). Final trip planning itineraries were developed for team members as well. (Appendix D).

Each site visit required different resources for planning due to location, geography, weather patterns during early spring, lodging, team needs, complexity of travel to sites, and available activities. Weather considerations, lodging accommodations, and transit options were the biggest factors when determining the itinerary for each trip. This was most prominent in the planning for the coast trip due to the nature of spring weather patterns, number of locations accessible by transit compared to other trips, and the decision to tent camp one night and sleep in a yurt the next. These factors contributed to this being the most challenging to plan, yet surprisingly, most flexible in reality.



TRIP PLANNING CONTINUED

Our team decided to use private vehicles for two of the trips due to logistical difficulties. The Tamanawas Falls trip required carpooling due to the lack of public transportation to the site. For the coast trip, two cars were used (driven by friends and family of our team) to transport tents, cooking gear, food, and sleeping gear. The decision to use a private vehicle was based on the sheer amount of gear required for eight people to camp, and the inability to store gear when conducting research and hiking at Kings Mountain and Wilson River trail. Additionally, our team transitioned from tent camping the first night (10 a.m. check-out) to yurt camping the second night (4 p.m. check-in) and had no place to store gear during the six-hour gap while visiting the coastal towns of Seaside and Cannon Beach. We sent our tent camping supplies back with the two cars returning to Portland, rather than attempt to carry the gear 1.2 miles on foot from our site in Nehalem Bay State Park to the town of Manzanita, and subsequent transfers via the NW Connector bus service.

The resources provided in this background document are by no means a comprehensive representation of what is available when planning a trip to Oregon's outdoor recreation sites. The specific websites used for trip planning were selected due to our familiarity with the website, and Google search returns of specific topics such as "bus to Oregon coast". Numerous other sites exist, providing a plethora of outdoor and trip planning information. Some sites, such as the Travel Oregon website, contain elements of destination selection, travel options, and things to do upon arrival.

"Planning for a trip, and adhering to the plan, rarely occurs when traveling. However, when traveling in nature, a well-crafted plan is highly recommended in order to remain safe and relatively comfortable if the unexpected occurs." - Oxbow

TRANSIT USED

Table 3 below lists the transit services used, with a comparison of cost, trip time, signage, number of transfers, and overall comfort level.

Table 3: Transit Services Used

Shuttle Service	Cost (Round Trip)	Trip Time	Wayfinding	Transfers	Overall Comfort
Sandy Area Metro / Mt. Hood Express	\$10	3 hours	No	2	Good
Central Oregon Breeze	\$96	4.5 hours	Yess and No	0	Fair
NW Connector	\$25	2 hours	Yes	1	Good

MAX Blue Line



Sandy Area Metro



Mt. Hood Express



Traveling by bus from Portland to Mt. Hood required two transfers, which added to the complexity and stress of this particular site visit. Additionally, at Gresham, the Sandy Area Metro lacked clear wayfinding of where to board. The \$1 fare to ride the Sandy Area Metro is affordable, and made the shortcomings worth it. In comparison, the Mt. Hood Express shuttle can be boarded in downtown Sandy at a newly constructed transit transfer center. This meant the amenities were better suited for travelers, and included essentials such as ample wayfinding, restrooms, and outlets. The transfer wait time was thirty minutes, which could be considered a burden to those traveling on a tight schedule, but it also provides an opportunity to explore the nearby shops and cafes, thereby bolstering the local economy.

Central OR Breeze



Cascade East



Mt. Bachelor Shuttle



The Central Oregon Breeze is a direct-service bus from Portland to Bend. The bus can be boarded at multiple stops in and near Portland. Our team boarded the bus at Portland Union Station, but it also made a stop at Portland International Airport, Cleveland Metropolitan Area Express (MAX) station, and the Gresham Transit Center before heading out of town. The various stops slow down the overall trip time, but allow for more types of riders (locals, visitors flying in to Oregon, and those living outside Portland proper). On the 4.5 hour ride to Bend, it stopped in various smaller cities to pick up and drop off passengers.

The multiple departure times were useful. There was a departure at 1 p.m. and 6 p.m. on a Friday from Portland Union Station. Having the option for a later bus made for a nice weekend getaway since it is less disruptive to a 5 p.m. work schedule, and meant the arrival time in Bend was not too late. Restrooms were not available on either style bus, so various stops were made about every 1.5 to 2 hours. Given we were traveling during early spring, taking the later bus meant the majority of the ride was in the dark, and there were no overhead lighting or outlets.

Once in Bend, our team used Cascades East Transit (CET) to get to Mt. Bachelor. The shuttle departed from a park-and-ride, which was a 15 minute walk from our lodgings in downtown Bend. This may not be ideal with heavy packs or gear, but our team was able to manage well with light snowshoes. The trip was a quick 30 minutes and cost \$10 round trip.

Tillamook County Transit



Sunset Empire Transit

The Northwest Connector is comprised of five county operated transit services: Tillamook County Transportation District, Columbia County Rider, Lincoln County Transit, Benton County Transportation, and Sunset Empire Transportation District. These transit providers offer service to numerous towns and destinations throughout Northwestern Oregon and along the North Coast. They provide relatively frequent service for rural transit service as well, mostly hourly depending on the time of day/week.

We boarded Tillamook County Transit (The Wave) at Portland Union Station, where we rode the service for a little over an hour to Kings Mountain/Wilson River Trailhead in the Coast Range. After hiking for about four hours, we caught one of the last buses the rest of the way to Tillamook. We made a transfer at the town's small transit center, where we took another Tillamook County line north to Manzanita, which was near our campsite where we stayed for the weekend. The following day we caught the same Tillamook line proceeding north to Cannon Beach, where we transferred to the Sunset Empire transit line that took us further north to Seaside. We used the same lines to make our way back to Manzanita that night, and back to Portland the following day.



DATA COLLECTION

While traveling to and spending time at the sites, we collected data through onboard passenger surveys, intercept surveys, and storytelling interviews (Appendix E, F, G).

ONBOARD PASSENGER SURVEY

The passenger survey was a means to collect data on why people are traveling by bus, where they are from, and final destination. We also asked why they chose the service to gauge understanding and interest in current or future service to outdoor recreation sites. The passenger survey was conducted on each of the following transit services:

CENTRAL OREGON BREEZE: Portland to Bend (March 23rd, 2018) and Bend to Portland (March 25th, 2018)

CASCADES EAST TRANSIT: Bend to Mt. Bachelor and back (March 24th, 2018)

NW CONNECTOR: Portland to Tillamook (March 31st, 2018) and Manzanita to Seaside (April 1st, 2018)

WEBSITE BLOG POSTS

Our site visit experience included a qualitative research to add real-world insights. We compiled our thoughts, experiences, and photos into blog posts, which were posted on our website after each site visit. These site visit experiences added a sense of real-world grounding to better inform our toolkit solutions.

INTERCEPT SURVEY

The intercept survey was conducted to visitors at recreation site trailheads and access points, as well as visitors in common spaces, such as Timberline and Mt. Bachelor ski-lodges. The survey was similar to the passenger survey, but also asked what mode of transportation visitors used to get to the outdoor site, how often they visited the site, and what factors would encourage public transportation use to recreation areas. The intercept survey was conducted at each of the following locations:

TAMANAWAS FALLS: Mt. Hood National Forest on March 18th, 2018

TIMBERLINE LODGE: Mt. Hood National Forest on March 21st, 2018

MT. BACHELOR: Deschutes National Forest on March 24th, 2018

KINGS MOUNTAIN AND WILSON RIVER TRAIL: Tillamook State Forest on March 31st, 2018

STORYTELLING: HUMANS OF CASCADIA

Our site visit research also included a storytelling component to add depth and richness to the quantitative data collection methods. The project included interviewing individuals to understand why they visit the outdoors, a memorable outdoor experience(s), and to capture advice they would give to individuals who have never visited outdoor recreation sites. The interview responses and a photo were posted to social media, with consent.

ONBOARD PASSENGER SURVEY FINDINGS

Onboard passenger surveys were conducted on three of the public transit services used by our team to travel to outdoor recreation destinations. The purpose of this survey was to determine why passengers were using the service, how they learned about the service, and satisfaction level. In total, 36 surveys were completed between March 23rd, 2018 and April 1st, 2018 (Figure 2). Demographic breakdowns of respondents by gender, race, household status, and income, as well as a copy of the survey can be found in Appendix H.

REASON FOR TRAVEL, DESTINATION, AND INTEREST IN TRANSIT

The most popular reason for travel on the selected service for all respondents was recreation/travel (53%) followed by work/school (22%). The most popular answer for final destination on CET one-way trip was Mt. Bachelor (28%). Overall, 50% of all respondents noted they had used transit at some time in the past to access outdoor recreation destinations. When asked if they were interested in using public transportation to access other Oregon outdoor recreation destinations than what had been used previously, 92% noted they were somewhat or very interested (Figure 3).

These findings will be useful for transit and land managers working in or near outdoor recreation areas not currently served by public transportation.

Figure 2: Passenger Survey Responses by Service

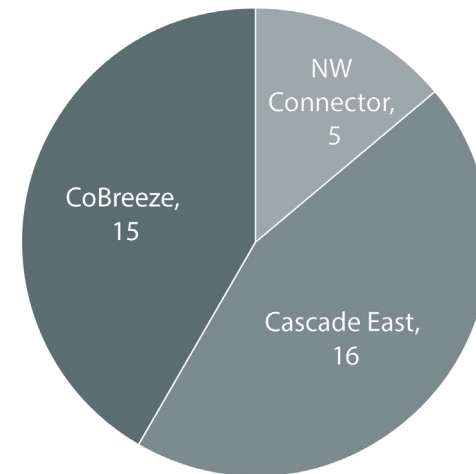
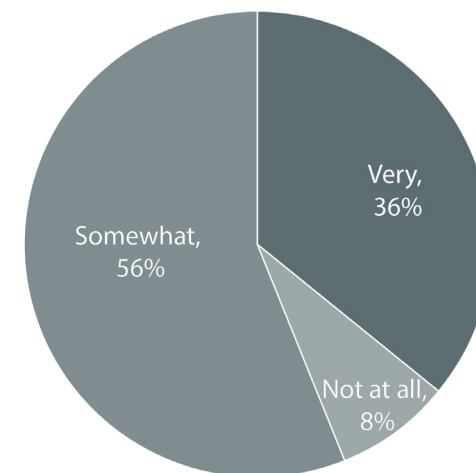


Figure 3: Interest In Using Public Transportation to Access Other Outdoor Recreation Destinations in Oregon



MARKETING AND MODE CHOICE

When asked how travelers heard about the service, friends/family/work or word of mouth was the top response at 75%, while 19% learned of the service through a formal advertisement, website, or Google. Many respondents cited numerous reasons, which were identified and grouped into four categories: convenience - 41%, cost - 38%, no other option - 26.5%, safety - 9%, the people you meet - 6%.

These behavioral barriers are important considerations to weigh when developing marketing strategies for solutions to encourage increased use of transit to recreation sites.

RATE OF SERVICE

Overall, the service quality was rated highly by respondents on three characteristics: overall satisfaction, convenience of service, and comfort level using service. When asked if respondents would consider using the service again 100%, or all 36, said yes.

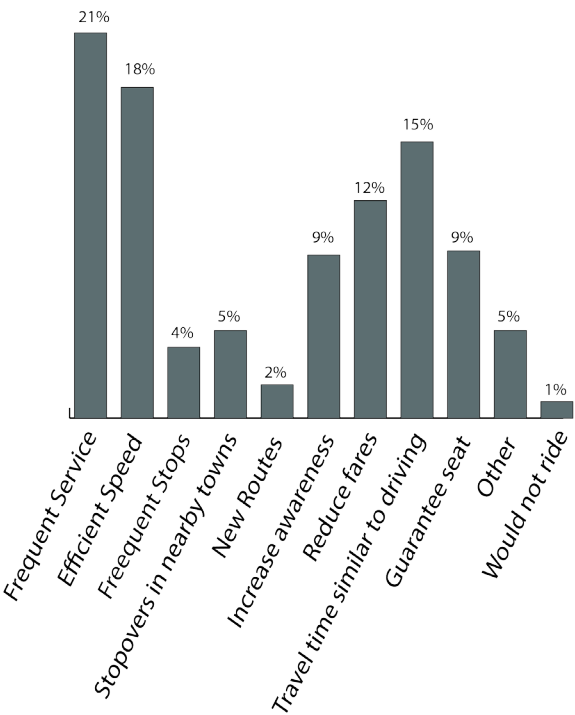
Nineteen responses were provided on what the service could do to improve the overall user experience. Recommendations were grouped into four broad categories with suggestions. Frequency was the most common category (table 4).

Table 4: Respondents Top Suggestions to Improve Overall Experience

Category	Specific Recommendation	% of Total
Amenities	Bathrooms, bigger bus, more seats, wifi, gear storage, ski-racks	21%
Cost	Lower or free	16%
Frequency	Regularity, more peak time, speed, more stops	47%
Tech Upgrades	Punch card or mobile purchase, lead times, status	16%

This correlates with intercept survey respondents who also listed frequency as being the top recommendation to encourage bus service use (Figure 4). Better amenities was the second most common category. This recommendation noted by respondents was also an area our team believes could be improved

Figure 4: What Would Encourage You to Take Public Transportation to Recreation Areas?



These findings can be used by existing service providers interested in mitigating quality of service deficiencies, which will help maintain the current rider base while attracting and planning for new riders.

In closing, current riders show strong interest in using transit to access Oregon's outdoor recreation destinations. Overall, respondents rated the service well, though opportunities to increase satisfaction and attract new riders exist. Many riders were taking service primarily to access specific outdoor recreation destinations. Among all riders, half had used the service in the past, and almost all stated they would like to access additional areas.

Understanding why current riders use service should help inform strategies to retain the current rider base and attract a larger rider base as population and tourism grows across the state. As funding is typically a constraint for all transit providers, and especially smaller services, looking to new funding streams, such as HB2017, is highly recommended for investments or upgrades. Constituents and visitors alike access Oregon's outdoor recreation destinations via transit and every effort to support these types of service is recommended.

PASSENGER SURVEY THEMES

92% of respondents were somewhat or very interested in using transit to access Oregon's outdoor recreation destinations.

53% of respondents said the reason they were using the service that day was for recreation/travel.

50% of respondents noted they had used the service at some time in the past to access outdoor recreation destinations.

75% of respondents learned about the service through word of mouth; while only 19% attributed formal advertising with knowledge of the service.

TOP REASONS FOR USING THE SERVICE WERE

Convenience (41%); Cost (38%); No other option (26.5%); Safety (9%) and; The people you meet (6%).

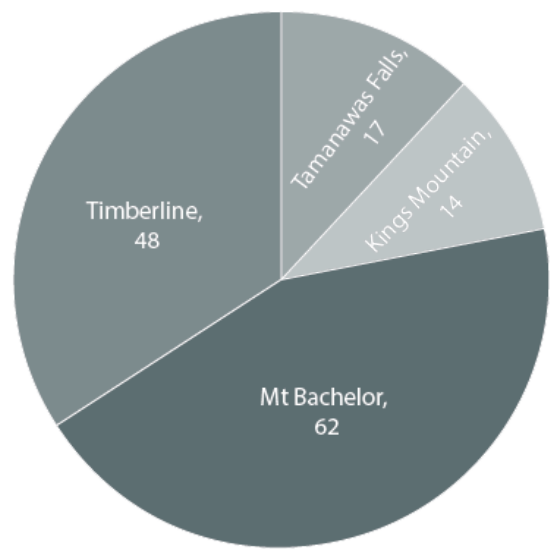
Overall, the NW Connector, Mt. Hood Express, and Central Oregon Breeze received high marks by respondents for satisfaction, convenience, and comfort level. 100% of respondents would use the service again.

Areas for improvement fell in four distinct categories, including amenities, cost, frequency and tech upgrades (table 4) .

INTERCEPT SURVEY FINDINGS

Intercepts surveys were conducted at four different trailheads as a means to connect with active users of the outdoors. Team members set-up at each trailhead and asked visitors to complete a short survey of 18 questions (Appendix F). In total, 141 surveys were completed by respondents at the four site locations (Figure 5). Demographic breakdowns of respondents by gender, race, household status, and income can be found in Appendix I. In addition to demographic questions, respondents were asked specific questions to determine transportation mode to the location, party number, number of visits to outdoor recreation destinations during the past two years by season, familiarity with transit to outdoor recreation destinations, interest in using transit to access outdoor recreation destinations, and what would encourage increased use.

Figure 5: Intercept Survey Respondents by Site Location



MODE OF TRAVEL

Taken together, these answers represent an opportunity to better market existing public transportation services to visitors and increase access to locations where tourists can support local economies.

Question three of the survey asked respondents to mark all modes of transportation utilized to arrive at their recreation trailhead. Of the 129 responses, arrival by car was the predominant mode, with 70 percent selecting this option. Only 7 respondents indicated they had arrived by bus and each of these were recorded at Mt. Bachelor. This represented 11% of the total for the Mt. Bachelor location and only 5.4% of the total data set.

