Outdoor Recreation in Oregon: Responding to Demographic and Societal Change





REVIEW DRAFT

January 2019

The 2019 – 2023 Oregon Statewide Comprehensive Outdoor Recreation Plan

This document is part of the Statewide Comprehensive Outdoor Recreation Plan (SCORP) process. Authority to conduct the SCORP process is granted to the Director of the Oregon Parks and Recreation Department under Oregon Revised Statues (ORS) 390.180. This document and related appendices are prepared to comply with Chapter 630 of the Land and Water Conservation Fund Grants Manual produced by the National Park Service, Department of the Interior.

The preparation of this bulletin is financed, in part, through a planning grant from the National Park Service, Department of the Interior, under provisions of the Land and Water Conservation Fund Act of 1965 (Public Law 188-578). Accordingly, all of the Oregon Parks and Recreation Department programs and activities must be operated free from discrimination, on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against or who would like further information regarding the prohibition of discrimination should write to:

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FOREWARD

A message from the Director, Oregon Parks and Recreation Department

The Oregon Parks and Recreation Department (OPRD) is pleased to provide your organization with a copy of the 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP) entitled *Outdoor Recreation in Oregon: Responding to Demographic and Societal Change*. This plan focuses on a number of serious challenges facing the wellbeing our state, our local communities, and our parks and natural resources. These challenges are associated with shifting demographics and lifestyle changes which are resulting in a clientele base with needs different from those served by recreation providers in the past.

This plan closely examines the effects of an aging population, an increasingly diverse population, lack of youth engagement in outdoor recreation, an underserved low-income population, and increasing levels of physical inactivity within the population. A series of carefully designed statewide SCORP research studies provide outdoor recreation managers with usable information and recommendations to guide federal, state, and local units of government, as well as the private sector in making policy decisions addressing these key changes. The plan will assist park and recreation providers to better describe the benefits resulting from recreation projects and programs in an effort to develop and foster a broader constituency and wider community support throughout the state. It will also assist communities and other jurisdictions in their local park and recreation planning efforts.

The plan constitutes Oregon's basic five-year plan for outdoor recreation. It also provides guidance for the Land and Water Conservation Fund (LWCF) program and other OPRD-administered grant programs including the Local Grant, County Opportunity Grant, Recreational Trails and All-Terrain Vehicle programs. OPRD will support the implementation of key statewide and local planning recommendations through internal and external partnerships and OPRD-administered grant programs.

My hope is that all Oregonians involved with the administration of recreation and park facilities and programs take time to read this important document and join OPRD in a statewide effort to proactively address the challenges associated with these demographic and societal changes outlined in this plan.

Sincerely,

Lisa Sumption
Director
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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The 2019-2023 Oregon Statewide Outdoor Recreation Plan (SCORP), entitled *Outdoor Recreation in Oregon: Responding to Demographic and Societal Change*, constitutes Oregon's basic five-year plan for outdoor recreation. The plan guides the use of Land and Water Conservation Fund (LWCF) funds that come into the state, provides guidance for other Oregon Parks and Recreation Department (OPRD)-administered grant programs, and provides recommendations to guide federal, state, and local units of government, as well as the private sector in making policy and planning decisions.

The plan addresses five important demographic and societal changes facing outdoor recreation providers in the coming years including:

1. An aging population;
2. An increasingly diverse population;
3. Lack of youth engagement in outdoor recreation;
4. An underserved low-income population; and
5. The health benefits of physical activity.

Besides satisfying grant program requirements, a primary intent of this plan is to provide up-to-date, high-quality information to assist recreation providers with park system planning in Oregon. As a result, a substantial investment was made to conduct a statewide survey of Oregon residents regarding their outdoor recreation participation in Oregon, as well as their opinions about parks and recreation management. Results of the survey are provided for the general statewide population; urban, suburban, and rural populations; and for demographic groups at the statewide, urban, suburban, and rural levels. A total of 3,550 randomly selected Oregonians completed a survey questionnaire. A summary of statewide and demographic group survey results is included in this plan. A SCORP planning support document entitled, "*2017 Oregon Resident Outdoor Recreation Survey*", contains the full report.

Survey results show that overall, 95% of Oregonians participated in at least one outdoor recreation activity in Oregon during the past year. Close-to-home activities dominate the total user occasions for Oregon residents since these activities can occur on a daily basis with limited travel time. Besides walking, bicycling and jogging on local streets / sidewalk; top outdoor activities include walking on local trails / paths, dog walking, walking / day hiking on non-local trails / paths. For demographic groups, families with children had the highest proportion of their population participating in some outdoor recreation activity, and middle old (ages 75-84) and low income (annual household income <$25,000) the lowest. Survey results include specific recommendations on how Oregon's recreation providers can better serve the outdoor recreation needs of the general population and target demographic groups.

A separate research project entitled, "*Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon*," calculated the energy expenditure from physical activity related to outdoor recreation participation by residents in kilocalories (kcal) expended or burned and cost of illness savings for chronic illnesses such as heart disease, stroke, depression, dementia, diabetes and several cancers. The study found that total energy expended by Oregonians for the 30 outdoor recreation activities included in the analysis is a conservative 503 billion kcal per year – equivalent to 144 million pounds of body fat, which would fill nearly 30

regulation-size Olympic swimming pools. The total annual Cost of Illness savings to Oregon from Oregonians' participation in 30 outdoor recreation activities is conservatively calculated to be $1.416 billion. According to the study, this Cost of Illness Savings is approximately 3.6% of total health care expenditures in the state, or 17% of expenditures in treating cardiovascular diseases, cancers, diabetes, and depression. The report clearly demonstrates that parks and recreation providers have a role in increasing the public health and wellbeing of Oregonians.

Findings from recent statewide planning efforts identified a critical need for additional funding for non-motorized trails in the state. This SCORP planning process identified a priority need for funding associated with non-motorized trail development and major rehabilitation for close-to-home areas of the state (within Urban Growth Boundaries) and for non-motorized trail deferred maintenance and major rehabilitation in dispersed-settings areas (outside of UGBs). The plan's data collection effort identified a $640.4 million total non-motorized trail funding need for Oregon. Close-to-home trail development need is by far the largest total cost of non-motorized trail need in the state at $502.8 million, followed by dispersed-setting non-motorized trail rehabilitation ($62 million), and close-to-home trail major rehabilitation ($60.9 million). Dispersed-setting trail deferred maintenance is the lowest of the cost of non-motorized trail need at $14.7 million. The chapter provides an examination of alternatives for establishing a new dedicated funding source for non-motorized trails in Oregon.

The *Oregon Parkland Mapping Project* developed a multi-jurisdictional parkland and facilities mapping database for Oregon. A web-based mapping interface <include link here> allows Oregon's recreation providers to generate Level of Service Standard parkland and facilities maps within their service areas and identify jurisdictional actions to address key planning recommendations. This tool provides critical planning information for local jurisdictions to maintain high-quality service provision as our state's population continues its rapid growth pattern.

In addition to materials in this plan, a series of support documents are included on a disk at the back of the plan. Those documents include:

- 2017 Oregon Resident Outdoor Recreation Survey;
- 2017 Oregon Resident Survey Aging Population Results;
- 2017 Oregon Resident Survey Latino and Asian Resident Results;
- 2017 Oregon Resident Survey Families with Children Results;
- 2017 Oregon Resident Survey Low-Income Resident Results;
- 2018 Oregon Parks and Recreation Provider Survey;
- 2018 Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon;
- 2018 Total Net Economic Value from Residents' Outdoor Recreation Participation in Oregon;
- 2018 Oregon Demographic and Social Trends Analysis;
- Alternative Funding Sources for a Non-Motorized Trails Fund;
- A Guide to Community Park and Recreation Planning for Oregon Communities;
- Oregon Administrative Rules for Distribution of LWCF Funding; and
- Oregon Wetlands Priority Plan.

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Appendices (on attached Disk)

- 2017 Oregon Resident Outdoor Recreation Survey;
- 2017 Oregon Resident Survey Aging Population Results;
- 2017 Oregon Resident Survey Latino and Asian Resident Results;
- 2017 Oregon Resident Survey Families with Children Results;
- 2017 Oregon Resident Survey Low-Income Resident Results;
- 2018 Oregon Parks and Recreation Provider Survey;
- 2018 Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon;
- 2018 Total Net Economic Value from Residents' Outdoor Recreation Participation in Oregon;
- 2018 Oregon Demographic and Social Trends Analysis;
- Alternative Funding Sources for a Non-Motorized Trails Fund;
- A Guide to Community Park and Recreation Planning for Oregon Communities;
- Oregon Administrative Rules for Distribution of LWCF Funding; and
- Oregon Wetlands Priority Plan.

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CHAPTER ONE - INTRODUCTION

Plan Introduction

The purpose of this planning effort was to provide guidance for the Land and Water Conservation Fund (LWCF) program, and information and recommendations to guide federal, state, and local units of government, as well as the private sector, in making policy and planning decisions. It also provides guidance for other Oregon Parks and Recreation Department (OPRD)-administered grant programs including the Local Grant, County Opportunity Grant, Recreational Trails and All-Terrain Vehicle Programs. Besides satisfying grant program requirements, the primary intent of this plan is to provide up-to-date, high-quality information to assist recreation providers with park system planning in Oregon. In addition, it provides recommendations to the Oregon State Park System operations, administration, planning, development, and recreation programs.

This document constitutes Oregon's basic five-year policy plan for outdoor recreation. It establishes the framework for statewide comprehensive outdoor recreation planning and the implementation process. In conjunction with that purpose, it is intended to be consistent with the objectives of the LWCF Act of 1965, which, as its title implies, is to conserve and make available for public enjoyment as much of the nation's high-quality land and water resources as may be available and necessary to meeting the nation's outdoor recreation needs.

The Land and Water Conservation Fund

The Land and Water Conservation Fund was established by Congress in 1964 to create parks and open spaces, protect wilderness, wetlands, and refuges, preserve wildlife habitat and enhance recreational opportunities. The LWCF has two components:

- A **federal program** that funds the purchase of land and water areas for conservation and recreation purposes within the four federal land management agencies; and
- A **stateside matching grants program** that provides funds to states for planning, developing and acquiring land and water areas for state and local parks and recreation areas.

<u>The Federal LWCF Program</u>

Funds appropriated for the federal program are available to federal agencies including the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, and the Bureau of Land Management for the purchase of land and water areas for conservation and recreation purposes. These funds are used for public acquisition of special lands and places for conservation and recreation purposes; public acquisition of special lands and places for conservation and recreation purposes; public acquisition of private holdings within National Parks, National Forests, National Fish and Wildlife Refuges, public lands managed by the Bureau of Land Management, and wilderness areas; public acquisition areas key to fish and wildlife protection; and public acquisition as authorized by law.

Federal LWCF program funds are distributed following an annual process of prioritizing regional land acquisition needs for each eligible agency. After taking into account a variety of factors

such as cost, probability of development, and local support, they develop prioritized "wish lists" that are forwarded to their Washington, D.C. land acquisition headquarters. The headquarters staff identifies its priorities and sends them to the Land Acquisition Working Group, comprised of the Assistant Secretary of the Interior for Fish, Wildlife, and Parks; and the Assistant Secretary of the Interior for Land Management; and the Assistant Secretary of Agriculture for Nature, Resources, and the Environment. The working group sends the prioritized agency lists to the Office of Management and Budget (OMB) at the completion of the congressional session. OMB critiques and returns the list and, following a final appeal process by the agencies, the fiscal year's land acquisition funding amount is presented as part of the President's budget.

The Stateside LWCF Grant Program

Those funds appropriated for the stateside matching grants program can be used to acquire land for parks and recreation purposes; build or redevelop recreation and park facilities; providing riding and hiking trails; enhance recreation access; and conserve open space, forests, estuaries, wildlife, and natural resource areas through recreation projects. In most years, all states receive individual allocations of stateside LWCF grant funds based on a national formula, with state population being the most influential factor.

The LWCF Act requires that all property acquired or developed with LWCF funds be dedicated in perpetuity exclusively to public outdoor recreation use. The law further states that no property can be converted to a different use without the approval of the Secretary of the Interior. When an organization wants to convert land to another use, consultation with OPRD is required prior to requesting approval from the National Park Service. Property converted from recreational use must be replaced with land of at least current fair market value and of equivalent recreational utility. Proposals to resolve conversions from recreation use will be consistent with the evaluation of new grant proposals. Proposals will be evaluated based on their consistency with the evaluation of new grant proposals. Proposals will be evaluated based on their consistency with SCORP priorities and/or consistency with project priorities identified through a local public planning process.

Qualifying For LWCF Funding

To qualify for stateside LWCF funding, each state must prepare a Statewide Comprehensive Outdoor Recreation Plan (SCORP) every five years. In Oregon, the plan functions not only to guide the LWCF program, but also provides guidance for other OPRD-administered grant programs including the Local Grant, County Opportunity Grant, Recreational Trails, and All-Terrain Vehicle Programs. Finally, the plan provides guidance to federal, state, and local units of government, as well as the private sector, in delivering quality outdoor recreational opportunities to Oregonians and out-of-state visitors.

Legal Authority

To be eligible for assistance under the Federal Land and Conservation Fund Act of 1964 (Public Law 88-578; 78 Stat. 897), the Governor of the state of Oregon has designated the Director of the Oregon Parks and Recreation Department as the official who has authority to represent and act for the State as the State Liaison Officer (SLO) in dealing with the Director of the National Park Service for purposes of the LWCF program. The SLO has authority and responsibility to accept and to administer funds paid for approved projects.

Authority to conduct the Statewide Comprehensive Outdoor Recreation Plan process is granted to the Director of the Oregon Parks and Recreation Department under Oregon Revised Statutes (ORS) 390.180. Authority to recommend and promote standards for recreation facilities, personnel, activities and programs is granted to the Director of the Oregon Parks and Recreation Department under Oregon Revised Statutes (ORS) 390.140. This document and related appendices were prepared to be in compliance with Chapter 630 of the Federal Land and Water Conservation Fund Grants Manual. Federal acceptance of the States comprehensive outdoor recreation planning process is a prerequisite for Oregon's establishing and maintaining eligibility to participate in the Land and Water Conservation Fund program.

The Oregon Administrative Rules, Chapter 736, Division 8, Distribution of LWCF Funding Assistance to Units of Local Government for Public Outdoor Recreation establishes the State Liaison Office, when distributing federal Land and Water Conservation Fund monies to the state agencies and eligible local governments, and the process for establishing the priority order in which projects shall be funded. See the support document entitled "Oregon Administrative Rules for Distribution of LWCF Funding" in the attached disk for the Oregon Administrative Rules used by OPRD when distributing stateside LWCF grant monies. These rules are also available online at: http://arcweb.sos.state.or.us/pages/rules/oars_700/oar_736/736_008.html.

The Planning Process

Background

The last Comprehensive Statewide Outdoor Recreation Plan for Oregon was completed by the OPRD and accepted by the National Park Service (NPS) in October 2013. With the completion of this plan, the state maintains eligibility to participate in the Land and Water Conservation Fund up to March 31, 2023.

OPRD began the current SCORP planning process in June, 2016. An initial planning task was to identify the most important issues in Oregon related to outdoor recreation. Critical issues identified and addressed in this plan include the effects of an aging population, an increasingly diverse population, lack of youth engagement in outdoor recreation, an underserved low-income population, and increasing levels of physical inactivity within the population. Since the primary intent of the plan is to provide information to assist recreation providers with park system planning in Oregon, the plan has been titled, *Outdoor Recreation in Oregon: Responding to Demographic and Societal Change*.

Components of the Planning Effort

The following section includes a brief description of the major components of the planning effort.

SCORP Advisory Committee

Early in the planning effort, OPRD established a 23-member SCORP Advisory Committee to assist the department with the planning process. Members of the group represented various organizations including local, state, and federal recreation providers, recreational user groups,

and universities. During the planning effort, committee members were asked to assist OPRD with the following SCORP related tasks:

- reviewing the basic planning framework;
- determining the basic planning outline;
- identifying significant statewide outdoor recreation issues and strategic actions;
- reviewing survey instruments, research findings, and reports;
- determining Open Project Selection Process criteria for evaluating grant proposals for the LWCF grant program; and
- reviewing the planning documents.

The initial full Advisory Committee meeting was held on March 2, 2017. Objectives of this meeting included:

- identifying the types of information to include in the SCORP plan;
- reviewing top statewide issues;
- reviewing statewide participation survey instruments and methods;
- reviewing Outdoor Recreation Metrics study methods;
- reviewing Demographic and Social Trends Analysis study methods;
- reviewing Parkland Mapping Project purpose and design; and
- reviewing the need for non-motorized trails funding purpose, design and data collection methods.

A final full committee meeting was held on October 25, 2018. Meeting objectives included:

- reviewing and providing feedback on research findings;
- reviewing Parkland Mapping Project progress;
- reviewing the need for non-motorized trail funding progress;
- reviewing proposed statewide issue action items; and
- reviewing LWCF grant evaluation criteria concepts.

A number of subcommittee meetings were held over the course of the planning effort. One subcommittee meeting was held on September 18, 2017 to guide the Parkland Mapping Project development. Another subcommittee meeting was held on October 19, 2017 to assist with the need for non-motorized trail funding chapter. A final subcommittee meeting was held on November 8, 2018 to develop a set of LWCF grant evaluation criteria for inclusion in the plan.

Oregon Outdoor Recreation Survey

OPRD conducted a statewide survey of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management. This report provides the results of the statewide survey.

The sample design was developed to derive information at various scales including statewide, urban, suburban, and rural for the general population and for the following demographic groups:

- Oregonians of Spanish/ Hispanic/ Latino descent;
- Oregonians of Asian descent (including South Asian and East/ Southeast Asian);

- Families with Children;
- Aging – Young Old (ages 60-74);
- Aging – Middle Old (ages 75-84); and
- Low Income (annual household income of <$25,000).

The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the general statewide population; urban, suburban, and rural populations; and for demographic groups at the statewide, urban, suburban, and rural levels. Survey results may be used by federal, state and local parks and recreation managers/ agencies and private-sector recreation providers to understand current recreation and future demands for recreation opportunities and programs

Summaries of key demographic group results are included in issues chapters in the plan. A SCORP planning support document entitled "2017 Oregon Resident Outdoor Recreation Survey" contains the full report including statewide and demographic group results. Separate demographic group reports (Aging, Diversity, Families With Children, and Low Income) are also provided for those interested in reviewing full survey results by demographic type.

Oregon Outdoor Recreation Metrics: Health, Physical Activity, and Value

Public land systems in Oregon, such as state parks and forests, national forests and grasslands, and county and municipal parks, provide public access for outdoor recreation activities. As people engage in outdoor recreation activities, they accrue many types of benefits. Measuring these benefits are indicators of public support for public land systems by demonstrating the real benefits flow to people, communities and the state through healthy lifestyles, lower health care costs, and overall quality of life.

This research project was conducted by Oregon State University's College of Forestry for the 2019-2023 Oregon SCORP. Two final reports from this research effort are included in the plan. The first report estimates the health benefits obtained by Oregonians from their participation in 30 outdoor recreation activities in 2017. The second report estimates the total net economic value for recreation participation in Oregon to Oregonians from their participation in 56 outdoor recreation activities in 2017.

Summaries of these two reports are included as chapters in the plan. A SCORP planning support document entitled "Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon" contains the full report including statewide and county level results. Another SCORP planning support document entitled "Total Net Economic Value from Residents' Outdoor Recreation Participation in Oregon" contains the full report including statewide and county level results.

Need For Non-Motorized Trails Funding In Oregon

Findings from recent statewide planning efforts identify a critical need for additional funding for non-motorized trails in the state of Oregon. This chapter addresses the need for non-motorized funding by addressing ten key components including:

1. Describing the problem;
2. Identifying the primary benefits of a new non-motorized trails fund for the state;
3. Identifying the existing sources of funding for non-motorized trails;
4. Identifying a dollar estimate for the current level of need for additional non-motorized trail funding in the state;
5. Recommending a total annual dollar amount needed for a proposed dedicated non-motorized trails fund;
6. Describing the objectives of a non-motorized trails fund;
7. Identifying the types of non-motorized projects to be funded and specific organizations/ agencies that would qualify for funding;
8. Identifying a preferred set of potential funding sources;
9. Describing options for administering a new non-motorized trails fund; and
10. Identifying implementation actions for moving forward with establishing a dedicated non-motorized trails fund for Oregon.

SCORP Demographic and Social Trends Analysis

To better understand how these important demographic changes will affect outdoor recreation providers in their local service areas in the coming years, OPRD requested the Population Research Center at Portland State University to prepare population estimates and projections for planning and grant program administrative purposes. The estimates were developed for 2018, and the projections, for 2020, 2025, and 2030. Estimates and projections include population sub-groups, as well as the total population, with specific demographic characteristics such as age, race/ethnicity, and Body Mass Index. The project also identified high-priority counties and cities for the following indicators: young old (ages 60-74), middle old (ages 75-84), Latino, Asian, youth (ages 6-17), low income, and Body Mass Index.

Recreational Needs Assessment

Two methods were used to identify funding need for additional recreational facilities in Oregon. The first method was a component of the Oregon Outdoor Recreation Survey. Oregonians were asked their opinions about priorities for the future. Respondents were asked to rate several items for investment by park and forest agencies using a 5-point Likert scale (1=Lowest priority need to 5=Highest priority need). The second method involved a survey of Oregon public recreation providers to identify recreational need. Two separate survey instruments were used for the survey, one completed by recreation providers with the majority of their managed parklands located within an Urban Growth Boundary (UGB), unincorporated community boundary, or a tribal community; and the other by recreation providers with the majority of parklands outside of such boundaries. Of the 417 providers contacted, 214 completed the survey for a 51% response rate. Respondents were asked to rate the importance of county-level funding need for a variety of recreation projects in their jurisdiction in the coming five years.

Parkland Mapping Project

This project was a joint effort by OPRD and the Population Research Center at Portland State University. The project created a web-based mapping interface (housed on the OPRD grant program website) allowing Oregon's recreation providers to generate Level of Service Standard

parkland and facilities maps within their service areas and identifying jurisdictional priorities addressing SCORP issues included in the plan's OPSP.

A Guide to Community Park and Recreation Planning for Oregon Communities

This guide (a support document to this plan) is provided to assist units of local government in Oregon (cities, counties, special districts, ports and regional districts) with a small staff, or no permanent staff at all, in preparing a park and recreation plan for their jurisdiction. The guide includes instructions on how to use the parkland mapping website to conduct Level of Service analysis for their jurisdiction.

Key Planning Actions

This chapter provides a description of the strategic actions identified during the planning process to better serve the needs of Oregonians as related to the top statewide planning issues including:

1. An aging population and outdoor recreation in Oregon.
2. An increasingly diverse population and outdoor recreation in Oregon.
3. Lack of youth engagement in outdoor recreation in Oregon.
4. Low income and outdoor recreation in Oregon.
5. Health benefits of physical activity in Oregon.

These strategic actions were finalized during the October 25, 2018 SCORP Advisory Committee meeting.

LWCF OPSP Criteria

To allocate LWCF funds in an objective manner, a set of Open Project Selection Process criteria were developed for evaluating statewide LWCF grant proposals. Seventy percent of the total points available are tied directly to findings from this SCORP planning effort.

Oregon Wetlands Priority Plan

The Emergency Wetlands Resources Act of 1986 (P.L. 99-645) requires each state comprehensive outdoor recreation plan to include a component that identifies wetlands as a priority concern within the state. A support document to the plan describes a brief history of wetland protecting in Oregon, current wetland protection strategies, and a priority listing of regions/watersheds for wetland restoration/acquisition. In Oregon, wetland protection typically occurs with private or public funding under the direction of the Oregon Department of State Lands. To maximize flexibility when selecting a replacement property, LWCF sponsors may choose to purchase wetlands prioritized for habitat or water quality needs when they are resolving conversions.

SCORP Planning Website

Early in the planning process, OPRD staff developed a SCORP planning website for people across the state to access current information about the 2019-2023 SCORP planning process. One of the primary objectives of the website was to disseminate research and report results. The website address is: https://www.oregon.gov/oprd/PLANS/Pages/SCORP_overview.aspx#SCORP.

CHAPTER TWO – 2017 OREGON OUTDOOR RECREATION SURVEY

Introduction

This chapter includes a summary of key results from the 2017 Oregon Outdoor Recreation Survey. A full survey report including statewide and demographic results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

Background

In preparation for the 2018-2022 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP), the Oregon Parks and Recreation Department (OPRD) conducted a statewide survey of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management. This report provides the results of the statewide survey.

The sample design was developed to derive information at various scales including statewide, urban, suburban, and rural for the general population and for the following demographic groups:

- Oregonians of Spanish/ Hispanic/ Latino descent;
- Oregonians of Asian descent (including South Asian and East/ Southeast Asian);
- Families with Children;
- Aging – Young Old (ages 60-74);
- Aging – Middle Old (ages 75-84);
- Low Income (annual household income of <$25,000);
- Male; and
- Female.

The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the general statewide population; urban, suburban, and rural populations; and for demographic groups at the statewide, urban, suburban, and rural levels. Survey results may be used by federal, state and local parks and recreation managers / agencies and private-sector recreation providers to understand current recreation and future demands for recreation opportunities and programs.

Data Presentation

Most data are presented at four scales – statewide, urban, suburban, and rural. Asian data is only presented at the statewide, urban and suburban scales, because there were fewer than 30 observations reflecting Asians living in rural areas.

Survey Methods

The survey was conducted using a random sample of Oregon households. In order to generate sufficient responses for each demographic group, the sample was stratified to differentiate between those residing in urban, suburban, and rural areas of the state for the general population and the following demographic groups including Oregonians of Spanish/ Hispanic/ Latino

descent, Oregonians of Asian descent, families with children, aging – young old (ages 60-74), aging – middle old (75-84), general population (ages 18-29 and 50-59), and rural and urban (ERS Rural-Urban Commuting Area Codes).

There were two versions of the survey:

- **Participants** – those who engaged in outdoor recreation in Oregon in 2017.
- **Non-participants** – everyone else.

Surveying Oregonians consisted of 17,016 mail outs, with 15,351 surveys deliverable (90%). Of those delivered, 3,069 completed surveys were obtained, for an overall response rate of 20%. This response rate is typical of statewide, general population surveys that are long and do not include financial incentives.

With respect to format, 74% of the surveys were completed online and 26% in paper format. Due to variable sampling intensity and response rates across target demographic groups, the probability sample was complemented by an online research sample administered by Qualtrics. A total of 481 respondents completed a survey (50% response rate) through the Qualtrics online sample. In total, most (94%) of the surveys were by participants, with the remainder (6%) by non-participants.

Maximizing Data Accuracy

The goal of surveys such as this one is to use a sample (limited number of respondents) to obtain information on the population (everyone of interest, in this case all Oregonians). Because only a portion of the population is sent a survey, and not all recipients complete the survey, this type of data collection is susceptible to various sources of error, including coverage, sampling, measurement, and non-response.

Readers should keep in mind that some error is inevitable. Nonetheless, significant attention has been given in this survey administration and analysis to the minimization of error and correction of factors that may lead to bias.

The resources devoted to this Oregon analysis allowed a sample size that is sufficiently large for measurement at the urban, suburban, and rural levels, which is unusual for SCORP surveys. It also provides more confidence in results at the statewide levels than is typical for SCORP surveys.

Weighting Data and Sample Demographics

Sample data were weighted by location (urban / rural), whether Asian and Latino, age, and gender. Weighting corrects the "oversampling" of rural residents, specific age groups, and Asian and Latino residents; the oversampling was done to achieve sufficient observations for each of these groups. Females were not oversampled, but they were more likely to complete the survey. The sample was not weighted by income or presence of children in the household because doing so would significantly reduce the sample due to item non-response for those variables. Households with children and households with higher income are overrepresented in the sample relative to the population as a whole, and results should be interpreted with that in mind.

Key Findings – Participant Survey

Outdoor Recreation Activities

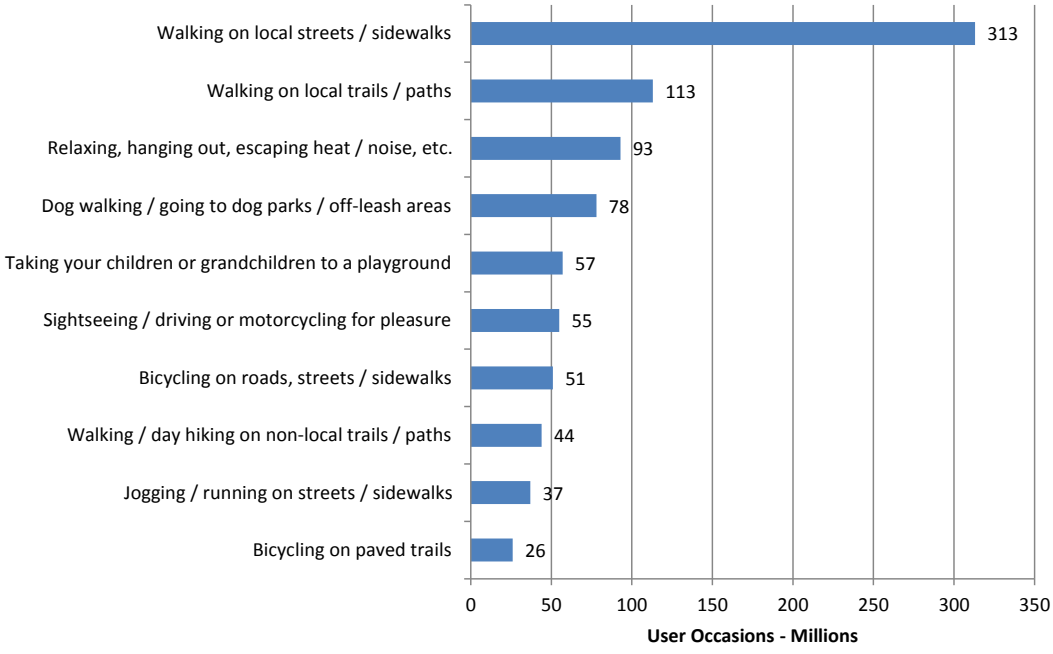
Based on previous SCORP outdoor recreation activity lists and the SCORP advisory committee comprised of parks and recreation managers across Oregon, fifty six (56) recreation activities were identified as important recreation activity types. These activities were grouped into eight (8) categories including Non-motorized Trail or Related Activities, Motorized Activities, Non-motorized Snow Activities, Outdoor Leisure and Sporting Activities, Nature Study Activities, Vehicle-based Camping Activities, Hunting and Fishing Activities, and Non-motorized Water-based and Beach Activities.

User Occasions and Participation in Outdoor Recreation

User occasions (number of times people engage in an activity) and percent of the population that participates in an activity are estimated at the state scale. The top activities based on total user occasions for Oregonians in 2017 include (Figure 2.1):

1. Walking on local streets / sidewalks – 313 million user occasions.
2. Walking on local trails / paths – 113 million user occasions.
3. Relaxing, hanging out, escaping heat / noise, etc. – 93 million user occasions.
4. Dog walking / going to dog parks / off-leash areas – 78 million user occasions.
5. Taking your children or grandchildren to a playground – 57 million user occasions.

