



# PORTLAND OFF-ROAD CYCLING MASTER PLAN

## NEEDS ASSESSMENT

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## Introduction

This report presents an assessment of community needs for off-road cycling experiences, including current levels of participation, demographics of participants, and potential demand for additional off-road cycling experiences. The assessment is based on:

- A literature review, including national, state, and local data and
- The results of a community questionnaire - To better understanding of the desired types of facilities, and experiences the *Portland Off-road Cycling Master Plan* project solicited public input using a questionnaire. The questionnaire and associated public engagement was intended identify gaps in the network, geographic inequalities, identify user groups and facilities to meet their needs. The questionnaire included sections pertaining to perceptions in off-road cycling facilities and off-road cyclists' needs and priorities. The questionnaire was administered in both web-based and paper formats over the summer of 2016.

The needs assessment, along with the existing conditions assessment, forms the basis for identifying gaps in the network, geographic inequalities, and lack of facilities for identified user groups. The existing conditions and needs assessment also inform the site assessment and system planning components of the Plan.

## Key Findings

The following key findings present a snapshot of off-road cycling participation and needs:

### *Participation*

- Approximately 11-12% of City residents ride a bike off-road at least once per year (or approximately 72,700 people in 2015).
- Walking and hiking are the most popular uses of unpaved trails, both locally and statewide. Approximately 60-65% of residents walk or hike on local trails.
- Off-road cycling has higher levels of participation than many outdoor sports, including tennis, field sports (baseball, softball, football, soccer, lacrosse), golf, disc golf, and skateboarding.
- A significant percentage (40%) of statewide off-road cycling participation occurs in Multnomah County. Portland is also a major location for competitive off-road cycling events.

### *Demographics*

- The demographics of people who ride bicycles off-road are similar to those who participate in other trail-based recreational activities.
  - More women participate than men.
  - People of all ages participate – total adult participation is roughly even between the following age groups: 18-29, 30-39, 40-49, and 50 or older.
  - People of all income groups participate. Approximately one-third of participating households have incomes of \$50,000 or less, while 28% earn over \$100,000.
- Trail-based activities, including off-road cycling, tend to have higher participation rates among people who identify as White than the population as a whole.

### *Demand for additional opportunities*

- Creating additional unpaved dirt trails for walking and hiking is the highest non-motorized trail priority both statewide and in the Portland region.
- Given trends in population growth and participation, overall off-road cycling ridership is expected to grow.
- Nearly half (47%) of residents in the Portland region place a moderate or high priority on creating additional trails for singletrack bicycling, the highest level of support statewide. However, this is lower than similar ratings for walking/hiking (76%), hard surface biking (59%), and running/jogging (54%).
- A local community questionnaire indicates a particular interest in beginner and moderately challenging trails.
- Most off-road cyclists prefer rides that are between 30 minutes and 2 hours in length, or approximately 3 – 11+ miles.
- Ability to experience nature and well-maintained trails are key desires.

## Equity Considerations

Equity exists when neighborhood, socioeconomic status, race, language ability, and other demographics do not dictate access to resources needed for health and well-being. These resources include safe neighborhoods, access to natural and green spaces for recreation or alternate means of travel, and efficient and safe transit routes. The Portland Plan's vision for equity relies on input from all Portlanders in public decision-making that affects them or the communities where they reside.

The Off-Road Cycling Plan strives to support equity by bringing off-road cycling trails and bike parks to neighborhoods which have traditionally not had immediate community access to such places. The City of Portland and City Council are committed to striving towards equitable access to the well-being and essential resources for all Portlanders (Portland City Ordinance 184880).

The data presented in this Needs Assessment report comes from two primary sources: surveys and user participation counts. This data provides valuable information regarding user experience and feedback, but does not represent all populations and demographics of people who may be affected by the Plan.

### **User Participation Counts**

These participation counts provide accurate measures of actual trail usage over a set period of time. These sources include Northwest Trail Alliance (2016) Stub Stewart State Park Trail Count Data, Oregon Bicycle Association (2015) race participation data, and The Intertwine Alliance Region Trail Counts (2016). By virtue of the collection method, the data specifically does not represent populations with limited trail access, limited trail or activity familiarity, or who do not participate due to lack of equipment, skills, time or other reasons.

### **Surveys and Questionnaires**

Surveys of smaller samples of a population are often conducted and generalized to represent larger populations. However, such data may under- or misrepresent populations depending on how the survey was designed or conducted (such as usability, cultural appropriateness, language, and accessibility).

- The Oregon Resident Outdoor Recreation Demand Analysis by The Oregon Parks and Recreation Department (2012) sent paper surveys randomly to Oregon residents using DMV records. Some accessed the survey form online and the results represents data at the national, regional, and county level. The survey form was lengthy, in English, and sent without incentive. Those most engaged, as represented by self-reported participation in outdoor recreation in Oregon in the previous year, were more likely to respond (88%) compared to those who were not. Some data from smaller counties were combined, and several of the counties surveyed have responses from demographically homogenous populations which exclude youth, lower socioeconomic status, and communities of colors except for those identifying as indigenous.
- The Oregon Trails 2016: A Vision for the Future report by the Oregon Parks and Recreation Department surveyed thousands of trail users throughout Oregon, but did not survey non-trail users which limits the scope of representation in the resulting data.