Timberline lodge represented the highest number of respondents arriving by plane with 14, or 29% checking this option. Each of these respondents noted they were visiting from another state or country, and 11 of those noted the use of an additional mode of transportation to arrive at Timberline Lodge. Each of these 11 respondents stated they arrived either by car, car rental, or rideshare/taxi, and only one respondent listed a zipcode from the state of Washington (feasible driving distance for a day trip and thus more likely to drive)



No visitors noted they were very familiar with public transportation options to Oregon’s outdoor recreation destinations, yet all marked they were somewhat or very interested in utilizing these options (Figure 6 and 7). One visitor from Hong Kong noted they had heard of the Sea to Summit and Central Oregon Breeze, but not the Mt. Hood Express. This respondent also noted that connection to Amtrak, outlet malls, and other outdoor destinations were things that would encourage use of public transit as an international visitor to the state.



Figure 6: Familiarity of Public Transportation Options to Access Outdoor Recreation Destinations by Visitors to Oregon at Timberline Lodge

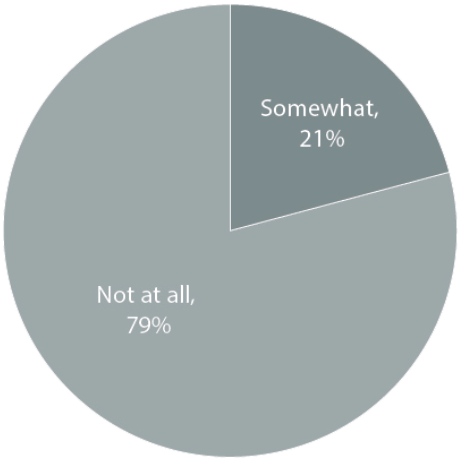
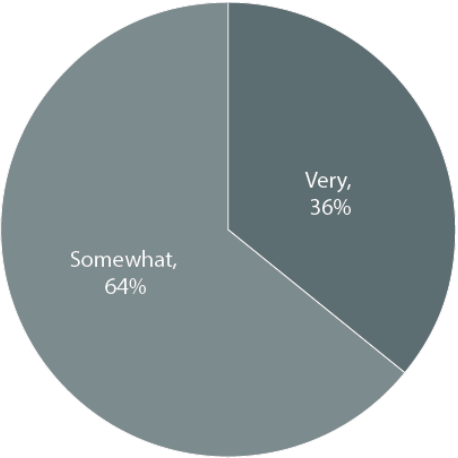


Figure 7: Interest in Using Public Transportation Options to Access Outdoor Recreation Destinations by Visitors to Oregon at Timberline Lodge



TRAVEL PARTY SIZE

Overall, the average group size was 3.5 people for all locations with most respondents traveling with family or friends (Figure 8).

When asked whether respondents were familiar with public transportation options to Oregon's outdoor recreation destinations, 54% selected not at all. When asked what options respondents had heard of, the most popular answer was shuttle or some variation. Over 60% of respondents noted they were somewhat or very interested in accessing the outdoors via public transportation (Figure 9).

When asked to mark all answers that would encourage respondents to use public transportation to access outdoor recreation areas in the future, the top three answers were:

- Frequent service (multiple departures/pickup times)
- Efficient speed (few transfers/stops) and
- Travel time similar to driving (Figure 10)

In conclusion, a desire to utilize public transportation options to access Oregon's outdoor recreation destinations is expressed by both residents and visitors alike. However, many do not know about public transportation options that currently exist. Efforts to improve public awareness about these options is recommended as an initial strategy. Once the public is more aware of the public transportation option, strategies to increase service and speed of travel should be studied.

Despite the findings, we understand we had a few limitations to our data collection. Our project had a five-month timeframe, which meant the number of sites and length of our stay at each were limited by time and resources.

Figure 8: With Whom Are You Traveling Today?

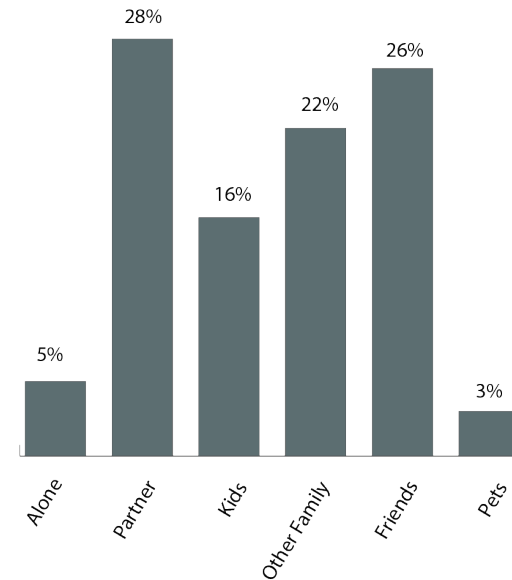
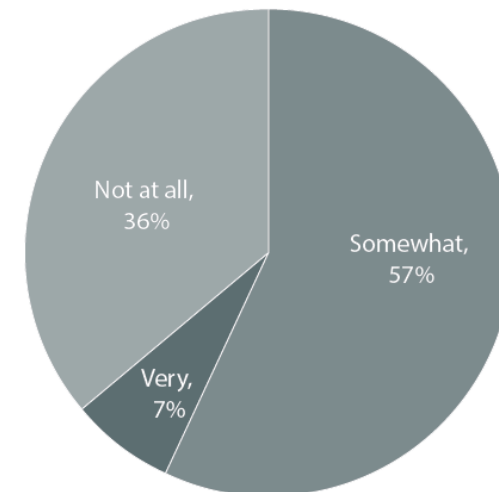


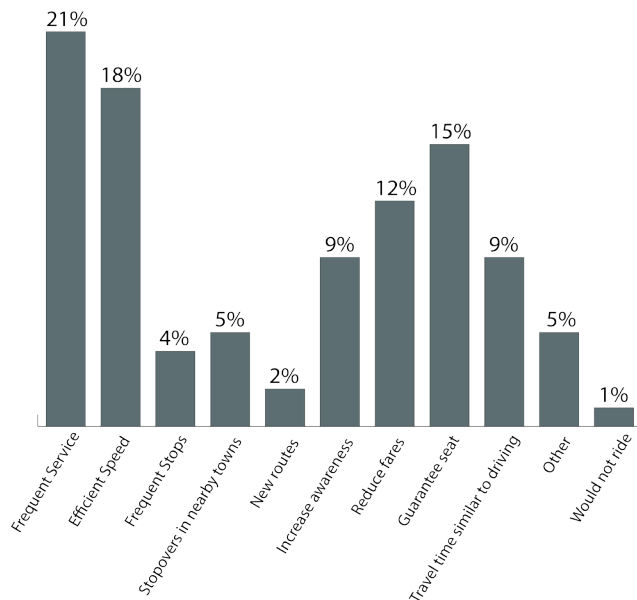
Figure 9: Survey Respondents Interest in Using Public Transportation Options to Access Outdoor Recreation Destinations



Though we chose sites across a wide geographic range, the timing of the research happened during the off-season. There are many winter sport enthusiasts in Oregon, but ideally, summer is prime time for visitations to outdoor recreation sites.

Additionally, we understand the limitations in surveying current users of outdoor recreation sites, which are predominantly visited by white, male, middle-to-higher-income individuals. This means our site visit findings only captured active users, not future users. We addressed the lack of representation in our survey data by holding an Access For All focus group to identify barriers people of color experience when accessing and enjoying the outdoors. The focus group findings will help inform solutions to change current demographics of those recreating in the outdoors.

Figure 10: What Would Encourage You to Take Public Transportation to Recreation Areas?



INTERCEPT SURVEY THEMES

98% of respondents said they either didn't know at all or only somewhat knew about transit options to Oregon's outdoor recreation destinations.

64% of respondents were somewhat or very interested in using transit to access Oregon's outdoor recreation destinations.

79% of respondents who were visiting Timberline Lodge from another state or country were not familiar with transit options to the lodge. However, **100%** were somewhat or very interested in using transit options to access Oregon's outdoor recreation destinations

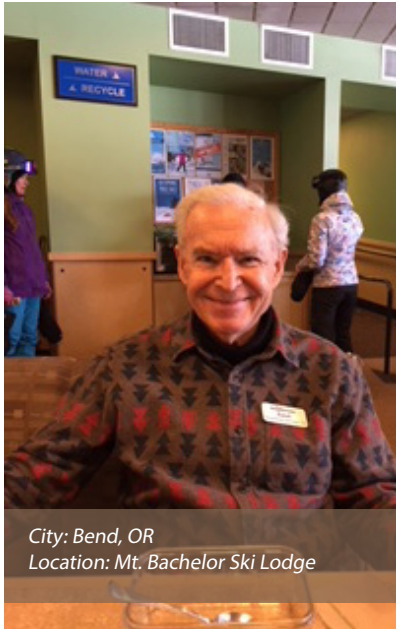
92% of respondents were visiting with another person and an additional 3% with their pets

When asked, "What would most encourage you to take transit to Oregon's outdoor recreation destinations?" the top four answers were: frequent service (21%); efficient speed (18%); travel time similar to driving (15%); and reduced fares (12%)

"I would really be interested in taking in some form of public transportation to recreation areas, I just don't have an awareness of any of those platforms. Better education and awareness building about ways to travel to those areas would be very helpful."

-Survey Respondent

HUMANS OF CASCADIA



City: Bend, OR
Location: Mt. Bachelor Ski Lodge

Most memorable time in Oregon's outdoors? "Kayaking on the Deschutes River."

In one sentence what advice would you give someone who's never been hiking in Oregon? "Be prepared, and enjoy."

If you could capture being outdoors in one word, what would it be? "Breathtaking."

Why do you keep coming back? "The outdoors gives me a sense of energy."



City: Bend, OR
Location: Mt. Bachelor Ski Lodge

Most memorable time in Oregon's outdoors? "Backpacking trips to the Mt. Jefferson Wilderness. Being in total solitude on a high altitude lake."

In one sentence what advice would you give someone who's never been hiking in Oregon? "You will find something you didn't know you were missing."

If you could capture being outdoors in one word, what would it be? "Thrilling."



Service: Central Oregon Breeze Shuttle
Destination: Bend, OR

Most memorable time in Oregon's outdoors? "Going up the west side of the Three Sisters. That's probably the most bomb-ass place."

In one sentence what advice would you give someone who's never been hiking in Oregon? "Make sure you're wearing a good pair of shoes. Be prepared for a sudden change in weather."

If you could capture being outdoors in one word, what would it be? "Clean."



Service: Mt. Hood Express
Destination: Timberline Lodge

Most beautiful place visited? "Wamic - a small, isolated town on the eastern slope of Mt. Hood."

In one sentence what advice would you give someone who's never been hiking in Oregon? "Stop being a hermit and have some fun."

If you could capture being outdoors in one word, what would it be? "Life. I don't know how people can live life indoors."



Service: NW Connector
Destination: Cape Lookout State Park

Most memorable time in Oregon's outdoors? "Taking a solo backpacking trip to Mt. Hood. It was my first solo hike. I took the shuttle and saw lots of animals and almost no people."

In one sentence what advice would you give someone who's never been hiking in Oregon? "Stay on the trails at first, until you learn to use a map and compass."

If you could capture being outdoors in one word, what would it be? "Invigorating."

HUMANS OF CASCADIA THEMES

DISCOVERY

People are looking for a sense of adventure, wonder, or new experiences.

SOLITUDE

People go to nature to getaway, be alone, and to recharge.

PREPAREDNESS

It is important to plan ahead and be prepared for unpredictable weather.

BLOG POST REFLECTIONS

TAMANAWAS FALLS

Author: John Whitman

March 28, 2018

On Sunday, March 18, the Oxbow Consulting team conducted our first site visit to Tamanawas Falls. The 100 ft. waterfall is located on the northeastern slope of Mt. Hood, on a tributary that feeds into a deep gorge on the East Fork of the Hood River. A moderate 3.6 mile round trip hike leads from the parking area off Highway 35 through dense forest, a large boulder field, and then to a viewpoint of the stunning falls. In the summer, hikers can scramble up rocks beside the waterfall and enter the amphitheater behind it. In late-winter, hikers and snowshoers are met with beautiful ice formations created by the waterfall's spray hitting freezing air.

Tamanawas Falls is a popular hike during all seasons, and it is not uncommon for the parking area and nearby road pullouts to be completely full of cars on weekends and holidays. While the trailhead is not currently served by public transit or shuttle, it would be a convenient stop on any bus line between Hood River and Government Camp. The day we visited was unexpectedly calm, with space available in the parking lot and relatively few visitors on the trail, and yet we had many enthusiastic survey respondents and enjoyed chatting with the many different types of trail users. It was a joy to have experienced yet another of Oregon's wonders with our team, a few of whom have never hiked in Oregon, and we're eagerly anticipating our trips to Timberline Lodge, Bend, and the North Coast.



TIMBERLINE LODGE

Author: John Whitman

April 12, 2018

Up until now, I had wrongly believed that the only way to get up to Mt. Hood was either by personal automobile, rental car, or a particularly arduous bike ride. I am therefore pleased to report that the under-marketed Mt. Hood Express offers six scheduled buses, seven days a week from Sandy to Government Camp, Skibowl, and Timberline Lodge. Though the trip requires two transfers, and takes an hour longer than traveling by car, the clean buses, affordable service, and gorgeous scenery ultimately make the ride worthwhile. When Timberline Lodge offered us rooms so that we could spend the night and conduct research, we saw it as the perfect opportunity to test this service.

After an early morning MAX ride from my home, I met Tony and Matt and sought out coffee and restrooms as we waited 20 minutes for our transfer, the Sandy Area Metro (SAM). These proved difficult to find, made more stressful by the fact that we were carrying heavy backpacks, snowshoes, and poles. The bus stop itself was also hidden among various TriMet stops, and if we had been transferring on a tighter schedule, this would have been cause for panic. A one dollar, the 30-minute bus ride took us to downtown Sandy, where we would catch the Mt. Hood Express. The plaza outside the museum is a very well-designed public space, with covered areas, clean restrooms, outlets for charging phones, as well as great public art, including a sculpture of salmon spawning and a mural depicting the historic Barlow Trail. A thirty minute transfer here gave us some time to wander over to regionally-famous Joe's Donuts, where we ate breakfast burritos and old-fashioned donuts. All of us

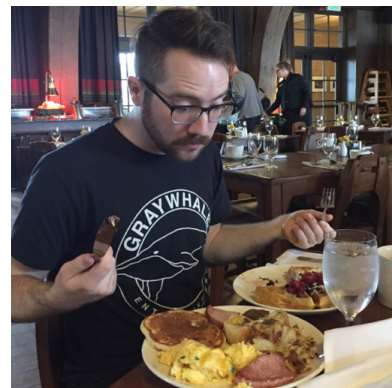
agreed we could have spent another half-hour wandering around Sandy, and that the Mt. Hood Express could be a driver of economic activity in the town. When I visited two years ago, the downtown still had several boarded-up houses and foreclosed homes, and it seemed that the town had never recovered from the recession. Now, the town is home to a food cart pod, new restaurants, and other attractions that appeal to tourists.

Clackamas County and a number of private partners, including Timberline Lodge, began operating the service in 2005 when they noticed that youth were routinely hitchhiking along the Mt. Hood Corridor to get from school to work. A few commuters we met said that if bus service didn't exist, there would be days in the week that they would have to hitchhike up Mt. Hood. We boarded the Mt. Hood Express and began our one hour journey up to Timberline.

Timberline Lodge is renowned for its woodwork, masonry, ironwork, and textiles. Built during the Great Depression as a WPA project, Timberline Lodge is renowned for its woodwork, masonry, ironwork, and textiles. Local artisans drew inspiration from the natural world, Native American art, and pioneer craftsmanship, and relied heavily on recycled materials, such as cedar utility poles, iron train tracks, and discarded WPA blankets. The Lodge's centerpiece is a 92-foot cylindrical stone fireplace, with custom-built furniture surrounding its six sides. After a snowshoe hike 1000-feet up the mountain to Silcox Hut, we spent hours reading by this fireplace and watching the snowfall outside. We began our ascent up the mountain, and snow began to fall.

As a coastal Californian, driving in snow makes me anxious, but on the bus, I was able to relax and trust that the driver would get us to Timberline safely. Instead of focusing on the road ahead, I got to stare out the window as we passed waterfalls and climbed towards sweeping views of Trillium Lake and the surrounding mountains. We woke up the next morning, took a quick soak in the hot tub, and had time to enjoy Timberline's legendary breakfast buffet before catching our 11am bus. Over breakfast, we excitedly discussed using the Mt. Hood Express in the summer to launch a week-long backpacking trip along the Timberline Trail, which circumnavigates Mt. Hood.

In its current state it would be pretty difficult, but not impossible, to use the Mt. Hood Express for day trips from Portland to the mountain. But for residents or tourists staying the night, either at Timberline or in Government Camp, transit is by far the most affordable option for accessing the mountain, and perhaps the most stress-free option. Cheers to more fun-filled outdoor adventures! (And lots and lots of good food!)