Figure 2.1. Top ten activities for Oregon residents, 2017, user occasions



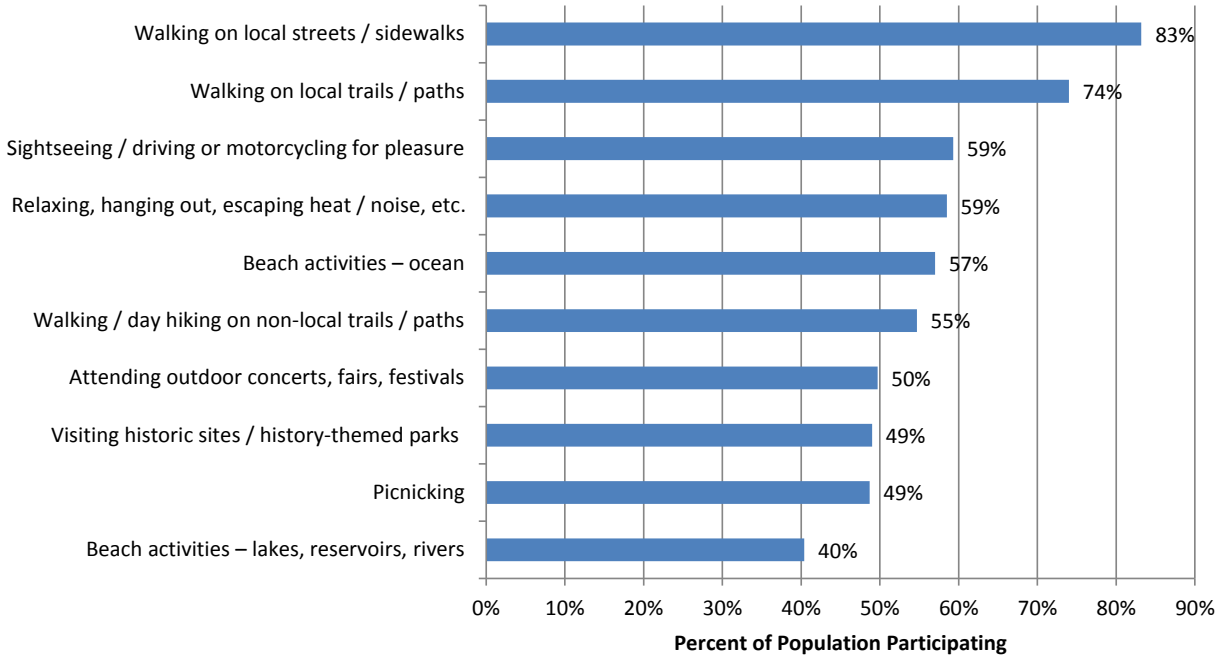
Within each of the eight activity categories, the top activity for Oregonians in 2017 based on user occasions include:

1. Non-motorized Trail Activities – Walking on local streets / sidewalks – 313 million user occasions.
2. Outdoor Leisure / Sporting Activities - Relaxing, hanging out, escaping heat / noise, etc. – 93 million user occasions.
3. Nature Study Activities – Other nature / wildlife / forest / wildflower observation – 25 million user occasions.
4. Non-motorized Water-based and Beach Activities – Beach activities – ocean – 23 million user occasions.
5. Hunting and Fishing Activities – Fishing – 12 million user occasions.
6. Motorized Activities – Class I all-terrain vehicle riding – 9 million user occasions.
7. Vehicle-based Camping Activities – Car camping with a tent – 8 million user occasions.
8. Non-motorized Snow Activities – Sledding, tubing, or general snow play – 6 million user occasions.

Overall, 95% of Oregonians participated in at least one outdoor recreation activity in Oregon during 2017. The activities in which the largest proportions of Oregonians participated in 2017 include (Figure 2.2):

1. Walking on local streets / sidewalks – 83%
2. Walking on local trails / paths – 74%
3. Sightseeing / driving or motorcycling for pleasure – 59%
4. Relaxing, hanging out, escaping heat / noise, etc. – 59%
5. Beach activities – ocean – 57%

Figure 2.2. Top ten activities for Oregon residents, 2017, percent population participating



Within each of the eight activity categories, the largest proportions of Oregonians participating include:

1. Non-motorized Trail Activities – Walking on local streets / sidewalks – 83%
2. Outdoor Leisure / Sporting Activities – Sightseeing / driving or motorcycling for pleasure – 59%
3. Non-motorized Water-based and Beach Activities – Beach activities – ocean – 57%
4. Nature Study Activities – Other nature / wildlife / forest / wildflower observation – 34%
5. Vehicle-based Camping Activities – Car camping with a tent – 32%
6. Non-motorized Snow Activities – Sledding, tubing, or general snow play – 27%
7. Hunting and Fishing Activities – Fishing – 27%
8. Motorized Activities – Power boating (cruising / water skiing) – 12%

For demographic groups, families with children (100%) had the highest proportion of their population participating in some outdoor recreation activity, and middle old (82.5%) and low income (88.3%) the lowest (Figure 2.3). A bivariate statistical test was used to identify statistical differences between the percent of the overall population participating in the specific activity and the percent of the demographic group participating in that activity (Table 2.1). Households with one or more children (families with children) included the greatest number of activity participation (40 of 56 activities) where participation was statistically greater than that of the overall Oregon population. Demographic groups with the greatest number of activity participation where participation was statistically less than the overall Oregon population included the middle old (51 activities), low income (37), young old (33), and Asian (28). These results suggest that, looking at participation across all activities, the most underserved populations, from an outdoor recreation perspective in Oregon, are the middle old, low income, young old, and Asian populations, of those demographic groups evaluated in this research.

Figure 2.3. Total percent of demographic group population participating in one or more outdoor activities, Oregon, 2017

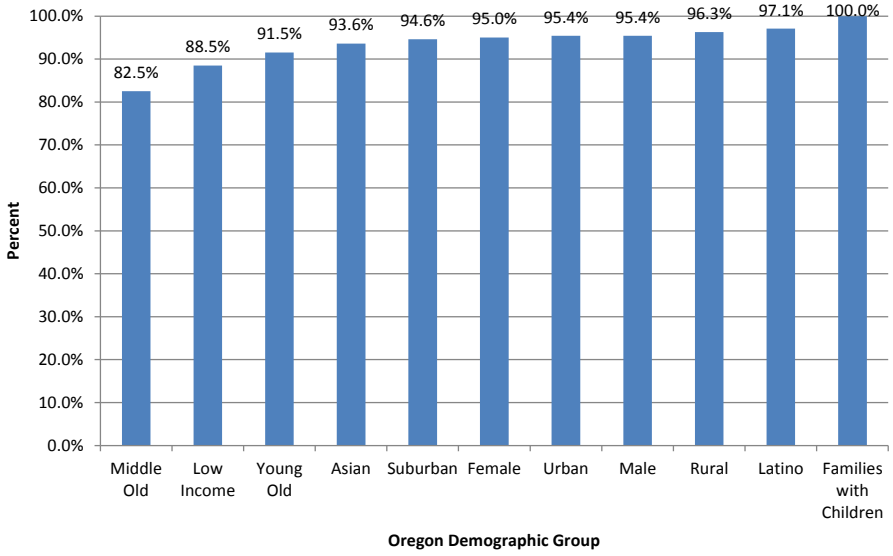


Table 2.1. Comparison of percent of population participating in activities between resident demographic groups and all Oregon residents, 2017

Target Demographic Group	# of Activities With Statistically Higher Participation Than Statewide Participation %	# of Activities With Statistically Lower Participation Than Statewide Participation %	# of Activities With No Statistical Difference With Statewide Participation %	Total Activities
Families with Children	40	2	14	56
Male	16	14	26	56
Female	15	15	26	56
Rural	14	19	23	56
Urban	13	12	31	56
Suburban	6	8	42	56
Latino	6	16	34	56
Young Old	4	34	18	56
Asian	1	29	26	56
Low Income	0	37	19	56
Middle Old	0	50	6	56

The annual mean number of participation times for all 56 activities for the Oregon population was 354.0 times (Table 2.2). Among demographic groups, the highest annual mean participation times were for families with children (443.6), urban (396.7), and female (360.6) populations. Demographic groups with the lowest annual mean participation times for all activities were the middle old (164.1 times), Asian (249.3), young old (283.0), Latino (300.4), and low income (312.3) populations. These results suggest that, when examining the total number of participation times across the year, the most underserved populations are the middle old, Asian, young old, Latino, and low income populations.

Table 2.2. Comparison of mean participating times for all activities between resident demographic groups and all Oregon residents, 2017

Demographic Group	Mean Annual Participation Times - Respondent
State Population	354.00
Families with Children	443.60
Urban	396.72
Female	360.64
Male	347.24
Suburban	341.19
Rural	326.27
Low Income	312.30
Latino	300.40
Young Old	282.98
Asian	249.28
Middle Old	164.11

Types of Outdoor Recreation Areas Used

This set of questions asked people if they had visited a certain type of recreation area in the past 12 months and how many days they participated in outdoor recreation in that certain area over the past 12 months.

For Oregonians, local / municipal parks experienced the highest percentage of respondents reporting that they had visited that type of area over the past 12 months, followed by State parks, forests, or game lands (Table 2.3). National parks, forests, and recreation areas were third, followed by county parks, private parks, and other areas. An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas identifies that local / municipal parks account for the highest percentage use (33%) of all outdoor recreation use from the survey sample, followed by State parks, forests, or game lands (19%), county parks (16%), national parks, forests and recreation areas (15%), private / commercial areas (11%), and other recreation areas (6%). These results point out the importance of close-to-home recreational opportunities to Oregon residents.

Table 2.3. Statewide participation by type of outdoor recreation area, Oregon population, 2017

Recreation Area Type	Did you visit this type of area in last 12 months?			Mean Days Per Year For This Type of Area in Last 12 Months	Percentage Use of the Types of Areas For The Average Survey Respondent
	Yes	No	Don't Know		
Local / municipal parks	89.4	7.8	2.0	15.3	33.2
County parks	63.2	19.2	17.6	7.3	15.8
State parks, forests, or game lands	83.2	12.0	4.8	8.7	18.7
National parks, forests, and recreation areas	73.0	20.5	6.6	6.9	15.0
Private / commercial areas	34.9	45.9	19.2	4.9	10.6
Other	12.2	50.9	36.6	3.1	6.7

Families with children reported the highest percentage of respondents visiting local / municipal parks (92%) and state parks, forests, or game lands (85%). Young old (66%) and rural (65%) populations reported the highest percentage of respondents visiting county parks, and male (74%) and rural (73%) populations the highest percentages visiting national parks, forests, and recreation areas.

Camping Likelihood and Priority Needs

This set of questions asked people to rate various camping types using 5-point Likert scales according to the likelihood of using a type of camping when or if the individual went camping at an Oregon campground (1 = not at all likely to 5 = very likely), and to rate their perceived need for more of each type of camping near the individual's community (1 = lowest priority need to 5 = highest priority need).

For Oregonians, drive-in tent sites had the highest likelihood of use, while hiker-biker sites had the lowest likelihood of use (Table 2.4). Similarly, drive-in tent campsites had the highest priority need, while, hiker-biker and RV sites had the lowest priority need. The majority of Oregonians are not at all likely to use hiker-biker sites. Drive-in tent sites had the largest proportion of very likely responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types. RV sites had the largest proportion of lowest priority need.

Table 2.4. Likelihood and priority need for camping type, Oregon, 2017

Camping Type	How likely to use camping type in Oregon*						Level of priority need for camping type near your community*					
	Mean	1	2	3	4	5	Mean	1	2	3	4	5
RV sites	2.5	48.8	10.1	9.8	6.3	25.0	2.4	42.9	12.3	19.8	11.0	13.9
Cabins or yurts w/ heat, lights	3.2	20.9	14.1	19.8	15.8	29.5	3.0	20.1	15.2	26.3	19.1	19.3
Cabins or yurts w/ heat, lights, bathroom, kitchen	3.2	21.6	13.8	17.3	15.7	31.6	3.0	22.4	15.5	24.3	17.7	20.1
Drive-in tent sites	3.6	18.9	7.5	13.7	14.7	45.2	3.4	16.4	9.1	23.4	21.5	29.6
Hike-in tent sites	2.6	37.5	14.3	16.4	13.2	18.7	2.8	28.3	15.0	24.3	16.3	16.1
Hiker-biker sites	2.0	55.6	16.7	12.0	6.9	8.7	2.4	37.8	16.9	24.4	11.3	9.6
Other type	2.2	63.2	2.1	7.2	4.7	22.8	2.3	52.4	6.0	16.8	6.8	17.9

* Means and Percentages for 5-point Likert Scale (1 = "Not at all likely" or "Lowest priority need" to 5 = "Very likely" or "Highest priority need")

The general patterns of likelihood of use and priority need from statewide reporting are maintained when the data is disaggregated to demographic groups. Drive-in tent sites have the greatest likelihood of use and highest priority need. The Latino, Asian, families with children, urban, suburban, low income populations report RV sites to be the lowest priority, and rural, young old, middle old, and female populations report hiker-biker sites to be the lowest priority.

Results for likelihood of use and priority need are further disaggregated to the demographic group level:

- RV sites – Middle old have the highest likelihood of use. Young old, middle old, and rural have the highest priority need. Urban and Asian have the lowest likelihood of use and lowest priority need.
- Cabins or yurts with heat and lights – Asian has the highest likelihood of use. Asian, Latino, and female have the highest priority need. Middle old has the lowest likelihood of use and middle old and male the lowest priority need.
- Cabins or yurts with heat, lights, bathroom and kitchen – Asian, Latino, and females have the highest likelihood of use and the highest priority need. Middle old, rural, and young old have the lowest likelihood of use and middle old and male the lowest priority need.
- Drive-in tent sites – Asian, families with children, and urban have the highest likelihood of use. Asian, urban, and low income have the highest priority need. Middle old and young old have the lowest likelihood of use and the lowest priority need.

- Hike-in tent campsites – Asian, Latino, and urban have the highest likelihood of use. Asian and urban have the highest priority need. Middle old and young old have the lowest likelihood of use and the lowest priority need.
- Hiker-biker sites – Latino and Asian have the highest likelihood of use. Low income and urban have the highest priority need. Middle old and young old have the lowest likelihood of use and the lowest priority need.

Sources of Information for Outdoor Recreation Activities

This set of questions asked participants about sources of information for outdoor recreation opportunities. Respondents were asked to rate seventeen information sources using a 5-point Likert scale (1 = not important to 5 = extremely important). Also, respondents were asked to report which information source they use the most.

The highest percentage of respondents said that websites were the information source that they used the most when seeking outdoor recreation information in Oregon (Table 2.5). Friends / relatives / word of mouth were also a highly used information source. Twitter, Snapchat, and Pinterest were the least important and least used information sources.

Table 2.5. Sources of information for outdoor recreation opportunities, Oregon, 2017

Information Source	% Important or Extremely Important	% Used Most
Websites	75.4	39.6
Friends / relatives / word of mouth	82.7	39.1
Maps / brochures	60.6	5.2
Travel guide/ tour book	46.5	4.3
Facebook	22.8	3.3
Newspaper / magazine articles	36.1	2.2
Visitor or welcome centers	52.0	1.4
Mobile / smart phone applications (e.g., Strava, MapMyRun)	26.6	1.2
Television/ radio	25.1	1.2
Instagram	11.4	0.7
Tourism advertising (e.g., 7 Wonders Campaign)	28.6	0.6
Video sharing platforms (e.g., YouTube, Vine, Vimeo)	19.4	0.4
Community organization or church	18.9	0.3
Snapchat	5.1	0.3
Schools	21.0	0.2
Pinterest	9.6	0.1
Twitter	4.9	0.0

For Oregon demographic groups, friends / relatives / word of mouth had the highest percentage of respondents saying that it was an important or extremely important information source across demographic groups followed by websites. The Latino and Asian respondents were much more

likely to say that mobile smart phone applications, Facebook, video sharing platforms, Instagram, Pinterest, Snapchat, and Twitter were important sources of information and considerably less important for young old and middle old. Websites were the most used information source for most demographic groups, with the exception of the Latino, rural, low income, and middle old populations, where friends/ relatives/ word of mouth were the most used. The lowest percentages reporting websites being the most important information source were middle old (20%), low income (27%), Latino (33%), and rural (34%).

Priorities for the Future

Oregonians were asked their opinions about priorities for the future both within and outside their community. Respondents were asked to rate twenty one (21) items for investment by park and forest agencies using a 5-point Likert scale (1 = lowest priority need to 5 = highest priority need). Items were developed by the steering committee, representing close-to-home and dispersed recreation areas. The following priority lists are based on number of individuals served, not on the frequency of their participation in each activity.

The top "in your community" needs for Oregonians are (Table 2.6):

- Cleaner restrooms.
- Soft surface walking trails.
- More restrooms.
- Playgrounds with natural materials (Natural Play Areas).
- Nature and wildlife viewing areas.
- Public access to waterways.

Low priority "in your community" needs for Oregonians area:

- Off-highway vehicle trails / areas.
- Low-impact exercise equipment.
- Designated paddling routes for canoes, kayaks, rafts, driftboats.

The top "outside your community" needs for Oregonians are (Table 2.7):

- Cleaner restrooms.
- Soft surface walking trails.
- Nature and wildlife viewing areas.
- More restrooms.
- Public access to waterways.
- More places and benches to observe nature and others.
- Picnic areas and shelters for small visitor groups.

Low priority "outside your community" needs for Oregonians area:

- Low-impact exercise equipment.
- Multi-use sports fields.

- Off-highway vehicle trails / areas.

Table 2.6. Priorities for the future, what park and forest agencies should invest in within communities, Oregon—mean and percentage for 5-point Likert (1 = "Lowest priority need" to 5 = "Highest priority need")—ordered by mean, 2017

Item	Mean	Percent				
		1	2	3	4	5
Cleaner restrooms	3.94	5.3	6.4	19.9	25.3	43.0
Dirt / other soft surface walking trails and paths	3.71	5.9	8.7	22.3	34.5	28.6
More restrooms	3.62	6.8	10.9	24.4	28.9	28.9
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.54	11.6	9.4	22.5	26.3	30.1
Nature and wildlife viewing areas	3.52	8.1	10.8	26.5	30.0	24.6
Public access sites to waterways	3.52	10.1	10.0	24.9	27.5	27.5
Picnic areas and shelters for small visitor groups	3.48	6.3	12.3	28.5	32.6	20.2
More places and benches to observe nature and others	3.39	9.8	13.4	26.2	28.8	21.8
Security cameras in key places	3.33	16.1	12.7	20.6	23.7	26.9
Paved / hard surface walking trails and paths	3.32	12.6	14.9	24.0	25.1	23.4
Off-street bicycle trails and pathways	3.26	17.2	12.4	22.2	23.7	24.2
Children's playgrounds and play areas built with manufactured structures like swingsets, slides, and climbing apparatuses	3.25	13.8	14.2	25.9	25.0	21.1
More shaded areas	3.25	13.1	12.9	29.6	25.1	19.3
Picnic areas and shelters for large visitor groups	3.05	13.9	19.1	30.1	22.0	14.8
Additional lighting	3.02	19.6	15.9	25.2	21.2	18.0
Community gardens (where you can grow vegetables)	2.94	24.9	15.2	20.9	18.9	20.1
Off-leash dog areas	2.92	25.9	14.4	21.9	17.7	20.2
Multi-use sports fields	2.80	24.7	18.0	24.4	18.2	14.8
Designated paddling routes for canoes, kayaks, rafts, driftboats	2.79	25.3	17.1	24.5	19.5	13.6
Low-impact exercise equipment	2.48	34.1	18.8	22.7	13.8	10.6
Off-highway vehicle trails/ areas	2.44	36.9	19.3	19.3	12.2	12.4

Table 2.7. Priorities for the future, what park and forest agencies should invest in outside communities, Oregon—mean and percentage for 5-point Likert (1 = "Lowest priority need" to 5 = "Highest priority need")—ordered by mean, 2017

Item	Mean	Percent				
		1	2	3	4	5
Cleaner restrooms	3.89	5.2	7.6	21.6	24.4	41.3
Dirt / other soft surface walking trails and paths	3.68	6.5	8.4	24.1	32.1	28.8
Nature and wildlife viewing areas	3.65	6.9	9.0	25.6	29.1	29.4
More restrooms	3.59	6.7	10.5	26.4	29.3	27.0
Public access sites to waterways	3.57	8.5	9.8	26.1	27.3	28.4
More places and benches to observe nature and others	3.36	10.6	13.2	27.4	26.7	22.1
Picnic areas and shelters for small visitor groups	3.34	7.5	14.3	32.6	28.7	17.0
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.22	14.9	13.4	28.4	21.7	21.7
Security cameras in key places	3.21	18.1	13.5	21.8	22.6	23.9
Off-street bicycle trails and pathways	3.18	17.2	13.5	26.2	20.8	22.3
More shaded areas	3.15	14.1	14.2	31.7	22.8	17.2
Paved/ hard surface walking trails and paths	3.14	14.7	15.9	28.2	22.4	18.7
Picnic areas and shelters for large visitor groups	2.98	14.3	19.8	33.1	19.6	13.2
Children's playgrounds and play areas built with manufactured structures like swingsets, slides, and climbing apparatuses	2.90	20.2	16.9	29.8	19.5	13.6
Designated paddling routes for canoes, kayaks, rafts, driftboats	2.90	21.7	15.8	27.6	20.9	14.0
Additional lighting	2.88	22.2	17.0	26.6	19.2	15.1
Off-leash dog areas	2.80	27.4	15.8	23.2	16.5	17.1
Community gardens (where you can grow vegetables)	2.63	32.3	16.9	21.3	14.1	15.4
Off-highway vehicle trails / areas	2.58	32.9	17.3	22.8	12.9	14.0
Multi-use sports fields	2.58	29.9	19.1	25.2	14.2	11.6
Low-impact exercise equipment	2.28	39.0	19.5	23.0	10.8	7.6

Consistent with the statewide results, the rank-order of items across demographic groups shows almost uniform support for cleaner restrooms, soft surface walking trails and more restrooms. Other priorities include natural play areas (Latino, families with children, suburban, low income), nature and wildlife viewing areas (urban, suburban, low income), public access sites to waterways (rural, young old, and male), picnic areas and shelters for small visitor groups (Latino, middle old), more places and benches to observe nature and others (Asian, Latino, middle old), security cameras in key places (Asian), and children's playgrounds built with manufactured structures (families with children).

Consistent with the statewide results for "outside your community" investments, the rank-order of items across demographic groups also shows almost uniform support for cleaner restrooms, soft surface walking trails, nature and wildlife viewing areas and more restrooms. Other priorities include more places and benches to observe nature and others (Latino, urban), natural play areas (families with children), and security cameras in key places (Latino and Asian).

Agency Management Actions

Oregon outdoor recreation participants were also asked to rate seventeen (17) potential "in your community" agency actions with respect to the effect on respondent participation in outdoor recreation. A 3-point Likert scale was used (1 = no effect, 2 = lead to a small increase, and 3 = lead to a large increase).

For statewide reporting (Table 2.8), providing more free-of-charge recreation opportunities was the most important action, with ensuring clean and well-maintained parks and facilities, and developing walking / hiking trails closer to home also high in importance. Providing seniors-only park areas, providing free Wi-Fi, and providing public transportation to parks were the lowest in importance.

Table 2.8. In your community actions, how would actions effect engagement, Oregon general population – mean and percentage for 3-point Likert (1= "No effect", 2 = "Lead to small increase", 3 = "Lead to large increase"), 2017

Action	Mean	Percent		
		1	2	3
Provide more free-of-charge recreation opportunities	2.38	15.4	31.7	53.0
Ensure clean and well-maintained parks and facilities	2.37	11.0	40.6	48.4
Develop walking / hiking trails closer to home	2.31	14.7	39.6	45.7
Make parks safer from crime	2.25	20.3	34.2	45.5
Develop parks closer to home	2.19	20.9	39.2	39.9
Expand park facilities (picnic tables, restrooms, etc.)	2.12	21.0	46.3	32.7
Provide more information on parks and recreation opportunities	2.08	23.6	44.7	31.7
Reduce overcrowding in parks	2.08	24.4	42.8	32.8
Place more benches and restroom facilities along trails	1.97	29.2	44.4	26.4
Provide lighting at night	1.95	31.9	41.4	26.8
Expand parking	1.94	31.5	43.2	25.3
Develop additional recreation programs (hiking, skiing, outdoor photography, etc.)	1.89	33.5	44.3	22.2
Develop water features (fountains, ponds, artificial waterfalls)	1.86	37.7	38.8	23.5
Provide accessibility for people with disabilities	1.80	44.3	31.1	24.6
Provide public transportation to parks	1.61	56.4	25.9	17.7
Provide free Wi-Fi	1.60	57.3	25.7	17.0
Provide seniors-only park areas	1.53	62.3	22.4	15.3

For Oregon demographic groups, providing more free-of-charge recreation opportunities and ensuring clean and well-maintained parks and facilities were most important actions to increase outdoor recreation engagement across all demographic groups. Developing walking / hiking trails closer to home was a most important action for families with children, low income, young old, middle old, male, and female populations. Making parks safer from crime was a most important action for Latino, Asian, urban, suburban, and rural populations.

Local Park Visitor Characteristics

A number of questions were asked of Oregon outdoor recreation participants about their use of local parks, trails, open space and recreation centers.

Key statewide findings include:

- Top local park group types were just family and both family and friends.
- Top typical local park group sizes were 3 to 5 people and 2 people.
- Most respondents reported that it is very important (46%) or somewhat important (37%) to have a recreation facility within a 10 minute or less walking distance from their home.
- Most respondents reported a single park or recreation facility (44%) or multiple parks/ facilities (34%) within walking distance from home. The lowest percentage (23%) reported having no park/ recreation facilities within walking distance from home.
- Most respondents reported driving themselves (51%) or walking (33%) to their most used outdoor recreation facility. Fewest participants reported traveling by taxi (<1%) or bus or other public transit (1%).
- In describing any access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation, most mentioned difficulties included inadequate parking, inadequate public transportation options, pedestrian safety, and traffic.

Key demographic group findings include:

- Respondents across all demographic groups are most likely to go to local parks with just family and both family and friends. About a third of most demographic groups also go to parks with a dog, but much lower for middle old (17%) and Asian (19%) populations. The low income population was much more likely to go to parks alone (38%) than other demographic groups.
- In general, urban, young old, and middle old demographic groups go to parks in smaller groups and Latino and families with children in large groups.
- Highest importance of having a local park, trail, open space or recreation center within walking distance of home was reported by urban, families with children, and Latino populations. Lowest importance was reported by rural and middle old populations.
- Urban respondents report the highest percentage of multiple parks/ facilities (48%), and lowest percentage of no parks / recreation facilities (10%). On the other hand, rural respondents report the highest percentage of no parks/ recreation facilities (50%), and lowest percentage of multiple parks / facilities (13%), and a single park or recreation facility (37%).
- For most demographic groups, driving themselves to the park was reported as the transportation type most used, however higher proportions of Asian (47%) and urban (45%) respondents reported walking to the park. The highest percentage of those driving

themselves to the park was reported by the rural population (67%). The highest percentage of those bicycling to the park was reported by the urban population (7%).

Community Recreation Program Need

In order to gauge residents' use of community recreation programs and need, respondents were asked if they have a need for a list of eighteen (18) recreation programs, classes, or events in their community and to rate how well that need is being met in the individual's community using 5-point Likert scale (1 = not being met to 5 = fully met). Next, they were asked to identify the top four programs from the list which are most important to them and other members of their household.

For statewide reporting (Table 2.9), farmer's markets showed the highest need, along with concerts, outdoor sports, and outdoor movies. Lowest need was reported for Pilates and Zumba classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, and concerts. Lowest mean scores for need being met were for game areas (e.g., chess, cards) and outdoor movies. The most important program to respondents was farmer's markets, followed by outdoor sports, concerts, and outdoor movies.

Table 2.9. Community recreation program need, Oregon general population, 2017

Type of program, class, or event	Do you have a need for this program, class, or event?		If yes, how well is your need being met? – Mean score*	Which programs are most important?			
	% Yes	% No		% 1st Choice	% 2nd Choice	% 3rd Choice	% 4th Choice
Farmer's market	68.6	31.4	3.83	40.8	16.6	10.3	7.1
Concert	56.3	43.7	3.29	9.9	18.1	14.0	9.1
Outdoor sports	48.5	51.5	3.43	13.8	8.2	9.0	9.4
Outdoor movies	46.2	53.8	2.63	3.2	7.5	9.5	11.9
Water exercise	41.0	59.0	3.00	5.8	6.8	6.5	7.5
Historical tours	40.2	59.8	2.75	2.9	5.6	8.7	8.9
Arts and crafts (ceramic, painting)	39.8	60.2	3.04	4.0	6.9	7.3	7.5
Quiet zone for reading or meditating	38.8	61.2	3.20	4.8	6.5	6.9	7.1
Environmental education	34.9	65.1	2.74	3.1	4.6	5.9	7.4
Yoga	34.4	65.6	3.12	3.0	4.5	4.8	4.5
Game area (e.g., chess, cards)	26.4	73.6	2.58	1.2	2.3	3.3	4.4
Walking club	26.3	73.7	2.73	0.7	1.1	1.2	0.5
Computer education	25.5	74.5	2.77	1.3	2.4	3.4	4.0
Social dancing	24.3	75.7	2.68	1.3	2.5	3.0	4.2
Aerobics	22.8	77.2	3.10	1.1	1.7	1.8	1.7
Tai Chi	20.8	79.2	2.73	1.5	2.2	2.0	2.1
Zumba	18.7	81.3	3.02	1.0	1.6	1.6	1.6
Pilates	18.4	81.6	2.84	0.5	0.8	0.8	1.2

* 5-point Likert Scale (1= "Not being met" to 5 = "Fully met")

Farmer's markets showed the highest need, along with concerts across all demographic groups. Other top programs showing high need include historical tours (Latino, young old, middle old), outdoor movies (urban, low income, female), outdoor sports (families with children, suburban, rural, male), and quiet zone for reading or meditating (Asian). Lowest mean scores for needs being met for top programs included historic tours (Latino, young old, middle old), outdoor movies (urban, suburban, low income, male, female), and arts and crafts (rural).

Agency Actions to Increase Physical Activity

Oregon outdoor recreation participants were also asked to rate sixteen (16) potential "in your community" agency actions with respect to increasing the level of physical activity of their or household members. A 3-point Likert scale was used (1 = no effect, 2 = lead to a small increase, and 3 = lead to a large increase).

At the statewide level (Table 2.10), providing more walking trails or paths was the most promising action, with more parks closer to where I live, and improved walking routes to parks also high in potential for increasing physical activity. Providing seniors-only areas, senior activity centers, separate areas in parks for older adults were the lowest in potential for increasing levels of physical activity.

Table 2.10. In your community actions, how would actions effect physical activity, Oregon general population – mean and percentage for 3-point Likert (1= "No effect", 2 = "Lead to small increase", 3 = "Lead to large increase"), 2017

Action	Mean	Percent		
		1	2	3
Walking trails or paths	2.21	16.1	46.5	37.4
More parks closer to where I live	1.96	33.1	37.6	29.3
Improved walking routes to parks	1.93	34.5	38.2	27.2
Bicycle trails or paths	1.90	37.9	34.1	27.9
Fitness classes (e.g., yoga, tai chi, pilates, zumba, cross-fit, water exercise)	1.72	46.9	34.2	19.0
Outdoor exercise equipment (e.g., elliptical trainer, stationary bike, rower)	1.60	55.4	29.4	15.2
Functional strength training (training the body for the activities performed in daily life)	1.56	56.3	31.3	12.4
Community gardens (where you can grow vegetables)	1.53	61.2	24.6	14.2
Adult sports leagues	1.49	63.0	25.3	11.8
Organized walks	1.48	62.4	27.3	10.4
Classes tailored to specific health concerns (e.g., heart disease, arthritis, diabetes or falls)	1.46	64.9	24.5	10.7
Adult dance classes	1.45	66.1	22.5	11.4
Provide accessibility for people with disabilities	1.40	70.2	19.3	10.6
Separate areas in parks for older adults to be with others their age	1.36	72.3	19.9	7.8
Senior activity centers	1.35	72.9	19.6	7.5
Provide seniors-only park areas	1.27	78.9	14.9	6.1

For demographic groups, providing more walking trails or paths, more parks closer to where I live, and improving walking routes to parks were the most important actions to increase physical activity across all demographic groups. Providing bicycle trails or paths was a most important action for families with children, urban, and male populations. Mean scores for the middle old population for these top actions are considerably lower than other demographic groups.

Disability

Oregon resident outdoor recreation participants were asked if they are anyone in their household had a disability, type of disability, if the disability hampered their ability to recreation outdoors, and if there is some accommodation or assistance that could be offered to help improve their recreational experience.

At the statewide level (Table 2.11), approximately one quarter (23%) of respondents indicated that they or someone in their household has a disability. Approximately 8% of households had someone with a sight disability and 6% a walking disability. And 13% indicated that the disability hampered their ability to recreate outdoors in Oregon, with 7% reporting that there is an accommodation or assistance that would help improve their recreation experience. The most frequently other types of disabilities mentioned were mental illness, back problems, neurological issues, heart problems, movement issues, autism, diabetes, arthritis, and post-traumatic stress disorder. Most frequently mentioned disability accommodations were trail maintenance (flat, paved, cleared), benches, reduced fees, providing accessible facilities, parking, and public transportation.

Table 2.11. Disabilities, Oregon general population, 2017

Do you, or anyone in your household, have a disability?			If yes, what type of disability?						Does disability hamper ability to recreate outdoors?				Is there an accommodation or assistance that would help?		
Yes	No		Hearing	Learning	Sight	Walking	Other		Yes	No	Does not apply		Yes	No	Does not apply
23.1	76.9		5.9	2.4	7.7	6.2	9.6		12.9	9.6	77.5		5.4	7.1	87.5

For demographic groups, highest percentages of households with someone with a disability were reported by the low income (45%), middle old (40%), and young old (32%) populations. The highest reported types of disabilities were hearing (middle old), sight (middle old, low income, young old), and walking (middle old, low income, young old). The middle old (26%) and low income (28%) populations were the highest reporting that the disability hampered their ability to recreate outdoors in Oregon. Approximately 15% of low income respondents reporting that there is an accommodation or assistance that would help to improve their recreation experience. The most frequently mentioned accommodations by low income respondents were providing accessible facilities, reduced fees, benches, trail maintenance, and public transportation. Most frequently mentioned other types of disabilities mentioned by low income respondents were mental illness, heart, and back problems.