- The Oregon Non-Motorized Trail Recreation Participation and Priorities report from Oregon State University (2015) used both a probability sample, using the 2013-2017 SCORP data, and a convenience sample via social media, recreation clubs, and their associated newsletters. Although the SCORP data is weighted for age and gender, compared to statewide demographic statistics, trail users were younger, more highly educated with higher income, and represented limited ethnic diversity. The report highlights current trail user priorities and participation, and does not include samples from non-users, past users, or possible future users.
- The Outdoor Recreation Participation Topline Report from the Outdoor Foundation (2016) was compiled from national online surveys and interviews with equal representation among gender and age brackets. Survey responses, although with above 70% Caucasian/white participation, reflect national racial proportions of the United States. Concentrated efforts were made to gather data from traditionally underrepresented populations and the final data was weighted in terms of gender, age, income, household size, region, and population density. No demographics were taken regarding disability or English language ability. Respondents were both current users and aspirational users. This data is considered reliable at the national level, but gives less information specific to Oregon or the Pacific Northwest.
- The Forest Park Recreation Survey by Portland Parks & Recreation (2012) intercepted and surveyed trail users in the park. This survey tool focused on user preference, experience, and frequency of use. A majority of respondents visit the park at least monthly (75%) and are overrepresented by higher educated, higher income individuals aged 25-54 identifying as White/Caucasian. The frequency of use indicates access and trail familiarity. The sample of respondents are not representative of communities of color, or less frequent or first time users.
- The City of Portland Bureau of Planning and Sustainability (2016) Off-road Cycling Community Questionnaire was administered online and through in-person solicitation at community and organized events. The questionnaire was presented in both English and Spanish. In-person administration was particularly designed to reach diverse community members (42% of responses were from people of color). This methodology was not representative of all Portlanders, though results are presented in subgroups which can suggest preliminary findings for some identified populations.

Each data set provides valuable information, and with proper context, sheds light on use and preferences of trail users. Most sources of data excluded non-users or perhaps less frequent users, do not track data related to English language ability, and no specific mention was made of physical disability. This data set should be considered reliable to reflect those only with current access to trails, necessary equipment, familiarity with trail locations, and strong English language ability, but must not be generalized to reflect City of Portland residents as a whole.

The Off-Road Cycling Master Plan seeks to bring equitable opportunities for healthful recreation and safe non-motorized trails to new communities and underserved populations. As such, more input on community needs and priorities is needed, particularly from aspirational users of all ages. Ideally, input should be representative of the demographics and language ability of each neighborhood in question, and the needs and opportunities for physically disabled residents should be taken into account.

## How many people are riding bicycles off-road?

### National, Regional and Local Participation in Off-road Cycling

#### National Participation

Nationally, the annual *Outdoor Recreation Participation Topline Report* (2016) published by the Outdoor Foundation, found that in 2015, mountain biking, unpaved bicycling, and BMX had over 11 million participants over the age of 6 combined (representing 3.8% of the national population over age 6). These figures reflect a three-year increase in participation of 2.8% for mountain biking and unpaved bicycling and over 7.5% for BMX. (Outdoor Foundation, 2016)

As a comparison, off-road cycling is less popular than day hiking (the most popular trail-based activity) as well as wildlife and bird watching – 10% or more of the nation’s population over age 6 participates in these activities each year, see Table 1. However, off-road cycling/BMX is more popular than trail running (2.7%) and skateboarding (2.2%). Off-road cycling participation rates are also on par with many traditional field sports, including outdoor soccer (4.3%), baseball (4.7%), softball (3.2%), and tackle/touch football (4.3%)<sup>1</sup>. (Outdoor Foundation, 2016)

**Table 1. User Occasions and Participation in Select Trail-based Recreation Activities, Nationwide (2015)**

Outdoor Activity	Annual Participation Nationwide			3-Year Change	% US Population over age 6
	2013	2014	2015		
Bicycling (BMX)	2,168	2,350	2,690	7.50%	0.9%
Bicycling (Mountain/NonPaved)	8,542	8,044	8,316	2.80%	2.8%
Bicycling (Road/Paved Surface)	40,888	39,725	38,280	-0.80%	13.0%
Hiking (Day)	34,378	36,222	37,232	2.60%	12.7%
Wildlife Viewing*	21,359	21,110	29,718	-3.40%	10.1%
Birdwatching*	14,152	13,179	13,093	-2.80%	4.5%
Trail Running	6,792	7,531	8,139	10.70%	2.8%
Skateboarding	6,350	6,582	6,436	-0.90%	2.2%

\* More than 1/4 mile from home or vehicle

Americans who ride a bicycle (road cycling, mountain biking, BMX) do so with much greater frequency (63 times per year) than those who participate in hiking (15 times per year). Cycling was the second most frequent activity after jogging and running (average of 91 outings per year). (Outdoor Foundation, 2016)

#### Statewide Participation

Statewide participation trends show that Oregonians participate at higher rates in a variety of outdoor recreational activities, including off-road cycling, than Americans in general. A study conducted by the Outdoor Foundation showed that approximately 28% of Oregonians, or 775,000 people, participate in either paved or off-road bicycling. (Outdoor Foundation, 2016) The *Oregon Resident Outdoor Recreation Demand Analysis* (2012), prepared in support of the *Statewide Outdoor Recreation Comprehensive Plan*

by Oregon State University, showed that approximately 12.2% of Oregon’s population participated in off-road cycling, logging nearly 15 million user occasions in 2011. Users participate on average 26 times per person per year. (Oregon Parks and Recreation Department, 2012)