GETTING TO BEND WITHOUT A CAR IS A BREEZE

Author: Kara Boden

April 22, 2018

For our third site visit, our team traveled to Bend, OR. After six years in Portland, I finally got a chance to experience this popular destination. As someone who is car-free in Portland, frequently visiting outdoor recreation sites has been a challenge, unless I go with friends who own a car or pay for a rental. In my six years in Portland, I've met many who bike or take transit during the week yet have a car for weekend outdoor trips. Discovering the direct bus route from Portland to Bend reassured me that living a car-free lifestyle in the city doesn't mean I have to give up enjoying the outdoors.

For our weekend getaway, our team took the Central Oregon Breeze bus, which is a 4.5-hour direct ride (no transfers) to Bend, Oregon. It also stops in smaller cities such as Welches, Madras, and Redmond, to name a few.

The bus can be boarded at multiple stops in and near Portland. We took the bus on a Friday. Half our team took the earlier 1 p.m. bus, and half took the 5 p.m. Having the option for a later bus made for a convenient weekend getaway since it was less disruptive for a 5 p.m. work schedule, and also meant the arrival time in Bend would not be too late. We boarded the bus at Portland Union Station, but it also makes a stop at Portland International Airport, and Gresham's Cleveland Avenue MAX station before heading out of town. The various stops allow for a variety of users (locals, visitors flying in to PDX Airport, and those living outside Portland city limits).

However, any chance you can get to spend time in Portland's beautiful Union Station, do it! Support Amtrak and pick up a cheesy postcard from the gift shop! I was impressed and delighted to see a long-distance bus service in operation, especially given the schedule times and the number of stops it makes along the way. But part of our research is to assess our real-world experiences in order to make recommendations for improvements.

Though the Central Oregon Breeze operates both a coach-style bus and smaller shuttle, not every trip is guaranteed the coach, presumably determined by demand, as the later bus had less people and used the smaller shuttle. Restrooms are not available on either style bus, so various stops were made about every 1.5 to 2 hours. Taking the later bus is good if you want to sleep, but those who don't are left in the dark after sunset because of a lack of overhead lights for reading. During the summer, this wouldn't be as much of a problem, but being early spring, the sun set around 7 p.m. Not such a big deal with today's digital gadgets, but sadly, outlets were also not provided. Though disappointing, the ability to sit back and relax and not stress about driving was well worth the few drawbacks.

Right on schedule we arrived safe and sound in Bend and were dropped off at a Burger King parking lot on the outskirts of downtown. This spot was about 2.8 miles from our Airbnb house in downtown Bend, so we used ride share to travel the last few miles. Bend has a local bus service, but we were unfamiliar, tired, and it was getting late. With a little more planning and lighter packing, the local bus may be an option. We view this last-mile trip barrier as an opportunity to tweak the route planning in order to suit a more diverse set of users.

A stop in downtown Bend, which would make it easier to walk, take bike share, or use the local buses, and a stop at the Mt. Bachelor park-and-ride during the day would be ideal. Bend may have the opposite problem that many other towns have, as it is easy to leave town and access astounding natural beauty, but it is more difficult for car-free tourists to get around town.

We arrived at the house, ate dinner, played a few rounds of Cards Against Humanity, fought over the beds (just kidding), slept, and woke up to sunshine and clear blue skies! Despite the colder temperatures, the sun and dry air were a much-needed respite from soggy Portland. Our Airbnb was a quick two-minute walk to a grocery store, and a few cafes, making the location convenient.

Saturday, we prepped for our visit to Mt. Bachelor, for a fun-filled day of surveying. We used Cascades East Transit to get there. The Cascade East Transit shuttle stopped at a park-and-ride, which was about a 15-minute walk from our lodging. This may not be ideal with heavy packs or gear, but we were able to manage well with backpacks and light snowshoes. The shuttle trip was quick and inexpensive – about 30 minutes and cost \$10 round trip.

After some time in the lodge conducting intercept surveys, we took a break to go snowshoeing. As Portland State University students, we were able to rent our snowshoes for \$9 for one week, which meant we towed them with us. That said, one could easily rent directly from the lodge, and not worry about towing gear, though it would be more expensive.

After a few hours at the mountain we called it a day. Finding the shuttle back to Bend wasn't too hard, as there was a group of people waiting. The bus back to Bend was a late afternoon trip and almost every seat was taken. Once back at the house we relaxed, then walked downtown to spend the evening eating delicious Latin American food at Barrio and enjoyed what Bend had to offer.

On Sunday we sadly left for Portland, and caught the 11 a.m. bus, which was great because it wasn't too early and we arrived in Portland by about 3:30 p.m. All in all it was a great trip, and the Central Oregon Breeze to Bend means another beautiful destination is simply a bus ride away!



NORTH BY NORTHWEST CONNECTOR

Author: Kara Boden

Mary 27, 2018

One of Oregon's most beautiful wonders is the rocky coastline, which is why our final site visit found us researching car-free access in this region of the state. A popular destination in the summertime, traveling by private vehicle means congestion becomes a consistent challenge during the warmer weather.

The NW Connector bus service was created to help ease the tourist vehicle congestion. The service is structured under an intergovernmental agreement, spanning five counties along Oregon's North Coast region, and was funded through a Department of Energy grant and Oregon Department of Transportation 5311 Formula grant for rural areas. A 3-day pass costs \$25; a 7-day pass is \$30 both with unlimited boarding. Quite a steal! The NW Connector runs up and down Oregon's North Coast region, stopping at multiple coastal towns and beaches. We took the service from Portland to Tillamook, where we made a transfer to another bus to Manzanita for a two-night stay at Nehalem Bay State Park.

Our team boarded the NW Connector bus at Portland's Union Station. Our pick-up spot was easy to find, with a sign showing their logo. Speaking of marketing, NW Connector secured a grant through ODOT to update their website with the help of Trillium Solutions. The website is well-designed and easy to navigate, with user-friendly route and schedule information, and makes taking the bus a fun and delightful adventure.

Once our team boarded at Union Station, the first things we noticed were the comfortable seating and how the monitor listed stops in English and Spanish. The total trip was about two hours, and it made one restroom stop at a local ballpark in North Plains.

For this trip we decided to do a stopover to go hiking at Kings Mountain in the Tillamook State Forest. We had a great time hiking and exploring in the outdoors! During this stopover, we learned a few takeaways about the bus service. This is a "flag-stop" service, which means when we were ready to leave, we had to stand on the side of the road to be visible to the bus operator. Not a horrible concept, except it's a high-speed road, with a bend, which made it harder for the bus operator to see us. Adding to our stress was the fact that this was the last bus of the day and we had no cellphone service.

Thankfully, all went well! We caught the last bus and made a transfer at the Tillamook Transfer Center. The new transit center has inviting facilities. The restrooms are modern and clean, the station includes ample signage for transfers, pamphlets on transit routes and tourist hotspots, benches, and the opportunity to wait inside if the weather is bad. If you have time, you can also walk around downtown to visit nearby cafes, shops and restaurants.

Once we arrived in Manzanita it was about a one mile walk from Manzanita to Nehalem Bay State Park. Half our team walked along the beach, and the other half hitched a ride with friends. Since we were camping with such a large group, we met friends at the bus stop who transported our gear, such as tents, food, water and camping stove.

Though we broke our “rules” of going car-free to the outdoors, using a car is not necessary for this trip – we simply had a large group and were trying to stay within our food budget. Walking from the bus stop is doable if you pack light and decide to eat out instead of cook on the campfire. That said, we see this last-mile barrier as an opportunity for NW Connector to tweak the route in order to drop people off at the entrance of Nehalem Bay State Park.

Once we arrived at the campsite we set up our tents, cooked bratwursts on the fire, and headed to bed. The next morning, we woke up to rain, so we quickly packed up our tents, cooked breakfast, and re-assessed our plans for the day.

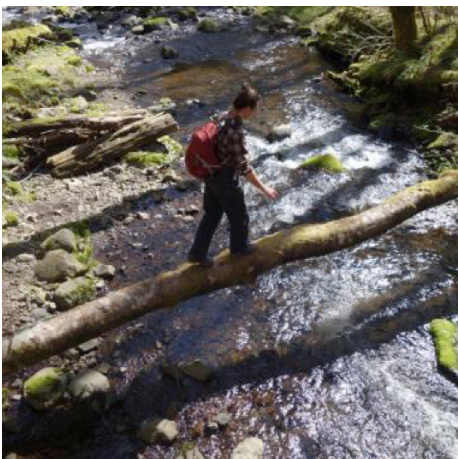
We were going to take the bus to Fort Stevens State Park and Shipwreck Beach, but since the adventure would have required a lot of time outdoors, we decided to instead go to Seaside and Cannon Beach. Once at Cannon Beach, we wandered in a few shops and then lingered at one to have coffee, pastries, and play a game of Chinese checkers. We had lunch at Tom’s Fish ‘n Chips, because you can’t go to the Oregon coast without a delicious meal of fish ‘n chips!

After a long day exploring the beautiful coastal towns, we headed back to camp. The second night at Nehalem Bay State Park we stayed in a yurt. After sleeping in tents on the ground in the cold and rain, this felt like luxury accommodations! They came equipped with beds, a heater, outlets, lights, a mirror and a table. I would definitely stay in these again, especially during the early and late seasons when the weather is less predictable and colder.

Sadly, the next day we had to pack up our belongings to head home. We walked along the beach back to Manzanita and caught the bus to Tillamook. During our transfer in Tillamook, we had time to kill, so we ate at a local restaurant called La Mexicana before boarding our bus back to Portland.

Until next time, Oregon coast!





SITE VISIT THEMES

VIABLE TRANSIT SERVICE

SEAMLESS SERVICE

On both the NW Connector and the Mt. Hood Express, service appeared seamless even when crossing from one jurisdiction to another. This demonstrates the strength of the IGAs between the government agencies working to provide these services. Wait times were short during transfers, and it was convenient on the NW Connector to have a fare that transferred from one service to the next.

RIDERSHIP

During our trips, ridership was high on the Central Oregon Breeze, Mt. Bachelor Shuttle, and Portland to Tillamook bus, likely due to time of the week. Ridership was fairly light on the Mt. Hood Express and coastal sections of the NW Connector, likely due to time of year. Anecdotally, we heard that all of these services have high ridership, and nothing from our own observations convinced us otherwise.

EXPRESS AND “VILLAGES” SERVICE

One nice thing about the Mt. Hood Express is that it offers two kinds of service, an express service that is more direct to destinations on the mountain and a villages service catered towards local commuters. When we traveled to Timberline, it was nice to not have to make a number of stops in the Mt. Hood Corridor, and locals we talked to said the two services work pretty well for serving everyone’s needs.

LOW IMPACT VISITATION

OFF-TRAIL IMPACTS

We had to walk 1.5 miles along the beach from Manzanita to Nehalem Bay State Park. Wayfinding was difficult, and we ended up going off trail through sand dunes to reach our campsite. Because we got lost, we may have entered and disturbed sensitive habitat.

UNDER-UTILIZED PARKS

At this point, the NW Connector does not offer great connectivity to state parks along the coast. One exception is Fort Stevens, which our land manager informants indicated can absorb much more visitation. Had we gone to Fort Stevens, time would have been limited because of limited bus service. Expanding service to this park could provide greater access to an underused asset.

ECONOMIC DEVELOPMENT

During our 30 minute transfer in Sandy, we explored downtown and visited a local business. It seemed like bus service passing through regional hubs like Sandy could help stimulate economic development. Transportation agencies and business districts could partner to increase these opportunities.

USER EXPERIENCE

PAYING FOR SERVICE AND SEAT RESERVATIONS

On the NW Connector, Mt. Bachelor Shuttle, Sandy Express, and Mt. Hood Express exact change was required. This was difficult if you did not know ahead of time, and our team paid more than the actual cost a couple of times. Additionally, none of these services provided a means to pre-register a seat and if a bus was full you would be turned away. This is especially worrisome for those trips on the final route of the day and at trailheads far from population centers without cellphone service. Though we were able to ask our bus driver to alert the next (and final bus of the day) for our need to be picked-up, not having a formal means to alert subsequent bus drivers beforehand was extremely worrisome.

BATHROOMS

None of the buses we rode had bathrooms. The NW Connector between Portland and Tillamook at least offered to stop during the two hour ride. One passenger was almost left behind because a head count was not taken before exiting and upon return of bathroom use. Over the course of 4.5 hours, the Central Oregon Breeze stops 2-3 times for bathrooms.

ADVERTISING ON BUSES

We were disappointed by the advertisements covering bus windows as we rode the Mt. Bachelor Shuttle and NW Connector. These obscured views and diminished the sightseeing aspect of riding the bus. Transportation agencies operate on limited advertising budgets, but placing advertisements on bus windows is undesirable.

RIDE-HAILING

The NW Connector allowed us to get off at undeveloped stops (Kings Mountain), and it appears to be their policy that they will drop you off at recreation sites along routes. Hailing buses from these stops can be worrisome, and at King's Mountain we feared that the bus would miss us. Drivers seemed unfamiliar with the process of picking up riders at recreation sites.

BETTER CONNECTION TO REGIONAL HUBS

The Central Oregon Breeze drops passengers off on the outskirts of Bend, 2-3 miles from downtown. This made it difficult for us to get to our lodging, and we ended up taking rideshare.

LOCAL KNOWLEDGE

Riding the bus gives tourists an opportunity to connect with local riders, who can be sources of recommendations and other local knowledge. On our ride to Bend, I spoke at length with a passenger who told me of the geological history of Central Oregon.

OVERCROWDED BUSES

Particularly when gear is towed, buses can get overcrowded during peak hours. We noticed this in late afternoon on the Mt. Bachelor Shuttle and on Monday afternoon service from Tillamook to Portland. Overcrowded buses are uncomfortable at best, and in worst case situations riders are left behind. Commuters on the Mt. Hood Express told us that sometimes the buses are too full to take them to their jobs on the mountain.

USER EXPERIENCE CONTINUED

GEAR CONSIDERATIONS

Bringing a day pack, a single overnight bag, and smaller gear (such as snowshoes) was all pretty feasible, with ample storage for these on the bus (when a bus is not at or close to capacity). Traveling with more gear, such as when we camped at the coast, was exceedingly difficult. We had trouble storing our large backpacks, and gear spilled out into aisles. Had we not had car support for our camping trip, it would have been near impossible to bring all our gear with us. Additionally, having some sort of centralized gear storage at major transfer points or urban locations on the coast could allow visitors to store gear while visiting various destinations. If we had not had a car support from friends, we would not have been able to visit towns to shop at local businesses or explore at outdoor destinations.

ACCESS FOR ALL

FAMILY PASS

Fare prices on most services we rode feel affordable for a single rider. Once family members are added, prices compound to make service unaffordable for many families. Riding the bus must feel relatively affordable compared to driving in order to incentivize riders.

WHEELCHAIR ACCESS

All buses we rode are able to accomodate wheelchairs. Not all stops are as ADA accessible as they could be.

MARKETING

None of the marketing materials we saw during our travels featured people of color or those differently-abled. Seeing others who look like you in marketing materials provides a sense of connection and belonging for those typically under-represented in outdoor spaces. Most of the services we rode and signage at trailheads were predominately in English. Adding information or translating materials to a few key languages would provide greater access for many groups.



A person with long hair, seen from behind, stands on a rocky shore in the foreground, looking out over a calm lake. The sky is filled with soft, pink and orange clouds from a sunset or sunrise. In the distance, a range of dark mountains is visible across the water. The water's surface reflects the colors of the sky. A semi-transparent green banner is overlaid across the lower portion of the image, containing the text 'PUBLIC OUTREACH'.

PUBLIC OUTREACH

APPROACH

In order to develop a toolkit for the implementation of car-free access to recreation sites, it was critical to engage a range of interests. Public involvement efforts consisted of three activities: focus group discussions, a stakeholder workshop, and an online survey.

The focus group discussions aimed to engage community members from underrepresented groups to understand and identify key barriers preventing them from accessing the outdoors by modes other than car; preferred regions and sites they would like to have access to; the necessary attributes of a transportation system that will overcome barriers, and the best forms of being engaged.

To inspire interest in our research, and as the primary users of our toolkit, our team convened transportation providers, federal and state agencies, land managers, and tourism nonprofits for a three-hour workshop. This effort aimed at initiating a discussion with these key stakeholders, strengthen and develop new relationships.

The online survey aimed to engage Portland area residents and those leading trips to Oregon's outdoor recreation destinations.



FOCUS GROUPS

For the focus groups, our team invited organizations actively involved in outdoor recreation, outdoor industry leaders, and conservation advocates to gather feedback. These participants were coined the Issue Based Focus Group by our team. The second focus group included organizations providing culturally specific services to communities of color, families, youth, and people who are differently-abled. They were coined as the Underrepresented Group by our team, but later renamed themselves Access for All Focus Group during the event. Organizations participating in our focus groups include:

ISSUE BASED GROUP

- Oregon Wild
- Trailkeepers of Oregon
- Friends of the Gorge
- Bark Out

ACCESS FOR ALL GROUP

- OPAL
- Willamette Partnership
- Urban League
- Hike it Baby
- Disability Community

Through partnership with these organizations, our team held the two focus group discussions in April. The Issue Based Focus Group was held on Wednesday, April 18th, while the Access for All Focus Group was held on Thursday, April 19th. Both focus groups took place in the Travel Oregon Portland Office from 4-5:30 p.m. on their respective dates. Light refreshments and a stipend were provided to all focus group participants. Refer to appendix J for our full list of questions posed to each focus group.