How Park and Forest Managers Can Help Participation

Oregonians that participated in outdoor recreation activities were asked to write in order of up to three things that managers can do to help with participation in outdoor recreation. The top ten number one priorities listed include:

- Reduce user fees (reduce, get rid of, make flexible).
- Provide better information about outdoor recreation opportunities.
- Trail maintenance.
- Clean restrooms.
- Improved security / safety.
- Clean facilities.
- Enforce rules.
- Improved accessibility (disabled, elderly).
- More and improved restrooms.
- Improved access to recreation lands.

Key Findings – Non-Participant Survey

Oregon Resident Non-Participants' Preferences

People that stated they did not participate in some outdoor recreation activity in 2017 were asked additional questions. These questions delved into 1) their past recreation history, 2) their limitations to participating in recreation activities, 3) a list of activities they would like to participate in, 4) if the creation or expansion of a list of programs or facilities in their community would cause them or members of their household to be more physically active, and 5) if they or anyone in their household had a disability, type of disability, and if the disability hampered their ability to recreate outdoors, and if there is some accommodation or assistance that could be offered to help improve their recreational experience. Results are presented at the statewide scale.

Participation History for Current Non-Participants

Overall, 5% of Oregonians reported not participating in any outdoor recreation activities in Oregon during 2017. The majority of non-participants reported that they have never participated in outdoor recreation activities:

- 52% of respondents never participated in outdoor recreation activities.
- 18% participated in outdoor recreation activities prior to 2017.
- 5% participated in outdoor recreation activities in 2017, but not in Oregon.

Non-participants were also asked to write-in the top reason why they did not participate in outdoor recreation activities in Oregon in 2017. In descending order of frequency, reasons include:

1. Health issues.
2. Age, too old.
3. Other things to do.
4. Disabilities.
5. Lack of time because of work.

Activities Would Like To Do

Respondents to the non-participant survey were also asked what activities they would like to participate in, with the largest percentages including:

1. Fishing.
2. Hiking.
3. Camping.
4. Walking.
5. Hunting.

Respondents were also asked to write-in the single most important thing that park and forest managers can do to help them participate in outdoor recreation. In descending order of frequency, actions include:

1. Improve accessibility (disability, elderly).
2. Reduce fees (free camping, fewer fees, more affordable).
3. Improve access (keep areas open, park availability).
4. Increase advertising (spread information, information on parks and opportunities).
5. Improve maintenance (improve parks, roads, facilities).
6. Clean facilities (bathrooms, parks, campgrounds).
7. Increase visitor safety (keep recreation areas safe, reduce theft, provide cell service).

Proximity to Parks

Most respondents reported that it is not at all important (38%) or somewhat important (35%) to have a recreation facility within a 10 minute or less walking distance from their home. The

lowest percentage (28%) reported it was very important to have a recreation facility within walking distance from home. Most respondents reported a single park or recreation facility (38%) or no park/ recreational facility (37%) within walking distance of home.

Agency Actions to Increase Physical Activity

Providing more walking trails or paths was the most promising action, with improved walking routes to parks, and providing accessibility for people with disabilities also high in potential for increasing physical activity (Table 2.12). Providing adult sports leagues, adult dance classes, community gardens, and outdoor exercise equipment were the lowest in potential for increasing levels of physical activity.

Table 2.12. In your community actions, how would actions effect physical activity, Oregon non-participant residents – mean and percentage for 3-point Likert (1= "No effect", 2 = "Lead to small increase", 3 = "Lead to large increase"), 2017

Action	Mean	Percent		
		1	2	3
Walking trails or paths	**1.71**	44.4	39.7	15.9
Improved walking routes to parks	**1.55**	56.5	32.3	11.3
Provide accessibility for people with disabilities	**1.54**	62.6	20.3	17.1
Classes tailored to specific health concerns (e.g., heart disease, arthritis, diabetes or falls)	1.52	59.5	28.6	11.9
Senior activity centers	1.52	57.6	32.8	9.6
Bicycle trails or paths	1.46	67.7	19.4	12.9
More parks closer to where I live	1.44	65.9	23.8	10.3
Fitness classes (e.g., yoga, tai chi, pilates, zumba, cross-fit, water exercise)	1.44	69.9	17.6	12.8
Separate areas in parks for older adults to be with others their age	1.42	63.8	30.7	5.5
Provide seniors-only park areas	1.41	66.4	25.6	8.0
Functional strength training (training the body for the activities performed in daily life)	1.39	66.9	26.8	6.3
Organized walks	1.38	69.6	22.4	8.0
Outdoor exercise equipment (e.g., elliptical trainer, stationary bike, rower)	1.32	73.2	21.1	5.7
Community gardens (where you can grow vegetables)	1.32	77.0	15.1	7.9
Adult dance classes	1.31	75.4	18.3	6.3
Adult sports leagues	1.17	84.8	12.8	2.4

* Top actions **bolded**.

Disabilities

For non-participants, approximately one half of respondents indicated that they or someone in their household has a disability (Table 2.13). Approximately one quarter (27%) of households had someone with a walking disability, 20% with a hearing disability and 12% with a sight disability. And 31% indicated that the disability hampered their ability to recreation outdoors in Oregon, with 7% reporting that there is an accommodation or assistance that would help improve their recreation experience. The most frequently mentioned disability accommodations were

providing accessible trails, restrooms and facilities, reduced fees and special disability passes, tailored activities for seniors, and providing wheelchairs at recreation sites.

Table 2.13. Disabilities, Oregon non-participant residents, 2017

Do you, or anyone in your household, have a disability?			If yes, what type of disability?						Does disability hamper ability to recreate outdoors?				Is there an accommodation or assistance that would help?			
Yes	No		Hearing	Learning	Sight	Walking	Other		Yes	No	Does not apply		Yes	No	Does not apply	
50.3	49.7		20.5	4.1	11.6	26.5	18.5		31.3	20.4	48.3		7.4	22.5	69.7	

Summary and Recommendations

Overall, 95 percent of Oregon residents participated in at least one outdoor recreation activity in Oregon during 2017. For demographic groups, families with children had the highest proportion of their population participating in some outdoor recreation activity, and middle old and low income the lowest. Survey results suggest that, looking a participation across all activities, the most underserved populations, from an outdoor recreation perspective in Oregon, are the middle old (ages 75-84), low income, young old (ages 60-74), and Asian populations, of those demographic groups evaluated in this research. When examining the total number of participation times across the year, the most underserved populations are the middle old, Asian, young old, Latino, and low income populations. Recreation providers should consider the needs of these underserved demographic groups during future jurisdictional planning efforts.

Survey results show that close-to-home activities dominate the total user occasions for Oregon residents since these activities can occur on a daily basis with limited travel time. Besides walking, bicycling and jogging on local streets / sidewalks; top outdoor activities include walking on local trails / paths, dog walking, and bicycling on paved trails. Recreational planners should note the high public priority for dirt and other soft surfaced walking trails and paths and off-street bicycle trails and pathways.

Another top activity among Oregon residents is general play at a neighborhood park / playground. Based on increasing interest among recreation providers in the state, a distinction was made in the "priorities for the future" survey question to include both public opinions on the need for "children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)" and the need for "children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses." Survey results indicate that Oregonians place a top priority on public investment in the development of natural play areas throughout Oregon. These findings can reinforce local efforts to plan and develop natural play areas in their jurisdictions.

Oregon's waterways (ocean, rivers, lakes, reservoirs and wetlands) are treasured resources and a preferred environment for outdoor recreation participation in the state. Public waterways are a

setting for many top outdoor activities such as camping, beach activities, boating, relaxing, picnicking, trail activities, and bird / wildlife observation. Planners should note the public's strong desire for more public access to Oregon's waterways. This public support could enable public recreation providers to identify and acquire lands for public waterway access and appropriate development of recreational facilities to facilitate public participation in these top outdoor activities.

Drive-in tent sites had the highest likelihood of use and the highest priority need for overnight camping facilities in the state. An analysis of current demand and supply shows that 31.5 percent of the Oregon population participates in car camping with a tent with 7.5 million user occasions. RV / motorhome / trailer camping is participated in by 17.2 percent of the Oregon population with 6.5 million user occasions. However, the 2018 Oregon public recreation provider survey identified that dispersed-setting recreation providers reported a need for additional RV / trailer campgrounds and facilities as a priority, but not tent campsites. These findings indicate that park planners should consider the need for additional tent campsites in campgrounds within their jurisdictions. Tent campsites should be developed with an understanding of the design preferences of this user group.

Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, and developing walking / hiking trails closer to home as high in importance. For demographic groups, providing more free-of-charge recreation opportunities and ensuring clean and well-maintained parks and facilities were the most important actions to increase outdoor recreation engagement across all demographic groups. Developing walking / hiking trails closer to home was a most important action for families with children, low income, young old, middle old, male and female populations. Making parks safer from crime was a most importation action for Latino, Asian, urban, suburban, and rural populations.

The survey also examined potential "in your community" agency actions to increase the level of physical activity of the respondent or the respondent's household members. At the statewide level, providing more walking trails or paths was the most promising action, with more parks closer to where I live, improved walking routes to parks, and bicycle trails or paths also high in potential for increasing physical activity. OPRD will provide funding priority for walking trails or paths, more parks closer to where I live, trails or paths that lead to parks, and bicycle trails or paths in OPRD-administered grant programs where applicable. Recreation providers should also consider these strategies in jurisdictional planning efforts.

Respondents cited access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including inadequate parking, inadequate public transportation options, pedestrian safety and traffic. Park managers should consider these problems in future planning efforts.

As reported by non-participants, health issues, being too old, and disabled were top reasons why they did not participate in outdoor recreation activities in Oregon in 2017. In 2018, 23 percent of Oregon's total population was over the age of 60. By 2030, that number will grow to 27 percent. Approximately a third of young old respondents indicated they or someone in their household

had a disability. For the middle old population, approximately 40 percent of respondents indicated that they or someone in their household had a disability. These findings indicate that recreation managers can expect a growing number of Oregonians to drop out of outdoor recreation participation in the coming years due to increasing age and disability unless accommodations are made to overcome their limitations. Based on survey, park managers should consider accommodations such as more accessible recreation facilities, more handicapped parking, more benches along trails, more paved trails, accessible restrooms, safe walking areas (free of fall risk), more benches / places to sit, public transportation to parks, and allowing electric mobility devices on trails.

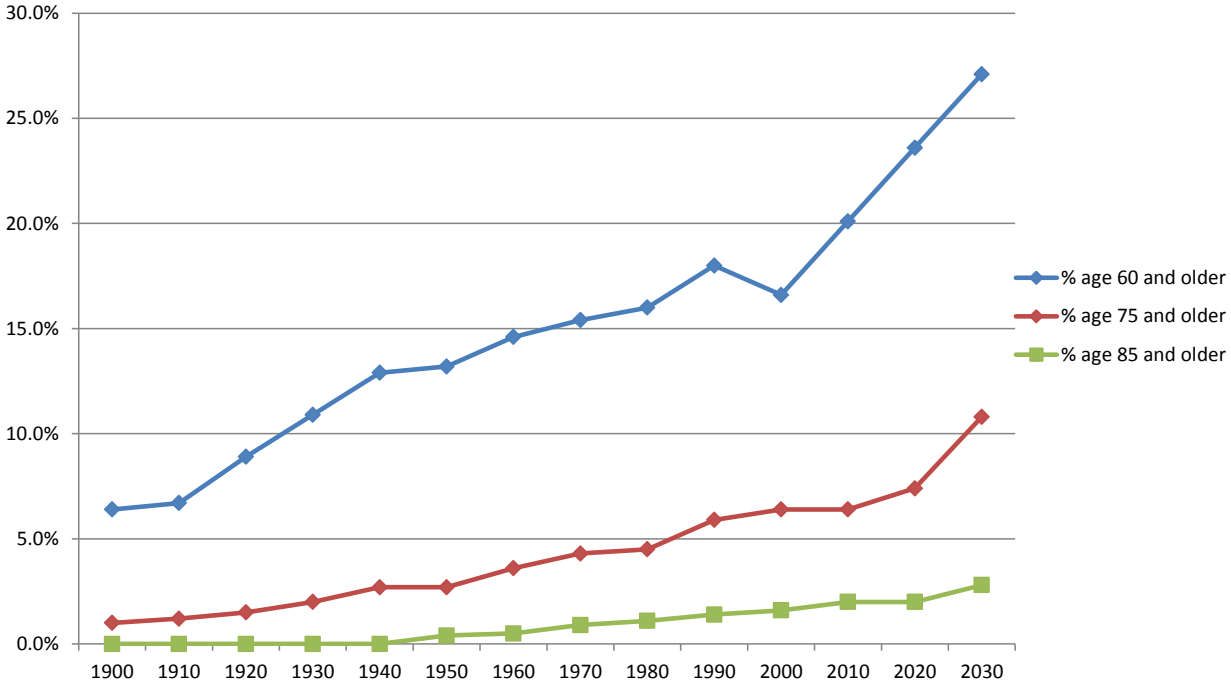
CHAPTER THREE – AN AGING POPULATION AND OUTDOOR RECREATION IN OREGON

Issue Introduction

Park and recreation professionals have long responded to demographic diversity by providing a range of services and facilities that cater to different age groups and participant recreation styles. However, the aging Baby Boomer (Boomer) generation (those born between 1946 and 1964) presents a distinct challenge for recreation providers. As this Boomer population ages, it generates increased demand for services and facilities suited to older adults.

In Oregon, and nationally, the percentage of people age 60 and older is increasing. Individuals 60 and over currently represent approximately 23% of the Oregon population, and that percentage will continue to grow. Longer life spans and aging Boomers are the primary factors driving this growth. As show in Figure 3.1, by the year 2030, over one in four (27%) Oregonians will be over the age of 60. Oregon is projected to be the state with the fourth highest proportion of older adults by 2025.

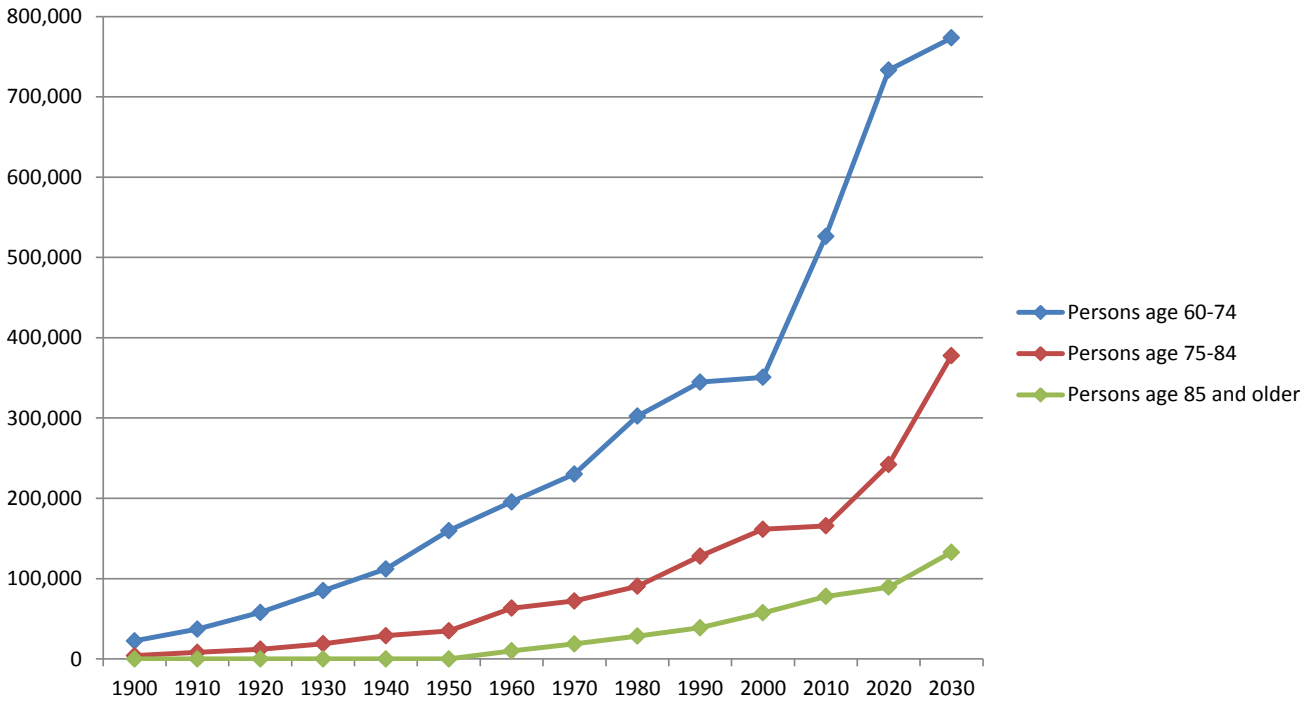
Figure 3.1. Percentage of people over 60 in Oregon, 1900-2030[1]



[1] US Census Bureau and Portland State University Population Research Center

Figure 3.2 shows the trend line for the total number of Oregonians in three elderly population age categories (persons age 60-74, 75-84, and 85 and older) during the period from 1900 to 2030. By the year 2030, approximately 1,284,000 Oregonians will be 60 years of age or older. According to Portland State Population Research Center projections, the number of Oregonians 60 years and older will increase by 33% between 2018 and 2030, from 968,500 to 1,284,000.

Figure 3.2. Number of people over 60 in Oregon, 1900-2030[1]



An Aging Oregon Population and Outdoor Recreation Participation

National and statewide data support the intuitive belief that participation rates decrease as one ages, particularly for physically demanding activities.[2] Recent analysis of National Survey on Recreation and the Environment[3] data generates four conclusions:

- With the exception of gardening / landscaping, participation in all recreation activities decreases with age.
- Participation in most activities continues to decrease as age increases, with physically demanding activities decreasing most rapidly.
- Even in the oldest age group (85+), there was at least some participation in almost every activity (participation rate went to 0%).
- Some activities such as walking for pleasure remain popular across all age groups.

[2] Kelly, J. 1980. Outdoor recreation participation: A comparative analysis. Leisure Sciences 3(2): 129-154.
[3] Cordell, K., Betz, C., Green, G., Thompson, F., West, A., Fly, M., Stephens, B. 2005. Retirees participation in outdoor activities: Retirees 65 and older remain active in many activities well into their senior years. Recreation and Tourism Statistics Update No. 10.

A 2007 SCORP survey of the Oregon population of Boomers (those born between 1946 and 1964) and Pre-Boomers (born between 1926 and 1945)[4] found that, in Oregon, outdoor recreation participation intensity tends to peak at age 45-49, decline with age, and then increase in the late 70s – though this increase appears due to a few particularly active individuals. Participation rate also tends to peak at age 45-49 and then slowly decline with age. These results are consistent with the expectation that recreation participation declines with age despite greater free time in retirement.

The 2007 survey found that the most popular activities among an aging population by participation rate (engaging in them at least once in the past year) included walking, picnicking, sightseeing, visiting historic sites, and ocean beach activities. In terms of average number of days engaged in an activity (activity participation intensity), the top activities were walking, bird watching, jogging, sightseeing and bicycling on road / path. Walking tops both lists.

This survey report identified that approximately a third (32%) of Boomer and Pre-Boomer respondents indicated that they or someone in their household had a disability. As a result, Oregon's recreation managers can expect substantial increases in the numbers of visitors with a physical or mental disability using their recreational facilities and services in the coming years as Boomers increase in age. Top activities for those respondents with disabilities were walking, picnicking, sightseeing, visiting historic sites, ocean beach activities, and fishing from a bank or shore.

Boomers differ from previous generations. As Ziegler[5] notes, Boomers work hard, play hard, and spend hard. Many feel (and behave) 10 years younger than their chronological age. In particular, they are devoted to exercise and fitness. In broad terms, these two forces work in opposite directions – there will be more people of retirement age, but their recreation patterns may change relatively little as they move into retirement. However, the net effect is unknown, and recreation providers require more detailed information to guide acquisition, facility development, and service provision. Traditionally, older people "exit" from physically demanding activities as they age. This is balanced by younger people "entering" these activities. The Boomers may effect this standard equation in two ways:

- First, the size of the cohort means that the "exit" may not be balanced by the "entry."
- Second, Boomers may not "exit" as early / quickly as their predecessors did.

It is difficult to quantify the size of the net effect, by the general direction of the effect is that there will be more demand for activities than in the past.

In preparation for the 2018-2022 Oregon Statewide Comprehensive Outdoor Recreation Plan, the Oregon Parks and Recreation Department conducted a statewide survey of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about

[4] Lindberg, K. 2007. Outdoor recreation and an aging Oregon population. Oregon State University. A 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan supporting document. Report online at: https://www.oregon.gov/oprd/PLANS/docs/scorp/aging_oregon_report.pdf.

[5] Ziegler, J. 2002. Recreating retirement: How will Baby Boomers reshape leisure in their 60s? Parks and Recreation, October, pp. 56-61.

park and recreation management. The sample design was developed to derive information at various scales including statewide, urban, suburban, and rural for the general population and for a number demographic groups including a random sample of Oregon's aging population. For this survey, two aging population categories were used including the "young old" (ages 60-74) and "middle old" (ages 75-84). A third aging population category, "old old" (ages 85+) was included in the initial pilot test, but removed from the final mailing due to a low response rate.

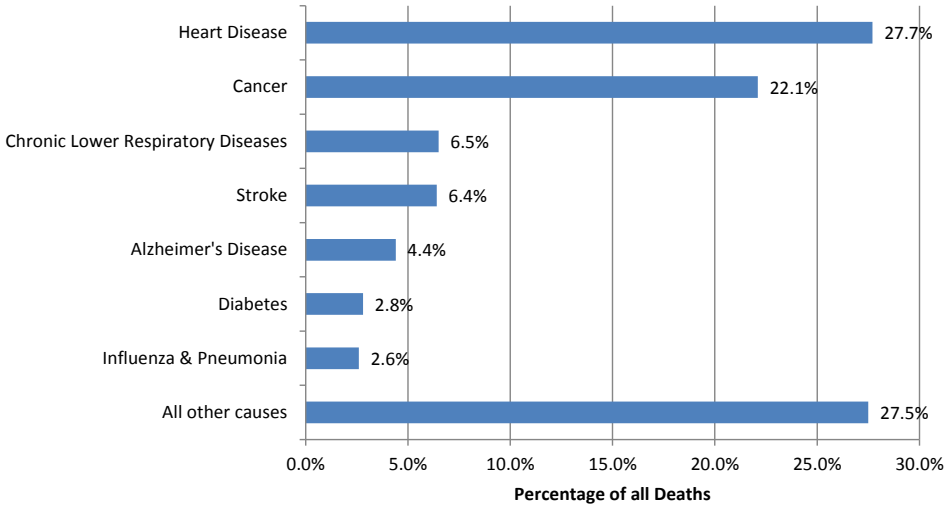
Survey results may be used by federal, state and local parks and recreation managers / agencies and private-sector recreation providers to understand current recreation and future demands for recreation opportunities and programs associated with an aging Oregon population.

Physical Activity and an Aging Oregon Population

(Note: National-level statistics and recommendations included under this heading are from a report entitled: The State of Health in America 2013[6].)

An enhanced focus on promoting and preserving the health of older adults is essential if we are to effectively address the health and economic challenges of an aging society. The cost of providing health care for one person aged 65 or older is three to five times higher than the cost for someone younger than 65. By 2030, health care spending will increase by 25%, largely because the population will be older, unless improving and preserving the health of older adults is more actively addressed.

Figure 3.3. Causes of death among U.S. adults aged 65 or older, 2007-2009[7]



The aging of America is triggering a higher demand for health care and social services. Currently, about 80% of older adults have at least one chronic disease, and two or three have at least two. People living with one or more chronic diseases often experience diminished quality of

[6] The State of Aging and Health in America 2013. Centers for Disease Control (CDC). Atlanta, Ga: Centers for Disease Control and Prevention, US Dept of Health and Human Services. Report online at: https://www.cdc.gov/aging/pdf/State-Aging-Health-in-America-2013.pdf.
[7] CEC, National Center for Health Statistics. National Vista Statistics System, 2007-2009.

life, generally reflected by a long period of decline and disability associates with their disease. Statistics indicate the number of Oregonians who need long-term care will grow from nearly 200,000 in 2005 to more than 265,000 in 2015, and more than 375,000 in 2025[8]. Because the population will be older and greater in number in the coming years, overall U.S. health care costs are projected to increase 25% by 2030. Medicare spending is projected to increase from $555 billion in 2011 to $903 billion in 2020. Preventing health problems is one of the few known ways to stem rising health care costs. By preserving function and preventing injury, we also can help older adults remain independent for as long as possible, which can improve their quality of life and delay the need for costly long-term care.

Millions of Americans, most of them older adults, suffer from chronic illnesses that can be prevented or improved through regular physical activity. In a 1993 study[9], 14 percent of all deaths in the United States were attributed to insufficient activity and inadequate nutrition.

Physical activity is an integral part of healthy aging. The Centers for Disease Control and Prevention estimate that only 16 percent of adults aged 65 and older met aerobic and muscle-strengthening guidelines in 2011 – the lowest of any age group. Physical inactivity increases the risk of cardiovascular disease, cancer, diabetes, hypertension, obesity and premature death. Increasing physical activity, especially from an absence, prevents and helps manage numerous chronic diseases. Even moderate increase in physical activity can greatly reduce risk of adverse health outcomes. Growing evidence illustrates the importance of the built environment and community design to promote physical activity for seniors.

The data are compelling, almost overwhelming: If older adults increase physical activity, improve eating habits, and take some relatively simple steps to minimize the risk of falling, they could live longer and healthier lives. In Oregon, 44% of adults between the ages of 55 and 64 and 52% 65 and older do not meet the CDC physical activity guidelines of moderate intensity physical activities for at least 30 minutes on 5 or more days a week[10]. In 2018, 19.1% of Oregon adults aged 65 and older in fair or better health reported doing no physical activity or exercise other than their regular job in the past 30 days[11].

Regular physical activity has beneficial effects on most (if not all) organ systems, and consequently it prevents a broad range of health problems and diseases. Physical activity in older persons produces three types of health benefits:

1. It can reduce the risk of developing chronic diseases such as heart disease.
2. It can aid in the management of active problems such as high blood pressure, diabetes, obesity, or high cholesterol.
3. It can improve the ability to function and stay independent in the face of active problems like lung disease or arthritis.

[8] State of Oregon. Recommendations on the future of long-term care in Oregon. Department of Human Services, Seniors and Peoples with Disabilities. May 2006.
[9] McGinnis, J., Foege W. 1993. Actual causes of death in the United States. JAMA, 270(18): 207-12.
[10] Oregon Overweight, Obesity, Physical Activity, and Nutrition Facts. 2012. Physical Activity and Nutrition Program. Oregon Department of Human Services.
[11] America's health rankings: A call to action for individuals and their communities. (2018). United Health Foundation. Report online at: https://assets.americashealthrankings.org/app/uploads/ahrsenior18-finalv1.pdf.

Although the benefits of physical activity increase with more frequent or more intense activity, substantial benefits are evident even for those who report only moderate levels of activity—i.e. washing a car for 60 minutes, raking leaves for 30 minutes, or brisk walking or swimming for 20 minutes. All of the benefits of physical activity are especially important for older men and women since they are more likely to develop chronic diseases and are more likely to have conditions such as arthritis that can affect their physical function.

Regular physical activity has beneficial effects on a variety of health outcomes, effects that are supported by consistent scientific evidence. These include:

- Lower overall mortality. Benefits were greatest among the most active persons but were also evident for individuals who reported only moderate activity.
- Lower risk of coronary heart disease. The cardiac risk of being inactive is comparable to the risk from smoking cigarettes.
- Lower risk of colon cancer.
- Lower risk of diabetes.
- Lower risk of developing high blood pressure. Exercise also lowers blood pressure in individuals who have hypertension.
- Lower risk of obesity.
- Improved mood and relief of symptoms of depression.
- Improved quality of life and improved functioning.
- Improved function in persons with arthritis.
- Lower risk of falls and injury.

Additional possible benefits of physical activity (research is less consistent) include:

- Lower risk of breast cancer.
- Prevention of bone loss and fracture after the menopause.
- Lower risk of developing depression.
- Improved quality of sleep.

Research studies have demonstrated these benefits in both middle-aged and in older persons, and in men and women. Because these chronic diseases increase with age, older persons may benefit even more than those in middle-age from physical activity. A recent study of older men in Baltimore demonstrated that leisure time activity was more important for protecting against heart disease in men over 65 than in younger men.

Of great importance to older adults, regular physical activity sustains the ability to live independently. Research has shown that virtually all older adults can benefit from regular physical activity. In particular, the mobility and functioning of frail and very old adults can be improved by regular physical activity. The large potential ability of regular physical activity to prevent chronic diseases and sustain active living means that an active lifestyle is a key component of healthy and successful aging.[12]

[12] Talbot L., Morrell C., Metter J. 2002. Comparison of cardio respiratory fitness versus leisure time physical activity as predictors of coronary events in men aged less than 65 and greater than 65 years. Am J Cardiology, 89: 1187-92.

According to a recent report[13], 27.7% of Oregon adults aged 65 and older in 2018 were identified as obese (with a body mass index of 30.0 or higher based on reported height and weight). Obesity is the leading cause of preventable life-years lost among Americans – surpassing tobacco use, high blood pressure and high cholesterol. There is a stronger relationship between obesity and mortality risk among older age groups. Adults with obesity, compared to adults at a healthy weight, are at a higher risk for developing serious health conditions including cognitive decline, chronic conditions and certain cancers. Contributing factors for obesity include behaviors such as poor diet and physical inactivity, social and physical environments, genetics and medical history.

Substantial health benefits occur with a moderate amount of activity (e.g., at least 30 minutes of brisk walking) on five or more days of the week. Additional health benefits can be gained through longer duration of physical activity or more vigorous activity. Brief episodes of physical activity, such as 10 minutes at a time, can be beneficial if repeated. Sedentary persons can begin with brief episodes and gradually increase the duration or intensity of activity.

The 2007 Oregon SCORP survey identified that walking was the top outdoor recreation activity for Oregon's aging population. As such, providing paved trails in close-to-home parks are key facilities to encourage physical activity for an aging Oregon population. According to Kaczynski, et al.[14], among all park facilities, trails have the strongest relationship with park use for physical activity. According to Reed, et al. [15], paved trails are the most heavily-used activity setting for men and women as compared to nine kinds of activity settings in 25 community parks. A 2014 study[16] found, that to encourage senior participation, trails and pathways should have even pavement, benches and light fixtures, be long and have a width between approximately 10-13 feet, be connected to other pathway segments, have relatively high configurational accessibility, and be closer to park entrances.

Clearly, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of older adults through encouraging and facilitating their involvement in active outdoor recreation activities. There is a strong economic incentive for action.

[13] America's health rankings: A call to action for individuals and their communities. (2018). United Health Foundation. Report online at: https://assets.americashealthrankings.org/app/uploads/ahrsenior18-finalv1.pdf.
[14] Kaczynski, A., Besenyl, G., Stanis, S., Kooshsari, M., Oestman, K., Begstrom, R., Potwarka, L., Reis, R. (2014). Are park proximity and park features related to park use and park-based physical activity among adults? Variations by multiple socio-demographic characteristics. International Journal of Behavioral Nutrition and Physical Activity, 11: 146-159.
[15] Reed, A., Arant, C., Wells, P., Stevens,K., Hagen, S., Haring, H. 2008. A descriptive examination of the most frequently used activity settings in 25 community parks using direct observation. Journal of Physical Activity and Health, 5(s1): 183-195.
[16] Zhai, Y. 2014. Urban park pathway design characteristics and seniors' walking behavior. North Carolina University dissertation. Raleigh, North Carolina.

Statewide Survey – Oregon's Aging Population Results

The survey was conducted by the Oregon Parks and Recreation Department (OPRD) using a random sample of Oregon's aging population. For this survey, two aging population categories were used including the young old (ages 60-74) and middle old (ages 75-84). The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the statewide population and urban, suburban, and rural populations separately for the young old and middle old age categories. For all correspondence, persons age 60-74 and 75-84 included in this sample were sent versions in the English language (e.g., cover letters, surveys). Surveys were mailed to 1,594 young old recipients and 1,594 middle old recipients. Adjusting for undeliverables, the response rate was 34% for the young old sample and 25% for the middle old sample. Due to variable sampling intensity and response rates across target demographic groups, the probability sample was complemented by an online research sample administered by Qualtrics. In total, 718 completed surveys were received for the Oregon young old sample and 464 for the middle old sample.