The *Oregon Non-Motorized Trail Participation and Priorities* (2015) found that walking on local trails and paths was the most popular non-motorized trail based activity, with participation rates of over 60%. Day hiking on non-local trails (48%) and cycling on paved trails (25%) were also popular activities. Off-road cycling participation rates were similar to those of long-distance hiking/backpacking (12%, though with 1/3 the number of occasions per year) and trail running (14.8%, twice the number of occasions per year). Birdwatching was not as popular in Oregon as in national studies, with 13.6% participation statewide, similar to off-road cycling participation rates. (Oregon State University, 2015)

**Table 2. User Occasions and Participation in Select Trail-based Recreation Activities, Oregon Residents 2011**

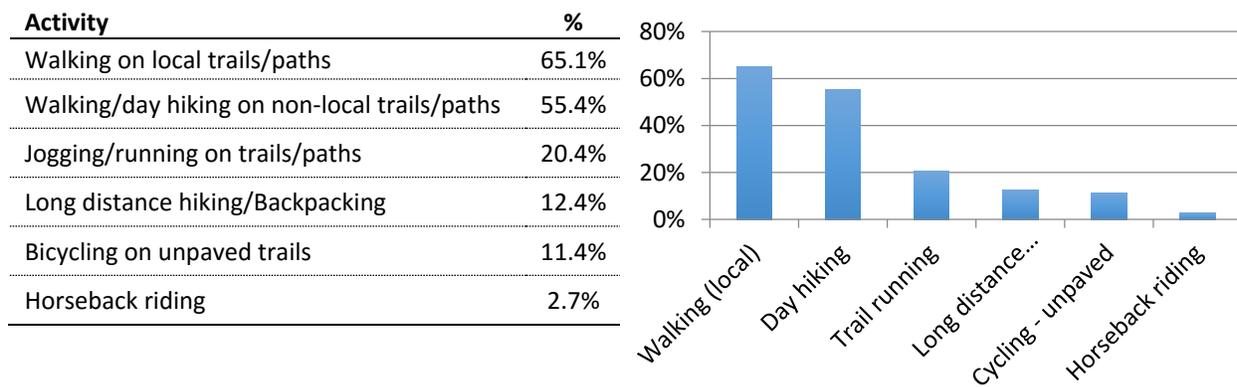
<b>Activity</b>	<b>User Occasions</b>	<b>% Population Participating</b>
Walking on local trails/paths	121,365,856	61.0%
Walking/day hiking on non-local trails/paths	40,246,062	48.0%
Jogging/running on trails/paths	32,192,793	14.8%
Bicycling on unpaved trails	14,766,435	12.2%
Long distance hiking/Backpacking	4,447,768	12.0%
Horseback riding	9,715,218	5.4%

Similar to national findings, more Oregonians participate in off-road cycling (12.2%) than many outdoor sports, including outdoor tennis (8.8%), baseball/softball (8.5%), field sports (football, soccer, lacrosse, rugby, ultimate Frisbee combined at 10.3%), golf (11.3%), disc golf (7.1%), and skateboarding (4.4%). Public agencies frequently provide recreational facilities for many of these outdoor activities. (Oregon Parks and Recreation Department, 2012)

#### *Local Participation*

Approximately 11.4% of Multnomah County residents, or approximately 85,000 people, bicycled on unpaved trails in 2011. Off-road cycling is three times more popular in Multnomah County than nationwide. However, fewer Multnomah County residents participate in off-road cycling than in hiking (all types) and trail running, see Table 3. (Oregon Parks and Recreation Department, 2012)

People bicycled on unpaved trails in Multnomah County almost 6 million times in 2011. So, of the over 13 million user occasions of off-road cycling in Oregon, approximately 40% occurred in Multnomah County, the highest share of any trail-based activity. Nearby Washington and Clackamas Counties also recorded high participation levels (14.8% and 6.6% respectively) suggesting that there is nearby demand – residents of these counties may also use facilities in the City of Portland. (Oregon Parks and Recreation Department, 2012)

**Table 3. Participation in Select Trail-based Recreation Activities, Multnomah County Residents 2011**


Similar to statewide and national findings, more Multnomah County residents participate in off-road cycling (11.4%) than many outdoor sports, including baseball/softball (5.7%), field sports (football, soccer, lacrosse, rugby, ultimate Frisbee combined at 10.8%), golf (7.2%), disc golf (4.9%), and skateboarding (5.0%). (Oregon Parks and Recreation Department, 2012)

#### *Racing Participation*

While racing represents a small portion of overall off-road cycling participation, it provides another metric of overall demand for off-road cycling in Portland. Portland hosts many of the largest off-road cycling races and events in the state, including cyclocross and short-track cross country mountain biking events.

The Oregon Bicycle Racing Association (OBRA) sanctions the majority of cycling races held in the state. The Cross Crusade cyclocross race series, which includes races in Portland, is the largest such series in the nation.

In 2015, there were nearly 12,000 participants in 28 OBRA-sanctioned off-road cycling races in Portland. These include over 9,140 participants in cyclocross races and about 2,830 in short-track cross country mountain biking. (Oregon Bicycle Association, 2015)

Both types of events draw a variety of participants, in terms of gender, age, and skill level. For both types of events, approximately 1 participant in 5 is a woman (18% for cyclocross, 22% for mountain biking), however this data may be inaccurate, because women may race in men's categories. The majority of participants are adults, mostly under the age of 55, however 7% of cyclocross and 11% of mountain bike race participants are youth age 18 and under, and there is limited participation by older adults as well. (Oregon Bicycle Association, 2015)