FOCUS GROUPS FINDINGS

It was clear that focus group participants in both groups value the outdoors. Participants in the Issue Based Focus Group are leaders in the outdoors industry, and organize hikes and activities in the outdoors, while participants in the Access for All not as much. Issue Based Focus Group participants were more interested in discussing existing congestion challenges at popular destinations and developing strategies to best mitigate congestion. Access for All participants focused discussion more on social and cultural challenges prevalent for their constituents while they recreate, as well as other barriers limiting access to the outdoors.

FOCUS GROUP THEMES

ISSUE BASED GROUP

CARPOOLING IS THE EASIEST MODE OF TRANSPORTATION

Carpooling is the easiest and most convenient mode of transportation for organizations that lead hiking trips. Organizations varied between their involvement organizing the carpool; some set them up while others left it to hiking participants.

INNOVATION

In response to the 42 trail closures due to the Eagle Creek wildfire in 2017, organizations leading hiking trips have had to consider new hiking trips outside of this popular recreational area. In turn, this has raised awareness to new hiking areas, potentially identified for future congestion-management dispersion solutions. This idea sparked interest in real-life modeling on user-demand to outdoor recreation areas across the state. Participants were interested in learning where people are going while many popular trails in the Columbia River Gorge are closed for restoration, and suggested research on this topic include social media tagging and trail website analysis.

PROMOTING CAR-FREE OPTIONS NEEDED

Organizations mainly promote Trimet, rideshare, or carpool to their constituents for accessing the outdoors. Some organizations stated their need to make improvements to their websites to better promote other car-free options such as the Mt. Hood Express or the Columbia Gorge Express.

TRANSIT CAN BE INCONVENIENT

Using transit to access the outdoors is inconvenient for various reasons including difficulties with carrying gear, enough storage space for gear, infrequent stops, trip time, and limited access to recreation sites.

MARKETING MATTERS

Marketing plays a big role in where and how people access the outdoors. Issued based participants expressed a need to do a better job in suggesting less congested areas and offering transit options to outdoor recreation destinations. They expressed a need to do this formally through digital advertising, newsletters, etc. Or informally, such as by word of mouth.

TRANSIT SUPPORT

Participants support transit service to access outdoor destinations, noting Silver Falls as a great place for transit services, especially with the current Columbia Gorge closures.

ACCESS FOR ALL GROUP

HIKES AND TRIPS

Almost all participants lead hikes and trips to outdoor destinations, however, mostly to familiar areas that are safe, clean, child-friendly, comfortable, in close proximity to communities, and are ADA accessible.

TRANSIT COST AND SAFETY

Participants noted transit cost and safety as major barriers for communities of color, immigrants, and refugees in accessing the outdoors. Safety concerns included personal and physical safety due to racial discrimination, racial profiling, and/or immigration status. Most participants mentioned their constituents are low-income community members or families with very little financial flexibility and inability to juggle multiple transit fares/passes.

CONSIDERATIONS FOR MOBILITY IMPAIRED

ADA accessibility and amenities is important for mobility impaired community members. This includes both transit options and at recreation areas.

CULTURALLY RESPONSIVE OUTDOOR PROGRAMS

Supportive programs that offer outdoor stewardship education beyond REI or Columbia classes, more community-led and/or culturally responsive outdoor programs are needed.

MARKETING MATERIAL MUST BE ACCESSIBLE AND INCLUSIVE

Marketing material must be accessible and inclusive to communities of color, low-income, immigrant, refugee, and differently-abled populations. Participants stated if their community members are not able to see themselves in the images on promotional materials, then it is hard to relate and/or be inspired to access the outdoors or be interested in whatever activity is being promoted.

OUTDOOR RECREATION SPACES MUST BE INCLUSIVE TO ALL

Comfort in outdoor recreation spaces is important. Communities of color often feel out of place, looked down on, stereotyped, and discouraged when recreating in predominantly white areas. For immigrant and refugee populations specifically, land managers can be intimidating as their uniforms are very similar to those of U.S. Immigration and Customs Enforcement (ICE) agents. Recreating also becomes inconvenient for families with children if outdoor areas are not equipped with clean restrooms, changing tables, access to water, seating, and areas for children to roam freely. Ability to recreate freely without judgement from active users for how to recreate is important for communities of color.

STAKEHOLDER WORKSHOP

The stakeholder workshop brought together a total of 35 participants that included transportation providers, federal and state agencies, land managers, and tourism nonprofits from across the state on Thursday, May 3, 2018. The workshop began with keynote speaker, Dan Little, First Gentleman of Oregon and Chair of Oregon Outdoor Recreation Initiative (OORI) Diversity of Participants Committee. He shared OORI's vision for the outdoors and the work he and his committee members are doing related to addressing the gap in diverse populations accessing the outdoors.

Kristen Stallman, Chair of OORI's Transportation Committee followed by sharing her committee's work and introducing how the Oxbow Consulting team has been a part of ODOT's efforts. Our team presented site visit experiences and findings. Key staff members that helped with the development of the Mt. Hood Express, the Columbia Gorge Express, and the NW Connector provided their insight through a panel discussion. Finally, the event came to a close with a table exercise that allowed participants to develop strategies to address funding, partnerships/relationships, access for all in the outdoors, non-funding related barriers and measures for evaluation, all of which are key considerations for the development of transit options to the outdoors. The event closed with lunch catered by Black Star Grill,

A few participants had existing relationships with each other, some only had virtual relationships, and others had none. By the end of the event, stakeholders were mingling, relationships were formalizing and there was excitement in the room about car-free access to Oregon's outdoors.

STAKEHOLDER THEMES

SUPPORT AND EXCITEMENT

Participants were excited and supportive of the work the Oregon Outdoors Recreation Initiative is leading.

APPRECIATION

Participants appreciated the site visits and associated findings from our team, Oxbow Consulting.

INSPIRATION

Transit service providers were inspired to test out their own services with staff.

RELATIONSHIPS

New relationships among participants formed and existing relationships were strengthened.

ONLINE SURVEY

To reach a broader audience beyond the focus groups, an online survey was developed using Qualtrics. The survey targeted Portland area residents and those leading trips to Oregon's outdoor recreation destinations, and contained many of the same questions as the intercept survey. A few additional questions were developed to understand how local recreationists access information about the outdoors and supply information to others. Refer to appendix K the online survey.

ONLINE SURVEY FINDINGS

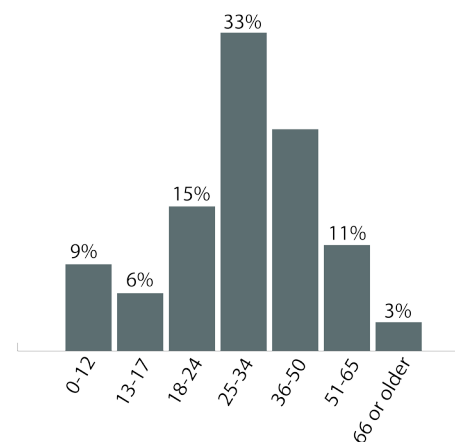
In total, 163 responses were recorded over a three week period from April 28th to May 12th. Demographic breakdowns for respondents by gender, race, household status, and income, as well as a copy of the survey, can be found in appendix L.

When asked if respondents ever organized trips to the outdoors in Oregon, 158 responses were logged. Of the 158, 45% responded yes, 49% said no and 5% said not sure. Of those who responded yes, the largest age cluster for participants was the 25-35 (Figure 11).

Respondents were then asked if they partnered with other organizations when leading or taking these trips. Of the 71 total responses, 28% responded yes, 71% said no, and 1% said don't know.

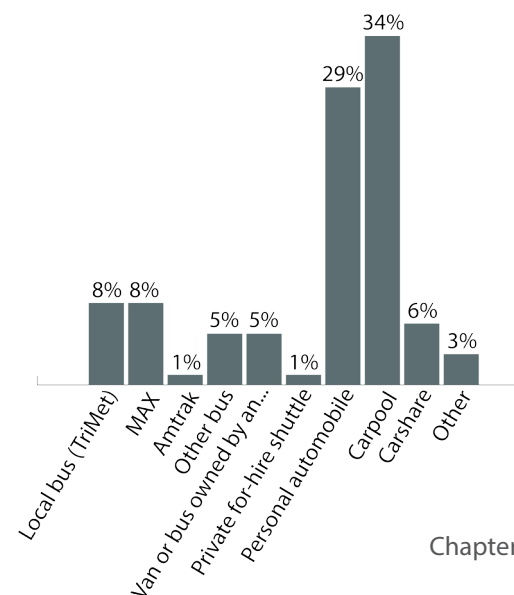
When asked what modes of transportation respondents suggest constituents use when participating in an activity led by their organization or group, carpool and private vehicle were the most common responses (Figure 12).

Figure 11: Approximate Age of Those You Take on Outdoor Trips



Similarly, all respondents, whether leading a trip or not, were asked what modes of transportation they personally use and recommend others to use to access outdoor recreation destinations. Carpool and private vehicle were the top answers, but of interest is the third most popular response, bike, which was only noted by three respondents previously (Figure 13).

Figure 12: Recommended Modes of Transportation to Constituents



All respondents, whether leading trips or not, were asked who they normally travel with to outdoor recreation destinations in Oregon and what activities they participate in at their destination. Respondents were asked to select all that applied for each question. 500 responses were recorded for who do you visit sites with and 768 responses for type of activity. Most respondents noted they traveled in some type of group more often than alone, and pets were listed more often than children (Figure 14). Hiking was the top activity for outdoor recreation destinations, followed closely by camping, sightseeing, and backpacking (Figure 15).

Figure 13: Modes of Transportation Used Personally or Recommended to Others by All Respondents

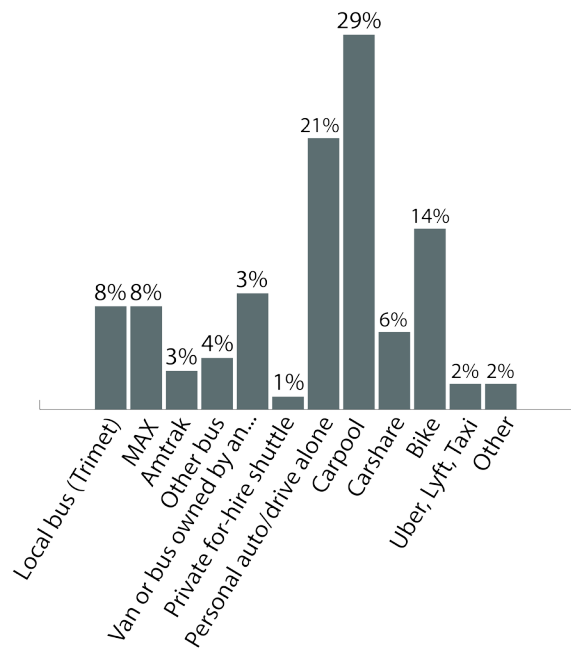


Figure 14: Who Do You Travel With to Oregon's Outdoor Recreation Destinations?

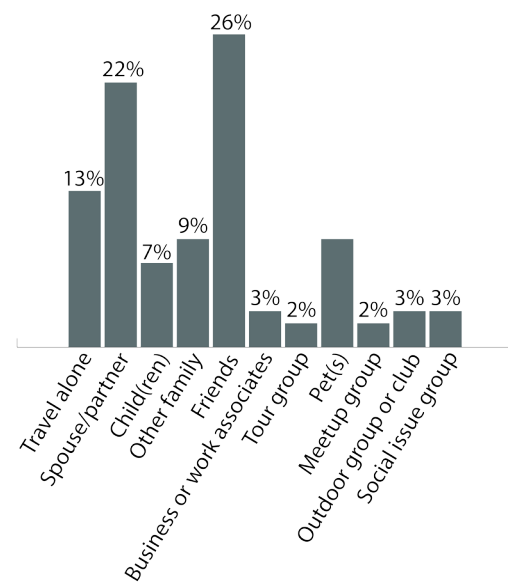
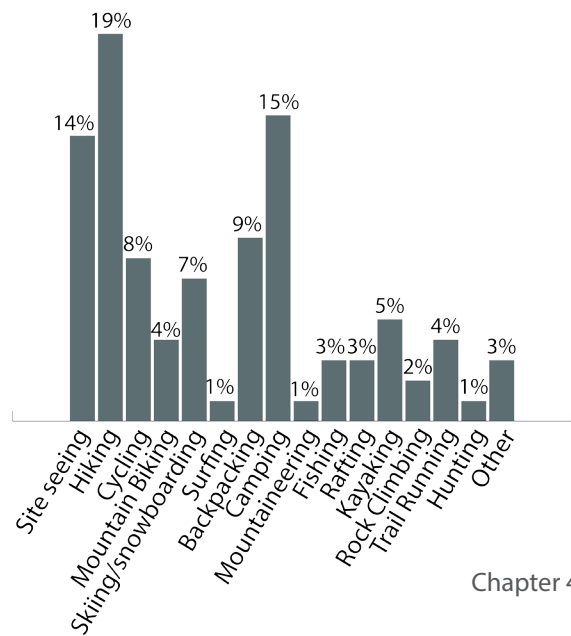


Figure 15: What Outdoor Activities Do You Participate In?



When trying to understand what activities users engage in, associated gear required to engage in a particular activity, gear storage capacity of transit compared to vehicles, and site locations compared to transit destinations are all key considerations when users select a particular mode of transportation. Ensuring each of these considerations better align with rider needs has the potential to alter mode use amongst active and future outdoor recreationists. Priority parking for carpool or increased fees for single occupants also presents an opportunity to at least shift single drivers to rideshare or carpooling options.

Understanding survey respondents knowledge of existing transportation services, previous use of the services, and overall willingness to use the services was a key data point in the research process. When asked about familiarity with transportation services (other than TriMet) that access Oregon's outdoor recreation destinations, 55% reported that they were somewhat or very familiar. Respondents were then asked which services they were familiar with. Amtrak was the most well known followed by the Mt. Hood Express (Figure 16). Only 22% (n=147) stated they had actually used one of the services in the past, with top responses as follows:

- Mt. Hood Express (44%)
- Amtrak (31%)
- Columbia Gorge Express (14%)

Figure 16: Which Transportation Services Have You Heard Of?

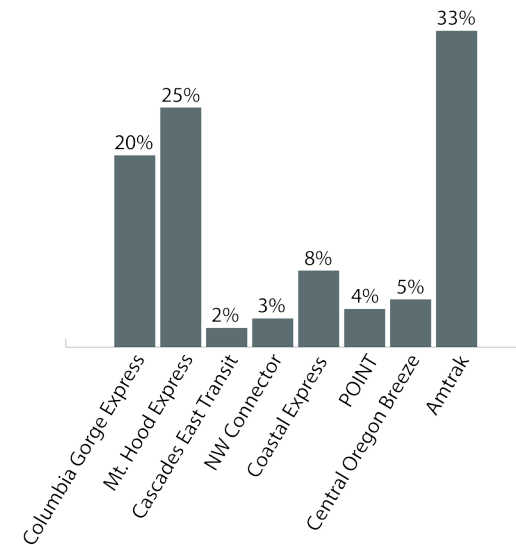
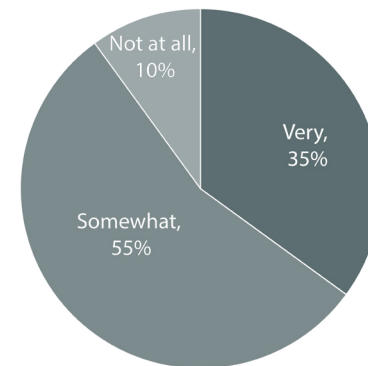


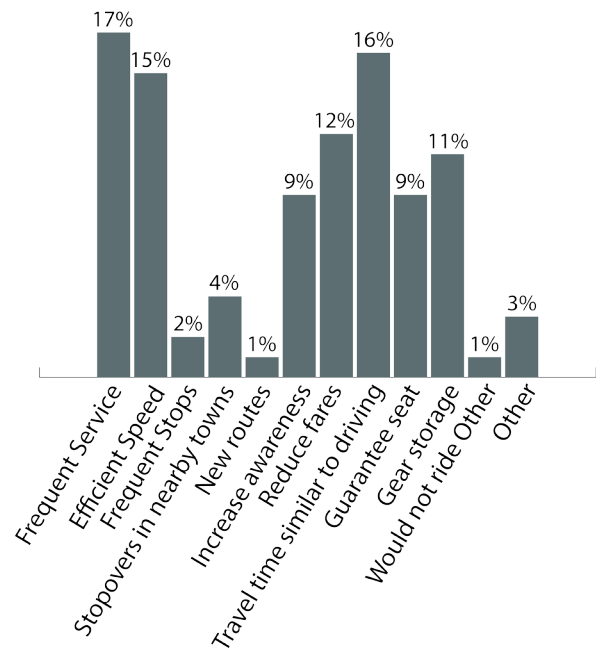
Figure 17: Interest In Accessing Oregon's Outdoor Recreation Destinations By Transit



However, overall interest in using transit services to access Oregon’s outdoor recreation was high, with 90% indicating they were somewhat or very interested (Figure 17). When asked what, if anything, would most encourage participants to utilize public transportation, the top three choices were (Figure 18):

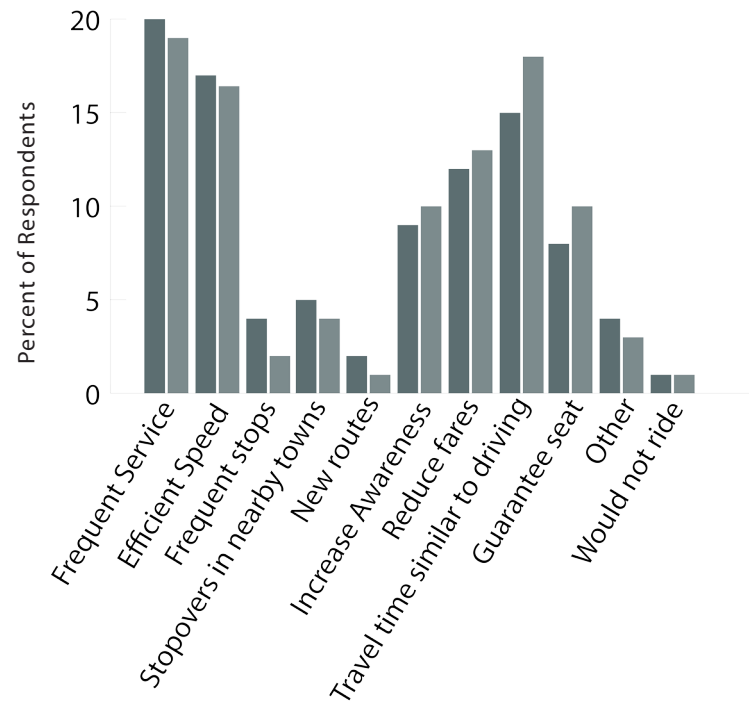
- Frequent service
- Travel time
- Efficient speed

Figure 18: What Would Encourage You to Take Public Transportation to Recreation Areas?