A full survey report including statewide results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

A full survey report including aging population results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentSurveyAgingPopulationResults.pdf.

Aging Population User Occasions and Participation in Outdoor Recreation

Overall, 92% of Oregon's young old population and 83% of Oregon's middle old population participated in at least one outdoor recreation activity in Oregon during 2017. Figures 3.4 and 3.5 provide the top ten activities for the Oregon young old and middle old populations, based on the proportion of the population participating in them.

The activities in which the largest proportions of young old Oregonians participated in 2017 include:

1. Walking on local streets / sidewalks − 75%
2. Sightseeing / driving or motorcycling for pleasure – 63%
3. Walking on local trails / paths − 63%
4. Beach activities – ocean – 51%
5. Visiting historic sites / history-themed parks – 49%

The activities in which the largest proportions of middle old Oregonians participated in 2017 include:

1. Walking on local streets / sidewalks − 62%
2. Sightseeing / driving or motorcycling for pleasure – 53%
3. Visiting historic sites / history-themed parks – 41%
4. Beach activities – ocean – 39%
5. Walking on local trails / paths – 37%

Figure 3.4. Top ten activities for Oregon young old population, percent participating, 2017

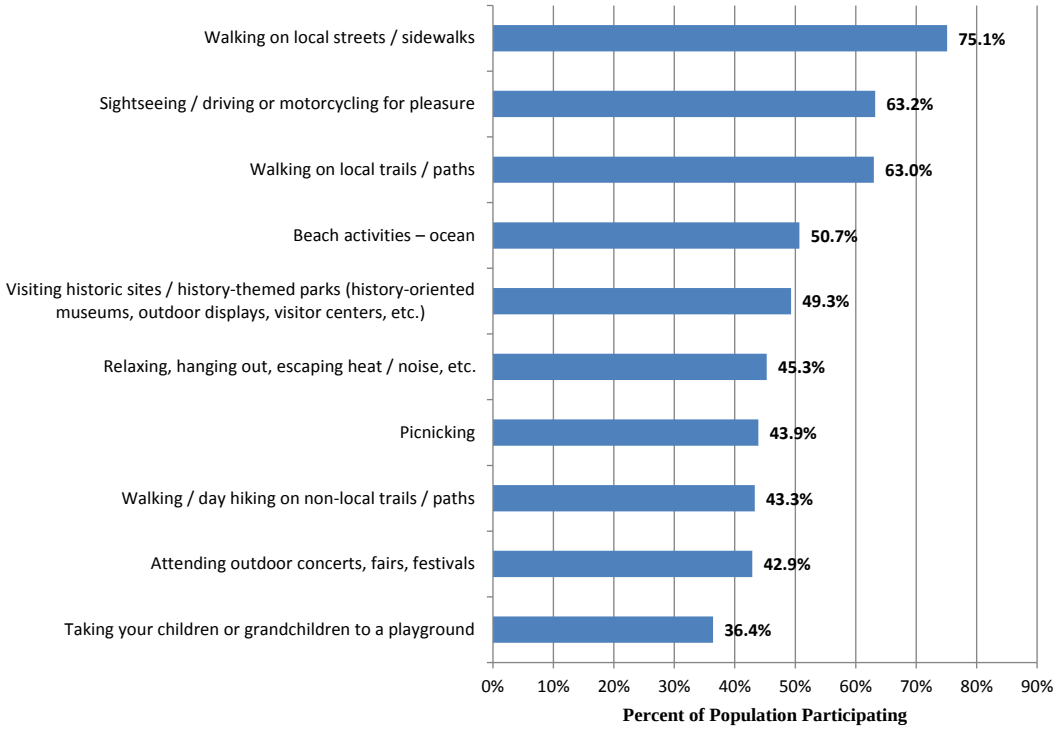
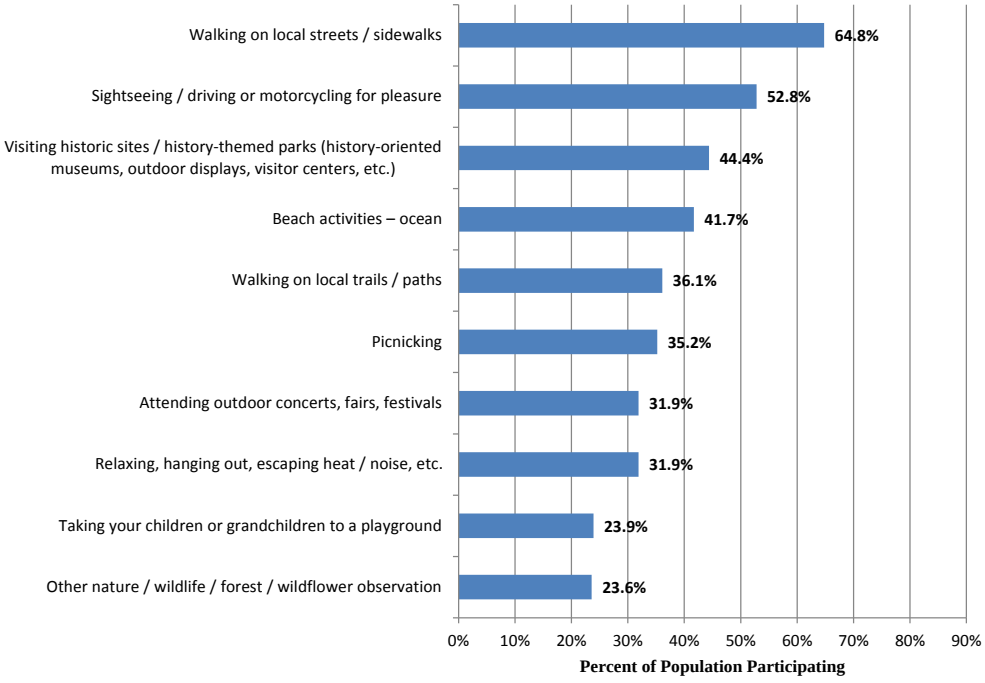


Figure 3.5. Top ten activities for Oregon middle old population, percent participating, 2017



A bivariate statistical test was used to identify statistical differences between the percent of the overall population participating in the specific activity and the percent of the young old and middle old populations participating in that activity for the full list of 56 outdoor recreation

activities included in the questionnaire. The young old population reported 34 activities and middle old 50 activities where participation was statistically less than the overall Oregon population. The annual mean of participation times for all 56 activities for the Oregon population was 354.0 times, 283.0 times for the young old population, and only 164.1 times for the middle old population. These results suggest that, when examining both the total number of activities participated in and the average number of days of participation across the year, the Oregon young old and middle old populations are underserved in comparison to the overall Oregon population in terms of outdoor recreation participation. Outdoor recreation participation significantly decreases as Oregonians move into the middle old age category (age 75-84).

Types of Outdoor Recreation Areas Used

For Oregon's young old and middle old populations local / municipal parks experienced the highest percentage of respondents reporting that they had visited that type of area over the past 12 months followed by State parks, forests, or game lands. National parks, forests, and recreation areas were third, followed by county parks, private parks, and other areas.

An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by Oregon's young old population identifies that local / municipal parks account for the highest percentage (30%) of all outdoor recreation use from the survey sample. State parks, forests, or game lands account for 19%, national parks, forests and recreation areas 17%, county parks 13%, private / commercial areas 12%, and other recreation areas account for 8%.

An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by the Oregon middle old population identifies that local / municipal parks account for the highest percentage (31%) of all outdoor recreation from the survey sample. State parks, forests, or game lands account for 16%, county parks 16%, national parks, forests and recreation areas 15%, private / commercial areas 11%, and other recreation areas account for 11%.

These results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's young old and middle old residents.

Camping Likelihood and Priority Needs

For young old Oregonians, cabins or yurts with heat, lights, bathroom, kitchen and drive-in tent sites had the highest likelihood of use. Drive-in tent campsites had the highest priority need, while, hiker-biker sites had the lowest priority need. RV sites had the largest proportion of very likely to use responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types.

For middle old Oregonians, RV sites and cabins or yurts with heat, lights, bathroom, and kitchen had the highest likelihood of use. RV sites had the highest priority need, while, hiker-biker sites had the lowest priority need. RV sites had the largest proportion of very likely to use responses from among the various types. Similarly, cabins or yurts with heat, lights, bathroom, and kitchen had the largest proportion of highest priority need among the various types.

A comparison between young old / middle old and Oregon population results shows higher young old / middle old likelihood of use for RV sites and higher priority need for RV sites.

Sources of Information for Outdoor Recreation Activities

The highest percentage of young old respondents said that friends / relatives / word of mouth and websites were the most important and most used information sources when seeking outdoor recreation information in Oregon. Maps / brochures, visitor or welcome centers, and travel guides / tour books were also most important information sources to young old respondents. Young old were much more likely to say that maps / brochures, visitor or welcome centers, travel guides / books, and newspaper / magazine articles were important sources than the general Oregon population.

The highest percentage of middle old respondents said that friends / relatives / word of mouth and maps / brochures were the most important information sources when seeking outdoor recreation information in Oregon. Websites and maps / brochures were also most important information sources to middle old respondents. Middle old were much more likely to say that maps / brochures and newspaper / magazine articles were important sources than the general Oregon population. Young old were much more likely to say that websites, visitor or welcome centers, and mobile / smart phone applications were more important sources than the middle old population.

Priorities for the Future

The top "in your community" needs for Oregon's young old population are:

- Cleaner restrooms.
- More restrooms.
- Dirt / other soft surface walking trails and paths.
- Public access sites to waterways.
- Nature and wildlife viewing areas.
- Picnic areas and shelters for small visitor groups.

The top "in your community" needs for Oregon's middle old population are:

- Cleaner restrooms.
- More restrooms.
- Picnic areas and shelters for small visitor groups.
- More places and benches to observe nature and others.
- Security cameras in key places.
- Nature and wildlife viewing areas.

The top "outside your community" priority need for Oregon's young old population are:

- Cleaner restrooms.
- Dirt / other soft surface walking trails and paths.
- Nature and wildlife viewing areas.
- More restrooms.
- Public access sites to waterways.
- More places and benches to observe nature and others.

The top "outside your community" priority need for Oregon's middle old population are:

- Cleaner restrooms.
- Dirt / other soft surface walking trails and paths.
- Nature and wildlife viewing areas.
- More restrooms.
- Public access sites to waterways.
- More places and benches to observe nature and others.

Agency Management Actions

In terms of potential "within community" actions to increase outdoor recreation engagement, for the young old population, ensuring clean and well-maintained parks and facilities and providing more free-of-charge recreation opportunities were the most important actions, with making parks safer from crime, developing walking / hiking trails closer to home, and expanded park facilities also high in importance. For Oregon's middle old population, ensuring clean and well-maintained parks and making parks safer from crime, were the most important actions, with providing more free-of-charge recreation opportunities, expanded park facilities, and placing more benches and restroom facilities along trails also high in importance.

Local Park Visitor Characteristics

A number of questions were asked of Oregon's young old and middle old outdoor recreation participants about their use of local parks, trails, open space and recreation centers.

Key findings include:

- For the young old and middle old populations, the top group types were just family and both family and friends. The middle old population was less likely than the general and young old populations to go to a local park with a dog.
- The top typical park visit group sizes for the Oregon young old and middle old was 2 people. In general, young old and middle old group size was smaller than the general Oregon population, which was more likely to report visiting local parks in groups of 3 to 5 people.
- Most young old respondents reported it is very important (39.3%) or somewhat important (38.2%) to have a recreation facility within a 10 minute or less walking distance from their home. However, most middle old respondents reported it is somewhat important (42.9%) or not important at all (29.1%) to have a recreation facility within a 10 minute or less walking distance from their home.

- The general population (2.28) places a higher level of importance having a local park, trail, open space or recreation center within walking distance of their home than the young old population (2.17) and the middle old population (1.99).
- Most young old (42.6%) and middle old (43.8%) respondents reported a single park or recreation facility within a walking distance from home. A higher percentage of young old (28.7%) and middle old (35.1%) respondents reported having no park / recreation facilities within walking distance from home than the general Oregon population (22.9%).
- The urban young old population reported the highest percentage of having multiple parks / facilities (37.1%) and the rural young old population reported having the highest percentage of no park / recreation facilities within walking distance from home (56.1%).
- The urban middle old population reported the highest percentage of having multiple parks / facilities (37.9%) and the rural middle old population reported having the highest percentage of no park / recreation facilities within walking distance from home (57.4%).
- Most young old (56.9%) and middle old (50.0%) respondents reported driving themselves or walking (young old, 28.8%; middle old, 26.4%) to their most used outdoor recreation facility.
- The highest percentage of those driving themselves to the park was reported by the rural young old (67.4%) and rural middle old population (56.6%). The highest percentage of those walking to the park was reported by the urban young old population (40.7%) and the lowest by the rural middle old population (13.2%).
- In describing any access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation, most young old mentioned difficulties included lack of parking, distance to parks, bad roads in dispersed settings, lack of public transportation, disabilities, dangerous crosswalks / intersections, and too much road traffic. Most middle old mentioned difficulties including disabilities, lack of parking, lack of public transportation, too much road traffic, and needing easier access from the parking lot to park facilities.

Community Recreation Program Need

For the young old population, farmer's markets showed the highest need, along with concerts, historical tours, and water exercise. Lowest need was reported for Zumba and Pilates classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, concerts, and yoga. Lowest mean scores for need being met were for outdoor movies, social dancing, and historical tours. The most important program to young old respondents was farmer's markets, followed by concerts and water exercise.

For the middle old population, farmer's markets showed the highest need, along with concerts, historical tours, water exercise, and computer education. Lowest need was reported for Pilates and Zumba classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, concerts, and quiet zones for reading or meditating. Lowest mean scores for need being met were for outdoor movies, historical tours, and computer education. The most important program to middle old respondents was farmer's markets, followed by concerts and water exercise.

Agency Actions to Increase Physical Activity

For the Oregon young old population, providing more walking trails was the most promising action, with improved walking routes to parks and more parks closer to where I live also high in potential for increasing physical activity. These actions are consistent with most promising actions identified by the general population. For the Oregon middle old population, providing more walking trails was also the most promising action, with senior activity centers and classes tailored to specific health concerns (e.g., heart disease, arthritis, diabetes or falls) also high in potential for increasing physical activity.

Disability

For the young old population, approximately one third (32%) of respondents indicated that they or someone in their household has a disability. Approximately 12% of young old households had someone with a sight disability and 9% a walking disability. And 20% of young old respondents indicated that the disability hampered their ability to recreate outdoors in Oregon, with 8% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed were more accessible recreation facilities, more handicapped parking, more benches along trails, more paved trails, and more accessible restrooms.

For the middle old population, approximately 40% of respondents indicated that they or someone in their household has a disability. Approximately 21% of middle old households had someone with a hearing disability and 15% a walking disability. And 26% of middle old respondents indicated that the disability hampered their ability to recreate outdoors in Oregon, with 6% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed were more safe walking areas (free of fall risk), more benches / places to sit, public transportation to parks, more affordable swimming opportunities, and allowing electric mobility devices on trails.

Summary and Recommendations

As the Baby Boomer generation (those born between 1946 and 1964) ages, it generates increased demand for services and facilities suited to older adults. In Oregon, and nationally, the percentage of people age 60 and older is increasing. Individuals 60 and older currently represent approximately 23% of the Oregon population, and that percentage will continue to grow. By the year 2030, 27% of Oregonians will be over the age of 60.

National and statewide data support the intuitive belief that outdoor recreation participation rates decrease as one ages − particularly for physically demanding activities. A 2007 Oregon SCORP survey found that, in Oregon, outdoor recreation participation intensity tends to peak at age 45-49, and decline with age. The study also found that a third of Oregonians over the age of 60 indicated that they or someone in their household had a disability. As a result, Oregon's recreation providers can expect substantial increases in the numbers of visitors with a physical or mental disability using their recreational facilities and services in the coming years.

An enhanced focus on promoting and preserving the health of older adults is essential if we are to effectively address the health and economic challenges of an aging society. The cost of

providing health care for one person aged 65 or older is three to five times higher than the cost for someone younger than 65. Physical activity is an integral part of healthy aging. Regular physical activity prevents a broad range of health problems and diseases in older persons.

Clearly, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of older adults through encourage and facilitating their involvement in active outdoor recreation activities. There is a strong economic incentive for such action.

Towards this end, a statewide survey was conducted by the Oregon Parks and Recreation Department using a random survey of Oregon households examining the statewide population and urban, suburban, and rural populations for Oregonians in two aging population categories including the young old (ages 60-74) and middle old (ages 75-84). The survey examined their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management.

Overall, 92% of Oregon's young old and 83% of Oregon's middle old population participated in at least one outdoor recreation activity in Oregon during 2017. Survey results showed that when examining both the total number of activities participated in and the average number of days of participation across the year that the young old and middle old populations are underserved in terms of outdoor recreation participation. These findings for Oregon reinforce the current national understanding that outdoor recreation participation rates decrease as one ages. As a result, it is recommended that planning priority should be directed towards better serving the outdoor recreation needs of young old and middle old Oregonians.

Survey results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's aging population. For Oregon's young old and middle old populations, local / municipal parks experienced the highest percentage of respondents reporting they had visited that type of area over the past 12 months (30% young old, 31% middle old), the highest number of mean days per year (14 days young old, 13 days middle old), and the highest percentage of use by recreation area type (30% young old, 31% middle old). As a result, it is essential that Oregon's local park and recreation providers focus efforts on addressing the needs of aging Oregonians in close proximity to where they live.

Regarding camping use and need for Oregon's young old population, cabins or yurts with heat, lights, bathroom kitchen and drive-in tent campsites had the highest likelihood of use. Drive-in tent campsites had the highest priority need. For middle old Oregonians, RV sites and cabins or yurts with heat, lights, bathroom, and kitchen had the highest likelihood of use. RV sites had the highest priority need. A comparison between young old / middle old and Oregon population results shows higher young old / middle old likelihood of use for RV sites and higher priority need for RV sites. As a result, Oregon's outdoor recreation providers should prioritize the addition of drive-in tent campsites and cabins or yurts with heat and lights for the young old population and RV sites and cabins or yurts with heat, lights, bathroom, and kitchen to better serve the camping needs of middle old Oregonians.

Aging Oregonians were also asked their opinions about priorities for the future. For the young old population, top "within your community" needs are for cleaner restrooms, more restrooms, dirt / other soft surface walking trails and paths, public access sites to waterways, nature and wildlife viewing areas, and picnic areas and shelters for small visitor groups. For the middle old population, top "within your community" needs are for cleaner restrooms, more restrooms, picnic areas and shelters for small visitor groups, more places and benches to observe nature and others, and nature and wildlife viewing areas. Top "outside your community" needs for the young old and middle old populations are for cleaner restrooms, dirt / other soft surface walking trails and paths, nature and wildlife viewing areas, more restrooms, public access sites to waterways, and more places and benches to observe nature and others. OPRD will provide funding priority for these young / middle old population needs in OPRD-administered grant programs where applicable. Recreation providers should also consider these needs in jurisdictional planning efforts.

Municipal recreation providers should consider actions such as ensuring clean and well-maintained parks and facilities, providing more free-of-charge recreation opportunities, making parks safer from crime, developing walking / hiking trails closer to home, and expanding park facilities as potential actions to increase outdoor recreation engagement by young old Oregonians. For the middle old population, providers should consider actions such as ensuring clean and well-maintained parks and facilities, making parks safer from crime, providing more free-of-charge recreation opportunities, expanding park facilities, and placing more benches and restroom facilities along trails.

Survey results suggest that, in general, parklands in urban and suburban areas of Oregon are reasonably distributed to serve aging populations. However, there will be situations at the local level where park access is a problem in urban and suburban areas. There does appear to be a greater need for additional close-to-home parklands in rural areas of the state to serve the young old and middle old populations. The parkland mapping project will allow communities across the state to identify specific areas within their Urban Growth Boundaries where aging resident parkland need exists within a ½ mile service area.

Highest young old population need for community recreation programs was for farmer's markets, concerts, historical tours, and water exercise. Lowest performance (needs being met) was reported for outdoor movies, social dancing, and historical tours. The most important program to young old respondents was farmer's markets, followed by concerts and water exercise. For the middle old population, highest need for community recreation programs was for farmer's markets, concerts, historical tours, water exercise, and computer education. Lowest performance (needs being met) was reported for outdoor movies, historical tours, and computer education. The most important program to middle old respondents was farmer's markets, followed by concerts and water exercise. Municipal recreation providers should examine the relationship between aging residence and these findings in program planning efforts.

Young old respondents cited access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, distance to parks, bad roads in dispersed settings, lack of public transportation, disabilities, dangerous crosswalks / intersections, and too much road traffic. Most middle old respondents mentioned difficulties

including disabilities, lack of parking, lack of public transportation, too much road traffic, and needing easier access from the parking lot to park facilities. Park managers should consider these problems in future planning efforts.

The survey also examined potential "in your community" agency actions to increase the level of physical activity of the respondent or the respondent's household members. For the young old population, providing more walking trails was the most promising action, with improved walking routes to parks and more parks closer to where I live also high in potential for increasing physical activity. For the Oregon middle old population, providing more walking trails was also the most promising action, with senior activity centers and classes tailored to specific health concerns (e.g., heart disease, arthritis, diabetes or falls) also high in potential for increasing physical activity. OPRD will provide funding priority for walking trails in young old and middle old priority areas in OPRD-administered grant programs where applicable. Recreation providers should also consider these strategies in jurisdictional planning efforts. OPRD will also conduct a statewide inventory of recreational trails to add trail corridors and trailhead locations to the statewide parkland mapping database to improve GIS-based access analysis for non-motorized trails.

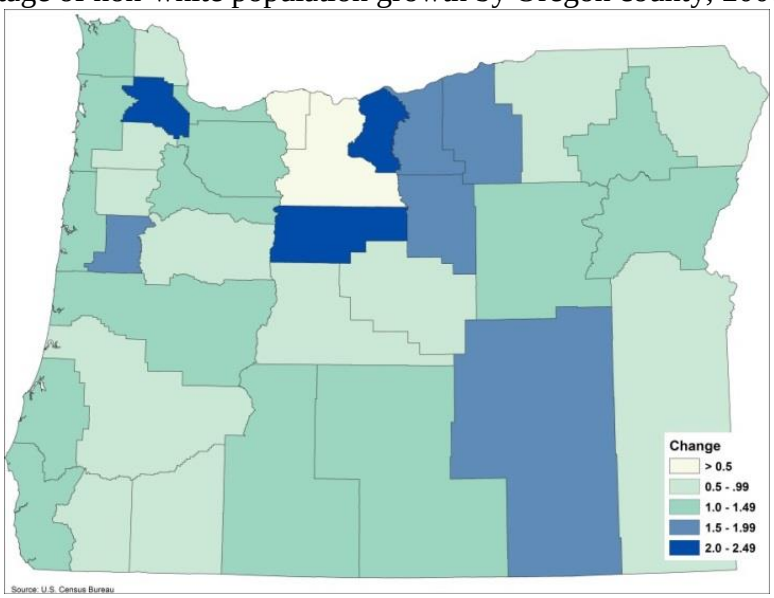
A high percentage of young old (32%) and middle old (40%) respondents indicated that they or someone in their household had a disability – considerably higher than reported by the general population (23%). Park managers should consider accommodations such as more accessible recreation facilities, more handicapped parking, more benches along trails, more paved trails, and more accessible restrooms to better serve Oregon's young old population. For the middle old population, accommodations such as more safe walking areas (free of fall risk), more benches / places to sit, public transportation to parks, more affordable swimming opportunities, and allowing electric mobility devices on trails should be considered.

CHAPTER FOUR – AN INCREASINGLY DIVERSE POPULATION AND OUTDOOR RECREATION IN OREGON

Issue Introduction

Oregon's total population reached 4.14 million in 2017, an increase of 8.3 percent since 2010. Oregon's population is rapidly becoming more diverse. The state's population has increased by about 255,000 residents since 2010. While whites make up approximately 88 percent of Oregon's population, they only accounted for 67 percent of this population growth. All of Oregon's 36 counties have become more diverse since 2010. Figure 4.1 shows Oregon county percentage non-white increase between 2000 and 2017.

Figure 4.1. Percentage of non-white population growth by Oregon county, 2000-2017[17]



Among different race and ethnic groups (Table 4.1), minority groups grew much faster than the statewide rate during the period from 2000 to 2016 (Multiracial increase of 98.2 percent, Hispanic increase of 89.8 percent, Native Hawaiian and Other Pacific Islander increase of 85.5 percent, Asian increase of 67.2 percent).

[17] US Census Bureau.

Table 4.1. Oregon minority population growth, 2000, 2016[18]

Minority Population Group	Total Population 2000	Total Population 2016	Percent Change	Share of 2016 Population
Hispanic or Latino (all races)	275,314	522,568	89.8%	12.8%
Asian alone	101,350	169,459	67.2%	4.1%
Black or African American alone	55,662	79,575	43.0%	1.9%
Native American or Alaska Native alone	45,211	45,426	0.5%	1.1%
Native Hawaiian & Other Pacific Islander alone	7,976	14,823	85.8%	0.4%
Multiracial alone	104,745	207,593	98.2%	5.1%
Total Statewide Population	3,421,399	4,093,465	19.6%	

For two of the fastest growing Oregon minority groups[19], Hispanics currently represent 13.1 percent and Asians 4.7 percent of the Oregon population, and these percentages will continue to grow. As show in Figure 4.2, by the year 2030, over one in four (26.7%) Oregonians will be Hispanic and 5.5 percent Asian.

Figure 4.2. Percentage of total Oregon population, Hispanic, Asian, 1980-2030[20]

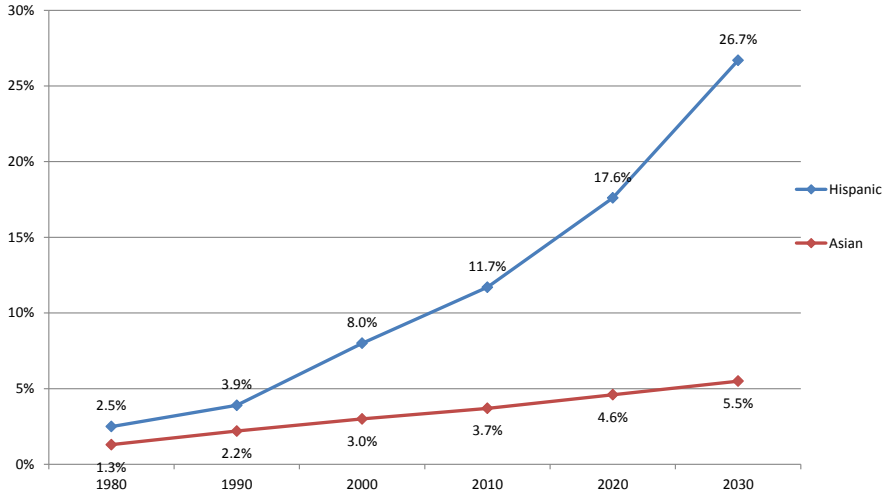


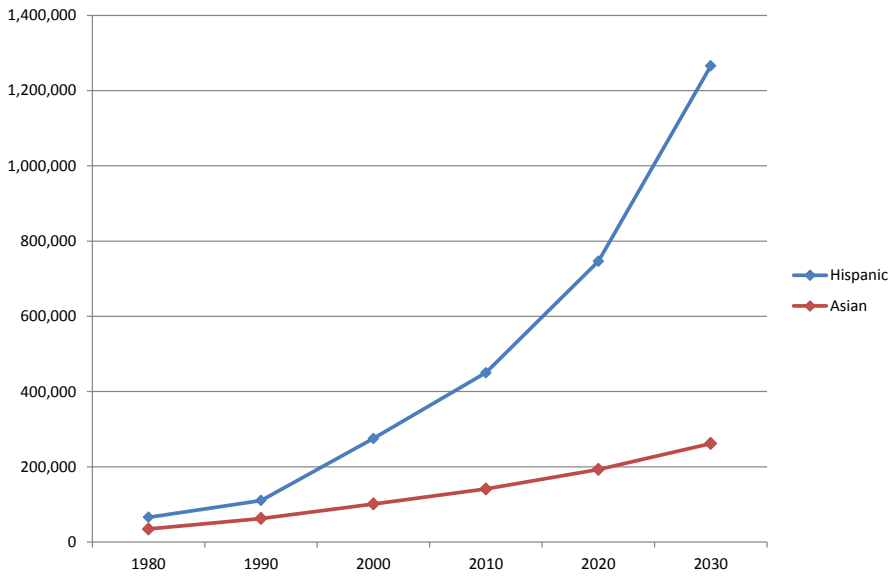
Figure 4.3 shows the trend line for the total number of Hispanic and Asian Oregonians during the period from 1980 to 2030. According to Portland State Population Research Center projections, the number of Hispanics in Oregon will increase by 133% between 2017 and 2030, from 542,700 to 1,266,000 and the number of Asians will increase by 35% from 194,700 to 262,000.

[18] US Census, American Community Survey Table B03002; DP01

[19] Although there are other minority populations in Oregon, SCORP planning budget limitations led to a decision to focus efforts on two of the fastest growing populations with the highest share of the 2016 population – the Hispanic and Asian populations. In this chapter, the term "diversity" will be used to describe these two populations. The term "under-represented population" will be used to describe when these diversity populations are participating in outdoor recreation activities and programs at lower levels than the overall Oregon population.

[20] US Census Bureau and Portland State University Population Research Center.

Figure 4.3. Number of people in Oregon, Hispanic, Asian, 1980-2030[1]



An Increasingly Diverse Oregon Population and Outdoor Recreation Participation

Park and recreation professionals have long responded to demographic diversity by providing a range of services and facilities that cater to different age groups and participant recreation styles. Despite these efforts, minorities are less likely than whites to participate in outdoor recreation in the U.S., and this limits the benefits both to the minority population and to the natural areas where outdoor recreation occurs. Minorities forego the health, social, and other benefits of outdoor recreation.

A 2007 Oregon SCORP survey of the Oregon population found that both the Hispanic and Asian populations in Oregon engage in outdoor recreation less that the general population.[21] With respect to days of participation (intensity), this is especially true for Asians. With respect to number of activities, this is true for both Hispanics and Asians.

The 2007 survey found that walking for pleasure was the most common favorite activity for both Hispanics and Asians, with fishing and soccer being the next most common for Hispanics and hiking and fishing the next most common for Asians. Walking for pleasure was also the activity respondents spent the most days engaged in during the past year. Hispanics engage more intensely than Asians in jogging / running, day hiking, picnicking, fishing, viewing natural features, visiting nature centers, and visiting historic sites. The most common activities respondents would like to do more often, or start doing were walking for Asians, and walking and camping for Hispanics. The factor that would most help make this happen is availability of partners, followed by more time.

[21] Lindberg, K. 2007. Outdoor recreation amongst Oregon's Hispanic and Asian Populations. Oregon State University. A 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan supporting document. Report online at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2008-2012_SCORP/Diversity_Survey_Report.pdf.

In 2006, a series of focus groups were completed in the state of Oregon to understand ethnic minorities' interests and needs related to outdoor recreation, and how recreation providers can better respond to these non-traditional users[22]. A series of four focus group meetings occurred, two taking place in the city of Portland (one African-American and one Asian-American), and one each in Hermiston (Hispanic) and Woodburn (Hispanic). Key findings included:

- Develop facilities (such as picnic areas) large enough for extended families.
- Recruit a more diverse staff.
- Target marketing information at ethnic groups in appropriate media and languages.
- Develop a multi-language recreation web site.
- Create trust with key informants within the communities.
- Focus information delivery on Hispanic youth.
- Focus youth programs on academic enhancement.

A 2017 study of residents of the Portland metropolitan region[23] was conducted to understand and compare park and natural area management issues for both traditionally underserved residents (i.e., communities of color) and traditionally well-served residents (i.e., white dominant population in the region). The proportionate random sample mostly targeted Hispanic / Latino, Black / African American, Asian, Slavic / Eastern European, Middle Eastern, and American Indian populations. These populations were combined into a single group called traditionally underserved populations (i.e., communities of color).

Compared to traditionally well-served respondents, traditionally underserved respondents were younger, had more children under the age of 18 currently living in their household, spoke more languages other than English at home (e.g., Spanish, Russian), were less educated, and had lower annual household incomes.

The activities in which traditionally underserved respondents participated most often were hiking or walking for pleasure; relaxing, hanging out, or escaping the weather / heat; jogging, running, or walking for exercise; and wildlife watching, birding, or nature study. By far the most common single main activity in parks and natural areas in the Portland region is hiking or walking for pleasure.