Cyclocross races attract riders across different skill levels at relatively equal rates; though intermediate and advanced riders represent the largest portion of participants (27% and 20%), 11% of riders are beginners and 18% are elite (24% of riders participate in mixed skill events). Mountain bike races are most popular with cyclists of intermediate skill (41% of participants), with beginners and advanced cyclists representing 16% of participants each and just 2% of participants at the elite level (25% of cyclists participate in mixed-skill events). (Oregon Bicycle Association, 2015)

More than half of the statewide cyclocross participants and the majority of short track cross country participants in 2015 competed in Portland. Races held in Portland attract local residents. Over half (50 to

57%) of Cross-Crusade participants were Portland residents, with the remainder travelling from the region, Oregon and from outside the US. Similarly, between 62 and 70 percent of Short Track race participants were Portland residents, and nearly one-third travel to Portland to race. (Oregon Bicycle Association, 2015)

**Table 4. Participation in Off-road Cycling racing events (2015)**

	Number of Events	Participants
<b>Cyclo-cross</b>		
Statewide	51	18,070
Portland area (35 miles)	32	471
Portland	20	9143
<b>Short Track XC</b>		
Statewide	14	3100
Portland	8	2836
<b>Other Off-road events</b>		
Statewide	26	3831
Portland	0	0
<b>Totals</b>	<b>151</b>	<b>37,451</b>

#### *Forest Park trail counts and user surveys*

The Intertwine Alliance conducts annual trail counts at sites across the Portland region. In 2016, trail counts occurred on four selected trails within Forest Park. Counts occurred at varying times of day/evening, on a weekday and weekend day, and in varying weather conditions. In total, cyclists made up 8% of users on Leif Erikson, 43% of users on Firelane 5, and 45% of users on Saltzman Road. No cyclists were observed on the Wildwood Trail, and none have been recorded in counts over the past five years. Hikers made up 47% of users on the Wildwood Trail, 14% of users on Firelane 5, and 24% of users on both Leif Erikson and Saltzman Road. Notably, trail runners made up a significant percentage (40-60%) of users on Leif Erikson, Saltzman Road, and the Wildwood Trail. (The Intertwine Alliance, 2016)

While these counts provide some information about trail use and demand in Forest Park, they should be used with caution. Little multi-year information is available and many trails within the park are not represented. Weather conditions can vary between trail counts and impact results. In addition, trail counts cannot capture latent demand for recreational use within the park.

In 2012, Portland Parks and Recreation contracted with the Portland State University (PSU) Survey Research Lab to conduct a baseline recreation survey for Forest Park. PSU conducted intercept surveys over six days in three seasons; 2,277 park users completed the survey. This user survey found that 9.3% of park users participated in off-road cycling as one of their top recreational activities in the park. More popular activities included hiking/walking (38% of respondents), jogging/running (25%), walking the dog (14%), and plant or wildlife viewing (9.5%). When asked about desired park improvements in an open-ended question, six percent of survey respondents desired an increase in mountain biking access/trails – the most popular response. (Portland Parks & Recreation, 2012)

#### *Stub Stewart State Park Ridership Counts*

Located approximately 30 miles west of Portland in Washington County, Stub Stewart State Park is one of the closest facilities with purpose-built off-road cycling trails. The park includes trails for off-road cycling, ranging from beginner cross-country trails to technical freeride trails. As such, it provides a

useful data point for participation in the Portland region. According to trail count data, approximately 12,800 visitors used the off-road cycling trails in 2015. Participation increased to over 18,000 riders in 2016. (Northwest Trail Alliance, 2016)

## Who rides bicycles off-road? Demographics of off-road cyclists

The *Oregon Non-Motorized Trail Participation and Priorities* report prepared by Oregon State University in July 2015 in support of *Oregon Trails 2016* explored the demographic trends of people participating in unpaved bicycling across the state.

### Gender

The study found that 46% of participants in off-road cycling were male and 54% were female. The overall population of Oregon is 49% male and 51% female. This higher level of participation by women is also found in other trail-based recreational activities, including walking, running, and biking on paved trails. (Oregon State University, 2015)