One option was added to the online survey, gear storage, which received 11% of the responses. A comparison of online and intercept survey responses around what would encourage participants to access Oregon’s outdoor recreation destinations reveal similar patterns across survey methods (Figure 19).

Figure 19: What Would Encourage You to Take Public Transportation to Recreation Areas? (Online and Intercept Survey)

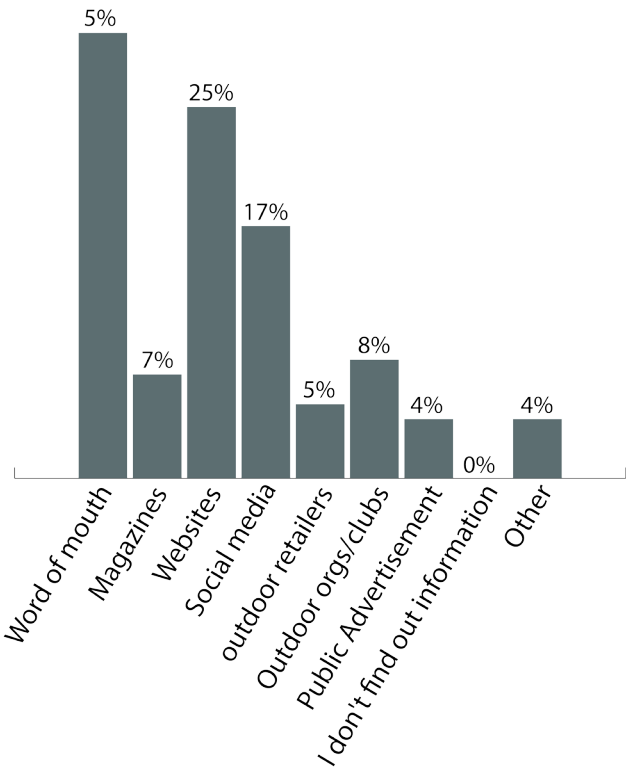


As previously noted, participants often do not have a clear understanding of transit options accessing outdoor recreation destinations. Determining how survey participants discover information about outdoor recreation destinations provides solutions to increase knowledge about transit options, as well as dispersing visitors to less congested areas.

When asked how participants find out information about outdoor recreation destinations, the top answers were based in social networks both in-person and digitally (Figure 20). Digitally, sites such as Facebook and Instagram were top social media platforms with Oregon Hikers and Outdoor Project top options for websites. In conclusion, a desire to utilize transit options to access Oregon’s outdoor recreation destinations is expressed by survey respondents. However, similar to the intercept survey results, many do not know about the transit options that currently exist. Efforts to improve public awareness of these options is recommended as an initial strategy.

Once the public is more aware of the transit option, strategies to increase service frequency and overall trip time would be a logical next step. However, some riders will not chose transit if frequency and trip time are inadequate, requiring an overall approach to user experience and needs to be assessed. Marketing efforts to increase awareness of transit options while also dispersing users to less congested areas can be done at a relatively low-cost through social media, popular hiking websites, and connections with community leaders who can share information with their networks.

Figure 20: How Online Survey Respondents Find Information About Oregon’s Outdoor Recreation Destinations?



ONLINE SURVEY THEMES

When visiting the outdoors, most participants use or recommend carpooling or driving alone to arrive at their destination.

87% of respondents travel to the outdoors with someone else or a pet.

Top activities respondents participate in are:

- Hiking (19%)
- Camping (15%)
- Sightseeing (14%)
- Backpacking (9%)

55% of respondents were somewhat or very familiar with transit options to Oregon's outdoor recreation destinations.

90% of respondents were somewhat or very interested in using transit to access Oregon's outdoor recreation destinations.

22% of respondents had used transit to access the outdoors and 47% who had used transit rode the Mt. Hood Express.

When asked, "What would most encourage you to take transit to Oregon's outdoor recreation destinations?", the top five answers were:

- Frequent service (17%)
- Travel time similar to driving (16%)
- Efficient speed (15%)
- Reduce fares (12%)
- Gear storage (11%)

When asked, "How do you find information about Oregon's outdoor recreation destinations?" top responses were:

- Word of mouth (30%)
- Websites (25%)
- Social media (17%)

Top websites to gather outdoor information include:

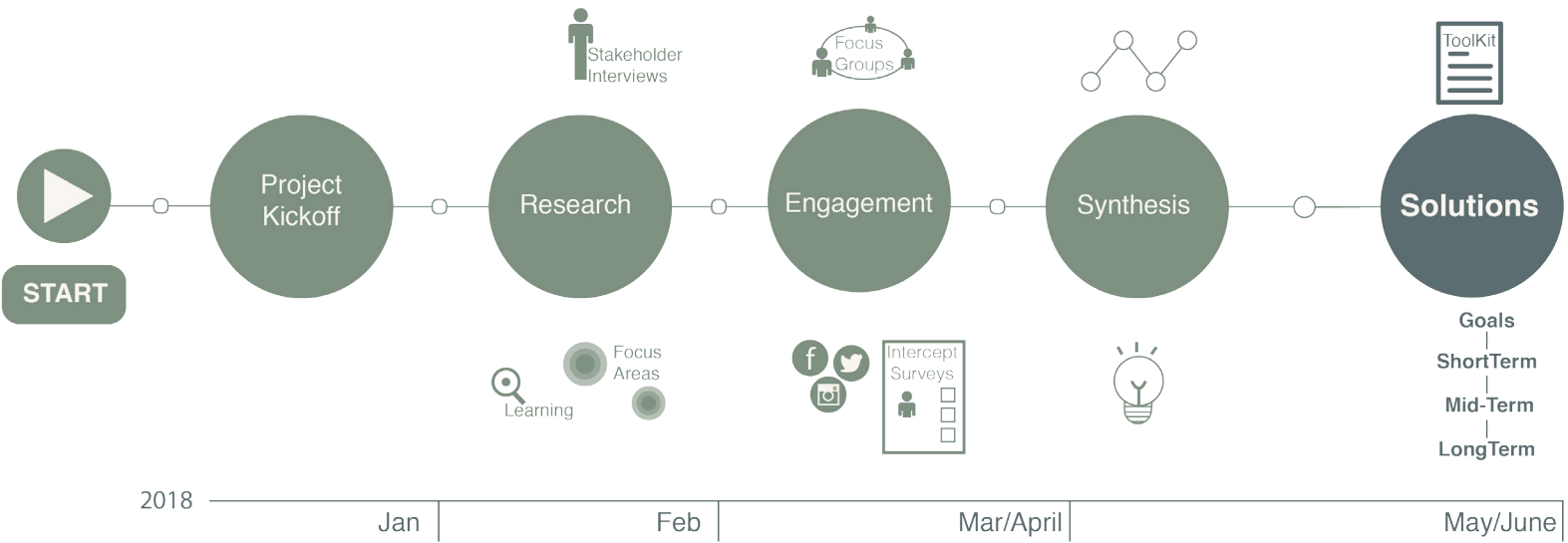
- Oregon Hikers
- Outdoor Project
- Friends of the Columbia Gorge



APPENDICES



APPENDIX A: PLANNING PROCESS



APPENDIX B: STAKEHOLDER INTERVIEW PARTICIPANTS

Name	Agency	Agency Type
Scott Brown	Smith Rock National Park	Land Manager
Ben Cox	Nehalem Bay Park	Land Manager
Rika Ayotte	Discover Your Forest	Land Manager
Terry Bergerson	Parks and Rec	Land Manager
Clay Courtright	West Columbia Gorge Park	Land Manager
Justin Parker	Fort Stevens Park	Land Manager
Chris Havel	Oregon Parks and Recreation Department	Land Manager
John Tullis	Timberline Lodge	Industry
Andi Howell	Sandy Area Metro	Transit Provider
Teresa Christopherson	Clackamas County	Transit Provider
Jeff Hazen	Sunset Empire Transportation District	Transit Provider
John Ahlen	Lane County Transit	Transit Provider
Doug Pilant	Tillamook Transportation District	Transit Provider

APPENDIX C: TRIP PLANNING RESOURCES

Tamanawas Falls: Mt. Hood National Forest			
Resource	Description (from site)	Team Use	URL
All Trails	At home or on the road, find your perfect hike, bike ride, or trail run by length, rating, and difficulty level. Filter by dog or kid-friendly trails, or find trails with great views.	Used to determine popular trails in the Mt. Hood area and specifics about the hike.	https://www.alltrails.com/?ref=header
Google Maps	What is a map when it's more than just a map? It's a tour of the moon, a ticket to Mars, and a bird's-eye view of Earth, from the highest mountains to the lowest valleys and everywhere in between.	Used to assess the parking area at the trailhead and a visual scout of the trail.	https://www.google.com/maps/@45.5131136,-122.6817536,15z
Instagrams	Instagram, a community of more than 800 million who capture and share the world's moments. Inspiring creativity through visual stroytelling.	Used to determine up to date trail conditions by searching hashtags of Tamanawas Falls.	https://www.instagram.com/

Timberline Lodge: Mt. Hood National Forest and Sandy, OR			
Resource	Description (from site)	Team Use	URL
OregonLive The Oregonian	Local news publication	Researched an article about how to travel from Portland to Mt. Hood via public transportation.	http://www.oregonlive.com/travel/index.ssf/2014/07/how_to_take_public_transportat.html
TriMet	Provides bus, light rail and commuter rail transit services in the Portland, Oregon metro area.	Used to determine schedule and route to arrive at Gresham Transit Center	https://trimet.org/
Sandy Area Metro	Public transit system operated by the city government of Sandy, Oregon.	Used to determine stop locations, schedule, and route for both SAM and Mt. Hood Express.	https://www.ci.sandy.or.us/Schedules-SAM/
Timberline Lodge	Set high on the shoulder of one of the most iconic peaks in the Pacific Northwest, Timberline Lodge and Ski Area continues - after 80 years - to offer one of the most exciting and unique high-alpine mountain experiences in North America.	Used to determine weather conditions, cost of lodging, and things to do while on the mountain.	https://www.timberlinelodge.com/

APPENDIX C: TRIP PLANNING RESOURCES

Bend and Mt. Bachelor: Central Oregon and Deschutes National Forest			
Resource	Description (from site)	Team Use	URL
Weather.com	Provides up to date weather information from around the world.	Used to determine the weather forecast during team trip and assist in planning what to wear.	https://weather.com
Mt. Bachelor	Mt. Bachelor is located entirely within the Deschutes National Forest and operates under a Special Use Permit issued by the United States Forest Service (USFS). Partnering together for more than 50 years, Mt. Bachelor and the USFS aim to provide popular year-round recreation opportunities in balance with respectful stewardship of the beautiful Central Oregon Cascades and the Deschutes National Forest.	Used to determine weather on the mountain and get a feel for the area before site visit.	https://www.mtbachelor.com/
REI	At Recreational Equipment, Inc. (REI), we love to get outside and play, and we know first-hand the importance of quality outdoor gear. We stand behind all our products with a 100% satisfaction guarantee, and we design our own line of award-winning REI brand gear and clothing. Whether you're new to outdoor adventure or a seasoned pro, we gladly share our enthusiasm for our products—and the trails, slopes and waterways where we play.	Used as a resource for information on layering.	https://www.rei.com/
Backpacker	Your source for backpacking gear reviews, outdoor skills information and advice, and destinations for backpacking, camping and hiking.	Used as a resource for information on layering.	https://www.backpacker.com/
AirBnb	Online marketplace and hospitality service for people to lease or rent, short-term lodging.	Used to find lodging during team trip.	https://www.airbnb.com/
Central Oregon Breeze	A local family-owned friendly and comfortable service. Relax. Enjoy the ride. Let us do the driving!	Used to travel from Portland to Bend including finding pricing, schedule, and route.	http://cobreeze.com/
Cascades East Transit	Cascades East Transit connects people to places through high-quality transit service. Our mission is to always exceed expectations of riders with courteous and friendly customer service representatives, transit operators, and staff. CET bus services include fixed-routes within Bend, city connectors throughout Central Oregon, recreational shuttles and rural Dial-a-Ride service for the public and Dial-a-Ride service for qualifying persons with disabilities and seniors who qualify as low-income.	Used to travel from Bend to Mt. Bachelor including finding pricing, schedules, and route finding.	http://

APPENDIX C: TRIP PLANNING RESOURCES

Northwest Oregon Coast: Oregon Coast Range, Nehalem Bay State Park, Tillamook, Manzanita, Cannon Beach, and Seaside, OR			
Resource	Description (from site)	Team Use	URL
Weather.com	Provides up to date weather information from around the world.	Used to determine the weather forecast during team trip and assist in planning what to wear.	https://weather.com/weather/tenday/l/
NW Connector	The NW Connector is a coordinated regional transit system that includes five individual transit agencies in NW Oregon. The transit system provides seamless travel between the Willamette Valley and Oregon Coast from Astoria to Yachats. The NW Connector makes transit an easy to use alternative for auto travelers, including bicyclists going to the coast to cycle. The NW Connector's network of stops allows riders to plan multiple stops and trip destinations. Riders can buy NW Connector Visitor Passes at discounted fares for three- and seven-day trips.	Used to travel from Portland to Tillamook and up the coast. This service was used for route finding, pricing, schedule, and trip suggestions between Portland and Tillamook.	http://www.nworegontransit.org/
Oregon State Parks	The mission of the Parks and Recreation Department is to provide and protect outstanding natural, scenic, cultural, historic and recreational sites for the enjoyment and education of present and future generations.	Used to find campground lodging, pricing, location information, site options, and hiking options.	https://oregonstateparks.org/

APPENDIX D: TRIP ITINERARIES

March 13th, 2018

9am - 1pm

RE: Tamanawas Falls Travel Guide

Hi Team,

Here are a few details on where I am proposing our first site visit this coming Sunday. Check out the details and let me know what you think. We will visit Tamanawas Falls.

- Trail information- <https://www.alltrails.com/trail/us/oregon/tamanawas-falls-trail>
- 76 miles from Portland in the Mt.Hood Wilderness
- Hike is 3.3 miles with an elevation gain of 597 ft.
- Parking area: ~480 ft. of parking area along the side of Hwy. 35. Parking is gravel and not lined.

Feel free to drop the little yellow person on the parking area and look around! [Satellite View](#)
Items to bring as an individual:

- Water
- Rain jacket
- Light snack i.e. kind bar or cliff bar (We will stop and grab a sandwich after we're done)
- Sturdy shoes with good traction. There is some snow on the trail and will probably be muddy.
- Bring a mid-layer in case you get cold as we will be standing around for a little bit. Maybe a hat or beanie as well. If your hands get cold easily, bring gloves as well. It isn't supposed to be cold on Sunday, but things can be a little different when you're standing around in a parking lot for a couple hours.
- Backpack to carry water and store your layers
- Wear a good pair of socks that are hiking specific and preferably wool
- I don't think there is a restroom here (and there may not be one at many places we visit) so be prepared. Sounds weird, but you should practice peeing in the woods as it's a reality when being in nature for extended periods of time. According to my wife, it's good to practice. Toilet paper, hand sanitizer, and a ziplock bag to carry out used toilet paper.
- Your awe and excitement! It's a beautiful waterfall and the hike through the forest is extremely relaxing and refreshing. I'm really excited to share these experiences with each of you and especially those who haven't spent much time in the outdoors.