[22] Burns, R., Graefe, A., Covelli, L. 2006. West Virginia University and The Pennsylvania State University. A 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan supporting document. Report online at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2008-2012_SCORP/OregonSCORPMinorityFocusGroupReport.pdf.

[23] Needham, M., and Rushing, J. 2017. Resident needs and behaviors in Portland parks and natural areas: Understanding communities of color. Final project report for Metro (Portland). Corvallis, OR: Oregon State University Department of Forest Ecosystems and Society and Natural Resources, Tourism, and Recreation (NATURE) Studies Lab.

Underserved residents were less likely to have visited Metro's parks and natural areas and other parks and natural areas in the Portland region than the traditionally well served residents. The most common constraints or barriers to visiting Metro parks and natural areas were:

- Lack of awareness (i.e., not knowing what to do at these areas);
- Where these areas are located;
- Proximity (i.e., too far away or take too long to get to);
- Lack of emotional attachment to these areas;
- Not knowing where to get information about these places;
- Limited public transportation to some of these areas; and
- Inability to take pets (e.g., dogs) to these places.

The most common constraints or barriers to visiting other parks or natural areas in the Portland region (not just Metro) was lack of free time and being too busy to visit. Other important constraints were fear of crime in parks and natural areas in this region, and costs of fees at these places. The most important constraints that residents want managers to address are fear of crime and perceptions of not feeling safe in parks and natural areas in the Portland region.

As stated in the 1997 US National Park Service Strategic Plan, the low participation of minorities "is an important cultural and social issue…and many parks do not attract and offer park experiences meaningful to visitors from varied ethnic backgrounds, or have not yet made their park values relevant to them[24]." Similarly, Driver et al. [25] observe that "if public land managers are to be responsive to the changing needs and values of an increasingly multicultural citizenry in management planning, they must work toward a fuller understanding of those needs and values."

This population trend and context raises a key question: How can Oregon's recreation providers prepare to help an increasingly diverse population have satisfying outdoor recreational experiences? As Oregon's population continues to change, it is critical to understand how different ethnic groups participate in outdoor recreation activities, and the constraints that limit their participation. The intent of this SCORP chapter is to begin the process of answering these critical questions.

Outdoor Recreation Participation and Underserved Populations

Various explanations for low minority participation in outdoor recreation have been proposed, with marginality and ethnicity being common explanations. The central tenet of marginality is that low levels of non-white participation are caused by lack of socioeconomic resources. Lower income hinders the ability of non-whites to participate given the costs involved in visiting parks, as well as the related issue of lack of transport. The ethnicity (subcultural) hypothesis explains differing participation rates as a result of differing norms, value systems, and socialization

[24] Noted in Floyd, M. 1999. Race, ethnicity and use of the National Park System. National Park Service *Social Science Research Review*, 1(2), 1-24.

[25] Driver, B.L., D. Dustin, T. Baltic, G. Elsner, and G. Peterson. 1996. Nature and the human spirit: Overview. In B.L. Driver, D. Dustin, T. Baltic, G. Elsner, and G. Peterson (eds.), *Nature and the human spirit: Toward an expanded land management ethic*. State College, PA: Venture.

practices. These differences may involve preferences for recreational experiences and style of park use in terms of location, social group, activity, desired facilities, and so on.

Research suggests several themes associated with variation in recreation and park use. These include:

- Minorities may prefer different physical settings than whites, including traditional park landscapes, urban proximate locations, and areas that allow for extended and multiple family gatherings. These preferences may be due to a combination of economic (e.g., transport) and cultural reasons.
- Many members of minority groups regard some outdoor recreation activities as culturally irrelevant and may have little interest in them.
- Minorities may prefer different social settings, including a greater emphasis on socializing than solitude, and park staff and information content that more fully reflect the minority population (i.e., that is not dominated by white employees).
- Minorities may perceive discrimination and, in general, feel less safe and comfortable than whites in outdoor recreation/park settings.
- Information about outdoor recreation and park opportunities may be less accessible to minorities than to whites in terms of content and distribution channels.
- Minorities may have had less socialization and exposure to outdoor recreation / parks, a self-reinforcing cycle. This may reflect the absence of parental or other role models and support for engaging in outdoor recreation.

Physical Activity and Minority Populations

In the US, the health status of racial and ethnic minorities lags far behind that of non-minority populations. As a result, the burden of many chronic diseases and conditions ─ especially high blood pressure, diabetes and cancer ─ varies widely by race and ethnicity. As mentioned in the aging chapter, lack of physical activity is an important contributor to many of the most important chronic diseases facing Oregonians including heart disease, diabetes, colon cancer, and high blood pressure.

During 2017, 16% of Oregon's White, Non-Latino population was reporting no physical activity during their leisure time activities (Table 4.2). However, at that time almost 1 in 3 (31%) of Oregon's Hispanic adults were reporting no physical activity during their leisure time activities

Table 4.2. Physical inactivity among Oregon adults, percent by population and race / ethnicity, 2017[26]

	No Leisure Time Physical Activity
Full population	17.2
Hispanic/ Latino	30.5
Multiracial	16.3
White	15.8

[26] United Health Foundation. 2017. Physical inactivity in Oregon in 2017. Online at: https://www.americashealthrankings.org/explore/annual/measure/Sedentary/state/OR

Approximately 45% of Oregon's Pacific Islanders are identified as being obese (Table 4.3). Other minority populations with higher levels of obesity in Oregon are American Indians and Alaska Natives (40%), African-Americans (39%), and Hispanic / Latinos (38%). Recreation providers should consider targeting these populations when developing strategies related to increasing physical activity within their service areas.

Table 4.3. Percent of Oregon adults who are obese, by race / ethnicity and gender, 2015-2016[27]

	Obese
White, Non-Latino	29.0
Pacific Islander	44.9
American Indian and Alaska Native	40.1
African American	38.7
Hispanic/ Latino	37.7
Asian	11.3

Statewide Survey – Oregon's Diverse Population Results

The survey was conducted by the Oregon Parks and Recreation Department (OPRD) using a random sample of Oregon households of Spanish / Hispanic / Latino and Asian descent (including South Asian and East / Southeast Asian). The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the statewide population and urban, suburban, and rural populations separately for the Latino and Asian samples[28]. For all correspondence, persons in the Latino sample were sent versions in both English and Spanish (e.g., English and Spanish cover letters, English and Spanish surveys). For all correspondence, persons in the Asian sample were sent versions in the English language. Surveys were mailed to 3,300 Latino and 2,168 Asian recipients. Adjusting for undeliverables, the response rate was 10% for the Latino and 17% for the Asian sample. Due to variable sampling intensity and response rates across target demographic groups, the probability sample was complemented by an online research sample administered by Qualtrics. In total, 408 completed surveys were received for the Oregon Latino sample and 408 for the Asian sample.

A full survey report including statewide results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

A full survey report including Latino and Asian resident results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentSurveyLatinoAsianResidentResults.pdf.

[27] Oregon Behavioral Risk Factor Surveillance System. 2015-2016 Preliminary race reporting.
[28] While data limitations only enabled focus on Latino and Asian groups, these findings could be extended to other underserved minority groups in Oregon.

Latino and Asian User Occasions and Participation in Outdoor Recreation

Overall, 97% of Oregon Latinos and 94% of Oregon's Asian population participated in at least one outdoor recreation activity in Oregon during 2017. Figures 4.4 and 4.5 provide the top ten activities for the Latino and Asian populations, based on the proportion of the population participating in them.

The activities in which the largest proportions of Oregon Latinos participated in 2017 include:

1. Walking on local streets / sidewalks − 85%
2. Walking on local trails / paths − 73%
3. Relaxing, hanging out, escaping heat / noise, etc. − 61%
4. Beach activities – ocean – 50%
5. Picnicking – 49%

The activities in which the largest proportions of Oregon Asians participated in 2017 include:

1. Walking on local streets / sidewalks − 79%
2. Walking on local trails / paths − 64%
3. Relaxing, hanging out, escaping heat / noise, etc. – 51%
4. Walking / day hiking on non-local trails / paths − 50%
5. Sightseeing / driving or motorcycling for pleasure − 50%

Figure 4.4. Top ten activities for Oregon Latino population, percent participating, 2017

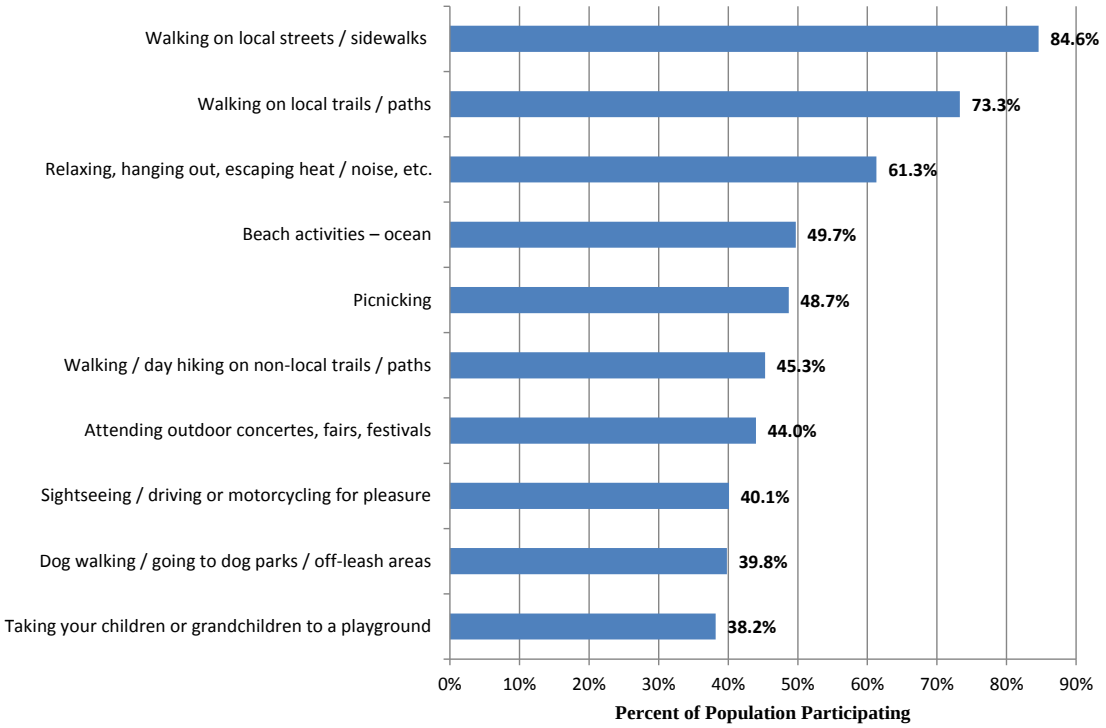
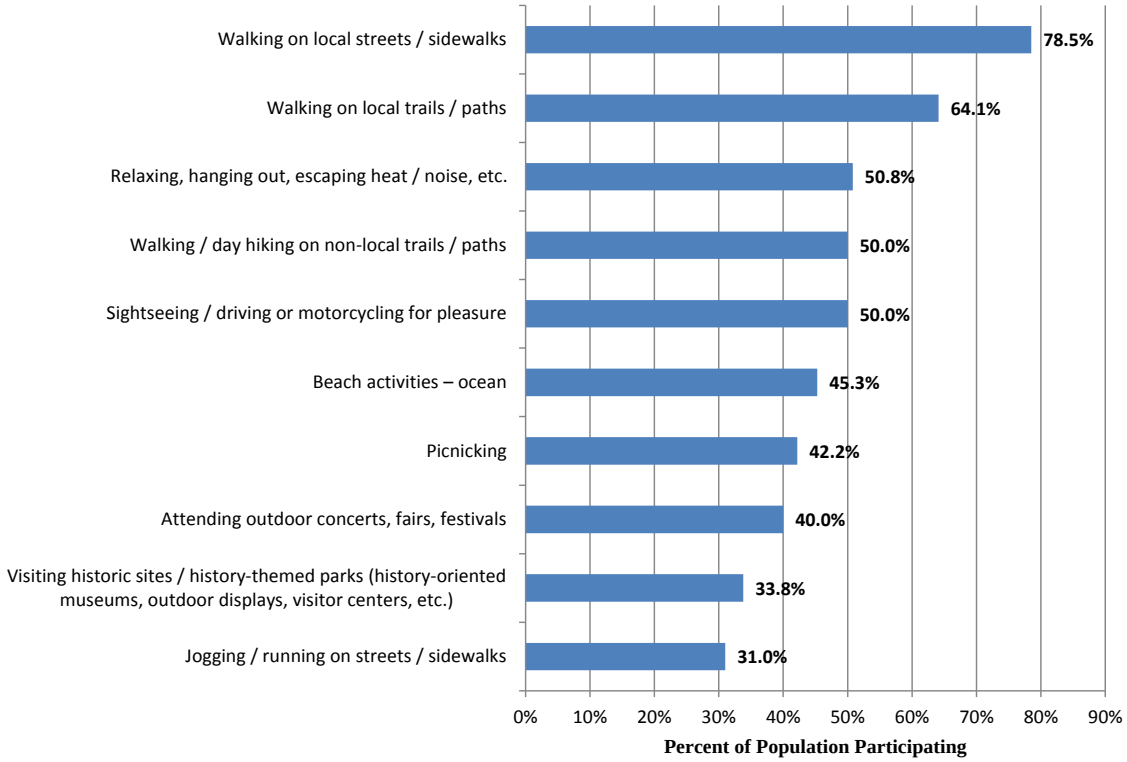


Figure 4.5. Top ten activities for Oregon Asian population, percent participating, 2017



A bivariate statistical test was used to identify statistical differences between the percent of the overall population participating in the specific activity and the percent of the Latino and Asian populations participating in that activity for the full list of 56 outdoor recreation activities included in the questionnaire. The Latino population reported 16 activities and Asian 29 activities where participation was statistically less than the overall Oregon population. The annual mean of participation times for all 56 activities for the Oregon population was 354.0 times, 300.4 times for the Latino population, and 249.3 times for the Asian population. These results suggest that, when examining the total number of activities participated in, the Asian population is an underserved population from an outdoor recreation perspective in Oregon. When examining the average number of days of participation across the year, the Oregon Latino and Asian populations are underserved populations in Oregon.

Types of Outdoor Recreation Areas Used

For Oregon's Latino and Asian populations local / municipal parks experienced the highest percentage of respondents reporting that they had visited that type of area over the past 12 months followed by State parks, forests, or game lands. National parks, forests, and recreation areas were third, followed by county parks, private parks, and other areas.

An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by Oregon's Latino population identifies that local / municipal parks account for the highest percentage (32%) of all outdoor recreation use from the survey sample. State parks, forests, or game lands account for 20%, county parks 18%, national parks, forests and recreation areas 14%, private / commercial areas 9%, and other recreation areas account for 7%.

An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by the Oregon Asian population identifies that local / municipal parks account for the highest percentage (34%) of all outdoor recreation from the survey sample. State parks, forests, or game lands account for 19%, county parks 17%, national parks, forests and recreation areas 14%, private / commercial areas 10%, and other recreation areas account for 7%.

These results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's Latino and Asian residents.

Camping Likelihood and Priority Needs

For the Latino and Asian populations, drive-in tent sites had the highest likelihood of use. Drive-in tent campsites had the highest priority need, while, RV sites had the lowest priority need. Drive-in tent sites had the largest proportion of very likely responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types.

A comparison between Latino and Oregon population results shows higher Latino likelihood of use for drive-in tent campsites; cabins or yurts with heat, lights; cabins or yurts with heat, lights, bathroom, kitchen; hike-in tent sites; and hiker biker sites and higher priority need for cabins or yurts with heat, lights. A comparison between Asian and Oregon population results shows higher

Asian likelihood of use for cabins or yurts with heat, lights, bathroom, kitchen; drive-in tent campsites; cabins or yurts with heat, lights; hike-in tent campsites; and hiker biker campsites and higher priority need for cabins or yurts with heat, lights, bathrooms, kitchen; cabins or yurts with heat, lights; drive-in tent campsites; and hike-in tent campsites.

Sources of Information for Outdoor Recreation Activities

The highest percentage of Latino respondents said that friends / relatives / word of mouth and websites were the most important and most used information sources when seeking outdoor recreation information in Oregon. Maps / brochures, visitor or welcome centers, and travel guides / tour books were also most important information sources to Latino respondents. Latinos were much more likely to say that social media information sources such as mobile smart phone applications, Facebook, video sharing platforms, Instagram, Pinterest, Snapchat, and Twitter were important sources than the general Oregon population.

The highest percentage of Asian respondents said that friends / relatives / word of mouth and websites were the most important and most used information sources when seeking outdoor recreation information in Oregon. Websites, maps / brochures, visitor or welcome centers, and travel guides / tour books were also most important information sources to Asian respondents. Asians were much more likely to say that tourism advertising, video sharing platforms, Instagram, and Facebook were important sources than the general Oregon population.

Priorities for the Future

The top "in your community" need for the Oregon Latino population are:

- Cleaner restrooms.
- More restrooms.
- Playgrounds with natural materials (Nature Play Areas).
- Nature and wildlife viewing areas.
- More places and benches to observe nature and others.
- Security cameras in key places.

The top "in your community" need for the Oregon Asian population are:

- Cleaner restrooms.
- Security cameras in key places.
- More restrooms.
- More places and benches to observe nature and others.
- Paved / hard surface walking trails and paths.
- Dirt / other soft surface walking trails and paths.

The top "outside your community" priority need for the Oregon Latino population are:

- Cleaner restrooms.
- More restrooms.
- Nature and wildlife viewing areas.
- More places and benches to observe nature and others.
- Security cameras in key places.

- Dirt / other soft surface walking trails and paths.
- More shaded areas.

The top "outside your community" priority need for the Oregon Asian population are:

- Cleaner restrooms.
- More restrooms.
- Nature and wildlife viewing areas.
- Security cameras in key places.
- More places and benches to observe nature and others.
- More shaded areas.

Agency Management Actions

In terms of potential "within community" actions to increase outdoor recreation engagement, for the Latino population, providing more free-of-charge recreation opportunities was the most important action, with ensuring clean and well-maintained parks and facilities, making parks safer from crime, developing parks closer to home, developing walking / hiking trails closer to home, and developing parks closer to home also high in importance. For Oregon's Asian population, ensuring clean and well-maintained parks and facilities was the most important action, with making parks safer from crime, more free-of-charge recreation opportunities, developing walking / hiking trails closer to home, and developing parks closer to home also high in importance.

Local Park Visitor Characteristics

A number of questions were asked of Oregon's Latino and Asian outdoor recreation participants about their use of local parks, trails, open space and recreation centers.

Key findings include:

- For the Latino and Asian populations, the top group types were just family and both family and friends. The Asian population was less likely than the general population to go to a local park with a dog.
- The top typical park visit group sizes for the Oregon Latino and Asian populations were 3-5 people and 2 people. In general, Latino group size was larger and the Asian group size slightly smaller than the general Oregon population.
- Most Latino respondents reported it is very important (50.7%) or somewhat important (39.5%) to have a recreation facility within a 10 minute or less walking distance from their home. Likewise, most Asian respondents reported it is very important (43.4%) or somewhat important (42.8%) to have a recreation facility within a 10 minute or less walking distance from their home.
- The Latino population (2.41) places a higher level of importance and the Asian population (2.30) a similar level of importance of having a local park, trail, open space or recreation center within walking distance or their home than the general population (2.28).
- Most Latino (54.0%) and Asian (52.3%) respondents reported a single park or recreation facility within a walking distance from home.

- The urban Latino population reported the highest percentage of having multiple parks / facilities (38.9%) and the rural Latino population reported having the highest percentage of no park / recreation facilities within walking distance from home (32.8%).
- The urban Asian population reported the highest percentage of having multiple parks / facilities (39.1%) in comparison with the suburban Asian population (32.3%).
- Most Latino respondents reported driving themselves (45.9%) or walking (33.2%) to their most used outdoor recreation facility. Most Asian respondents reported walking (47.2%) or driving themselves (32.9%) to their most used outdoor recreation facility. More Asian participants (47.2%) reported traveling by walking than the general population (33.2%).
- The highest percentage of those driving themselves to the park was reported by the rural Latino population (58.9%). The highest percentage of those walking to the park was reported by the urban Latino population (37.6%) and the lowest by the rural Latino population (21.4%).
- In describing any access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation, most Latinos mentioned difficulties included lack of parking, too much road traffic, no car, distance to parks, and lack of public transportation. Most Asians mentioned difficulties including lack of parking, too much road traffic, distance to parks, no car, and no sidewalks.

Community Recreation Program Need

For the Latino population, farmer's markets showed the highest need, along with concerts, historical tours, and arts and crafts. Lowest need was reported for Pilates and Tai Chi classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, concerts, and quiet zones for reading or meditating. Lowest mean scores for need being met were for outdoor movies, Tai Chi, Pilates, and historical tours. The most important program to Latino respondents was farmer's markets, followed concerts and outdoor sports.

For the Asian population, farmer's markets showed the highest need, along with concerts, quiet zones for reading or meditating, outdoor sports and arts and crafts. Lowest need was reported for social dancing, Zumba, and aerobics classes. The highest mean scores for need being met were for farmer's markets, concerts, outdoor sports, and quiet zones for reading or meditating. Lowest mean scores for need being met were for game areas, computer education, Tai Chi, Zumba, and walking clubs. The most important program to Asian respondents was farmer's markets, followed by outdoor sports, quiet zones for reading or meditating and concerts.

Agency Actions to Increase Physical Activity

For the Oregon Latino and Asian populations, providing more walking trails was the most promising action, with more parks closer to where I live, and improved walking routes to parks also high in potential for increasing physical activity. These actions are consistent with most promising actions identified by the general population.

Disability

For the Latino population, approximately one fifth (22%) of respondents indicated that they or someone in their household has a disability. Approximately 9% of households had someone with

a sight disability and 4% a walking disability. And 11% indicated that the disability hampered their ability to recreate outdoors in Oregon, with 6% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed were handrails and benches along trails and more handicapped parking.

For the Asian population, approximately one tenth (11.7%) of respondents indicated that they or someone in their household has a disability, substantially lower that reported by the general population (23.1%). Approximately 4% of households had someone with a sight disability and 2% a walking disability. And 5% indicated that the disability hampered their ability to recreate outdoors in Oregon, with 3% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed by the Asian population were more benches or places to rest, easier trails, and more information about accessible facilities.

Summary and Recommendations

Oregon's population is rapidly becoming more diverse. The state's population has increased by about 255,000 residents since 2010. While whites make up approximately 88 percent of Oregon's population, they only accounted for 67 percent of this population growth. For two of the fastest growing Oregon minority groups, Hispanics currently represent 13.1 percent and Asians 4.7 percent of the Oregon population, and these percentages will continue to grow. By the year 2030, over one in four (26.7%) Oregonians will be Hispanic and 5.5 percent Asian.

Park and recreation professionals have long responded to demographic diversity by providing a range of services and facilities that cater to different age groups and participant recreation styles. Despite these efforts, minorities are less likely than whites to participate in outdoor recreation in the U.S., and this limits the benefits both to the minority population and to the natural areas where outdoor recreation occurs. Minorities forego the health, social, and other benefits of outdoor recreation.

In the U.S. and Oregon, the health status of racial and ethnic minorities lags far behind that of non-minority populations. As a result, the burden of many chronic diseases and conditions ─ especially high blood pressure, diabetes and cancer ─ varies widely by race and ethnicity. As mentioned in the aging chapter, lack of physical activity is an important contributor to many of the most important chronic diseases facing Oregonians including heart disease, diabetes, colon cancer, and high blood pressure.

This population trend and context raises a key question: How can Oregon's recreation providers prepare to help an increasingly diverse population have satisfying outdoor recreational experiences? As Oregon's population continues to change, it is critical to understand how different ethnic groups participate in outdoor recreation activities, and the constraints that limit their participation. The intent of this SCORP chapter is to begin the process of answering these critical questions.

Towards this end, a statewide survey was conducted by the Oregon Parks and Recreation Department using a random survey of Oregon households examining the statewide population

and urban, suburban, and rural populations for Spanish / Hispanic / Latino and urban and suburban populations for those of Asian descent (including South Asian and East / South east Asian). The survey examined their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management. While data limitations only enabled focus on Latino and Asian groups, these findings could be extended to other underserved minority groups in Oregon.

Overall, 97% of Oregon Latinos and 94% of Oregon's Asian population participated in at least one outdoor recreation activity in Oregon during 2017. Survey results showed that when examining the total number of activities participated in, the Asian population is an underserved population from an outdoor recreation perspective in Oregon. When examining the average number of days of participation across the year, the Oregon Latino and Asian populations are underserved populations in Oregon. These findings for Oregon reinforce the current national understanding that minorities are less likely than whites to participate in outdoor recreation. As a result, it is recommended that planning priority should be directed towards better serving the outdoor recreation needs of Oregon's Latino and Asian populations.

Survey results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's Latino and Asian populations. For Oregon's Latino and Asian populations, local / municipal parks experienced the highest percentage of respondents reporting they had visited that type of area over the past 12 months (88% Latino, 82% middle old), the highest number of mean days per year (13 days Latino, 10 days Asian), and the highest percentage of use by recreation area type (32% Latino, 34% Asian). As a result, it is essential that Oregon's local park and recreation providers focus efforts on addressing the needs of the Latino and Asian populations in close proximity to where they live.

Regarding camping use and need for Oregon's Latino and Asian populations, drive-in tent sites had the highest likelihood of use. Drive-in tent campsites had the highest priority need, while, RV sites had the lowest priority need. Drive-in tent sites had the largest proportion of very likely responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types. A comparison between Latino and Oregon population results shows higher Latino likelihood of use for drive-in tent campsites; cabins or yurts with heat, lights; cabins or yurts with heat, lights, bathroom, kitchen; hike-in tent sites; and hiker biker sites and higher priority need for cabins or yurts with heat, lights. A comparison between Asian and Oregon population results shows higher Asian likelihood of use for cabins or yurts with heat, lights, bathroom, kitchen; drive-in tent campsites; cabins or yurts with heat, lights; hike-in tent campsites; and hiker biker campsites and higher priority need for cabins or yurts with heat, lights, bathrooms, kitchen; cabins or yurts with heat, lights; drive-in tent campsites; and hike-in tent campsites. As a result, Oregon's outdoor recreation providers should prioritize the addition of drive-in tent sites and cabins or yurts with heat, lights; cabins or yurts with heat, lights, bathroom, kitchen to better serve the camping needs of Latino and Asian residents.

Latino and Asian populations were also asked their opinions about priorities for the future. For the Latino population, top "within your community" needs are for cleaner restrooms, more restrooms, playgrounds with natural materials (Nature Play Areas), nature and wildlife viewing

areas, more places and benches to observe nature and others, and security cameras in key places. For the Asian population, top "within your community" needs are for cleaner restrooms, security cameras in key places, more restrooms, more places and benches to observe nature and others, paved / hard surface walking trails and paths, and dirt / other soft surface walking trails and paths. Top "outside your community" needs for the Latino population are for cleaner restrooms, more restrooms, nature and wildlife viewing areas, more places and benches to observe nature and others, security cameras in key places, dirt / other soft surface walking trails and paths, and more shaded areas. Top "outside your community" needs for the Asian population are for cleaner restrooms, more restrooms, nature and wildlife viewing areas, security cameras in key places, more places and benches to observe nature and others, and more shaded areas. OPRD will provide funding priority for these Latino and Asian population needs in OPRD-administered grant programs where applicable. Recreation providers should also consider these needs in jurisdictional planning efforts.

Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, making parks safer from crime, developing walking / hiking trails closer to home, and developing parks closer to home as potential actions to increase outdoor recreation engagement by the Oregon Latino population. For the Asian population, providers should consider actions such as ensuring clean and well-maintained parks and facilities, making parks safer from crime, providing more free-of-charge recreation opportunities, developing walking / hiking trails closer to home and developing parks closer to home.

Survey results suggest that, in general, parklands in urban and suburban areas of Oregon are reasonably distributed to serve the Latino and Asian populations. However, there will be situations at the local level where park access is a problem in urban and suburban areas. There does appear to be a greater need for additional close-to-home parklands in rural areas of the state to serve the Latino population. The parkland mapping project will allow communities across the state to identify specific areas within their Urban Growth Boundaries where Latino and Asian resident parkland need exists within a ½ mile service area.

Highest Latino population need for community recreation programs was for farmer's markets, concerts, historical tours, and arts and crafts. Lowest performance (needs being met) was reported for outdoor movies, Tai Chi, Pilates, and historical tours. The most important program to Latino respondents was farmer's markets, followed concerts and outdoor sports. For the Asian population, highest need for community recreation programs was for farmer's markets, along with concerts, quiet zones for reading or meditating, outdoor sports and arts and crafts. Lowest performance (needs being met) was for game areas, computer education, Tai Chi, Zumba, and walking clubs. The most important program to Asian respondents was farmer's markets, followed by outdoor sports, quiet zones for reading or meditating and concerts.

Latino respondents cited access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, too much road traffic, no car, distance to parks, and lack of public transportation. Most Asian respondents mentioned difficulties including lack of parking, too much road traffic, distance to parks, no car, and no sidewalks. Park managers should consider these problems in future planning efforts.

The survey also examined potential "in your community" agency actions to increase the level of physical activity of the respondent or the respondent's household members. For the Oregon Latino and Asian populations, providing more walking trails was the most promising action, with more parks closer to where I live, and improved walking routes to parks also high in potential for increasing physical activity. These actions are consistent with most promising actions identified by the general population. OPRD will provide funding priority for walking trails in Latino and Asian priority areas in OPRD-administered grant programs where applicable. Recreation providers should also consider these strategies in jurisdictional planning efforts. OPRD will also conduct a statewide inventory of recreational trails to add trail corridors and trailhead locations to the statewide parkland mapping database to improve GIS-based access analysis for non-motorized trails.

For the Latino population, approximately one fifth (22%) of respondents indicated that they or someone in their household had a disability – similar to that reported by the general population (23%). Fewer Asian respondents (11.7%) indicated that they or someone in their household had a disability. Park managers should consider accommodations such as handrails and benches along trails and more handicapped parking to better serve Oregon's Latino population. For the Asian population, accommodations such as more benches or places to rest, easier trails, and more information about accessible facilities should be considered.

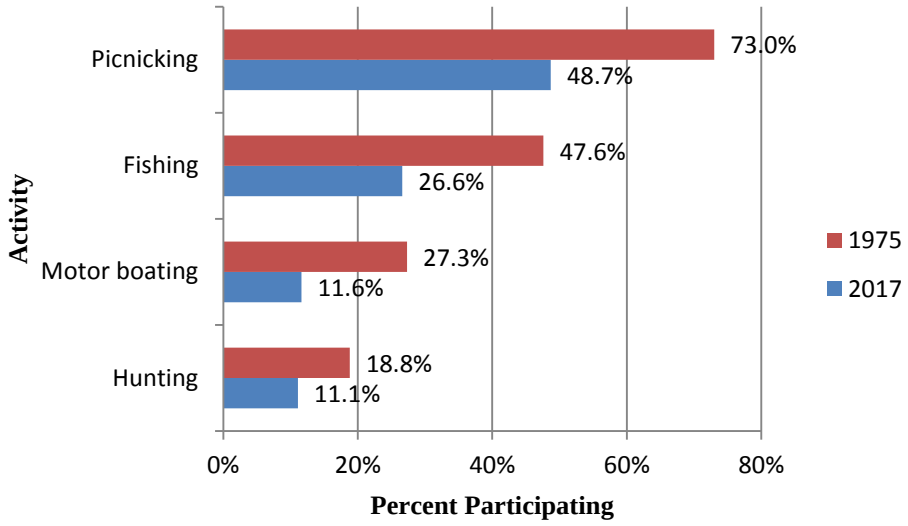
CHAPTER FIVE – LACK OF YOUTH ENGAGEMENT IN OUTDOOR RECREATION IN OREGON

Issue Introduction

Oregon is a state rich in physical variety, with citizens molded by a recent frontier history. The relative proximity of seashore, mountains and deserts to most of the state's population has instilled in Oregonians a special connection to these lands. Because of these factors, an active outdoor lifestyle is a central part of our shared tradition and heritage in Oregon and throughout the Pacific Northwest.

However, growing evidence shows that young Oregonians are gravitating away from outdoor experiences and towards a virtual indoor reality. Analysis of past Oregon SCORP results (Figure 5.1) indicates that participation in traditional outdoor recreation activities is decreasing. Anecdotal information and recent analysis indicate that youth participation in outdoor recreation is decreasing because of several factors including increased urbanization, loss of free time, increased single-parent family households, and greater focus on electronic activities (TV, video games, and internet).