### Age

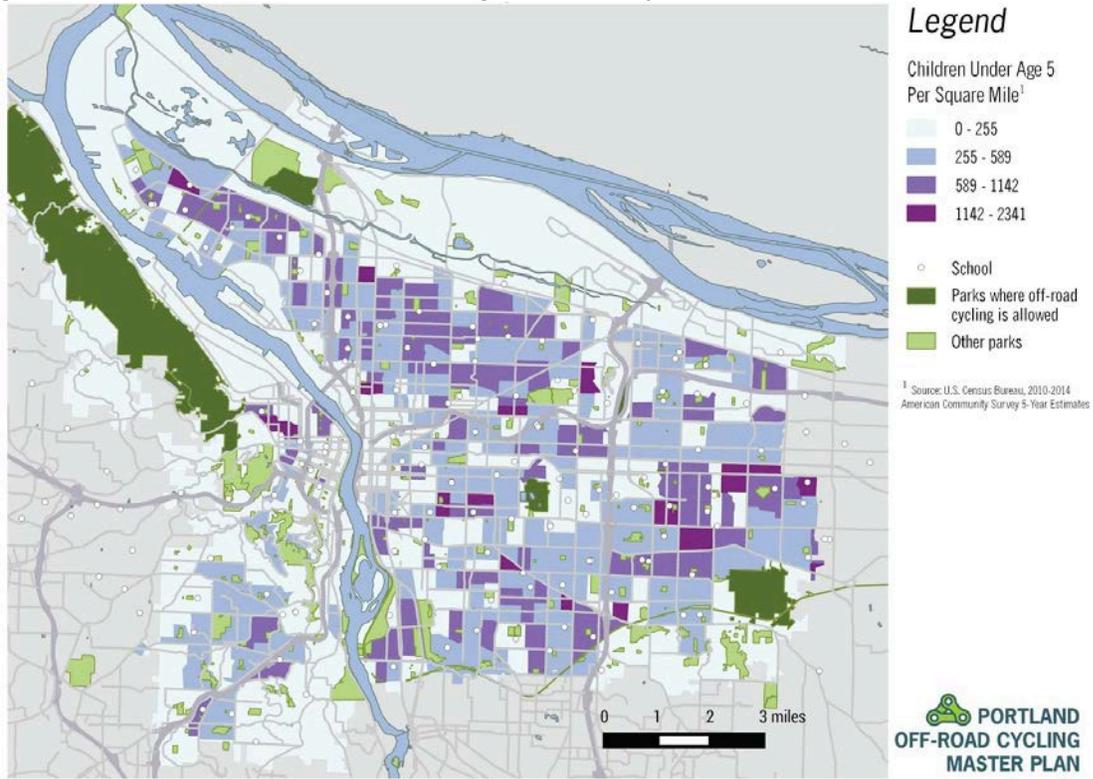
According to *Oregon Trails 2016*, adults of all ages participate in bicycling on unpaved trails. However, "...as expected, older Oregonians are less likely to engage in trail activities...". (Oregon Parks and Recreation Department, 2016, p. 80) The study found that approximately 28 percent of off-road cycling participants are between 18 and 29 years old, 24% are 30 to 39, 25% are 40 to 49, 14% are 50 to 59, and 9% are older than 60. This distribution is relatively similar to that of other activities, such as walking on trails and snowshoeing. The study noted that older Oregonians are less likely to participate in all trail-based activities, though hiking had the highest participation (15% over age 60). Backpacking and running have the highest proportion of younger adults participating (36% of participants are between 18 and 29 years old).

**Table 5. Oregon Non-Motorized Trail Participation - Age Demographics**

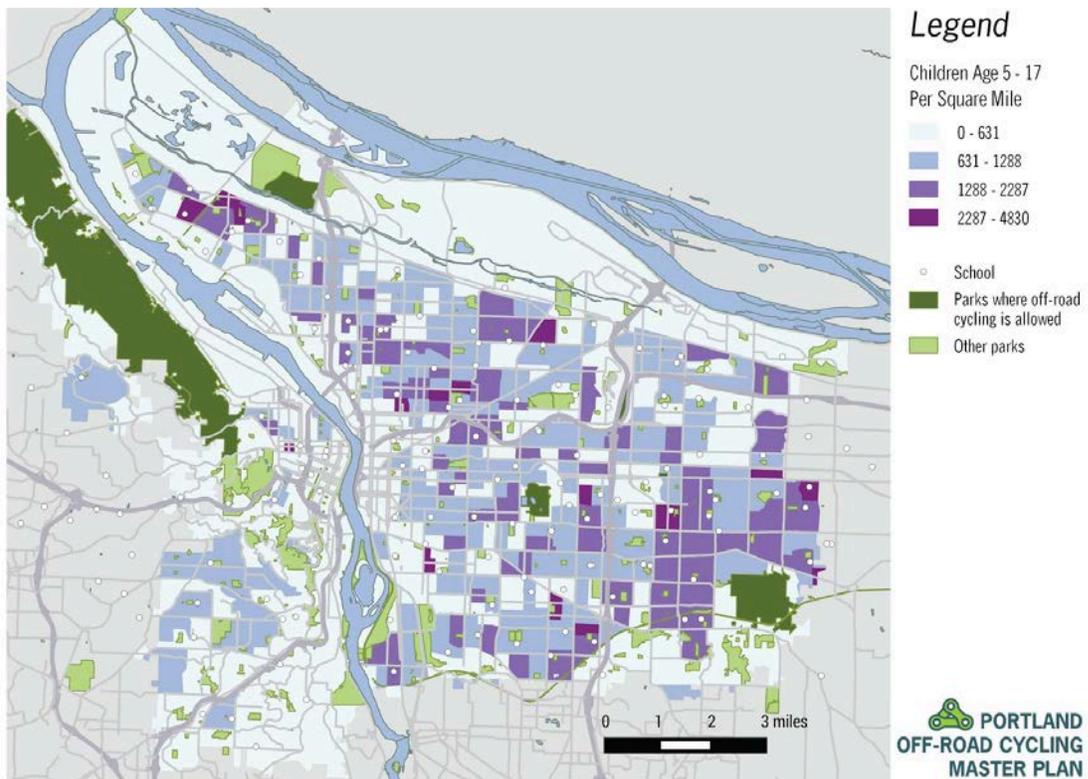
Activity	Age Category					
	18-29	30-39	40-49	50-59	60-69	70+
Bicycling on unpaved trails	28%	24%	25%	14%	7%	2%
Walking on local trails/paths	25%	24%	21%	16%	10%	5%
Walking/day hiking on non-local trails/paths	2%	25%	21%	17%	9%	3%
Jogging/running on trails/paths	36%	30%	21%	9%	4%	0%
Bicycling on paved trails	26%	26%	25%	14%	7%	2%
Horseback riding	31%	20%	22%	18%	8%	2%
Cross-country skiing	28%	21%	22%	15%	12%	2%
Snowshoeing	29%	23%	21%	16%	10%	1%
All Oregonians	21%	17%	17%	18%	14%	13%

While limited local data is available for youth, the National Outdoor Recreation survey indicates that road, mountain, and BMX biking rank as the most popular outdoor activity for young between ages of 6 and 17. (Outdoor Foundation, 2016) Figures 1 and 2 show the distribution of children under the age of 5 and ages 5 to 17 respectively in Portland by population per square mile. These figures also show school and park locations, including the locations of parks where off-road cycling is currently allowed. Children and youth are a significant demographic in off-road cycling, and they may not be well-represented in questionnaires and surveys.