Bring the following as a team:

- Clipboards
- Pens
- Snacks to give to survey participants
- Copies of our survey
- Copies of the site analysis checklist
- Maybe copies of the 1-pager we gave out at the Outdoor Initiative meeting with overview of our project, contact info, and ways to follow.
- Consent forms if we take photos of individuals and use their story for social media

March 21st, 2018

RE: Bend Trip Travel Guide

Oxbow,

Hello once again friends. I'm excited for our upcoming trip this weekend and look forward to working, playing, celebrating, and relaxing hard! With that in mind, I have a few points of assistance for the trip. Individual items and resources are first. Team items of need are listed after the individual section with who is responsible for bringing what. Sorry for the long email but know I'm extremely excited for this trip and the opportunity to get to know each of you better.

Details for Individuals:

- Plan to bring appropriate clothing for the weather. It will be colder than our Tamawanas Trip and you know how you do in the weather. **Remember we will be outside for an extended period of time.**
- **Bend forecast** <https://weather.com/weather/tenday/l/USOR0031:1:US>
- **Mt. Bachelor forecast** <https://weather.com/weather/tenday/l/265:11:US>
- **Mt. Bachelor Info** <https://www.mtbachelor.com/>
- You always take layers off, but you can't add what you don't bring.
- **Resources for layering:** <https://www.rei.com/learn/expert-advice/layering-basics.html> and this one which is geared more for backpacking, but still has great information <https://www.backpacker.com/skills/layering-for-cold-weather-dress-to-the-nine-below>
- With that in mind bring the following: gloves, beanie, long-johns or warm under-layer, warm mid-layer, outer shell, warm socks, water-proof boots, synthetic or water resistant/proof pants if possible, backpack, water bottle, personal snacks, and sunglasses.
- If you would like to, bring snowshoes. If we do a hike before our counts, this is the only way you will be able to do so. If you do not wish to snowshoe, you should be able to go and begin intercept surveys at Mt. Bachelor Lodge. This isn't ideal as the hikes are a great way to connect as a team and it's nice to have everyone helping with the trailhead intercept surveys.
- Bring whatever clothes and toiletries you need for two nights. You know you, so I'll leave that up to the individual to decide what they need.
- Address for AirBNB
- House has 4 beds and 1 bath
- It may be useful for a couple people with a sleeping pad and bag to bring them.
- **Print bus tickets and bring them**
- **Bring \$\$\$** to cover meals until reimbursement.

Team Items to Bring:

- Intercept survey
- Bus survey
- Humans of the Outdoors questions
- Consent forms
- Site analysis forms
- One pagers about project
- Cliff Bars
- Pens
- Clipboards
- Small table

APPENDIX D: TRIP ITINERARIES

March 28, 2018
11:30am – 2:30pm

RE: Coast Trip Planning

Oxbow,

Hope this email finds you well and enjoying spring break! I just want to say how thankful I am to have each of you on our team sharing this journey as we seek to better understand current realities on the existing transportation network to outdoor recreation destinations. I had a blast on the Bend trip, felt as though we connected as a team, and was blown away by the hard work shown by all.

We learned a lot of great lessons and should be able to incorporate them into our upcoming trip to the coast this weekend (Sat-Monday). I've included some information for each of you to review and some action items folks need to complete before we leave. If you see anything that should be included or have questions let me know. Thanks for all the hard work and determination as we enter the final stretch to becoming REAL PLANNERS!!!

P.S. There are LOTS of links with detailed information Please Click and Read.

[Coast Information](#) [Weather Forecast](#)

Day 1- Saturday 3/30 (Tent Camping):

- We will use the NW Connector to reach the coast and travel up and down. You can find more information at <http://www.nworegontransit.org/>
- 3-day (\$25) and 7-day visitor passes may be purchased from drivers (**bring \$25 cash to purchase ticket Saturday**) on any route served by NW CONNECTOR partner agency. Visitor passes allow one trip to the coast from Portland or the Albany/Corvallis area, one return trip, and unlimited travel in Clatsop, Tillamook and Lincoln Counties (from Astoria to Yachats).
- **Please arrive at Union Station by 11:00 a.m. Saturday 3/30.** #5 Bus departs at 11:20 a.m. for more info: [To Tillamook](#)
- We will conduct a site analysis at the [Wilson River Trail: King's Mountain stop](#) and **arrive at 12:50. Wear your hiking boots, bring lunch, water, clothing layers, your new headlamp, and a small backpack to carry personal gear and intercept survey materials (clipboards, pens, intercept survey, bus survey, site analysis form, consent forms, notebook).** You can read about the [Wilson River Trail](#) and [King's Mountain](#) to prep.
- We will flag down the bus to head to [Tillamook at 5:15 and arrive by 5:50 p.m.](#)
- We will then catch the #3 Bus from [Tillamook to Cannon Beach at 6:00 p.m. to arrive in Manzanita by 7:04 p.m.](#) We will then need to [walk 1.2 miles or catch a Lyft/Uber to Nehalem Bay State Park.](#)
- **Due to the late arrival, we can either eat in Manzanita or bring food to cook dinner at the camp site. We will also need to set-up camp (tents, get water, firewood, etc.) that evening so depending on how tired folks are we should think about this.**

Day 2- Sunday 4/1 (Yurt Camping):

- Cook / eat breakfast at camp and make lunch (**we need to determine menu**)
- Leave camp at 10:25am, walk to Manzanita (1.2 miles)
- **Option 1:** [Manzanita to Shipwreck Beach](#) Bus #3>PC>Bus #15 at 11:04pm - 1:57pm; [Shipwreck Beach to Cannon Beach](#) Bus PC at 3:57pm - 4:43pm; Eat Dinner; [Cannon Beach to Manzanita](#) Bus #3 at 7:49pm - 8:14pm; walk 1.2 miles to camp
- **Option 2:** [Manzanita to Seaside](#) Bus #3> Bus PC> at 11:04pm - 12:09pm; [Seaside to Shipwreck Beach](#) Bus PC at 1:47 - 2:16; [Shipwreck Beach to Cannon Beach](#) Bus PC at 3:57pm - 4:43pm; Eat Dinner; [Cannon Beach to Manzanita](#) Bus #3 at 7:49pm - 8:14pm; walk 1.2 miles to camp

Day 3- Monday 4/2 (Head Home):

- **Breakfast at Camp (probably eggs, bacon, and coffee)**
- [Manzanita to Cheese Factory](#): Bus #3> Bus #1 at 10:14am - 11:33am; Eat Cheese and grab lunch (**Sorry Kara! Here's a menu to see if there's food you can eat** if not, we'll do something else); [Cheese Factory to Tillamook Transit Center](#): Bus #1 at 12:31pm - 12:38pm; [Tillamook to Portland](#): Bus 5 at 1:00pm - 2:55pm
- Home and pass out!!!

Things we need to assign to bring:

- Tents (need 4)
- Sleeping Bag (need 6)
- Sleeping pads (need 6)
- Bus survey
- Intercept survey
- Consent forms
- One pager
- People of nature questions
- Site analysis forms
- Snack bar giveaways
- Pens
- Clipboards
- Make a grocery list

Things for individuals to bring:

- Stuff for shower (**\$3.00 in quarters**, soap, shampoo, shower shoes, towel, wash cloth)
- Clothing: rain jacket, mid-layer, warm jacket for night, beanie, warm socks to sleep in, boots or sturdy shoes, sleep clothing that is warm, sunglasses, sunscreen
- Water bottle
- Small backpack for day trips
- Personal snacks
- \$25 in cash to pay for bus
- Spending \$\$
- Lunch for Saturday
- Headlamp
- Toiletries
- Pillow or you can use your clothing

APPENDIX E: PASSENGER SURVEY

Passenger Survey Transport Service: _____ Date: _____ Time: _____

We are Oxbow Consulting, a team of Portland State University graduate students in Urban and Regional Planning are conducting a survey with visitors to outdoor recreation sites throughout the state to help determine the viability of transit or ride-share to the state's top recreation areas. We would appreciate a few minutes of your time to answer the following questions. We are not selling anything, the survey is completely confidential, and is being conducted for research purposes only.

1. What is the purpose of this bus trip?
☐ Work/School
☐ Recreation/Travel
☐ Social Visits
☐ Personal Business/Appointments/Errands

2. What is the ZIP code of your primary residence (or country of residence, province)?

3. What is the final destination of your current one-way trip?

4. How did you hear about this service?
☐ Website (please specify): _____
☐ Friends/Family/Work
☐ Advertisement
☐ Hotel
☐ Other (please specify): _____

5. Why have you chosen to use this service over other modes of transportation?

6. How much have you used this service?
☐ This is the first time I have used this service
☐ I have used this service 2-10 Times
☐ I have used this service 10+ Times
☐ I use this service regularly (weekly/monthly)
☐ I use this service frequently (more than once weekly)

7. Do you ever use this service to access an outdoor recreation area? ☐ Yes ☐ No

8. What modes of transportation are you using throughout your trip?
(MARK ALL THAT APPLY)
☐ Flew to the area ☐ Train / Amtrak
☐ Rental car ☐ Bus
☐ Private car ☐ Motorcycle
☐ Private shuttle ☐ Bicycle
☐ Camper / RV ☐ Other _____
☐ Uber, Lyft, taxi

9. How many people are in your travel party, including yourself?

10. With whom are you traveling today? (MARK ALL THAT APPLY)
☐ No one, traveling alone ☐ Business associates
☐ Spouse / partner ☐ Tour group
☐ Child(ren) ☐ Sports team
☐ Other family ☐ Pet(s)
☐ Friend(s) ☐ Other: _____

11. In total, how many visits have you made in the past 2 years to your intended destination, including this current visit? (ENTER 0 IF NONE, or say "Frequently")
Spring _____ Fall _____
Summer _____ Winter _____

12. How familiar are you with public transit options to outdoor recreation areas in Oregon?
NOT AT ALL SOMEWHAT VERY
☐ ☐ ☐

13. How interested would you be in using public transit to other destinations and recreation areas in Oregon?
NOT AT ALL SOMEWHAT VERY
☐ ☐ ☐

14. What are some changes to this service that would improve your overall experience?

15. In a typical week, approximately how many days a week do you use each of the following modes of transportation?

	0	1	2	3	4	5	6	7
Public Transit (ie.. bus, rail)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber, Lyft, taxi, Zipcar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey continues on other side

16. On a scale from 1 to 5, how would you rate the following:

	0	1	2	3	4	5
Overall Satisfaction of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Convenience of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comfort level using service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Would you consider using this service again?
☐ Yes ☐ No

Answer questions 18 and 19 if you are using this service to access an outdoor recreation destination

18. How does overcrowding of cars (e.g. full parking lot, difficulty finding a parking space, cars parked on road) at the access point of your favorite outdoors destinations affect your experience?

19. If you are accessing an outdoor recreation destination, has this service provided the amenities to accommodate the activity you intend to do?
• If yes; what amenities are provided?
• If no; what amenities could be added?

20. Which category best describes your household status?
☐ Single, no children
☐ Couple, no children
☐ Household (single or couple) w/children living at home
☐ Household (single or couple) w/grown children not at home

21. What race do you consider yourself to be?
☐ White
☐ Asian, Asian Indian or Pacific Islander
☐ Native American
☐ Black or African American
☐ Other

22. Are you of Hispanic or Latino origin? ☐ Yes ☐ No

23. In what year were you born? _____

24. Your gender ☐ Male ☐ Female ☐ Other

25. Which of the following categories best describes the annual income of your household (before taxes)?
☐ \$0 to \$49,999 ☐ \$100,000 to \$199,999
☐ \$50,000 to \$99,999 ☐ \$200,000 or more
☐ Don't know/prefer not to answer

Oxbow Consulting thanks you for your participation in our research program! Your input is valuable to future planning efforts.

APPENDIX F: INTERCEPT SURVEY

Oregon Outdoor Recreation Survey Location: _____ Date: _____ Time: _____

We are Oxbow Consulting, a team of Portland State University graduate students in Urban and Regional Planning are conducting a survey with visitors to outdoor recreation sites throughout the state to help determine the viability of transit or ride-share to the state's top recreation areas. We would appreciate a few minutes of your time to answer the following questions. We are not selling anything, the survey is completely confidential, and is being conducted for research purposes only.

1. Are you a:

☐ Resident of the Portland Metro area
☐ Resident elsewhere in Oregon
☐ Visitor from another state
☐ Visitor from another country

2. What is the ZIP code of your primary residence (or country of residence, province)?

3. How did you travel to Oregon (out of state visitors only)?
 (MARK ALL THAT APPLY)

☐ Flew to the area ☐ Train / Amtrak
☐ Rental car ☐ Bus
☐ Private car ☐ Motorcycle
☐ Private shuttle ☐ Bicycle
☐ Camper / RV ☐ Other _____
☐ Uber, Lyft, taxi

4. How many people are in your travel party, including yourself?

5. With whom are you traveling today? (MARK ALL THAT APPLY)

☐ No one, traveling alone ☐ Business associates
☐ Spouse / partner ☐ Tour group
☐ Child(ren) ☐ Sports team
☐ Other family ☐ Pet(s)
☐ Friend(s) ☐ Other: _____

6. In total, how many visits have you made in the past 2 years to this recreation area by season, including this current visit?
 (ENTER 0 IF NONE)

Spring _____ Fall _____
 Summer _____ Winter _____

7. How familiar are you with public transit options to outdoor recreation areas in Oregon?

NOT AT ALL SOMEWHAT VERY
☐ ☐ ☐

8. Which public transit options have you heard of that go to this recreation site?

9. How interested would you be in using public transit to this area or other recreation areas in Oregon?

NOT AT ALL SOMEWHAT VERY
☐ ☐ ☐

10. What, if anything, would most encourage you to take public transportation when traveling to this area or other recreation areas in the future?

(MARK ALL THAT APPLY)

☐ Frequent bus service (multiple departure/pickup times)
☐ Efficient speed of trip (few transfers/stops)
☐ Frequent bus stops
☐ Stopovers in nearby cities/towns (downtown districts)
☐ Add new bus routes (where?): _____
☐ Increase public awareness about bus service
☐ Reduced or inexpensive bus fares
☐ Have travel time about the same as driving my car
☐ Guarantee my seat (reservations)
☐ Other: _____
☐ None – would not ride the bus at all or more frequently

11. In a typical week, approximately how many days a week do you use each of the following modes of transportation?

	0	1	2	3	4	5	6	7
Public Transit (ie bus, light rail, Amtrak)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber, Lyft, taxi, Zipcar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Do you have any comments or suggestions about your experiences in or traveling to this recreation area?

The following questions are optional and for classification purposes only. This survey is confidential.

13. Which category best describes your household status?

☐ Single, no children
☐ Couple, no children
☐ Household (single or couple) w/children living at home
☐ Household (single or couple) w/grown children not at home

14. What race do you consider yourself to be?

☐ White
☐ Asian, Asian Indian or Pacific Islander
☐ Native American
☐ Black or African American
☐ Other

15. Are you of Hispanic or Latino origin? ☐ Yes ☐ No

16. In what year were you born? _____

17. Your gender ☐ Male ☐ Female ☐ Other

18. Which of the following categories best describes the annual income of your household (before taxes)?

☐ \$0 to \$49,999 ☐ \$100,000 to \$199,999
☐ \$50,000 to \$99,999 ☐ \$200,000 or more
☐ Don't know/prefer not to answer

Oxbow Consulting thanks you for your participation in our research program! Your input is valuable to future planning efforts.

APPENDIX G: HUMANS OF CASCADIA INTERVIEW QUESTIONS

Humans of Cascadia Interview Questions

1. Tell me about your most memorable time in Oregon's outdoors?
2. Describe the most beautiful place you've visited?
3. In one sentence, what advice would you give someone who's never been hiking in Oregon?
4. If you could capture being outdoors in one word, what would it be?
5. Why do you keep coming back?