Figure 5.1. Percentage of Oregon population participating in traditional outdoor activities, 1975-2017



This disconnect from nature has serious long-term implications for the health and well-being of our state and to the future stewardship of our public lands. Research has shown that people who do not participate in outdoor recreation as youth are less likely to participate in those activities as adults (with implications also for the next generation). Exposing children to outdoor recreation activities can provide children a variety of benefits – including physical, social, emotional and spiritual benefits. Increasing participation by youth in active outdoor recreation activities can also serve as a primary strategy in combatting the unprecedented epidemic of childhood obesity that is currently plaguing the state of Oregon. Moreover, an effort to increase outdoor recreation

participation is critical for achieving positive conservation attitudes in the future, and ultimately for maintaining support for agencies that manage recreation and natural areas.

Outdoor Recreation Participation and Oregon's Youth Population

With the wild enthusiasm over video games, the Internet and the endless supply of TV channels, children and teenagers have little need to walk out their front door to find entertainment. A 2010 study[29] of media in the lives of 8 to 18 year olds found that in 1999 young people in the U.S. spent an average of nearly 6 and a half hours (6:19) a day with media. In 2009, young people had increase the time they spend consuming media by an hour and nineteen minutes daily, from 6:19 to 7:38. A national longitudinal study of children and their families conducted by the University of Michigan in 2004[30], found a substantial decline in the amount of time spent in out-of-door activities among American children between the ages of 6-17. In 1982 youth spent an average of 1 hour and 40 minutes per week on outdoor activities and only half of that amount of time (50 minutes) in 2003.

According to Zaradic and Pergams[31], increasing use of electronic media has been implicated in negative psychological and physical effects, including obesity, loneliness, depression, and attentional problems. Internet use at home is shown to have a strong negative impact on time spent with friends and family as well as time spent on social activities. Outdoor play and nature experience have proven beneficial for cognitive functioning, reduction in symptoms of ADD, increase in self-discipline and emotional wellbeing at all development stages. Yet, in contrast to the hours spent per child per week in front of electronic entertainment, children living in the United States reportedly spend on average only 30 minutes of unstructured time outdoors each week.

A recent study by Walsh, et al.[32] included more than 4,500 children in the U.S. ages 8 to 11 who were assessed with six standard tests that measured language skills, memory, planning ability, and speed at completing mental tasks. Researchers tied three behaviors to higher scores on tests of mental abilities in these children: at least 60 minutes of physical activity a day, 9 to 11 hours of sleep a night, and no more than two hours a day of recreational screen time. Compared with those who met none of the three behavioral criteria − those who met all of them scored about 4 percent higher on combined tests. According to the lead author, "evidence suggests that good sleep and physical activity are associated with improved academic performance, while physical activity is also linked to better reaction time, attention, memory, and inhibition."

This trend towards more indoor electronic media time is not likely to go away in the near future. A 2017 study by Common Sense, reported that nearly all (98 percent) children age 8 and under live in a home with some type of mobile device, the same percentage that have a TV in the home

[29] Rideout, V., Foehr, U., and Roberts, D. 2010. Generation M2: Media in the lives of 8- to 18-year olds. A Kaiser Family Foundation Study.
[30] Juster, F.T, H. Ono and F.P. Stafford. Changing times of American youth: 1981-2003. Nov. 2004. Institute for Social Research , University of Michigan.
[31] Zaradic P.A. and Pergams ORW. Videophilia: Implications for childhood development and conservation. The Journal of Developmental Processes Spring 2007; 2(1): 130-147.
[32] Walsh, J., Barnes, J., Cameron, J, Goldfield, G., Chaput, J., Gunnell, K., Ledoux, A. Zemek, M., Tremblay, M. (2018). Associations between 24 hour movement behaviours and global cognition in US children: a cross-sectional observational study. The Lancet Child & Adolescent Health, 2018; DOI: 10.1016/S2352-4642(18)30278-5.

(mobile media ownership is up from 75 percent in 2013 and 52 percent in 2011)[33]. Ninety-five percent of families with children this age now have a smartphone, and 78 percent have a tablet. Forty-two percent of children now have their own tablet device. This study found that children 8 and under spend an average of about two-and a-quarter hours (2:19) a day with screen media, up from 1:55 in 2013. Children from lower-income homes spend an average of 1:39 more with screen media each day that those from higher-income homes (3:29 vs. 1:50).

In Oregon, recent data confirm a continuing shift towards a virtual indoor reality. An analysis of results from the 2011 and 2017 Oregon Healthy Teens Survey[34] identified a small reduction in weekday hours of TV watching and a substantial increase in weekday hours of video games playing and computer use that is not for school work.

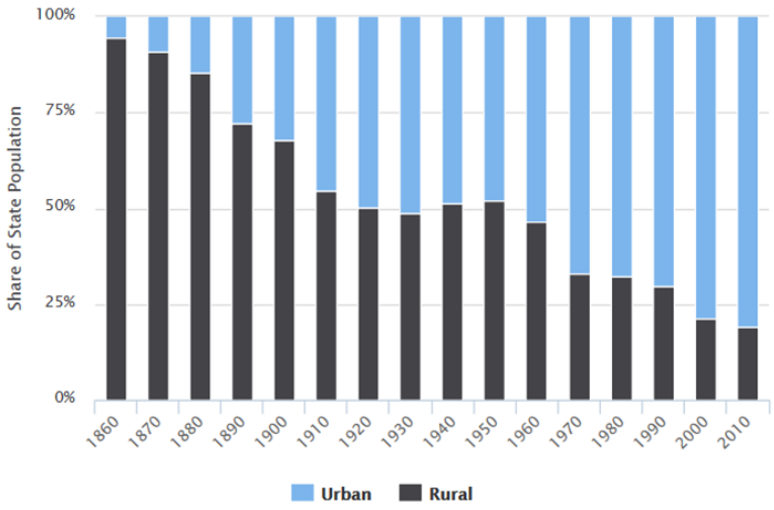
- an 11% decrease from 2011 to 2017 in the fraction of Oregon 8th graders who watched more than two hours of TV on an average school day (23.5% to 20.9%);
- a 14% decrease from 2011 to 2017 in the fraction of Oregon 11th graders who watched more than two hours of TV on an average school day (20.8% to 17.8%);
- a 102% increase from 2011-2017 in the fraction of 8th graders who played video or computer games or used a computer for something that is not school work more than two hours a day (24.4% to 49.3%); and
- an 81% increase from 2011-2017 in the fraction of 11th graders who played video or computer games or used a computer for something that is not school work more than two hours a day (25.8% to 46.8%).

A national study of children's time spent outdoors from 2007-2009[35], found that, in general, most children (between the ages of 6 and 15) spent at least two hours outdoor daily. Males, younger children, and Hispanics spent more time outside than other demographic groups. Playing or hanging out was the most common outdoor activity. Other common activities included biking, jogging, or running and using electronic media outdoors. Children participated in outdoor nature-based activities less frequently than many alternatives. Interest in other activities such as listening to music, art, or reading, watching TV, DVDs, or playing video games, and using electronic media including internet and texting were the most common reasons for not spending more time outside. While this study found that children do spend time outdoors, what they are doing may be changing. For example, playing or hanging out, sports activities, and technology-centered activities are more popular than nature-based activities. Electronic media consumption and parental involvement in outdoor recreation activities seem to be important factors influencing children's time outdoors. Children's time spent outdoors is strongly influenced by the amount of time their parents or guardians are willing and able to spend with them in outdoor settings. Because the recreation behavior of children and their parents may be relatively inseparable, managers should strive to conceptualize recreation from the family-based perspective.

[33] Common Sense 2017. The common sense consensus: Media use by kids age zero to eight. Online at: https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-kids-age-zero-to-eight-2017
[34] Oregon Department of Human Services, Physical Activity and Nutrition Program.
[35] Larson, L., Green, G., and Cordell, H.K. 2011. Children's time outdoors: Results and implications of the national kids survey. Journal of Park and Recreation Administration, 29 (2): 1-20.

A 2007 Oregon SCORP survey of Oregon parents and youth[36] found that children spend more time, on average, than parents did in organized sports, both indoor and outdoor. However, there have been decreases in other activities, with greatest decreases occurring in outdoor chores and outdoor play not at school. In general, outdoor recreation skills have decreased more, on average, amongst urban and suburban households than among rural households. These finding are exacerbated by the continuing urbanization of the state's population (Figure 5.2). The survey also identified that the more a parent engages in an outdoor recreation activity, the more their child does.

Figure 5.2. Oregon urban and rural population shares, 1860-2010[37]



A second Oregon SCORP research study[38] was designed to explore the opinions and thoughts directly from youth in a series of focus group meetings during the months of February and March 2007. A series of nine focus group meetings occurred, four taking place in the city of Portland, Oregon and five in rural and suburban settings (one in Prineville and four in Bend). Ages of the youth ranged between 7-18 years old and groups ages of 7-9, 9-11, 11-13, 13-16, and 16-18. Activities, time, constraints and benefits experienced were the major focus of this exploration. Key recommendations from this report included:

- Conduct a region-based inventory of governmental, not-for-profit, and for-profit youth-related facilities, programs and processes.
- Oregon recreation resource managers should attempt to understand if their existing and proposed facilities are appropriate for Oregon's youth.

[36] Lindberg, K. 2007. Encouraging youth outdoor recreation participation in Oregon. Oregon State University. A 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan supporting document. Report online at: https://www.oregon.gov/oprd/PLANS/docs/scorp/youth_survey_report.pdf.

[37] US Census Bureau. Urban and rural definitions are not strictly comparable over time.

[38] Burns, R., Autry, C., and Graefe, A. 2007. Youth focus group interviews: Oregon Statewide Comprehensive Outdoor Recreation Plan. West Virginia University. A 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan supporting document. Report online at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2008-2012_SCORP/Youth_Focus_Group_Interviews.pdf.

- Recreation resource managers should strive to develop partnerships with appropriate recreation entities.
- Oregon recreation resource managers may want to consider a public awareness campaign touting the importance of outdoor recreation and include awareness about sedentary activities.
- Many communities have been participating in "community policing" method, where police are present in neighborhoods to prevent criminal activity, rather than responding to crimes. Partnerships between police and other safety/security agencies in communities with crime threats would be an important component and may allow kids to feel more comfortable recreating outdoors.
- Recreation resource managers should consider a pointed marketing campaign touting the benefits and potential outcomes of playing outside.

A "Lost Generation" of Oregon Outdoor Recreation Participants

Several studies have noted that people who do not participate in outdoor recreation as youth are less likely to participate in those activities as adults. For example, Cordell et al.[39] state that "the type of outdoor recreation children learn as children and young adults will affect outdoor recreation because a surprising number of outdoor interests and skills are acquired only, or mainly, in childhood." Bixler, Floyd, and Hammitt[40] found that childhood play in wild environments led to more positive perceptions of outdoor recreation activities.

Research points to the importance of a supportive social environment of parents, family, and friends, enabling young people to become engaged and stay engaged in outdoor activities . A recent study concludes that, in order to address static or declining outdoor recreation participation, conditioning children in their preschool and preteen years to be active in the outdoors is of fundamental importance, since this is the time when attitudes to nature and the outdoors are established.

Since participation in outdoor recreation as youth is correlated with participation as adults, there is the potential for a continuous cycle of reinforcing participation—but also a downward cycle if participation declines (since interest and skills may not be passed to the next generation). Parents not only introduce children to outdoor recreation, continuing (or breaking) the cycle, but also set examples for physical activity generally.

Additional studies on attitude toward the environment suggests that direct contact with nature, especially as children, is the most critical influence on later attitude toward the environment . In a recent public appearance, Richard Louv spoke about the potential repercussions of today's youth losing a personal connection to the outdoors. According to Louv, "We care for what we know and love." He told the group that if today's children don't have "transformational experiences in the outdoors" during their youth, they are unlikely, as adults, to be engaged in

[39] Cordell, K., McDonald, B., Teasley, J., Bergstrom, J., Martin. J., Bason, J., Leeworthy, V. (1999). Outdoor recreation participation trends. In K. Cordell, C. Betz, and Bowker, J. (Eds)., *Outdoor recreation in American life: A national assessment of demand and supply trends*. Champaign, IL: Sagamore Publishing.

[40] Bizler, R., Floyd, M., and Hammitt, W. 2002. Environmental Socialization: Quantitative tests of the childhood play hypothesis. Environment and Behavior, 34(6): 795-818.

public policy deliberations about our forests and parks and about environmental issues like global warming.

In 2016, Oregon voters passed Ballot Measure 99[41], authorizing funds from the state lottery to provide al fifth-or sixth-grade students in Oregon access to a week of Outdoor School. Measure 99 provided the funding for the Outdoor School Law, which was passed by the Oregon Legislature in 2015. Every Oregon student in fifth or sixth grade, including home schooled and charter school students, now have the opportunity to attend a weeklong Outdoor School field science program, or an equivalent outdoor educational experience that reflects local community needs, provided their school district or education service district applies to receive funding for an eligible Outdoor School program. Outdoor School programs are typically housed in residential camps; students stay onsite for up to five nights. For many children, Outdoor School is their very first experience hiking in a forest, getting their feet wet in a stream or exploring sea life along a sandy beach.

Analysis of past Oregon SCORP results suggests that this downward cycle of outdoor recreation participation has been underway for some time within the overall Oregon population. It could be argued that because of a variety of societal changes, Oregon has "lost a generation" of outdoor recreation participants. Some outdoor recreation activities like walking for pleasure and viewing scenery and wildlife come naturally to people. Other activities, such as hiking, fishing, hunting and wilderness camping require not only acquired skills and knowledge, but also a strong understanding of the recreation resource and resource stewardship. By providing Oregon's youth with opportunities to learn outdoor recreation skills in outdoor settings, we have the opportunity to rebuild the foundation for future outdoor recreation participation and reestablish personal connections with nature and their public lands.

Physical Activity and Oregon's Youth

According to a 2000 report to the President on promoting youth health[42], "America loves to think of itself as a youthful nation focused on fitness. But behind the vivid media images of robust runners, Olympic Dream Teams, and rugged mountain bikers is the troubling reality of a generation of young people that is, in large measure, inactive, unfit, and increasingly overweight."

Rates of participation in physical activity have declined in the past 30 years for both children and youth. More than a third of young people in grades 9-12 do not regularly engage in vigorous physical activity. Daily participation in high school physical education classes dropped to 30% in 2017[43]. According to the Center for Disease Control (CDC), in 2017 15.4% of U.S. high school students were not physically active for a total of at least 60 minutes on at least one day during the seven days before the survey.

[41] https://ballotpedia.org/Oregon_Outdoor_School_Lottery_Fund,_Measure_99_(2016)
[42] Promoting better health for young people through physical activity and sports. 2000. A report to the President from the Secretary of Health and Human Services and the Secretary of Education. Fall.
[43] Trends in the prevalence of physical activity and sedentary behaviors National YRBS: 1991-2017. Centers for Disease Control and Prevention, Division of Adolescent and School Health.

In the long run, physical inactivity threatens to reverse the decades-long progress we have made in reducing death and suffering from cardiovascular diseases. Children and adolescents who are overweight are move likely to be overweight or obese as adults[44]. Physical inactivity increases the risk of dying prematurely, dying of heart disease, and developing diabetes, colon cancer, and high blood pressure. In addition to the toll taken by human suffering, surges in the prevalence of these diseases could lead to crippling increases in our national health care expenditures.

In the short run, physical inactivity has contributed to an unprecedented epidemic of childhood obesity that is currently plaguing the US. Obesity continues to be a major public health concern in the U.S. Recent data from the 2015-16 NHANES indicates that approximately 19% of boys and 18% of girls 2 to 19 years of age were obese[45]. Since 1980, childhood obesity rates (ages 2 to 19) have tripled – with the rates of obese 6- to 11-year olds more than doubling (from 7.0 percent to 17.5 percent) and rates of obese teens (ages 12 to 19) quadrupling from five percent to 20.5 percent[46].

Similar patterns are occurring in the state of Oregon[47] :

- The percent of 8th graders who were overweight or obese in 2017 was **25.7%**.
- The percent of 11th graders who were overweight or obese in 2017 was **28.9%**.
- The percentage of 8th graders who were overweight or obese increased **20%** since 2011.
- The percentage of 11th graders who were overweight or obese increased **16%** since 2011.

Of children 5 to 10 who are overweight, 61% have one or more cardiovascular disease risk factors, and 27% have two or more[48]. Childhood obesity not only increases cardiovascular risk in adulthood, but is also associated with cardiovascular damage during childhood[49]. The negative health consequences linked to the childhood obesity epidemic include the appearance in the past two decades of a new and frightening public health problem: Type 2 diabetes among adolescents. This condition was previously so rarely seen in children or adolescents that it came to be called "adult-onset diabetes". Now, an increasing number of teenagers and preteens must be treated for diabetes and strive to ward off the life-threatening health complications that it can cause. In recent years, it has been estimated that in the U.S. as many as 30% of boys and 40% of girls are at risk for being diagnosed with Type 2 diabetes.

[44] Ferraro, K., Thorpe, R. Jr, Wilkinson, J.2003. The life course of severe obesity: Does childhood overweight matter? Journal of Gerentology, 58B(2): S110-S119.
[45] Skinner, A., Ravanbakht, S., Skelton, J., Perrin, E., Armstrong, S. 2018. Prevalence of obesity and severe obesity in US Children, 1996-2016. Pediatrics, 141(3).
[46] Ogden C., Carroll M., Fryar C., Flegal. 2015. Prevalence of obesity among adults and youth: United States, 2011–2014. NCHS data brief, no 219. Hyattsville, MD: National Center for Health Statistics.
[47] Oregon Healthy Teens Survey. Oregon Department of Human Services, Physical Activity and Nutrition Program.
[48] Freedman, D., Dietz, W., Srinivasan, S., Berenson, G. 1999. The relation of overweight to cardiovascular risk factors among children and adolescents: the Bogalusa heart study. Pediatrics; 103: 1175-82.
[49] Cote, A., Haris, K., Panagiotopoulous, C., George, G., Sandor, S., Devlin, A. 2013. Childhood obesity and cardiovascular dysfunction. Journal of the American College of Cardiology; 62(15): 1309-1319.

Reducing childhood obesity is a public health priority that has substantial health and economic benefits. According to a Duke Global Health Institute study[50], childhood obesity comes with an estimated price tag of $19,000 per child when comparing lifetime medical costs to those of a normal weight child. When multiplied by the number of obese 10-year –olds in the United States, lifetime medical costs for this age alone reach roughly $14 billion.

Park proximity plays an important role in promoting higher levels of park use and physical activity, particularly for youth[51]. A study examining park proximity and travel diary data of youth between the ages of five and twenty in Atlanta, Georgia shows that youth who resided close to parks and open space were approximately two to three times more likely to take a walk within a two-day period than their counterparts that had now parks near their homes[52].

There is a strong relationship between how much money is spent to provide park and recreation services and the amount of physical activity health benefits people receive. A nationwide study[53] using data on high school students from the Youth Behavior Surveillance System showed that an extra $10 spent per capita on parks and recreation was associated with one-third of a day more per week of vigorous exercise by girls. State spending on parks and recreation was also associated with more days of strength-building exercise by both sexes. By extension, these investments are investments in the health of Oregon's youth.

Clearly, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of youth through encouraging and facilitating their involvement in active outdoor recreation activities.

Statewide Survey – Oregon Families With Children Results

The survey was conducted by the Oregon Parks and Recreation Department (OPRD) using a random sample of Oregon households with children 17 years or younger. The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the statewide population and urban, suburban, and rural populations. For all correspondence, persons age 30-49 included in this sample were sent versions in English language (e.g., cover letters, surveys). Surveys were mailed to 6,050 recipients. Adjusting for undeliverables, the response rate was 21% for the families with children sample. In total, 1,041 completed surveys were received for the Oregon families with children sample.

[50] Finkelstein, E., Graham, W., Malhotra, R. 2014. Lifetime direct medical costs of childhood obesity. Pediatrics. Published online at: http://pediatrics.aappublications.org/content/pediatrics/early/2014/04/02/peds.2014-0063.full.pdf.
[51] Kaczynski, A., Henderson, K. (2007). Environmental correlates of physical activity: A review of evidence about parks and recreation. Leisure Sciences. 29(4): 315-354.
[52] Frank, L., Chapman, J., Sallis, J. (2007). Urban form relationships with walk trip frequency and distance among youth. American Journal of Health Promotion. 21(4): S1-S7.
[53] Cawley, J., Meyerhoefer, C., Newhouse, D. 2007. The correlation of youth physical activity with state policies. Contemporary Economic Policy (25(4): 506-517.

A full survey report including statewide results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

A full survey report including families with children population results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentSurveyFamiliesChildrenResults.pdf.

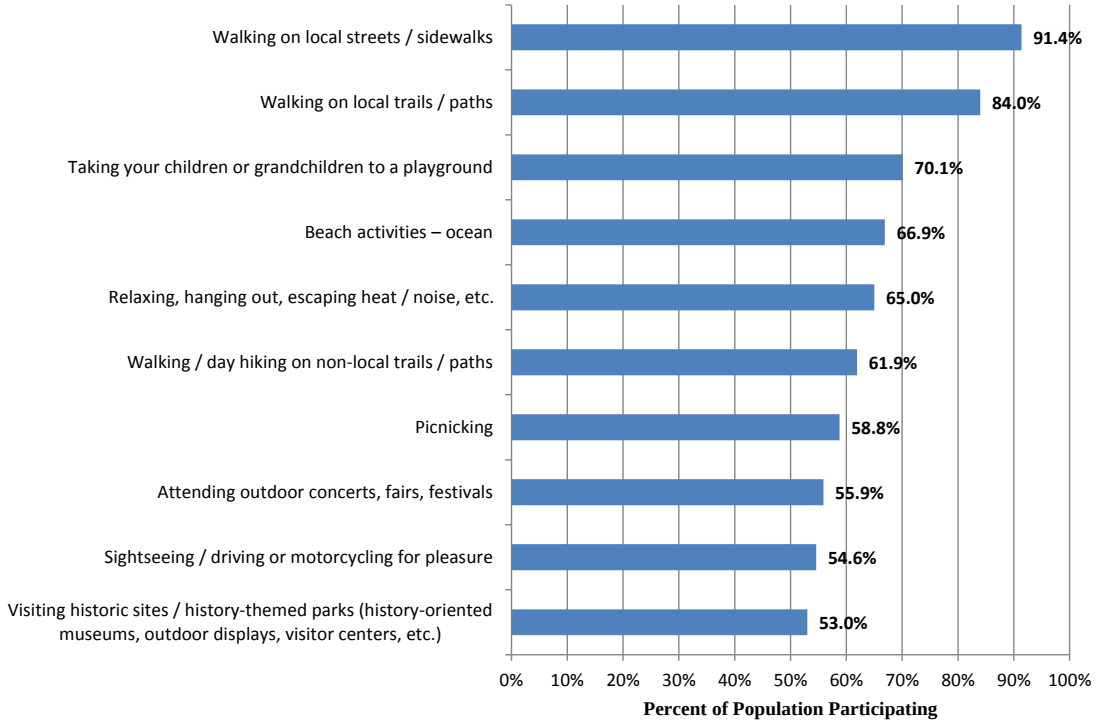
Families With Children User Occasions and Participation in Outdoor Recreation

Overall, 100% of Oregon families with children participated in at least one outdoor recreation activity in Oregon during 2017. Figure 5.3 provides the top ten activities for the Oregon low-income population, based on the proportion of the population participating in them.

The activities in which the largest proportions of Oregon's families with children participated in 2017 include:

1. Walking on local streets / sidewalks − 91%
2. Walking on local trails / paths − 84%
3. Taking your children or grandchildren to a playground − 70%
4. Beach activities– ocean – 67%
5. Relaxing, hanging out, escaping heat / noise, etc. – 65%

Figure 5.3. Top ten activities for Oregon families with children, percent participating, 2017



A bivariate statistical test was used to identify statistical differences between the percent of the overall population participating in the specific activity and the percent of the families with children population participating in that activity for the full list of 56 outdoor recreation activities

included in the questionnaire. Results indicate that Oregon's families with children participate at higher rates in comparison to the overall Oregon population in terms of outdoor recreation participation. Families with children reported 40 activities where participation was statistically higher than the overall Oregon population and only two activities less than the overall population. The annual mean of participation times for all 56 activities for the Oregon population was 354.0 times and 443.6 times for families with children. These results suggest that Oregon's parents are successfully enabling young people to become engaged in outdoor recreation.

As expected, there were differences in activity participation between urban / suburban and rural families with children populations. Rural families with children reported higher participation in activities such as horseback riding, Class II – Off-road 4-wheel driving, RV / motor home / trailer camping, hunting and fishing. Urban / suburban families with children reported higher participation in bicycling on paved roads and bicycling on streets / sidewalks.

Types of Outdoor Recreation Areas Used

For Oregon's families with children population local / municipal parks experienced the highest percentage of respondents reporting that they had visited that type of area over the past 12 months followed by State parks, forests, or game lands. National parks, forests, and recreation areas were third, followed by county parks, private parks, and other areas. An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by Oregon's families with children population identifies that local / municipal parks account for the highest percentage (33%) of all outdoor recreation use from the survey sample. State parks, forests, or game lands account for 19%, national parks, forests and recreation areas 18%, county parks 16%, private / commercial areas 13%, and other recreation areas account for 6%. These results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's families with children.

Camping Likelihood and Priority Needs

For Oregon's families with children, drive-in tent sites had the highest likelihood of use, while hiker-biker sites had the lowest likelihood of use. Drive-in tent campsites had the highest priority need, while RV sites had the lowest priority need. Drive-in tent sites had the largest proportion of very likely responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types. RV sites had the largest proportion of lowest priority need.

A comparison between families with children and the Oregon general population results shows higher families with children likelihood of use for drive-in tent campsites; cabins or yurts with heat, lights; cabins or yurts with heat, lights, bathroom, kitchen; and hike-in tent sites; and similar priority need with the overall Oregon population.

Sources of Information for Outdoor Recreation Activities

The highest percentage of Oregon families with children respondents said that friends / relatives / word of mouth and websites were the most important and most used information sources when seeking outdoor recreation information in Oregon. Maps / brochures, visitor or welcome centers, and travel guides / tour books were also most important information sources to families with

children respondents. Families with children were much more likely to say that schools, social media information sources such as Facebook and video sharing platforms, and community organizations or churches were important sources than the general Oregon population.

Priorities for the Future

The top "in your community" needs for Oregon's families with children are:

- Playgrounds with natural materials (Natural Play Areas).
- Dirt / other soft surface walking trails and paths.
- Children's playgrounds and play areas built with manufactured structures.
- More restrooms.
- Picnic areas and shelters for small visitor groups.

Oregon's families with children place a higher priority on the need for natural play areas and manufactured structure playgrounds and play areas than the general population.

The top "outside your community" priority need for Oregon's families with children are:

- Cleaner restrooms.
- Dirt / other soft surface walking trails and paths.
- More restrooms.
- Playgrounds with natural materials (Natural Play Areas).
- Nature and wildlife viewing areas.
- Public access to waterways.

Again, Oregon's families with children place a higher priority on the need for natural play areas and manufactured structure playgrounds and play areas than the general population in outside community areas.

Agency Management Actions

In terms of potential "within community" actions to increase outdoor recreation engagement, for Oregon's families with children, providing more free-of-charge recreation opportunities was the most important action, with ensuring clean and well-maintained parks and facilities, developing walking / hiking trails closer to home, developing parks closer to home, and making parks safer from crime also high in importance. These most important families with children actions were consistent with those of the Oregon general population.

Local Park Visitor Characteristics

A number of questions were asked of Oregon's families with children outdoor recreation participants about their use of local parks, trails, open space and recreation centers.

Key findings include:

- Top local park group types were just family and both family and friends. Oregon's families with children were more likely to go to a local park with just family or with both family and friends, and less likely to go alone than the Oregon general population.
- Top typical local park group sizes were 3 to 5 people and 2 people. In general, families with children group size was larger than the general Oregon population.
- Most families with children respondents reported it is very important (52.4%) or somewhat important (36.5%) to have a recreation facility within a 10 minute or less walking distance from their home. A comparison of mean importance scores shows that the Oregon's families with children (2.41) place a higher level of importance having a local park, trail, open space or recreation center within walking distance of their home than the general Oregon population (2.28).
- The rural families with children population reported the lowest importance of having a local park, trail, open space or recreation center within walking distance of their home (2.11), compared to the urban (2.54) and suburban (2.46) families with children populations.
- Most families with children respondents reported a single park or recreation facility (44.5%) or multiple parks/ facilities (38.0%) within a walking distance from home. A lower percentage of families with children respondents (17.5%) reported having no park / recreation facilities within walking distance from home than the general Oregon population (22.9%).
- Urban families with children reported the highest percentage of having multiple parks/ facilities (54.0%) and rural families with children reported having the highest percentage of no park / recreation facilities within walking distance from home (41.1%).
- Most families with children respondents reported driving themselves (52.0%) or walking (35.9%) to their most used outdoor recreation facility.
- The highest percentage of those driving themselves to the park was reported by rural families with children (69.4%). The highest percentage of those walking to the park was reported by urban families with children (47.8%) and the lowest by rural families with children (18.7%).
- In describing any access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation, most mentioned difficulties included lack of parking, dangerous traffic / road crossings, distance to parks, poor access roads / parking in dispersed settings, lack of sidewalks, no car / don't drive and lack of public transportation.

Community Recreation Program Need

Farmer's markets showed the highest need, along with concerts, outdoor sports, outdoor movies, and arts and crafts. Lowest need was reported for Tai Chi, Pilates, and Zumba classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, concerts, and quiet zones for reading or meditating. Lowest mean scores for need being met were for game areas (e.g., chess, cards), walking clubs, social dancing, and historical tours. The most important program to families with children respondents was farmer's markets, followed by outdoor sports and concerts.

Agency Actions to Increase Physical Activity

For families with children, providing more walking trails was the most promising action, with more parks closer to where I live, and bicycle trails or paths also high in potential for increasing physical activity. These actions are consistent with the most promising actions identified by the general population. Priority physical activity-related actions are consistent across the urban, suburban, and rural levels for this demographic group.

Disability

For families with children, 16% of respondents indicated that they or someone in their household has a disability. Approximately 4% of households had someone with a sight disability and 4% a walking disability. And 8% indicated that the disability hampered their ability to recreate outdoors in Oregon, with 4% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed were more accessible trails (flat / paved / benches / access to restrooms), more handicapped parking, accessibility education for staff and visitors, lower fees, and more accessible playgrounds / park activities.

Summary and Recommendations

Although Oregon is a state with abundant natural resources, there is growing evidence that Oregon's youth are gravitating away from outdoor experiences and towards a virtual indoor reality. Analysis of past Oregon SCORP results indicates that participation in traditional outdoor recreation activities such as picnicking, motor boating, fishing and hunting has dramatically decreased. This disconnect from nature has serious long-term implications for the health and well-being of our state and to the future stewardship of our public lands.

With the wild enthusiasm over video games, the Internet and the endless supply of TV channels, children and teenagers have little need to walk out their front door to find entertainment. In Oregon, recent data confirm a continuing shift towards a virtual indoor reality. An analysis of results from the 2011 and 2017 Oregon Healthy teen Survey identified a substantial increase in weekday hours of video games playing and computer use that is not for school work among Oregon 8th and 11th graders. National studies project that this trend toward more indoor electronic media time is not likely to go away in the near future.

Several studies have noted that people who do not participate in outdoor recreation as youth are less likely to participate in those activities as adults. Research points to the importance of a supportive social environment of parents, family, and friends, enabling young people to become engaged and stay engaged in outdoor recreation activities. Parents not only introduce children to outdoor recreation, but also set examples for physical activity generally.

Rates of participation in physical activity have declined in the past 30 years for both children and youth. In the long run, physical inactivity threatens to reverse the decades-long progress we have made in reducing death and suffering from cardiovascular diseases. Children and adolescents who are overweight are more likely to be overweight or obese as adults. In the short run, physical inactivity has contributed to an unprecedented epidemic of childhood obesity that is

currently plaguing the U.S. In 2017, 26% of Oregon 8th graders and 29% of 11th graders were overweight or obese, with substantial increases since 2011.

Reducing childhood obesity is a public health priority that has substantial health and economic benefits. Park proximity plays an important role in promoting higher levels of park use and physical activity, particularly for youth. There is a strong relationship between how much money is spent to provide park and recreation services and the amount of physical activity health benefits people receive. Increasing participation by youth in active outdoor recreation activities can serve as a primary strategy in combatting the epidemic of childhood obesity that is currently plaguing the state of Oregon.