**Figure 1. Distribution of Children under Age 5 in the City of Portland**



**Figure 2. Distribution of Children Ages 5-17 in the City of Portland**



### *Race and Ethnicity*

Trail users in Oregon overwhelmingly identify as White (92%), while other ethnicities are represented in the low single digit percentages. This representation is comparable across all trail activities, including off-road cycling. For comparison, 89% of Oregonians identify as White. (Oregon State University, 2015, p. 12)

### *Educational Attainment*

Trail users in general were more highly educated as compared to the census data of Oregonians as a whole. Slightly over half of people who participated in unpaved bicycling have a bachelor's degree or higher, comparable to rates for local walking (52%). Trail activities which require specialized equipment and training such as snowshoeing and cross-country skiing had a higher representation of highly educated respondents as compared to more widely accessible trail activities. (Oregon Parks and Recreation Department, 2016, p. 82)

### *Income*

While people of all income levels participate in trail-based activities, trail users in Oregon tend to have higher income levels than Oregonians overall. Approximately one-third of households who participate in off-road cycling have incomes of \$50,000 or less, while 28% earn over \$100,000. The percentage of lower income households participating is higher in off-road cycling than many other trail activities (including running, paved cycling, horseback riding, cross country skiing, and snowshoeing) but lower than participation in walking (35%). (Oregon Parks and Recreation Department, 2016)

### *Participation in other recreational activities*

According to *Oregon Trails 2016*, nearly all trail users report participating in walking or hiking at least once in the past 12 months. Approximately 23% report participating in off-road cycling. (Oregon Parks and Recreation Department, 2016, p. 88) This reinforces the prevalence of walking as a trail based activity, but also points to the likely multi-sport participation of off-road cyclists. This is further demonstrated in the results from the community questionnaire – the majority (73%) of respondents who participate in off-road cycling also reported walking or hiking in local parks. (City of Portland Bureau of Planning and Sustainability, 2016)

## Is there demand for additional off-road cycling trails and facilities?

### *Ridership Trends*

Participation in off-road cycling is expected to increase from its current levels. The population of the City of Portland and surrounding areas continues to grow. If current levels of participation remain constant, the total number of Portland residents participating in off-road cycling will increase from approximately 72,000 participants in 2015 to approximately 102,000 participants in 2035 (assuming 11.4% participation and growth of 260,000 residents as stated in the *Portland 2035 Comprehensive Plan*).

In addition, participation in off-road bicycling is increasing nationwide. Participation rates rose from 2.9% in 2010 to 4.3% in 2015. (Outdoor Foundation, 2016)

### *Statewide Priorities*

According to *Oregon Trails 2016*, “the highest priority for additional trails was for walking/hiking, both inside and outside one’s community.” Trails for hard surface biking were the next highest priority for

inside [one’s community]... Close-to-home investments will maximize everyday use by local residents.” (Oregon Parks and Recreation Department, 2016, p. 107)

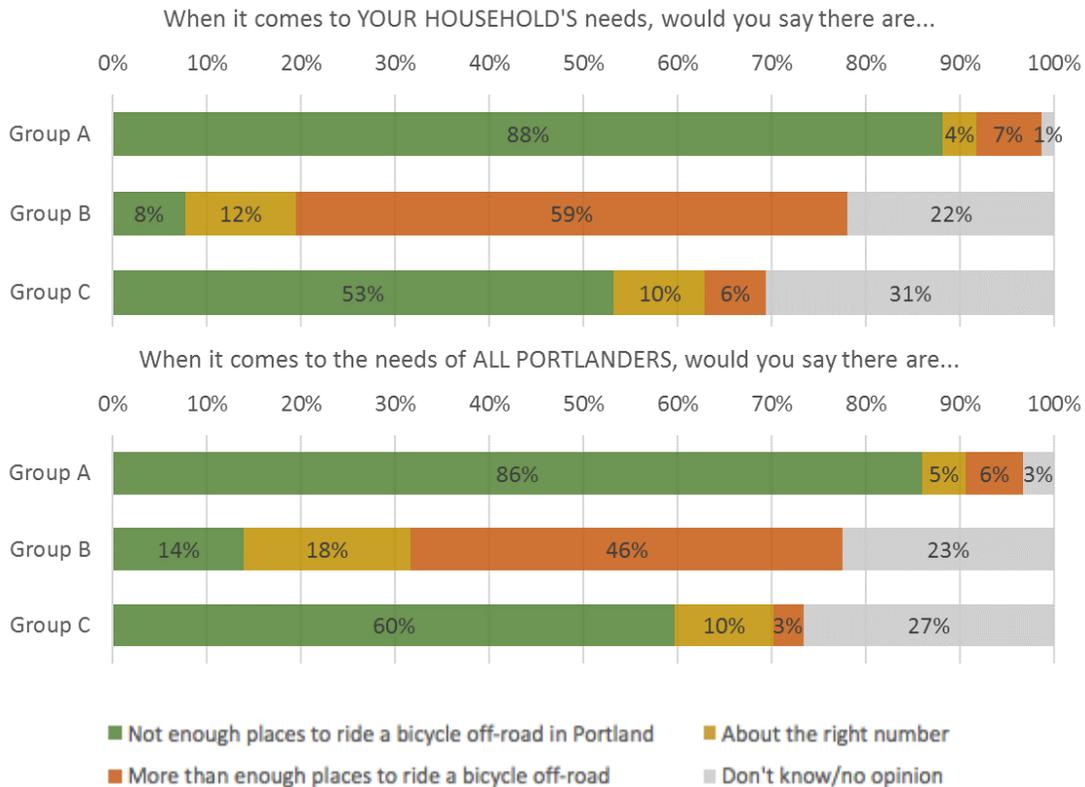
The *Oregon Non-Motorized Trail Participation and Priorities* report also included a qualitative element that identified priorities that park and forest agencies should invest in. On a scale of 1 to 5, Portland Metro residents rated “off-street bicycle trails and pathways” as 3.4, within the top four priorities park and forest agencies should invest in. Also, 2% of non-participants in outdoor activities identified a lack of “trail options in nearby parks” as a barrier to their participation. (Oregon State University, 2015)