Ask questions that:

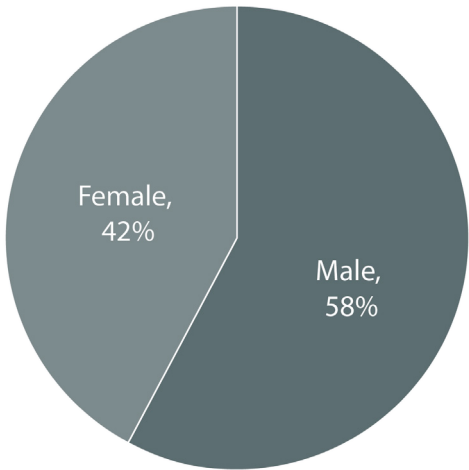
- elicit scene, a specific time when x
- a moment you realized x
- where were you?
- how did you know?
- *And ask them what they make of it (their experience). *

Interview Tips:

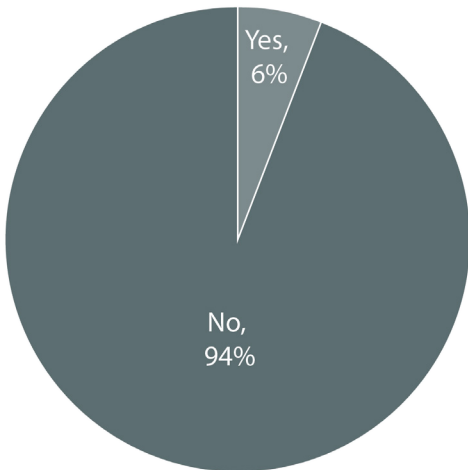
Listen very carefully. If they give a short answer let them know you'd love to hear more. Sometimes it helps to be a little vulnerable yourself if someone needs to be drawn out, don't judge, be open to receive whatever people tell you. Never presume or impose your own experience. Often their story is in this reflection.

APPENDIX H: PASSENGER SURVEY PARTICIPANT DEMOGRAPHICS

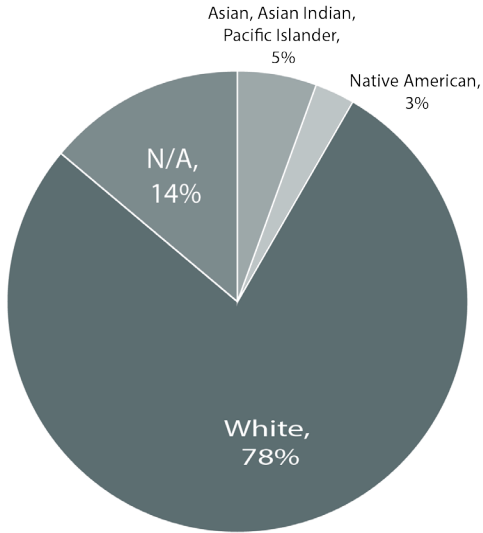
Passenger Survey Respondents By Gender



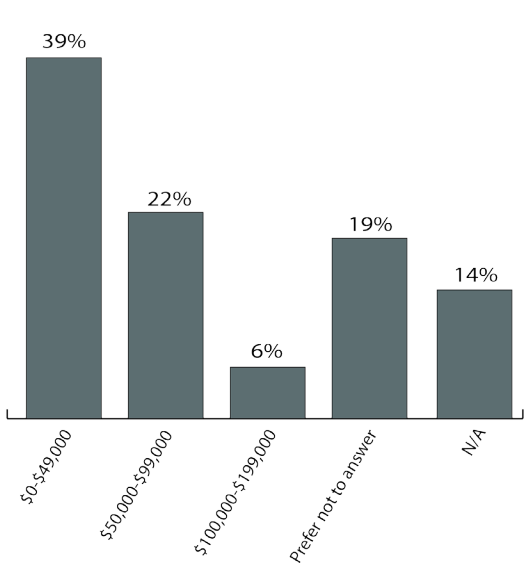
Passenger Survey Respondents Identifying Hispanic or Latinx



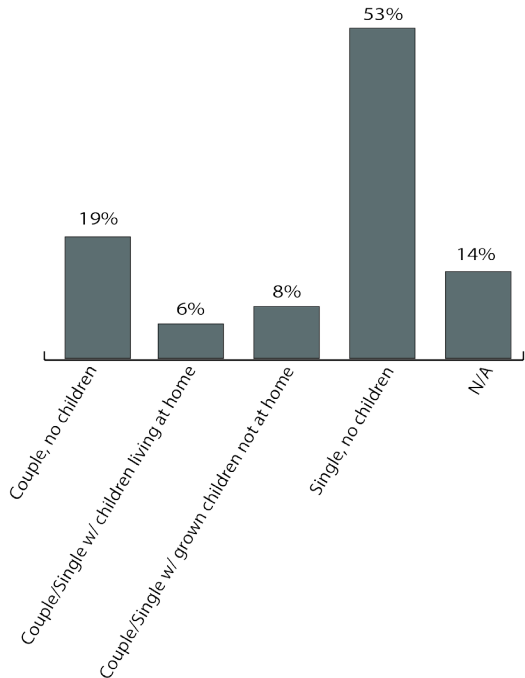
Passenger Survey Respondents By Race



Passenger Survey Respondents Annual Income

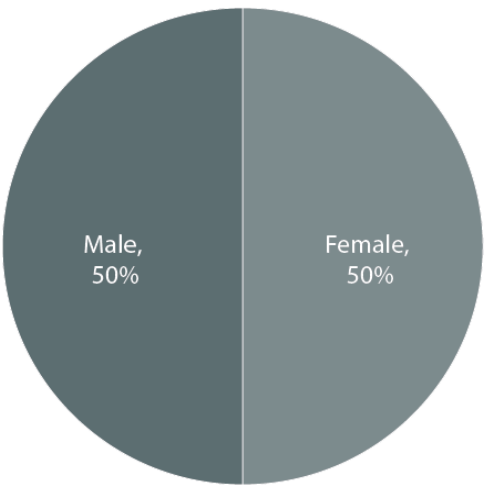


Passenger Survey Respondents by Household Status

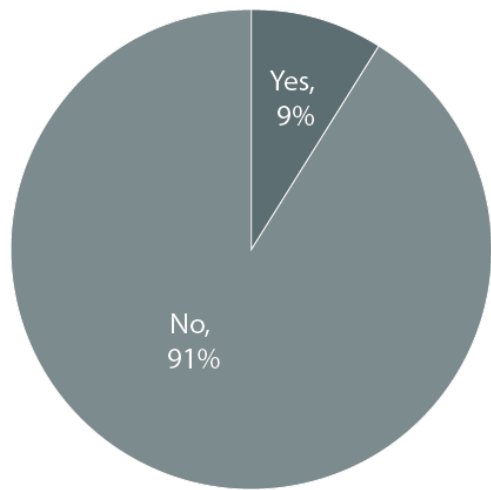


APPENDIX I: INTERCEPT SURVEY PARTICIPANT DEMOGRAPHICS

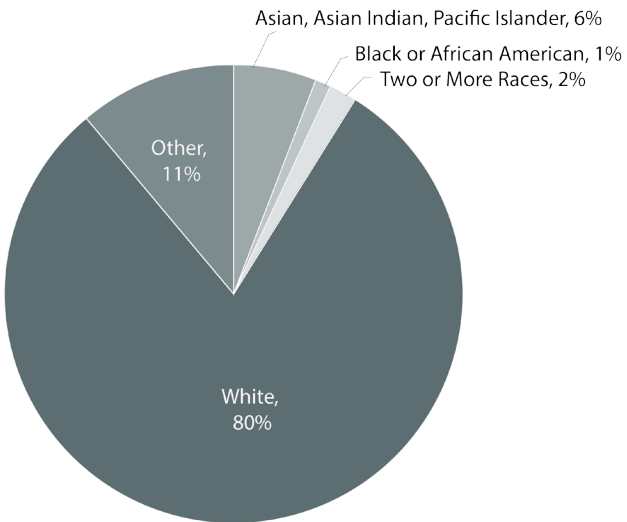
Intercept Survey Respondents By Gender



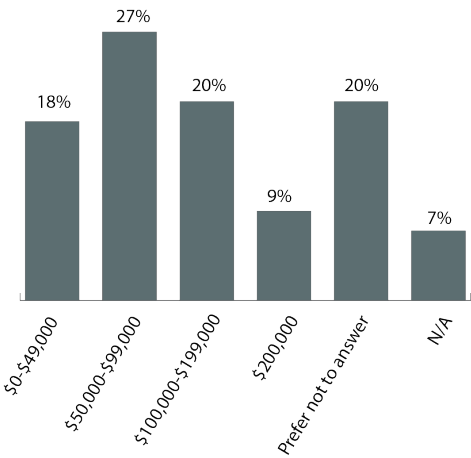
Intercept Survey Respondents Identifying Hispanic or Latinx



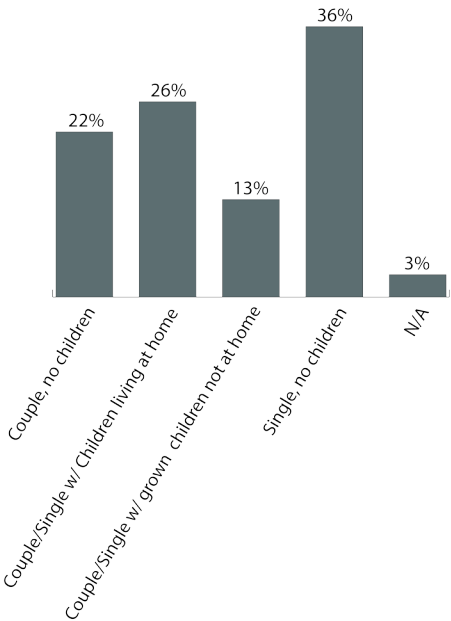
Intercept Survey Respondents By Race



Passenger Survey Respondents Annual Income



Passenger Survey Respondents by Household Status



APPENDIX J: FOCUS GROUP DISCUSSION QUESTIONS

CASCADIA CONNECT: FOCUS GROUP DISCUSSION
ISSUE BASED GROUP COMMENT FORM
4.18.2018

1. What is your favorite thing to do in the outdoors?
2. Where do you lead outdoor activities? Or where do you suggest people go?
3. How do you get to your destination or how do you recommend others get to their outdoor destination (i.e. trips you are leading or places others go)? Why?
4. Have you ever considered using or have you used public transportation or car-lite modes (rideshare, carpool) to access the outdoors as an individual or as part of a group? If so, what mode did you use, where did you go and what activities did you participate in? If not, why? What would help you and your constituents consider using these modes of transportation?
5. Where do you send your constituents to access information for outdoor recreation? OR What resources do you trust to get information about the outdoors for your constituents?
6. Anything else we should know?

CASCADIA CONNECT: FOCUS GROUP DISCUSSION
ACCESS FOR ALL COMMENT FORM
4.19.2018

1. What is your favorite thing to do in the outdoors?
2. Where do you lead outdoor activities? Or where do you suggest people go?
3. How do you get to your destination or how do you recommend others get to their outdoor destination (i.e. trips you are leading or places others go)? Why?
4. Would you ever consider using or have you used public transportation or car-lite modes (rideshare, carpool) to access the outdoors as an individual or as part of a group? If so, what mode did you use, where did you go and what activities did you participate in? If not, why?
5. What transportation services that access outdoor recreation sites are you aware of? How could these services better reach your constituency? What would help you and your constituents consider using these modes of transportation?
6. What are the best ways to share information with your communities? What resources do you send constituents to access information for outdoor recreation?
7. Anything else we should know?

APPENDIX K: ONLINE SURVEY

5/29/2018

Qualtrics Survey Software

Default Question Block

Oregon Outdoor Recreation Survey

We are Oxbow Consulting, a team of Portland State University graduate students in Urban and Regional Planning are conducting a survey with visitors to outdoor recreation sites throughout the state to help determine the viability of transit or ride-share to the state's top recreation areas. We would appreciate a few minutes of your time to answer the following questions. We are not selling anything, the survey is completely confidential, and is being conducted for research purposes only.

Upon successful completion of this survey you will be entered into a random drawing of outdoor gear as a thank-you for your participation.

Where do you live?

☐ Portland Metro area

☐ Elsewhere in Oregon

☐ Vancouver, WA

☐ Another State

What is the ZIP code of your primary residence (or country of residence, province)?

Do you ever organize or lead trips to the outdoors in Oregon?

☐ Yes

☐ No

☐ Not sure

What is the approximate age of your constituents / participants for these trips? (Check all that apply)

☐ 0 - 12

☐ 13 - 17

☐ 18 - 24

☐ 25 - 35

☐ 36 - 50

☐ 51 - 65

☐ 66 or older

Do you partner with other organizations or groups for these trips?

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview>

1/10

5/29/2018

Qualtrics Survey Software

☐ Yes

☐ No

☐ Not sure

Who do you plan trips for and/or with?

Which organizations or groups do you partner with?

When leading or planning a trip for others, what mode(s) of transportation do you use or do you suggest others use to access outdoor recreation sites/areas? (SELECT ALL THAT APPLY)

☐ Local bus (TriMet)

☐ MAX

☐ Amtrack

☐ Other bus (please list the service)

☐ Van or bus owned by an organization, group or club

☐ Private for-hire shuttle

☐ Personal automobile

☐ Carpool

☐ Carshare

☐ Other

With whom do you generally travel with to outdoor recreation sites? (SELECT ALL THAT APPLY)

☐ Travel alone

☐ Spouse / partner

☐ Child(ren)

☐ Other family

☐ Friend(s)

☐ Business or work associates

☐ Tour group / Organizations

☐ Sports team

☐ Pet(s)

☐ Meetup group

☐ Outdoor activities group or club

☐ Faith community or group

☐ Social issue group or club

☐ Clients, customers, or constituents of your work

☐ Other

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview>

2/10

APPENDIX K: ONLINE SURVEY

5/29/2018 Qualtrics Survey Software

What activities do you engage in when visiting outdoor recreation sites/areas alone or as a group? (SELECT ALL THAT APPLY)

<input type="checkbox"/> Site seeing	<input type="checkbox"/> Mountaineering
<input type="checkbox"/> Hiking	<input type="checkbox"/> Fishing
<input type="checkbox"/> Cycling	<input type="checkbox"/> Rafting
<input type="checkbox"/> Mountain biking	<input type="checkbox"/> Kayaking
<input type="checkbox"/> Skiing / snowboarding	<input type="checkbox"/> Rock climbing
<input type="checkbox"/> Surfing	<input type="checkbox"/> Trail running
<input type="checkbox"/> Backpacking	<input type="checkbox"/> Hunting
<input type="checkbox"/> Camping	<input type="checkbox"/> Other <input type="text"/>

What mode(s) of transportation do you use or do you suggest others use to access outdoor recreation sites/areas? (SELECT ALL THAT APPLY)

<input type="checkbox"/> Local Bus (TriMet)	<input type="checkbox"/> Carpool
<input type="checkbox"/> Other Bus	<input type="checkbox"/> Carshare (Car2Go, Zipcar, ReachNow, etc.)
<input type="checkbox"/> MAX Train	<input type="checkbox"/> Bicycle
<input type="checkbox"/> Amtrak Train	<input type="checkbox"/> Uber, Lyft, taxi
<input type="checkbox"/> Van or bus owned by an organization, group or club	<input type="checkbox"/> Camper / RV
<input type="checkbox"/> Private for-hire shuttle	<input type="checkbox"/> Other <input type="text"/>
<input type="checkbox"/> Drive alone	

How familiar are you with public transit options to outdoor recreation areas?

☐ Not at all
☐ Somewhat
☐ Very

Which public transit options have you heard of that access areas outside of Portland?

<input type="checkbox"/> Columbia Gorge Express	<input type="checkbox"/> POINT
<input type="checkbox"/> Mt. Hood Express	<input type="checkbox"/> Central Oregon Breeze (COB)
<input type="checkbox"/> Central East Transit (Mt. Bachelor and Bend area)	<input type="checkbox"/> Bolt Bus
<input type="checkbox"/> NWConnector	<input type="checkbox"/> Amtrak
<input type="checkbox"/> Coastal Express	<input type="checkbox"/> None
<input type="checkbox"/> Diamond Express	<input type="checkbox"/> Other <input type="text"/>

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 3/10

5/29/2018 Qualtrics Survey Software

Have you ever used any of these services to access outdoor recreation areas?

☐ Yes
☐ No
☐ Not sure

Which public transit options have you used to access outdoor recreation areas? (SELECT ALL THAT APPLY)

☐ Columbia Gorge Express
☐ Mt. Hood Express
☐ Central East Transit (Mt. Bachelor and Bend area)
☐ NWConnector
☐ Coastal Express
☐ Diamond Express
☐ POINT
☐ Central Oregon Breeze (COB)
☐ Bolt Bus
☐ Amtrak
☐ Other

How interested would you be in using transit services to recreation areas in Oregon?

☐ Not at all
☐ Somewhat
☐ Very

What, if anything, would most encourage you to take public transportation when traveling to outdoor recreation areas?

<input type="checkbox"/> Frequent bus service (multiple departure / pickup times)	<input type="checkbox"/> Reduced or inexpensive bus fares
<input type="checkbox"/> Efficient speed of trip (few transfers / stops)	<input type="checkbox"/> Travel time similar to driving a car
<input type="checkbox"/> Frequent bus stops	<input type="checkbox"/> Guarantee my seat (reservations)
<input type="checkbox"/> Stopovers in nearby cities / towns (downtown districts)	<input type="checkbox"/> Gear storage
<input type="checkbox"/> Add new bus routes (where?): <input type="text"/>	<input type="checkbox"/> None - would not ride bus at all or more

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 4/10

APPENDIX K: ONLINE SURVEY

5/29/2018 Qualtrics Survey Software

_____ frequently

☐ Increase public awareness about bus service ☐ Other _____

In a typical week, approximately how many days do you use each of the following modes of transportation? (Please select one answer for each transportation mode. If you do not ride either select 0)

	0	1	2	3	4	5	6	7
Public Transit (bus, light rail, Amtrak)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber, Lyft, Zipcar, taxi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What region(s) of Oregon do you generally visit for outdoor recreation? (SELECT ALL THAT APPLY).