By providing Oregon's youth with opportunities to learn outdoor recreation skills in outdoor settings, we have the opportunity to rebuild the foundation for future outdoor recreation participation and reestablish personal connections with nature and their public lands. In addition, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of youth through encouraging and facilitating their involvement in active outdoor recreation activities. Because the recreation behavior of children and their parents may be relatively inseparable, managers should strive to conceptualize recreation from the family-based perspective.

Towards this end, a statewide survey was conducted by the Oregon Parks and Recreation Department using a random survey of Oregon households examining the statewide population and urban, suburban, and rural populations for Oregon households with children 17 years or younger. The survey examined their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management.

Overall, 100% of Oregon families with children participated in at least one outdoor recreation activity in Oregon during 2017. Survey results showed that Oregon's families with children participate at higher rates in comparison to the overall Oregon population in terms of outdoor recreation participation. These results suggest that Oregon's parents are successfully enabling young people to become engaged in outdoor recreation activities.

Survey results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon families with children. Local / municipal parks experienced the highest percentage of respondents reporting they had visited that type of area over the past 12 months (92%), the highest number of mean days per year (15 days), and the highest percentage of use by recreation area type (33%). As a result, it is essential that Oregon's local park and recreation providers continue to focus efforts on addressing the needs of Oregon families with children in close proximity to where they live.

Regarding camping use and need for Oregon families with children, drive-in tent campsites had the highest likelihood of use and the highest priority need. A comparison between families with children and the Oregon general population results shows higher families with children likelihood of use for drive-in tent campsites; cabins or yurts with heat, lights; cabins or yurts with heat, lights, bathroom, kitchen; and hike-in tent sites; and similar priority need with the overall Oregon population. As a result, Oregon's outdoor recreation providers should prioritize

the addition of drive-in and hike-in tent sites to better serve the camping needs of families with children.

Oregon families with children were also asked their opinions about priorities for the future. Top "within your community" needs are for playgrounds with natural materials (natural play areas), cleaner restrooms, dirt / other soft surface walking trails and paths, children's playgrounds and play areas built with manufactured structures, more restrooms, and picnic areas and shelters for small visitor groups. Top "outside your community" needs are for cleaner restrooms, dirt / other soft surface trails and paths, more restrooms, playgrounds with natural materials (natural play areas), nature and wildlife viewing areas, and public access to waterways. OPRD will provide funding priority for these families with children needs in OPRD-administered grant programs where applicable. Recreation providers should also consider these needs in jurisdictional planning efforts.

Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, developing walking / hiking trails closer to home, developing parks closer to home, and making parks safer from crime as potential actions to increase outdoor recreation engagement by Oregon families with children.

Most families with children respondents reported it is very important or somewhat important to have a local park, trail, open space or recreation center within a 10 minute or less walking distance from their home. A higher percentage of families with children respondents (17.5%) reported having no park / recreation facilities within walking distance from home as the general Oregon population (22.9%). Urban families with children respondents reported the highest percentage of having multiple parks / facilities (54.0%) and rural families with children respondents reported having the highest percentage of no park / recreation facilities within walking distance from home (41.1%). Survey results suggest that, in general, additional close-to-home parklands in rural Oregon are needed to serve families with children. In addition, there will be situations at the local level where park access is a problem. The parkland mapping project will allow communities across the state to identify specific areas within their Urban Growth Boundaries where families with children parkland need exists within a ½ mile service area.

Highest families with children need for community recreation programs was for farmer's markets, concerts, outdoor sports, outdoor movies, and arts and crafts. Lowest performance (needs being met) was reported for game areas (e.g., chess, cards), walking clubs, social dancing, and historical tours. The most important program to families with children respondents was farmer's markets, followed by outdoor sports and concerts. Municipal recreation providers should examine the relationship between families with children residence and these findings in program planning efforts.

Families with children respondents cited access or transportation problems including lack of parking, dangerous traffic / road crossings, distance to parks, poor access roads / parking in dispersed settings, lack of sidewalks, no car / don't drive and lack of public transportation in traveling to the place they most often visit for outdoor recreation. Park managers should consider these problems in future planning efforts.

The survey also examined potential "in your community" agency actions to increase the level of physical activity of the respondent or the respondent's household members. For Oregon families with children, providing more walking trails was the most promising action, with more parks closer to where I live, and bicycle trails or paths also high in potential for increasing physical activity. OPRD will provide funding priority for walking trails in families with children priority areas in OPRD-administered grant programs where applicable. Recreation providers should also consider these strategies in jurisdictional planning efforts. In coming years, OPRD will also add non-motorized trail corridors and trailhead locations to the statewide parkland mapping database to improve GIS-based access analysis for non-motorized trails. OPRD will also provide funding priority for new parks in families with children priority areas in OPRD-administered grant programs where applicable.

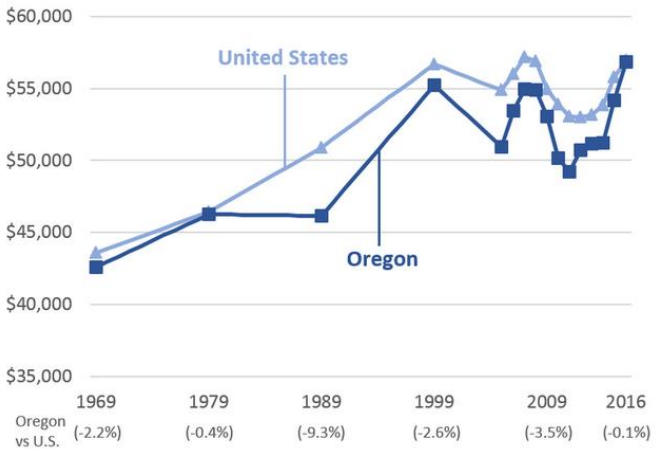
16% percent of families with children respondents indicated that they or someone in their household had a disability – lower than that reported by the general population (23%). Park managers should consider accommodations such as more accessible trails (flat / paved / benches / access to restrooms), more handicapped parking, accessibility education for staff and visitors, lower fees, and more accessible playgrounds / park activities to better serve Oregon's families with children.

CHAPTER SIX: LOW INCOME AND OUTDOOR RECREATION IN OREGON

Issue Introduction

In recent years, there is reason for optimism when looking at economic data for the state of Oregon. In 2016, Oregon's median household income, after adjusting for inflation, is at or near the highest it has ever been. Income for the typical Oregon household is back to where it was prior to the Great Recession. Furthermore, the gap between Oregon's household income and the U.S. is effectively gone (Figure 6.1).

Figure 6.1. Median household income U.S. and Oregon, inflation adjusted, 1969-2016[54]



While this is good news, it does not apply evenly across the state. It is important to point out that poverty in Oregon is concentrated among certain segments of the population. Recent data from the U.S. Census Bureau's American Community Survey (Table 6.1) shows that in 2016, 15.7% of Oregonians are living with household incomes below the poverty threshold, considerably higher than the 11.6% rate in 2000. In 2016 there were approximately 642,670 Oregonians living below the poverty line.

Children are especially vulnerable to the consequences of poverty. In 2000, 14.7% of Oregonians under the age of 18 were living in poverty. That rate has grown to 20.4% in 2016. Furthermore, families with children and single women with children were much more likely to be living in poverty than families overall. Just 8.5% of all families lived in poverty, compared to 14.1% of families with children, and 36.0% of single women with children.

Poverty rates also vary significantly by race and ethnicity throughout Oregon. While the poverty rate in 2016 among whites was 13.3%, it was much higher for people of color including Native Hawaiian and Pacific Islander (29.8%), Hispanic or Latino (26.1%), African American (32.5%), and American Indian and Alaska Native (28.3%).

[54] U.S. Bureau of Economic Analysis, U.S. Census, Oregon Office of Economic Analysis.

In addition, poverty rates vary significantly by educational attainment. In 2016, 26.2% of Oregonians with less than a high school degree lived in poverty.

Table 6.1. Percent of Oregon population below the poverty line, 2000[55], 2016[56]

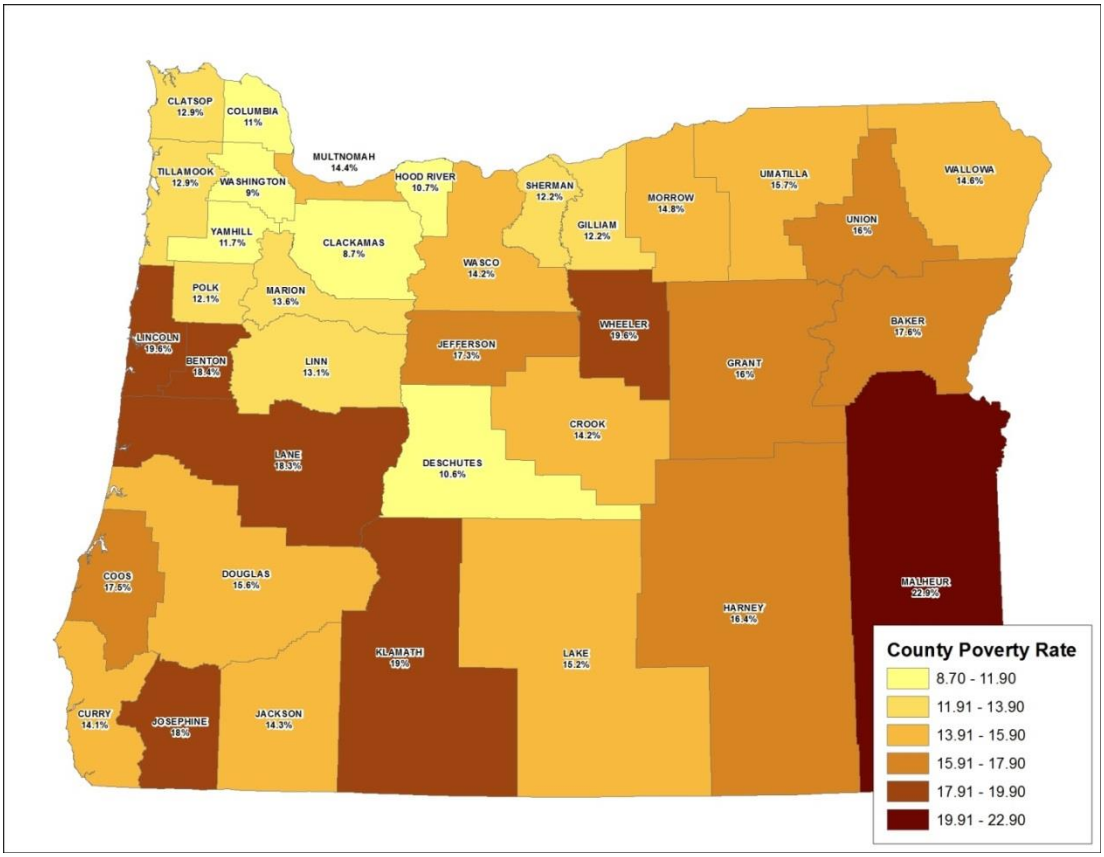
	Year		
	2000		2016
Total Population	11.6%		15.7%
Race / Ethnicity			
Asian alone	12.5%		15.4%
White (non-Hispanic)	9.8%		13.3%
Native Hawaiian & Pacific Islander alone	18.2%		29.8%
Hispanic or Latino alone	24.9%		26.1%
African American alone	24.1%		32.5%
American Indian & Alaska Native alone	22.2%		28.3%
Age			
Under 18 years	14.7%		20.4%
18-64 years	11.2%		16.1%
65 years and older	7.6%		8.8%
Educational Attainment, population 25 years and over			
Less than high school degree			26.2%
High school graduate			15.4%
Some college, Associate's degree			12.6%
Bachelor's degree or higher			5.9%

Although Oregon's median household income began to rise in 2011 after stagnating for years after the recession, housing costs, particularly rents, have been increasing rapidly in many markets much more quickly and for a longer period of time. This means that people must spend more of their earnings on the cost of housing, leaving less money left over at the end of the month for other necessities such as food, daycare, transportation, healthcare, or emergency savings. This is an especially difficult situation for people living below the poverty line.

Poverty rates also vary by county across the state, particularly between urban and rural areas of the state. Counties with the highest poverty levels in 2016 (Figure 7.2) include Malheur (22.9%), Lincoln (19.6%), Wheeler (19.6%), Klamath (19.0%), Benton (18.4%), Lane (18.3%), and Josephine (18.0%).

[55] US Census, American Community Survey, P087
[56] 2012-2016 American Community Survey 5-year estimates

Figure 6.2. Oregon poverty rate by county, 2016[57]



Wealth and economic well-being are predictors for what social scientists refer to as life chances, or the opportunities that people have to improve their lives[58]. Low-income residents are far more restricted in their choice of employment, residence, schools for their children, access to food and health coverage, and modes of transportation[59]. Studies have shown that poorer Americans are less likely to travel, spend money on leisure, participate in the arts and visit museums, participate in outdoor recreation activities, and exercise during free time[60].

Low Income and Outdoor Recreation Participation

An extensive literature indicates that individuals of lower socio-economic status are less likely to use publicly funded park and recreation resources. One study found that affluent Americans are

[57] 2016 American Community Survey 1- year estimate.
[58] Fishkin, J. 1983. Justice, equal opportunity, and the family. New Haven, CN.: Yale University Press.
[59] Neckerman, K. 2004. Social inequality. New York: Russell Sage Foundation.
[60] Scott, D. 2013. Economic inequality, poverty, and park and recreation delivery. Journal of Park and Recreation Administration. 31(4), 1-11.

three times more likely to visit national parks than poor Americans.[61] Other studies have documented similar patterns for state, regional, and local parks.

Parks in low-income neighborhoods are often used less than those in high-income neighborhoods. Perceived threats can be barriers to park use, and fears about crime, traffic safety, becoming injured, or being caught up in gang violence have all been cited as reasons some people avoid parks[62]. Low-income groups often hold unpleasant perceptions of neighborhood conditions, high perceptions of crime, and unleashed dogs naming them as factors reducing their park use[63]. Fear of crime is among the most frequently reported reasons why many poorer Americans do not make greater use of park facilities near where they live. Management practices such as staffing, program and event scheduling, facility maintenance, landscaping, and renovating facilities play a large role in drawing users to parks and potentially overcoming perceived threats[64]. In addition, park and recreation providers must strive to be more welcoming to people with low income and provide meaningful employee diversity training.

A literature review by the National Recreation and Park Association[65] found that low-income groups and ethnic minorities tend to be underserved in terms of access to parks and recreational facilities. Research shows that poorer Americans' recreation participation is reduced because they do not live close to recreation resources, and often lack reliable transportation. Also, low-income areas have been found to have parks with poorer quality amenities than higher income areas[66]. Disadvantaged areas of cities seem to have fewer amenities in public open space, including tables, fountains, and cycling paths[67]. Access to play in parks and the quality of play amenities is also an issue. Underserved populations have less access to playgrounds[68] and play amenities tend to have lower quality, to have lower levels of maintenance, to be perceived as overcrowded, and include more physical environment hazards[69]. Poor park conditions in low-income areas are proven to influence low level of park use and recreational activities.

Early childhood experiences in outdoor recreation tend to carry over into adulthood. Children growing up in persistent poverty are unlikely to acquire the same skills, knowledge, and

[61] Taylor, P. Grandjean, B, and Anatchkova, B. 2011. National Park Service comprehensive survey of the American public: National Technical Report. Natural Resource Report NPS/NRPC/SSD/NRR-2011/295. National Park Service, Fort Collins, CO.
[62] Shinew, K., Stodolska, M., Roman, C., Yahner, J. 2013. Crime, physical activity and outdoor recreation among Latino adolescents in Chicago. Preventative Medicine. 57(5), 541-544.
[63] Cerin, E., Leslie, E. 2008. How socio-economic status contributes to participation in leisure-time physical activity. Social Science & Medicine. 66(12), 2596-2609.
[64] Dolash, K., He, M., Yin, Z., Sousa, E. 2015. Factors that influence park use and physical activity in predominantly Hispanic and low-income neighborhoods. Journal of Physical Activity and Health.12(4), 462-469.
[65] National Recreation and Park Association. 2011. Parks & Recreation in Underserved Areas: A Public Health Perspective; National Recreation and Park Association: Ashburn, VA.
[66] Loukaitou-Sideris, A., Steiglitz, O. 2002. Children in Los Angeles parks: A study of equity, quality and children's satisfaction with neighborhood parks. Town Plan. 73, 467-488.
[67] Crawford, D., Timperio, A., Giles-Corti, B., Ball, K., Hume, C., Roberts, R., Andrianopoulous, N., Salmon, J. 2008. Do features of public open spaces vary according to neighborhood socio-economic status? Health Place. 14, 889-833.
[68] Moore, L., Diez Roux, A., Evenson, K., McGinn, A., Brines, S. 2008. Availability of recreational resources in minority and low socioeconomic status areas. American Journal of Preventative Medicine, 37, 16-22.
[69] Rigolon, A. Flohr, T. 2014. Access to parks for youth as an environmental justice issue: Access inequalities and possible solutions. Buildings. 4, 69-94.

appreciation of outdoor recreation activities and destinations as those who are more affluent. As a result, it is important to provide low-income youth with basic instruction in different outdoor recreation activities.

The costs associated with structured and unstructured recreation activities and programs can be problematic for low-income families. The consensus is that fees and charges negatively impact lower income Americans' access to park facilities and programs. For example, a modest swimming pool or recreation center fee may be enough to limit low-income individuals from using these facilities. A 2016 study of participation in youth sports programs[70] found that a facilitated waiver program had a dramatic effect on waiver applications; a twelvefold increase with most among children attending schools in low-income neighborhoods. Scott[71] suggests the following ways that agencies can make programs more affordable for low-income residents:

- Set aside times during the week when facilities and programs are available at no charge.
- Allow customers to volunteer in exchange for a fee waiver.
- Offer financial assistance programs for poorer residents.

There are similar findings in dispersed-setting outdoor recreation participation for low-income Americans regarding fees and charges. A study of National Park visitors found that fee increases to 31 U.S. National Parks resulted in significant declines in use[72]. Another study found that low-income outdoor recreationists tended to choose non-fee settings when they are available and reported travel over three times as for to reach non-fee settings relative to comparable settings which require a fee[73].

Physical Activity and Low-Income Populations

According to the United States Department of Health and Human Services, there is a strong relationship between family income and physical activity with low-income families being the most sedentary. A 2009 study[74], found that people in America who live in the most poverty-dense counties are those most prone to obesity and have the greatest sedentariness. There is also evidence of the association between sedentariness, poor health, obesity, diabetes, other metabolic diseases, and premature death[75]. Children who live in low-income communities are also more likely to be overweight or obese than children from more affluent backgrounds.

[70] Berk, M., McGivern, L. 2016. Effects of a facilitated fee waiver program on participation in youth sports programs. Journal of Park and Recreation Administration. 34(3), 99.
[71] Scott, D. 2013. Economic inequality, poverty, and park and recreation delivery. Journal of Park and Recreation Administration. 31(4), 1-11.
[72] Schwartz, Z., Linn, L. 2006. The impact of fees on visitation of national parks. Tourism Management, 27, 1386-1396.
[73] Lamborn, C., Smith, J., Burr, St. 2017. User fees displace low-income recreationists. Landscape and Urban Planning. 167, 165-176.
[74] Low, S., Chin, M., Deurenberg-Yap, M. 2009. Review on epidemic of obesity. Annals Academy of Medicine Singapore. 38(1), 57-59.
[75] Thorp, A., Owen, N., Heuhaus, M., Dunstan, D. 2011. Sedentary behaviors and subsequent health outcomes in adults a systematic review of longitudinal studies, 1996-2011. American Journal of Preventative Medicine. 41m 207-215.

The 2018 Oregon State Health Assessment[76], reports that adults with higher income are more likely to meet physical activity recommendations than adults with lower incomes. In 2016, only 17% of adults in Oregon with household incomes below the federal poverty level met physical activity recommendations compared to 25% with incomes above the federal poverty level. In addition, children and teens who receive free or reduced price lunch (FRPL) at school are less likely to meet physical activity recommendations (29%), compared to those not receiving such benefits (33%). Adults living below the federal poverty level have a higher prevalence of obesity. In 2016, 35% of adults in Oregon with household incomes below the federal poverty line were either obese or morbidly obese. Likewise, children and teens who receive free or reduced price lunch at school are more likely to be obese. In 2017, 15% of Oregon 8th graders who received free or reduced price lunch were obese compared to those not receiving such benefits (8%).

Regular exercise decreases the risk of many chronic diseases including heart disease, diabetes, hypertension, and both colon and breast cancer risk. Exercise also helps individuals manage their weight, boosts energy, improves mood, and supports better sleep. Unfortunately, there are barriers to exercise built into many communities. Within cities, green space is not always equitably distributed. Access is often highly stratified based on income, ethno-racial characteristics, age, gender, and disabilities. Over the past two decades, the uneven accessibility of urban greenspace has become recognized as an environmental justice issue as awareness of its importance to public health has become recognized[77]. Many U.S. cities have implemented strategies to increase the supply of urban green space, especially in park-poor neighborhoods. Potential strategies to address park equity disparities include[78]:

- Adapting land-use and planning policies to promote parks and active living.
- Promoting funding opportunities for park-poor communities.
- Supporting parks, trails, recreation facilities and programs in disadvantaged neighborhoods.
- Establishing collaborations between public sector organizations and the academic community to translate promising new research into practice.

Parks often serve as sites of physical activity, which is associated with enhanced health and reduced risk for all-cause mortality and many chronic diseases. A large number of studies demonstrate linkages between park proximity, physical activity, and health benefits. A study[79] in Kansas City, MO found participants without a park nearby (i.e., within half a mile) were more than twice as likely to have two or more chronic health conditions, than those with a nearby park. Children with more access to parks and recreational facilities are more active than children with

[76] Oregon Health Authority, Public Health Division. 2018. Oregon's State Health Assessment. Online at: https://www.oregon.gov/oha/PH/ABOUT/Documents/sha/state-health-assessment-full-report.pdf
[77] Jennings, V., Johnson-Gaither, C., Gragg, R. 2012. Promoting environmental justice through urban green space access: A synopsis. Environmental Justice, 5(1), 1-7.
[78] UC Berkley School of Public Health. July 2011. Policy Brief: Disparities in Park Space by Race and Income. Online at: https://activelivingresearch.org/sites/default/files/PolicyBrief_ParkDisparities_0.pdf
[79] Besenyi, G., Kacynski, A., Stanis, W., Bergstrom, R., Lightner, J., Hipp, J. 2014. Planning for health: a community-based spatial analysis of park availability and chronic disease across the lifespan. Health & Place. 27, 102-105.

less access, and most results for adults are similar. In addition to proximity to where they live, the number and condition of facilities and amenities, park safety and aesthetics, and program offerings, fees, and level of supervision also influence participation in physical activity in parks.

Oregon's park and recreation providers have an opportunity to examine and address the special needs of the underserved low-income population in the state. Not only is this a matter of service equity, but there is a strong economic incentive for action based on health care costs associated with physical inactivity and obesity.

Statewide Survey – Oregon Low Income Household Results

The survey was conducted by the Oregon Parks and Recreation Department (OPRD) using a random sample of Oregon households. The sample was developed with the assistance of Dr. Kreg Lindberg, Oregon State University (OSU), under a technical assistance agreement. Results of the survey are provided for the statewide population and urban, suburban, and rural populations for Oregonians with an annual household income of <$25,000 (defined as low-income population). The survey was conducted using a random sample of Oregon households, with names and addresses based on Department of Motor Vehicles (DMV) records of persons living in Oregon and 18 years of age or older. Surveys were mailed to 17,016 recipients. Adjusting for undeliverables, the response rate was 20%. In total, 3,069 completed surveys were received for the statewide sample. A total of 371 respondents reported annual household income of less than $25,000.

A full survey report including statewide results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

A full survey report including low-income population results is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentSurveyLow-IncomeResidentResults.pdf.

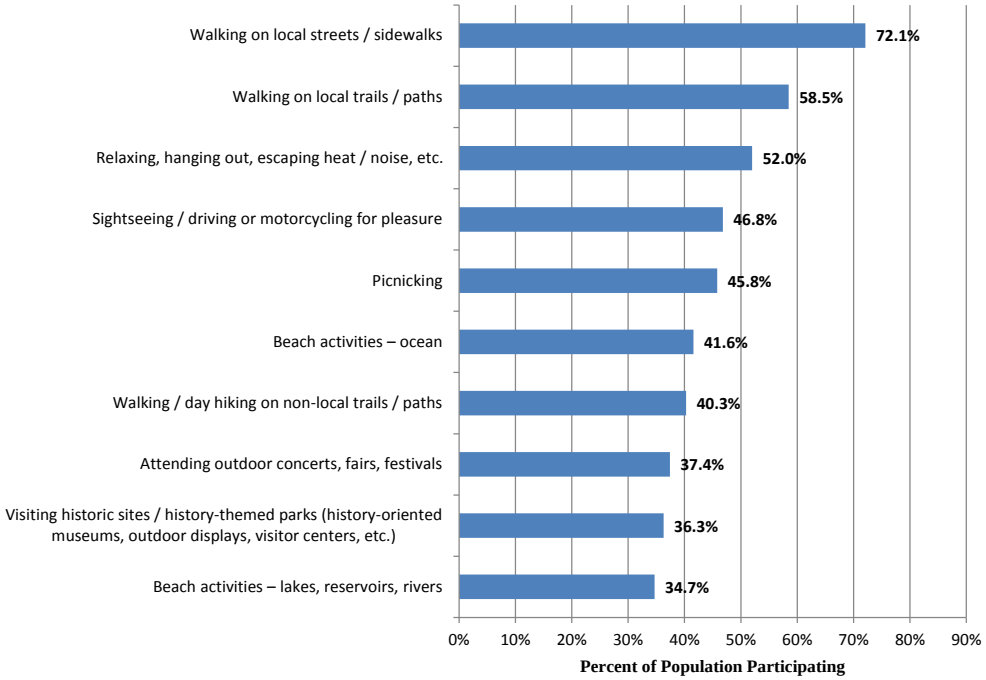
Low-Income User Occasions and Participation in Outdoor Recreation

Overall, 89% of Oregon's low-income population participated in at least one outdoor recreation activity in Oregon during 2017. Figure 6.3 provides the top ten activities for the Oregon low-income population, based on the proportion of the population participating in them.

The activities in which the largest proportions of low-income Oregonians participated in 2017 include:

1. Walking on local streets / sidewalks − 72%
2. Walking on local trails / paths − 59%
3. Relaxing, hanging out, escaping heat / noise, etc. – 52%
4. Sightseeing / driving or motorcycling for pleasure – 47%
5. Picnicking – 46%

Figure 6.3. Top ten activities for Oregon low income, percent participating, 2017



A bivariate statistical test was used to identify statistical differences between the percent of the overall population participating in the specific activity and the percent of the low-income population participating in that activity for the full list of 56 outdoor recreation activities included in the questionnaire. The low-income population reported 37 activities where participation was statistically less than the overall Oregon population. The annual mean of participation times for all 56 activities for the Oregon population was 354.0 times and only 312.3 times for the low-income population. These results suggest that, when examining both the total number of activities participated in and the average number of days of participation across the year, the Oregon low-income population is underserved in comparison to the overall Oregon population in terms of outdoor recreation participation.

Types of Outdoor Recreation Areas Used

For Oregon's low-income population local / municipal parks experienced the highest percentage of respondents reporting that they had visited that type of area over the past 12 months followed by State parks, forests, or game lands. National parks, forests, and recreation areas were third, followed by county parks, private parks, and other areas. An examination of the percentage breakdown of outdoor recreation use across the six types of outdoor recreation areas by Oregon's low-income population identifies that local / municipal parks account for the highest percentage (34%) of all outdoor recreation use from the survey sample. State parks, forests, or game lands account for 18%, national parks, forests and recreation areas 18%, county parks 17%, private / commercial areas 7%, and other recreation areas account for 6%. These results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's low-income population.

Camping Likelihood and Priority Needs

For low-income Oregonians, drive-in tent sites had the highest likelihood of use, while hiker-biker and RV sites had the lowest likelihood of use. Drive-in tent campsites had the highest priority need, while RV sites had the lowest priority need. Drive-in tent sites had the largest proportion of very likely responses from among the various types. Similarly, drive-in tent campsites had the largest proportion of highest priority need among the various types. RV sites had the largest proportion of lowest priority need.

A comparison between the Oregon low-income and the general population results shows higher low income likelihood of use for drive-in tent campsites and hike-in tent sites and similar priority need with the overall Oregon population.

Sources of Information for Outdoor Recreation Activities

The highest percentage of Oregon low-income respondents said that friends / relatives / word of mouth and websites were the most important and most used information sources when seeking outdoor recreation information in Oregon. Maps / brochures, visitor or welcome centers, and travel guides / tour books were also most important information sources to low-income respondents. Low-income respondents were more likely to say that community organizations or churches, television / radio, schools, and social media information sources such as video sharing platforms and Facebook were important sources than the general Oregon population.

Priorities for the Future

The top "in your community" needs for Oregon's low-income population are:

- Cleaner restrooms.
- More restrooms.
- Playgrounds with natural materials (Natural Play Areas).
- Picnic areas and shelters for small visitor groups.
- Dirt / other soft surface walking trails and paths.
- Nature and wildlife viewing areas.

Oregon's low-income population places a higher priority on the need for picnic areas and shelters for small visitor groups than the general population.

The top "outside your community" priority need for Oregon's low-income population are:

- Cleaner restrooms.
- Dirt / other soft surface walking trails and paths.
- Public access to waterways.
- Nature and wildlife viewing areas.
- More restrooms.
- Shelters for small visitor groups.

Again, Oregon's low-income population places a higher priority on the need for picnic areas and shelters for small visitor groups than the general population outside of communities.

Agency Management Actions

In terms of potential "within community" actions to increase outdoor recreation engagement, for the low-income population, providing more free-of-charge recreation opportunities and ensuring clean and well-maintained parks and facilities were the most important actions, with developing walking / hiking trails closer to home, making parks safer from crime, and developing parks closer to home also high in importance. These low income actions were consistent with those of the Oregon general population.

Local Park Visitor Characteristics

A number of questions were asked of Oregon's low-income outdoor recreation participants about their use of local parks, trails, open space and recreation centers.

Key findings include:

- Top local park group types were just family and both family and friends. Oregon's low-income population was more likely to go to a local park alone and less likely to go with just family than the Oregon general population.
- Top typical local park group sizes were 3 to 5 people and 2 people. In general, low-income group size was similar to the general Oregon population.
- Most low-income respondents reported it is very important (41.2%) or somewhat important (39.9%) to have a recreation facility within a 10 minute or less walking distance from their home. A comparison of mean importance scores shows that Oregon's low-income population (2.22) place a similar level of importance to having a local park, trail, open space or recreation center within walking distance of their home as the general Oregon population (2.28).
- The rural low-income population reported the lowest importance of having a local park, trail, open space or recreation center within walking distance of their home (2.07), compared to the urban (2.36) and suburban (2.19) low-income respondents.
- Most low-income respondents reported a single park or recreation facility (44.7%) or multiple parks / facilities (32.1%) within a walking distance from home. A similar percentage of low-income respondents (23.1%) reported having no park / recreation facilities within walking distance from home as the general Oregon population (22.9%).
- Urban low-income respondents reported the highest percentage of having multiple parks / facilities (46.7%) and rural low-income respondents reported having the highest percentage of no park / recreation facilities within walking distance from home (44.0%).
- Most low-income respondents reported driving themselves (45.4%) or walking (28.0%) to their most used outdoor recreation facility. A lower percentage of low-income respondents (28.0%) reported walking to their most used outdoor recreation facility as compared to the general population (33.2%).

- The highest percentage of those driving themselves to the park was reported by rural low-income respondents (62.1%). The highest percentage of those walking to the park was reported by urban low income (42.7%) and the lowest by rural low income (21.8%).
- In describing any access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation, most mentioned difficulties included lack of parking, disabilities, distance to parks, no car / don't drive and lack of public transportation.

Community Recreation Program Need

Farmer's markets showed the highest need, along with concerts, outdoor movies, arts and crafts, historical tours, quiet zones for reading or meditating, and water exercise. Lowest need was reported for Pilates and Zumba classes. The highest mean scores for need being met were for farmer's markets, outdoor sports, concerts, and quiet zones for reading or meditating. Lowest mean scores for need being met were for outdoor movies, game areas (e.g., chess, cards), walking clubs, and social dancing. The most important program to low-income respondents was farmer's markets, followed by concerts and outdoor movies.

Agency Actions to Increase Physical Activity

For the low-income population, providing more walking trails was the most promising action, with more parks closer to where I live, and improved walking routes to parks also high in potential for increasing physical activity. These actions are consistent with the most promising actions identified by the general population.