*Local Demand*

*Oregon Trails 2016* notes that 47% of Portland region respondents placed a moderate or high priority on creating additional trails for singletrack biking in their community. This is lower than similar ratings for walking/hiking (76%), hard surface biking (59%), and running/jogging (54%). (Oregon Parks and Recreation Department, 2016, p. 98) However, this rating is the highest for any region statewide.

Questionnaire respondents were asked whether they felt there were enough places to ride a bicycle off-road in Portland—both for their own household’s needs and the needs of all Portlanders. The vast majority of respondents who ride off-road said there are not enough places to ride off-road, both for their own household and for all Portlanders. An intercept group also generally agreed that there aren’t enough places for both their own household and for all Portlanders. In contrast, respondents who do not ride off-road generally felt strongly there were more than enough places to ride off-road. (City of Portland Bureau of Planning and Sustainability, 2016)

**Figure 3. Adequacy of Places to Ride**



Questionnaire respondents were also asked to rate the importance of providing more of a variety of park and recreation facilities. Respondents who currently ride off-road rates providing more unpaved off-road cycling trails as the highest priority, along with natural areas, bike parks, and unpaved walking trails. Natural areas and unpaved walking trails were also the highest priorities for respondents who do not ride off-road, as well as for an intercept group. (City of Portland Bureau of Planning and Sustainability, 2016)

**Table 6. Importance of providing park & recreation facilities**

	<b>Respondents who ride off-road</b>	<b>Respondents who do NOT ride off-road</b>	<b>Intercept Group</b>
<b>Highest Importance</b> <i>(Weighted score &gt; 2.5)</i>	Unpaved off-road cycling trails Natural areas Bike parks Unpaved walking trails	Natural areas Unpaved walking trails	Natural Areas Unpaved walking trails Community gardens Playgrounds Bike Parks
<b>Moderate Importance</b> <i>(Weighted score 2 - 2.5)</i>	Playgrounds Dog off-leash areas Community Gardens Sports Fields	Community Gardens Playgrounds Dog off-leash areas Sports Fields Paved trails	Unpaved off-road cycling trails Paved trails Sports fields Dog off-leash areas Sports courts Skateparks
<b>Lowest Importance</b> <i>(Weighted score &lt; 2)</i>	Sports Courts Skateparks Paved trails Golf courses	Sports Courts Skateparks Bike parks Unpaved off-road cycling trails Golf courses	Golf courses

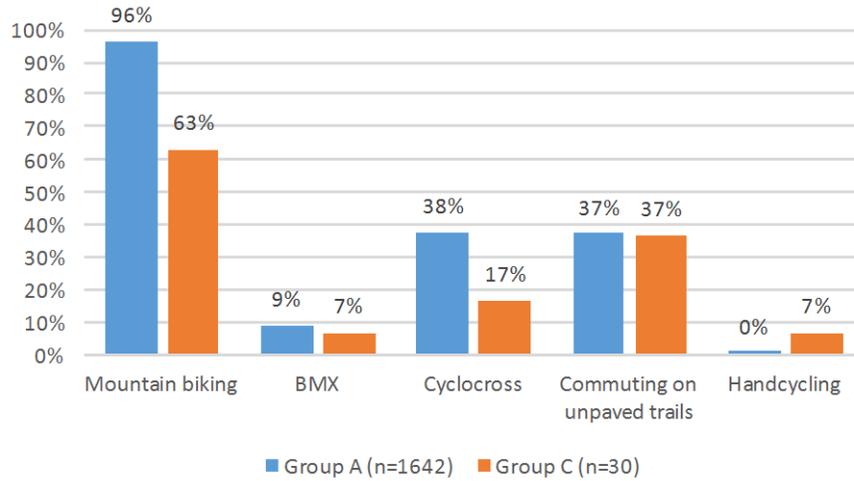
## What types of riding experiences are desired?