☐ Coast ☐ Central / High Desert

☐ Coastal Mountains ☐ Eastern Oregon

☐ Southern Oregon ☐ Columbia Gorge

☐ Willamette Valley ☐ Other _____

☐ Cascades

In total, how many visits have you made to the Coast in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Coastal Mountains in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Southern Oregon in the past 2 years to these regions by season?

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 5/10

5/29/2018 Qualtrics Survey Software

(ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Willamette Valley in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Cascades in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Central / High Desert in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Eastern Oregon in the past 2 years to these regions by season? (ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 6/10

APPENDIX K: ONLINE SURVEY

5/29/2018 Qualtrics Survey Software

	0	1-5	6-10	Over 10
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Columbia Gorge in the past 2 years to these regions by season?
(ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In total, how many visits have you made to the Other location in the past 2 years to these regions by season?
(ONLY SELECT ONE OPTION FOR EACH SEASON, ENTER 0 IF NONE)

	0	1-5	6-10	Over 10
Spring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Where do you usually find information or hear about the outdoor recreation areas/sites that you visit?
(MARK ALL THAT APPLY)

<input type="checkbox"/> Word of mouth from co-workers, friends, or family	<input type="checkbox"/> Outdoor Organizations / Clubs
<input type="checkbox"/> Magazines	<input type="checkbox"/> Public Advertisement
<input type="checkbox"/> Websites	<input type="checkbox"/> I don't find out information
<input type="checkbox"/> Social Media	<input type="checkbox"/> Other <input type="text"/>
<input type="checkbox"/> Outdoor Retailers	

Which magazines? (if not sure write "not sure")

Which social media sites? (if not sure write "not sure")

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 7/10

5/29/2018 Qualtrics Survey Software

Which websites? (if not sure write "not sure")

Which outdoor retailers? (if not sure write "not sure")

Which organizations or clubs? (if not sure write "not sure")

Which types of public advertisement? (Select all that apply)

<input type="checkbox"/> Radio	<input type="checkbox"/> Netflix
<input type="checkbox"/> Bus	<input type="checkbox"/> Youtube
<input type="checkbox"/> Billboards	<input type="checkbox"/> Magazine
<input type="checkbox"/> T.V.	<input type="checkbox"/> Newspaper
<input type="checkbox"/> Streaming music service	<input type="checkbox"/> Other <input type="text"/>
<input type="checkbox"/> Hulu	

Do you have any comments or suggestions about your or others experiences with traveling to outdoor recreation areas?

If interested in being entered to win a free outdoor product for filling out this survey, please add your email.

The following questions are optional and for classification purposes only. This survey is confidential.

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview> 8/10

APPENDIX K: ONLINE SURVEY

5/29/2018

Qualtrics Survey Software

If you do not wish to provide demographic data, scroll to the bottom of the page and click the arrow.

Which category best describes your household status?

☐ Single, no children

☐ Couple, no children

☐ Household (single or couple) w/children living at home

☐ Household (single or couple) w/grown children not at home

What race do you identify as?

☐ White

☐ Black or African American

☐ American Indian or Alaska Native

☐ Asian

☐ Native Hawaiian or Pacific Islander

☐ Other

Are you of Hispanic or Latino origin?

☐ Yes

☐ No

How old are you?

☐ 17 or younger

☐ 18 - 24

☐ 25 - 35

☐ 36 - 50

☐ 51 - 65

☐ 66 or older

Gender

☐ Male

☐ Female

☐ Non-binary

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview>

9/10

5/29/2018

Qualtrics Survey Software

Other

Which of the following categories best describes the annual income of your household (before taxes)?

☐ \$0 - \$49,999

☐ \$50,000 - \$99,000

☐ \$100,000 - \$199,000

☐ \$200,000 - or more

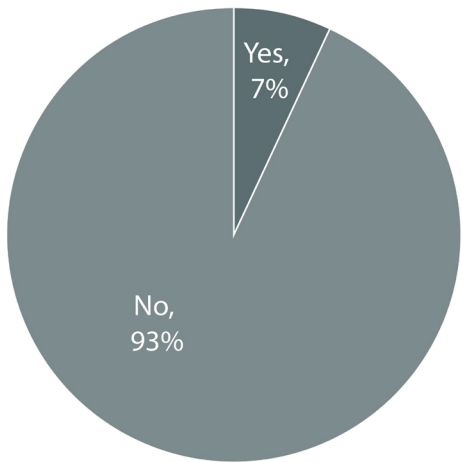
☐ Don't know / prefer not to answer

<https://portlandstate.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview>

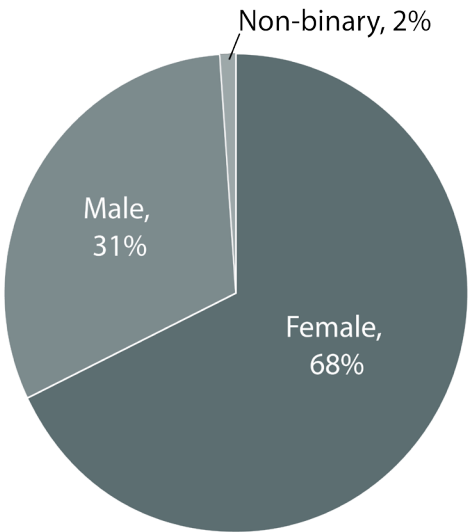
10/10

APPENDIX L: ONLINE SURVEY PARTICIPANT DEMOGRAPHICS

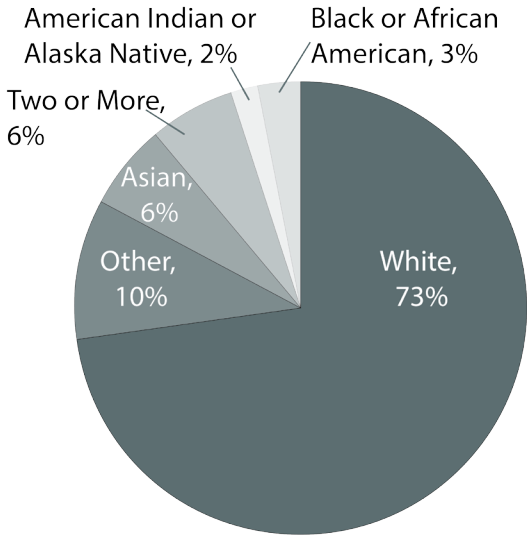
Online Survey Respondents By Gender



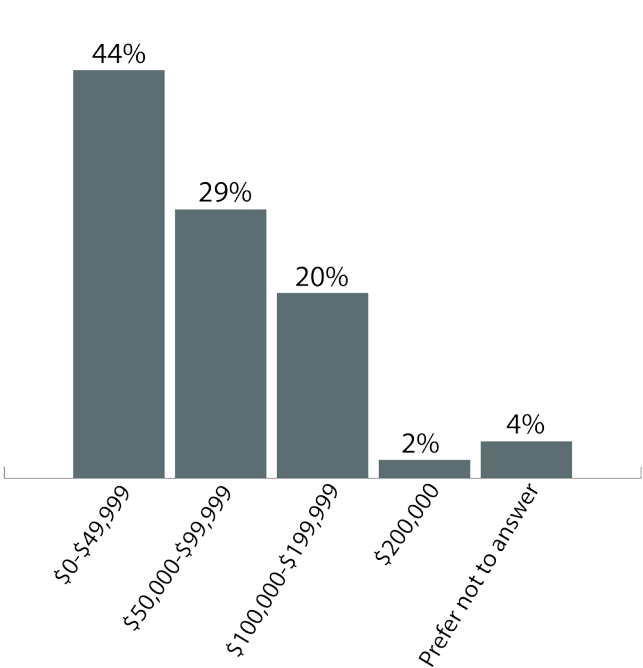
Online Survey Respondents Identifying Hispanic or Latinx



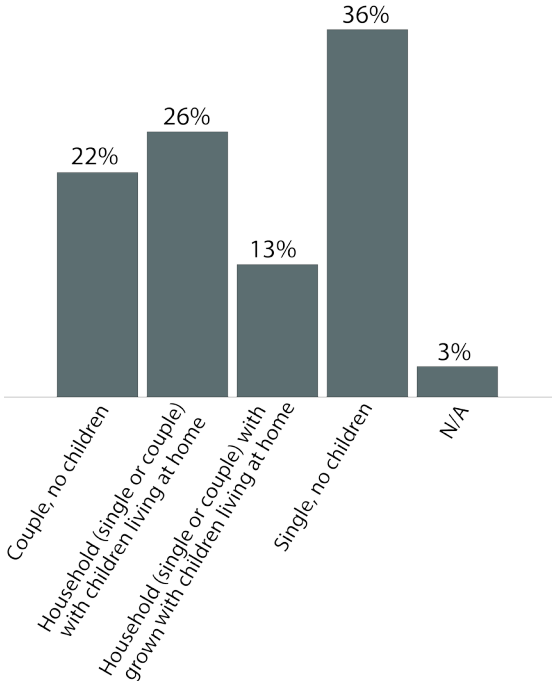
Intercept Survey Respondents By Race



Online Survey Respondents Annual Income



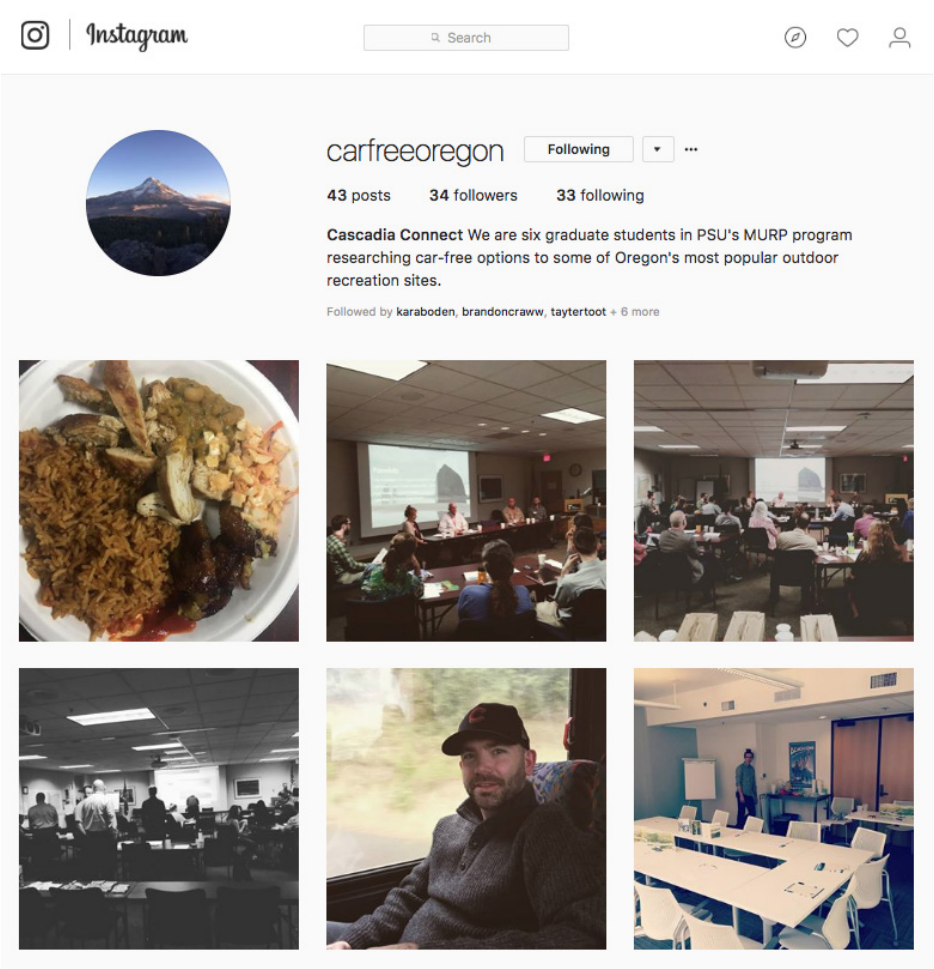
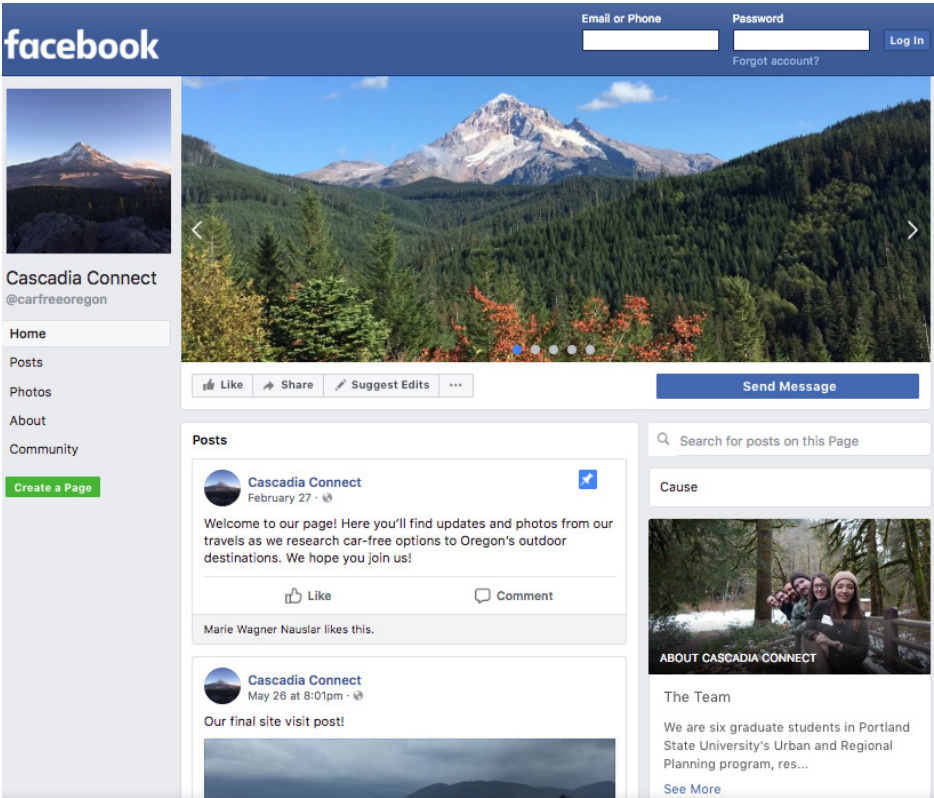
Online Survey Respondents by Household Status



APPENDIX L: ONLINE SURVEY RESPONDENTS LIST OF PARTNERS

Organizations Respondents Partnered With When Leading or Taking Trips to Oregon's Outdoor Recreation Destinations		
Bark	Local conferences	Lightfoot Militia
ROSE CDC	Friends of the Gorge	Metro
Lents Youth Initiative	Casa Latinos Unidos de Benton County	Molalla Riverwatch Watershed Council
Vive Northwest,	Centro Latinoamericano	Molalla River Alliance
Oregon Mycological Society	Mano a Mano	Native Fish Society
Sierra Club (Oregon Chapter)	Jackson Street Youth Shelter	Molalla River School District
Great Old Broads for Wilderness	NAACP Eugene	Oregon Wild
Cascadia Wild	Cornerstone Community Housing	various hiking and biking meetup groups
Devil's Club	MeetUps	Northwest Trail Alliance
Native Plant Society of Portland	Ranges	Evergreen MTB Alliance
Washington Trails Association	S&R	
PCTA	Passport Oregon	
TKO	I have a Dream	
Adaptive Sports NW	Portland Tennis & Education	
Different Spokes	Freinds of the Gorge	
OSCI	Lower Columbia Estuary Partnership	
The Blue Zones Project	Portland Parks and Recreation	
LatinXplorers	Portland Public Schools	
Radio Tierra KZAS	North Clackamah School District	
Latin Xplorers	Oregon State Parks Foundation	
SOLVE Oregon	Wisdom of the Elders	
local walking groups	The Boy Scouts	

APPENDIX M: SOCIAL MEDIA



APPENDIX N: THE OXBOW CONSULTING TEAM

MARI VALENCIA

PROJECT MANAGER

Specialization: Community Development, Land Use

KARA BODEN

COMMUNICATIONS LEAD

Specialization: Transportation

MATT GRAY

DESIGN LEAD

Specialization: Transportation

TONY LAMB

OUTREACH & TECHNICAL LEAD

Specialization: Economic, Real Estate, and Community Development

BRANDON CRAWFORD

GIS LEAD

Specialization: Environment, GIS

JOHN WHITMAN

POLICY & RESEARCH LEAD

Specialization: Land Use, Environment



OXBOW CONSULTING

LEFT TO RIGHT: JOHN, BRANDON, TONY, MATT, KARA, AND MARI