### *Type of riding and skill level*

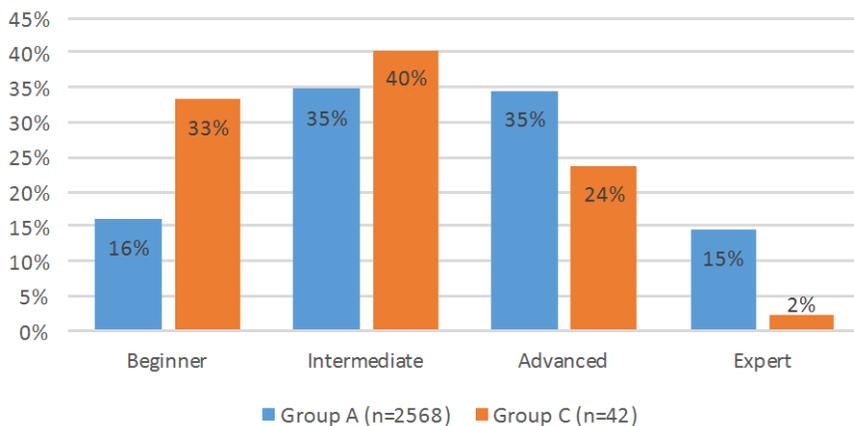
According to the *Off-road Cycling Master Plan's* questionnaire, the majority of respondents who currently ride bicycles off-road participate in mountain biking. Smaller numbers compete in cyclocross or use unpaved trails for commuting, see Figure 4. Additionally, riders are of a variety of skill levels -ranging from beginner to expert, see Figure 5. (City of Portland Bureau of Planning and Sustainability, 2016)

Questionnaire respondents indicated a priority for beginner-friendly trails (intercept survey) and moderately challenging trails (off-road cycling users), at 40% and 52%, respectively. (City of Portland Bureau of Planning and Sustainability, 2016) This represents a greater desire for beginner-friendly trails than is noted in statewide data, which reports that current off-road cyclists prefer moderate or varied level of difficulty (73%) for trails within their community. (Oregon Parks and Recreation Department, 2016, p. 95)

**Figure 4. Types of riding households participate in**



**Figure 5. Level of rider experience**



*Length of Experience*

*Oregon Trails 2016* reports that people engaging in bicycling on unpaved surfaces tend to spend between ½ hour – 1 hour (30%) or 1 ½ - 2 hours (43%) engaged in the activity. This points to a potential need for both local, short experiences as well as opportunities for moderate length activity. (Oregon Parks and Recreation Department, 2016, p. 89)

In addition, off-road cyclists indicated a strong preference for longer mileage experiences, 53% preferred lengths of 11 miles or more, while 48% preferred lengths of between 3 and 10 miles, and no respondents (0%) preferred lengths of less than 3 miles. These results are similar to findings for paved cycling and notably different from those of walking activities (where virtually all participants preferred lengths of less than 10 miles). (Oregon Parks and Recreation Department, 2016, p. 94)

### *Other Qualities*

Ability to experience nature is a common desire indicated in both statewide reports and in the project questionnaire. In the Portland region, more than 3 in 4 trail users rate protecting natural features and the ability to experience the natural environment as high priorities. (Oregon Parks and Recreation Department, 2016, pp. 100,104)

Trail surface and upkeep is also a key concern. Nearly all (95%) Oregonians who participate in singletrack cycling prefer a dirt surface. Repair and maintenance of trail surfaces is also a priority issue for non-motorized trail users generally. (Oregon Parks and Recreation Department, 2016, pp. 94, 100)

Regarding shared-use of crowded non-motorized trails, 86% of people strongly or somewhat prefer creating new trails for singletrack biking, while only 8% prefer maintaining shared use on crowded trails. When asked about alternative options – widening and one-way designation – there was greater support for one-way designation on trails used for singletrack bicycling than for widening (which received roughly neutral support). (Oregon Parks and Recreation Department, 2016, p. 96)

Finally, questionnaire respondents indicated a desire for accessibility of local off-road cycling opportunities via either the City's paved bicycle or transit networks. (City of Portland Bureau of Planning and Sustainability, 2016)

## References

- City of Portland Bureau of Planning and Sustainability. (2016). Off-road Cycling Community Questionnaire Results Summary.
- Northwest Trail Alliance. (2016). Stub Stewart State Park, Trail Count Data.
- Oregon Bicycle Association. (2015). *2015 Results*. Retrieved from <http://obra.org/results>
- Oregon Parks and Recreation Department. (2012). *Oregon Resident Outdoor Recreation Demand Analysis*. Retrieved from [https://www.oregon.gov/oprd/PLANS/docs/scorp/2013-2018\\_SCORP/Demand\\_Analysis.pdf](https://www.oregon.gov/oprd/PLANS/docs/scorp/2013-2018_SCORP/Demand_Analysis.pdf)
- Oregon Parks and Recreation Department. (2016). *Oregon Trails 2016: A Vision for the Future*. Retrieved from [http://www.oregon.gov/oprd/Trail\\_Programs\\_Services/Documents/2016OregonStatewideTrailsPlan.pdf](http://www.oregon.gov/oprd/Trail_Programs_Services/Documents/2016OregonStatewideTrailsPlan.pdf)
- Oregon State University. (2015). *Oregon Non-Motorized Trail Recreation Participation and Priorities*. Retrieved from [https://www.oregon.gov/oprd/Trail\\_Programs\\_Services/Documents/Nonmotorized\\_%20trail\\_report.pdf](https://www.oregon.gov/oprd/Trail_Programs_Services/Documents/Nonmotorized_%20trail_report.pdf)
- Outdoor Foundation. (2016). *Outdoor Recreation Participation Topline Report*. Retrieved from <http://www.outdoorfoundation.org/research.participation.2016.topline.html>
- Portland Parks & Recreation. (2012). *Forest Park Recreation Survey*. Retrieved from <https://www.portlandoregon.gov/parks/article/317545>
- The Intertwine Alliance. (2016). *Region Trail Counts 2016*. Retrieved from <http://www.oregonmetro.gov/sites/default/files/trail-counts-flyer-2016.pdf>