Disability

45% of low-income respondents indicated that they or someone in their household has a disability. Approximately 15% of households had someone with a sight disability and 13% a walking disability. And 28% indicated that the disability hampered their ability to recreate outdoors in Oregon, with 15% reporting that there is an accommodation or assistance that would help improve their recreation experience. Most frequently mentioned disability accommodations needed were more benches / places to rest on trails, lower fees, more accessible trails (flat / paved / benches / access to restrooms), more accessible restrooms, more accessible park facilities, and public transportation.

Summary and Recommendations

An extensive literature indicates that individuals of lower socio-economic status are less likely to use publicly funded park and recreation resources. Low-income groups and ethnic minorities tend to be underserved in terms of access to parks and recreational facilities. Children growing up in persistent poverty are unlikely to acquire the same skills, knowledge, and appreciation of outdoor recreation activities and destinations as those who are more affluent. The costs associated with structured and unstructured recreation activities and programs can also be problematic for low-income families.

There is a strong relationship between family income and physical activity with low-income families being most prone to obesity and have the greatest sedentariness. Children who live in low-income communities are also more likely to be overweight or obese than children from more affluent backgrounds. Parks are often seen as sites of physical activity, which is associated with enhanced health and reduced risk for all-cause mortality and many chronic diseases. A large number of studies demonstrate linkages between park proximity, physical activity, and health benefits. Unfortunately, there are barriers to exercise built into many communities. Within cities, green space is not always equitably distributed. Access is often highly stratified based on income, ethno-racial characteristics, age, gender, and disabilities.

In 2016, 13.3% of Oregonians (approximately 536,000 people) were living in households with incomes below the poverty threshold. Poverty in Oregon is concentrated among certain segments of the population including residents of certain counties, children, single women with children, and people of color. Oregon's park and recreation providers have an opportunity to examine and address the special needs of the underserved low-income population in the state. Not only is this a matter of service equity, but there is a strong economic incentive for action based on health care costs associated with physical inactivity and obesity levels.

Towards this end, a statewide survey was conducted by the Oregon Parks and Recreation Department using a random survey of Oregon households examining the statewide population and urban, suburban, and rural populations for Oregonians with an annual household income of <$25,000 (defined as low-income population). The survey examined their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management.

Overall, 89% of Oregon's low-income population participated in at least one outdoor recreation activity in Oregon during 2017. Survey results showed that when examining both the total number of activities participated in and the average number of days of participation across the year that the Oregon low-income population is underserved in terms of outdoor recreation participation. These findings for Oregon reinforce the current national understanding that individuals of lower socio-economic status are less likely to use publically funded park and recreation resources. As a result, it is recommended that planning priority should be directed towards better serving the outdoor recreation needs of low-income Oregonians.

Survey results point out the importance of close-to-home recreation opportunities provided at local / municipal parks to Oregon's low income population. Local / municipal parks experienced the highest percentage of respondents reporting they had visited that type of area over the past 12 months (82%), the highest number of mean days per year (15 days), and the highest percentage of use by recreation area type (34%). As a result, it is essential that Oregon's local park and recreation providers focus efforts on addressing the needs of low-income Oregonians in close proximity to where they live.

Regarding camping use and need for Oregon's low income population, drive-in tent campsites had the highest likelihood of use and the highest priority need. A comparison between Oregon's low income and the general population results shows higher low income likelihood of use for drive-in tent campsites and hike-in tent sites and similar priority need with the overall Oregon

population. As a result, Oregon's outdoor recreation providers should prioritize the addition of drive-in and hike-in tent sites to better serve the camping needs of low-income residents.

Low-income Oregonians were also asked their opinions about priorities for the future. Top "within your community" needs are for cleaner restrooms, more restrooms, playgrounds with natural materials (natural play areas), picnic areas and shelters for small visitor groups, dirt / other soft surface walking trails and paths, and nature and wildlife viewing areas. Top "outside your community" needs are for cleaner restrooms, dirt / other soft surface trails and paths, public access to waterways, nature and wildlife viewing areas, more restrooms, and shelters for small visitor groups. OPRD will provide funding priority for these low-income population needs in OPRD-administered grant programs where applicable. Recreation providers should also consider these needs in jurisdictional planning efforts.

Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, developing walking / hiking trails closer to home, making parks safer from crime, and developing parks closer to home as potential actions to increase outdoor recreation engagement by low-income Oregonians.

Most low-income respondents reported it is very important or somewhat important to have a local park, trail, open space or recreation center within a 10 minute or less walking distance from their home. A similar percentage of low-income respondents (23.1%) reported having no park / recreation facilities within walking distance from home as the general Oregon population (22.9%). Urban low-income respondents reported the highest percentage of having multiple parks / facilities (46.7%) and rural low-income respondents reported having the highest percentage of no park / recreation facilities within walking distance from home (44.0%). Survey results suggest that, in general, parklands in Oregon are reasonably distributed to serve low-income populations. However, there will be situations at the local level where park access is a problem. The parkland mapping project will allow communities across the state to identify specific areas within their Urban Growth Boundaries where low-income resident parkland need exists within a ½ mile service area.

Highest low-income population need for community recreation programs was for farmer's markets, concerts, outdoor movies, arts and crafts, historical tours, quiet zones for reading or meditating, and water exercise. Lowest performance (needs being met) was reported for outdoor movies, game areas (e.g., chess, cards), walking clubs, and social dancing. The most important program to low-income respondents was farmer's markets, followed by concerts and outdoor movies. Municipal recreation providers should examine the relationship between low-income residence and these findings in program planning efforts.

Low-income respondents cited access or transportation problems including lack of parking, distance to parks, and public transportation in traveling to the place they most often visit for outdoor recreation. Park managers should consider these problems in future planning efforts.

The survey also examined potential "in your community" agency actions to increase the level of physical activity of the respondent or the respondent's household members. For the low-income

population, providing more walking trails was the most promising action, with more parks closer to where I live, and improved walking routes to parks also high in potential for increasing physical activity. OPRD will provide funding priority for walking trails in low-income areas in OPRD-administered grant programs where applicable. Recreation providers should also consider these strategies in jurisdictional planning efforts. OPRD will also conduct a statewide inventory of recreational trails to add trail corridors and trailhead locations to the statewide parkland mapping database to improve GIS-based access analysis for non-motorized trails. OPRD will also provide funding priority for new parks in low-income areas in OPRD-administered grant programs where applicable.

An extremely high (45%) percentage of low-income respondents indicated that they or someone in their household had a disability − twice as high as reported by the general population (23%). Park managers should consider accommodations such as adding more benches / places to rest on trails, accessible trails (flat / paved / access to restrooms), accessible restrooms, accessible park facilities, and public transportation to better serve Oregon's low-income population.

CHAPTER SEVEN: HEALTH BENEFITS ESTIMATES FOR OREGONIANS FROM THEIR OUTDOOR RECREATION PARTICIPATION IN OREGON

Issue Introduction: Health Benefits of Physical Activity

"Sitting is the new smoking" is a phrase used frequently in conversations about healthy lifestyles and workplaces. This is because greater understanding and therefore importance is being placed on physical activity as a key component to living a healthy lifestyle. In 2010, physical inactivity and poor diet were the two most influential risk factors for mortality in the U.S., surpassing tobacco, motor vehicles, and firearms[80]. In response to the growing health crisis, the U.S. Department of Health and Human Services published its Physical Activity Guidelines for Americans in 2008. The guidelines were based on a comprehensive report from the Physical Activity Guidelines Advisory Committee, made up of exercise science and public health experts. The guidelines included recommendations for aerobic and muscle strengthening activities. The Physical Activity Guidelines Advisory Committee[81] found that 500 to 1,000 MET-minutes[82] per week (roughly equivalent to 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity activities) were required to receive substantial health benefits[83]. Physical activities (aerobic, anaerobic, and flexibility movements) include recreating outdoors or indoors, doing work on the job or at home, commuting by walking or bicycling, and even exercising at the gym or at home.

Physical activity may decrease the risk of many chronic illnesses such as heart disease, stroke, depression, dementia, diabetes and several cancers (e.g., breast, colon, endometrial, esophageal, kidney, stomach, lung)[84]. In 2014, these chronic conditions made up five of the top ten leading causes of death[85]. Daily physical activity provides multiple benefits to people such as increased memory function and improved quality of sleep.

[80] Maizlish, N. 2016. ITHIM: Integrated Transport and Health Impact Modeling. Berkley, CA.
[81] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.
[82] MET stands for metabolic equivalent task, where one MET is the typical energy expenditure of an individual at rest (1 kcal/kg/h). Activities are assigned MET values based upon how much energy they require to perform. METs are constants for activities and therefore are usually expressed as either MET-minutes or MET-hours. A MET-minute is a unit that describes the energy expenditure of a specific activity per minute. For example, walking at 3.0 mph requires 3.3 METs of energy expenditure and running at 6.0 mph is a 10 MET activity. Walking at 3.0 mph for 10 minutes would be expressed as 33 MET-minutes, whereas running at 6.0 mph for 10 minutes is 100 MET-minutes.
[83] There are a variety of ways someone could meet the minimum guideline of 500 MET-minutes. For example, if someone walked their dog (MET value of 3) every day for 25 minutes they would accumulate 525 MET-minutes every week (Ainsworth, et al. 2011). It is important to note that while the 500 MET-minutes per week result in "substantial" health benefits, any amount of physical activity is beneficial and the largest health improvements are received by those who are moving away from being sedentary to any physical activity.
[84] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.
[85] Maizlish, N. 2016. ITHIM: Integrated Transport and Health Impact Modeling. Berkley, CA.

Yet, 23.1% of all U.S. adults report no physical activity or exercise outside of work[86]. Conversely, Blackwell and Clarke[87] report that "22.9% of U.S. adults aged 18-64 met the guidelines for both aerobic and muscle-strengthening activities during LTPA [leisure-time physical activity] in 2010-2015." They also report that 32.4% of all adults aged 18-64 met one of the two guidelines, and 44.7% met neither guideline.

Oregonians are above average in their non-work physical activity among all states in the U.S.; however, there is a reported 17.2% of adults who are physically inactive (i.e., they are sedentary) outside of work in 2016[88], down from 18.8% in 2015[89]. About 60% of adults met the aerobic activity recommendation, 30% met the muscle strengthening recommendation, with 23% meeting both the aerobic and muscle strengthening recommendation[90]. Blackwell and Clarke[91] report that 25.8% of Oregon adults aged 18-64 met the guidelines for both aerobic and anaerobic activities during LTPA in 2010-2015.

This state of physical inactivity and associated chronic illnesses is a public health concern, as well as an economic burden. In the U.S., 11.1% of aggregate health care expenditures can be attributed to insufficient physical activity and sedentarism[92]. Substantial cost of illness savings (or conversely, health benefits) could be realized through increased physical activity in Oregon. Oregonians spent over $39.1 billion on health care in 2014[93].

Promoting Physical Activity Through Outdoor Recreation Participation

The largest predictor of a community's health is not the accessibility or quality of clinical care, but rather the social, economic, and physical conditions in which people live. These are considered "upstream" factors and they shape our environments[94]. The lived environment influences people's physical activity participation, and parks and recreation providers can play a key role[95]. The 2018 Advisory Committee reviewed various interventions for promoting physical

[86] 2016 CDC Behavioral Risk Factor Surveillance System (BRFSS) data
[87] Blackwell, D., Clark, T. 2018. State Variations in Meeting the 2008 Federal Guidelines for Both Aerobic and Muscle-strengthening Activities Through Leisure-Time Physical Activity Among Adults Aged 18-64; United States, 2010-2015. National Health Statistics Reports, No. 112. Hyattsville, MD: National Center for Health Statistics.
[88] Oregon Public Health Division. 2016 Oregon 2016 BRFSS Physical Activity. Portland, OR: Oregon Public Health Division, Oregon Health Authority.
[89] Oregon Public Health Division. 2015 Oregon 2015 BRFSS Physical Activity. Portland, OR: Oregon Public Health Division, Oregon Health Authority.
[90] Oregon Public Health Division. 2015 Oregon 2015 BRFSS Physical Activity. Portland, OR: Oregon Public Health Division, Oregon Health Authority.
[91] Blackwell, D. and Clarke, T. 2018. State Variation in Meeting the 2008 Federal Guidelines for Both Aerobic and Muscle-strengthening Activities Through Leisure-Time Physical Activity Among Adults Aged 18-64: United States, 2010-2015. National Health Statistics Reports, No, 112. Hyattsville, MD: National Center for Health Statistics.
[92] Carlson, S., Fulton, J., Pratt, M., Yang, Z., Adams, E. 2015. Inadequate Physical Activity and Health Care Expenditures in the United States. Progress in Cardiovascular Diseases, 57(4): 315-323.
[93] The Henry J. Kaiser Family Foundation. 2018. Oregon: Health Costs and Budgets. URL: https://www.kff.org/state-category/health-costs-budgets/?state=or.
[94] White, S., Blakesley, S. 2016. Improving Health and Mobility in Clatsop County: A Rapid Health Impact Assessment of the Clatsop County Multi-Use Paved Path Concept. Portland, OR: Oregon Health Authority Health Impact Assessment Program and Clatsop County Health Department.
[95] Pitas, N., Barrett, A., Mowen, A., Graefe, A., Godbey, G., Sciamanna, C. 2017. The relationship between self-rated health and use of parks and participation in recreation programs, United States, 1991 and 2015. Preventing Chronic Disease, 14:1060441.

activity to determine what approaches were effective at increasing rates of physical activity. They categorized the interventions into four different levels: individual, community, environment and policy, and communication / information technologies. The evidence supporting the efficacy of environment and policy interventions were found to be strong to moderate. Specifically, there was strong evidence suggesting point-of-decision prompts, like signs encouraging people to take the stairs instead of the elevator, to be effective, and moderate evidence suggesting that the built environment, including community designs and active transportation infrastructures that support physical activity, and access to indoor and outdoor facilities / environments were effective interventions[96]. Public transportation and trails-related bills focused on policy and environmental changes to promote physical activity have a high likelihood of being enacted[97].

It is important to note that most epidemiological studies that link environmental factors with participation in physical activities have been generally conducted in urban environments. These studies look at land use mix, road design / street connectivity, urban planning policies (provision of parks, trails, or open spaces), neighborhood characteristics, and / or transportation infrastructure (sidewalks, bike lanes, trails). Environments that are more supportive of physical activity are generally found to have a positive influence on outdoor recreation participation.

A review of 11 cross-sectional studies shows that adults in neighborhoods that are more activity-supportive reported a median of 50.4 more minutes per week of moderate-to-vigorous physical activity and averaged about 13.7 minutes more of recreational walking compared to less supportive neighborhoods[98]. Characteristics positively correlated with supportive environments include perceptions of safety; proximity of destinations; street connectivity; walkability indices; neighborhood aesthetics; low traffic volumes; and access to indoor and outdoor recreation facilities or outlets, including parks, trails, and green spaces.

Brown, Rhodes, and Dade[99] used a participatory mapping method to relate park types and locations with physical activities and perceived social, psychological and environmental benefits. Their results confirm that physical activity benefits most often occur in parks close-to-home, while social and environmental benefits are derived from more distant parks. Correlation analysis of their data suggests that larger parks provide greater opportunities to be physically active. When controlling for park size, their analysis shows natural parks, linear parks (i.e., trails), and large urban parks have the largest mean physical activity scores.

[96] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.
[97] Eyler, A., Budd, E., Camberos, G., Yan, Y., Brownson, R. 2016. State legislation related to increasing physical activity: 2006-2012. Journal of Physical Activity and Health, 13(2): 207-213.
[98] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.
[99] Brown, G., Rhodes, J., Dade, M. 2018. An evaluation of participatory mapping methods to assess urban park benefits. Landscape and Urban Planning, 178: 18-31.

Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon

This research project was conducted by Dr. Randall Rosenberger and Tara Dunn from Oregon State University's College of Forestry and was funded by the Oregon Parks and Recreation Department for the 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan. The research project estimates the health benefits obtained by Oregonians from their participation in 30 outdoor recreation activities in 2017.

The full research report including a more detailed description of study methods and county-level estimates is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2018HealthBenefitsEstimatesforOregonians.pdf.

Methods

Oregon SCORP Data

In preparation for the 2019-2023 Oregon SCORP, the OPRD conducted a statewide survey[100] of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management. The survey was conducted using a random sample of Oregon households. The sample design was developed to derive information at various scales including statewide, urban, suburban, and rural using ERS Rural-Urban Commuting Area Codes for the general population and for specific demographic groups.

Based on previous SCORP outdoor recreation activity lists and recommended by the SCORP advisory committee, fifty six (56) recreation activities were identified as important recreation activity types. These activities were grouped into eight (8) categories including Non-motorized Trail or Related Activities, Motorized Activities, Non-motorized Snow Activities, Outdoor Leisure and Sporting Activities, Nature Study Activities, Vehicle-based Camping Activities, Hunting and Fishing Activities, and Non-motorized Water-based and Beach Activities. The health benefits estimation analysis focused only on those 30 activities that could be ascribed to moderate-intensity to vigorous-intensity aerobic activity based on MET values assigned to them, including categories of Non-motorized Trail Activities, Motorized Activities, Non-motorized Snow Activities, and the remaining collated as Other Outdoor Activities.

The Outdoor Recreation Health Impacts Estimator

The Outdoor Recreation Health Impacts Estimator (OR Estimator) tool was developed by modifying the Transportation Options Health Impact Estimator (TO Estimator) tool to include a suite of outdoor recreation activities in Oregon. Just as the TO Estimator is a modification of the underlying Integrated Transport and Health Impact Model (ITHIM), including input and output user pages and prompts that increase accessibility of ITHIM to practitioners, the OR Estimator provides guided and simple input needs to increase accessibility for recreation and community

[100] Bergerson, T. 2018. 2017 Oregon Resident Outdoor Recreation Survey: 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Salem, OR: Oregon Parks and Recreation Department. URL: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

planners. The OR Estimator links an environmental intervention to behavioral changes that result in changes in physical activity exposures, which in turn lead to improved health outcomes. In other words, a new trail (environment) leads to increased walking (behavior) thus increasing physical activity (exposure), which results in a decrease in chronic diseases (health outcome). When the decrease in chronic diseases is monetized as a Cost of Illness savings, then the health outcome of the intervention may be quantified as an economic measure of health benefits due to the intervention. Although this is the conceptual flow of the tool's application; the tool itself only models the relationship between behavior change, exposure level, and health outcomes.

ITHIM was designed to estimate the health outcomes from transportation projects that affect the level of active transportation through walking (a moderately-intense physical activity; MET-value = 3.0 and bicycling (a vigorously-intense physical activity; MET-value = 6.0). Changes in the amount of physical activity for the median participant are modeled on how their relative risks of eight different diseases are affected by the amount of physical activity changes. The relative risk changes are converted into monetary estimates as Cost of Illness savings. The underlying functions that related physical activity to relative risks, and relative risks to Cost of Illness savings are based on cumulative knowledge from health science studies that estimated these relationships. The TO Estimator adapts the model to fit Oregon's population and health distributions. And the OR Estimator expands on active transportation modes (walking and biking) to include 30 different outdoor recreation activity types.

Energy Expenditure Calculations

A direct outcome from physical activity of any kind is energy expenditure or kilocalories (kcal) expended or burned. An individual's energy balance is the difference between energy in (diet and nutrition) and energy out (physical activity), and is related to the individual's weight status and health[101]. Total annual kcal expended by outdoor recreation activity type were calculated. MET-values for this analysis were ascribed from the compendium for physical activities[102]. For outdoor recreation activities that matched multiple MET-values reported in the compendium (e.g., slow to rapid pace), the lower MET-value was used in order to derive conservative estimates of energy expenditure. In other applications, the average of related MET-values per outdoor recreation activity was used[103].

Cost of Illness Savings Estimation

Health benefits, or Cost of Illness savings, estimates for Oregonians participating in outdoor recreation were estimated using the Outdoor Recreation Health Impact Estimator tool, as described above. ITHIM was modified to fit transportation and physical activity behaviors, and demographics of Oregon in the Transportation Options Health Impact Estimator tool.

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[101] Wells, N., Ashdown, S., Davies, E., Cowett, F., Yang, Y. 2007. Environment, design, and obesity: Opportunities for interdisciplinary collaborative research. Environment and Behavior 39(1): 6-33.

[102] Ainsworth, B., Haskell, W., Herrmann, S., Meckes, N., Bassett, J., Tudor-Locke, C. 2011. Compendium of Physical Activities: a second update of codes and MET values. Medicine and Science in Sports and Exercise 43(8): 1575-1581.

[103] Kline, J., Rosenberger, R., White, E. 2011. A national assessment of physical activity in U.S. national forests. Journal of Forestry 109(6): 343-351.

Aggregate COI savings estimates are derived from the OR Estimator tool by inputting county, activity type, and median outdoor recreation activity weekly minutes. Estimates for each county's COI savings are not reported given they are based on regional population participation rates and median participant weekly minutes, and therefore are not specific to the county individually, but they are appropriate in the aggregate. Therefore, each county's COI savings by activity are summed to provide an estimate for COI savings at the state level.

Two additional adjustments are made to COI estimates to account for changes in population and inflation over time. First, growth in Oregon's adult population between 2010 and 2017 is accounted for by increasing each county's COI estimate by its adult population growth rate. Given the model applies the participation rate from the 2017 statewide survey, this is an appropriate adjustment. Second, COI estimates are adjusted for inflation from 2010 USD to 2018 USD using a CPI deflator tool.

Results

The results of these analyses are restricted to Oregon SCORP survey outdoor physical activities with minimum MET-values ≥ 3.0, which correspond with moderate intensity (3.0 – 5.9 METs) to vigorous intensity (6.0 or higher METs) in physical activity recommendations[104]. MET-values < 1.5 are considered to be sedentary behavior. Oregon SCORP outdoor recreation activities not included in this analysis include: Class II off-road driving; powerboating; sightseeing; picnicking; taking children to playground or natural settings; relaxing; attending outdoor concerts; pickleball; orienteering / geocaching; visiting historic sites or nature centers; whale-watching; exploring tidepools; other nature observation; outdoor photography; vehicle-based camping; hunting; fishing/shellfishing; canoeing; and beach activities. While these activities may generate health benefits depending on the intensity and duration of engagement, they are not included in the analysis.

Table 7.1 lists the 30 outdoor recreation activities that are included in the analysis. The top three activities based on total adult participants and proportion of the adult population participating in them include Walking on local streets / sidewalks (2.716 million, 83.2%); Walking on local trails / paths (2.416 million, 74%); and Walking / day hiking on non-local trails / paths (1.786 million, 54.7%). The bottom three activities on total adult participation and proportion of the adult population participating in them include Futsal (0.02 million, 0.6%); Snowmobiling (0.072 million, 2.2%); and Class III – Off-road motorcycling (0.104 million, 3.2%).

Total annual user occasions are the primary Oregon SCORP survey outcomes that correlate with activity engagement. The top three activities with the largest annual user occasions include Walking on local streets / sidewalks (313 million); Walking on local trails / paths (113 million); and Dog walking / going to dog parks / off-leash areas (78 million). The bottom three activities with the smallest annual user occasions include Futsal (0.4 million); Cross-country / Nordic skiing on ungroomed trails (0.6 million); and Snowmobiling (1 million).

[104] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.

Table 7.1. Energy expenditures and Cost of Illness Savings from 2017 outdoor recreation activity participation in Oregon (2018 USD)

Activity	Total Participants (million)	% Population Participating	User Occasions, Total Annual (million)	Energy Expended, Total Annual kCal (billion)	Energy Expended, Annual / Participant, kCal	Energy Expended, Per User Occasion, kCal	COI Savings, Total Annual ($million)	COI Savings, Annual / Participant	COI Savings, Per User Occasion
Non-motorized Trail Activities									
Walking on local streets / sidewalks	2.716	83.2	312.726	117.893	43,406	377	$385.405 - $629.991	$164.60 - $231.95	$1.43 - $2.01
Walking on local trails / paths	2.416	74.0	113.083	57.497	23,801	508	$71.602 - $125.860	$34.38 - $52.10	$0.73 - $1.11
Walking / day hiking on non-local trails / paths	1.786	54.7	44.035	31.913	17,872	725	$33.240 - $45.556	$21.59 - $25.51	$0.88 - $1.03
Long-distance hiking (back packing)	0.431	13.2	4.915	15.992	37,111	3,254	$5.670 - $36.096	$15.26 - $83.77	$1.34 - $7.34
Jogging / running on streets / sidewalks	0.875	26.8	37.224	41.938	47,936	1,127	$32.574 - $145.605	$43.19 - $166.43	$1.02 - $3.91
Jogging / running on trails / paths	0.692	21.2	17.284	22.598	32,653	1,307	$10.430 - $64.721	$17.48 - $93.52	$0.70 - $3.74
Horseback riding	0.127	3.9	2.626	5.444	42,757	2,073	$3.002 - $4.200	$27.35 - $32.99	$1.33 - $1.60

Activity	Total Participants (million)	% Population Participating	User Occasions, Total Annual (million)	Energy Expended, Total Annual kCal (billion)	Energy Expended, Annual / Participant, kCal	Energy Expended, Per User Occasion, kCal	COI Savings, Total Annual ($million)	COI Savings, Annual / Participant	COI Savings, Per User Occasion
Bicycling on unpaved trails	0.486	14.9	11.403	16.412	33,740	1,439	$8.079 - $26.983	$19.27 - $55.47	$0.82 - $2.37
Bicycling on paved trails	0.983	30.1	26.105	17.762	18,076	680	$15.422 - $15.840	$15.69 - $18.70	$0.59 - $0.70
Bicycling on roads, streets / sidewalks	1.254	38.4	51.251	32.086	25,596	626	$47.311 - $78.109	$43.78 - $62.31	$1.07 - $1.52
Motorized Activities									
Class I – All-terrain vehicle riding	0.281	8.6	5.746	6.742	24,016	1,173	$6.365 - $6.514	$22.67 - $26.92	$1.11 - $1.32
Class III – Off-road motorcycling	0.104	3.2	2.038	2.700	25,850	1,325	$3.904 - $7.970	$43.35 - $76.29	$2.22 - $3.91
Class IV – Riding UTVs / side-by-side ATVs	0.134	4.1	2.734	4.404	32,907	1,611	$3.897 - $5.756	$33.78 - $43.01	$1.65 - $2.11
Snowmobiling	0.072	2.2	1.000	1.405	19,560	1,404	$1.557 - $2.882	$25.15 - $40.13	$1.81 - $2.88
Personal water craft – jet ski	0.140	4.3	3.139	4.367	31,113	1,391	$1.642 - $9.862	$13.57 - $70.26	$0.61 - $3.14

Activity	Total Participants (million)	% Population Participating	User Occasions, Total Annual (million)	Energy Expended, Total Annual kCal (billion)	Energy Expended, Annual / Participant, kCal	Energy Expended, Per User Occasion, kCal	COI Savings, Total Annual ($million)	COI Savings, Annual / Participant	COI Savings, Per User Occasion
Non-motorized Snow Activities									
Downhill skiing / snowboarding	0.415	12.7	4.228	5.362	12,932	1,268	$8.117 - $14.102	$22.71 - $34.02	$2.23 - $3.34
Cross-country / Nordic skiing on groomed trails	0.189	5.8	1.235	1.656	8,744	1,340	$0.521 - $4.411	$3.19 - $23.30	$0.49 - $3.57
Cross-country / Nordic skiing on ungroomed trails	0.118	3.6	0.582	1.158	9,851	1,988	$0.417 - $4.613	$4.12 - $39.25	$0.83 - $7.92
Snowshoeing	0.343	10.5	1.279	2.062	6,015	1,613	$1.189 - $2.138	$3.47 - $7.24	$0.93 - $1.94
Sledding, tubing, or general snow play	0.878	26.9	6.435	6.864	7,817	1,067	$0.787 - $12.125	$1.04 - $13.81	$0.14 - $1.88
Other Outdoor Activities									
Dog walking / going to dog parks / off-leash areas	1.185	36.3	77.872	41.529	35,045	533	$39.829 - $75.372	$38.99 - $63.60	$0.59 - $0.97

Activity	Total Participants (million)	% Population Participating	User Occasions, Total Annual (million)	Energy Expended, Total Annual kCal (billion)	Energy Expended, Annual / Participant, kCal	Energy Expended, Per User Occasion, kCal	COI Savings, Total Annual ($million)	COI Savings, Annual / Participant	COI Savings, Per User Occasion
Tennis (played outdoors)	0.219	6.7	2.526	1.670	7,633	661	$1.176 - $2.068	$5.37 - $10.97	$0.47 - $0.95
Outdoor court games other than tennis	0.330	10.1	11.148	9.245	28,039	829	$4.587 - $9.928	$16.14 - $30.11	$0.48 - $0.89
Soccer	0.258	7.9	10.928	11.329	43,927	1,037	$5.829 - $28.856	$26.22 - $111.89	$0.62 - $2.64
Futsal	0.020	0.6	0.444	0.429	21,888	966	$0.177 - $1.447	$10.48 - $73.89	$0.46 - $3.26
Golf	0.464	14.2	6.592	10.838	23,380	1,644	$11.502 - $14.256	$28.78 - $30.75	$2.02 - $2.16
Collecting (rocks, plants, mushrooms, berries)	0.875	26.8	16.872	11.245	12,853	666	$2.375 - $8.527	$2.71 - $11.31	$0.14 - $0.59
Crabbing	0.343	10.5	1.858	2.857	8,335	1,538	$2.206 - $5.222	$6.44 - $17.67	$1.19 - $3.26
White-water canoeing, kayaking, rafting	0.366	11.2	2.614	3.215	8,792	1,230	$2.025 - $3.080	$5.54 - $9.77	$0.77 - $1.37
Swimming / playing in outdoor pools / spray parks	0.826	25.3	13.993	14.012	16,965	1,001	$11.801 - $36.413	$16.57 - $44.09	$0.98 - $2.60
		TOTAL OREGON kCAL (billion)		**502.622**	**TOTAL OREGON COI SAVINGS ($millions)**		**$735.271 - $1,415.872**		

Energy Expenditure Calculations

Table 7.1 provides total annual kcal in energy expended per activity by Oregonians, as well as annual kcal per participant and kcal per user occasion. MET-values assigned to each activity are reported in Table 7.2.

Total energy expended by Oregonians for the 30 outdoor recreation activities included in this analysis is a conservative 503 billion kcal per year. The estimate is conservative because it only focuses on a subset of outdoor recreation activities, and uses the lowest intensity MET-value for each activity. Regardless, it is nearly twice the amount estimated for annual visitation to all national forests in the U.S. (289 billion kcal)[105]. Total energy expended can be expressed in alternative ways. The 503 billion kcal of energy expended per year by Oregonians through a set of outdoor recreation activities is equivalent to 144 million pounds of body fat[106], which would fill 29.5 regulation-size Olympic swimming pools[107].

The top three outdoor recreation activities in terms of total annual energy expenditures are Walking on local streets / sidewalks (118 billion kcal); Walking on local trails / paths (57 billion kcal); and Jogging / running on streets / sidewalks (42 billion kcal). The activities with the lowest energy expended per year include Futsal (0.4 billion kcal); Cross-country / Nordic skiing on ungroomed trails (1.2 billion kcal); and Snowmobiling (1.4 billion kcal).

The average annual energy expended per participant per year is reported in Table 7.1. The top three activities in terms of average annual energy expended per participant per year include: Jogging / running on streets / sidewalks (47,936 kcal); Soccer (43,927 kcal); and Walking on local streets / sidewalks (43,406 kcal). The first two activities are vigorous-intensity (MET = 7.0) and the other is moderate-intensity (MET = 3.5). The bottom three activities with the lowest energy expended per person per year include Snowshoeing (6,015 kcal); Tennis (played outdoors) (7,633 kcal); and Sledding, tubing, or general snow play (7,817 kcal).

[105] Kline, J., Rosenberger, R., White, E. 2011. A national assessment of physical activity in U.S. national forests. Journal of Forestry 109(6): 343-351.
[106] One pound of body fat when oxidized through physical activity is 3,500 kcal.
[107] A regulation-size Olympic swimming pool (50m x 25m x 2m) holds 660,430 gallons of liquid. One gallon of human body fat weighs 7.4 pounds. One regulation-size Olympic swimming pool would hold 4,887,182 pounds of human body fat.

Table 7.2. MET values and average weekly minutes by target and baseline activity levels, Oregon

Activity (j)	MET Value	Target Activity Level (j)		Baseline Activity Level (∑J-j)	
		Rural Weekly Minutes	Urban[108] Weekly Minutes	Rural Weekly Minutes	Urban[a] Weekly Minutes
Non-motorized Trail Activities					
Walking on local streets / sidewalks	3.5	101	162	171	201
Walking on local trails / paths	3.5	35	36	235	279
Walking / day hiking on non-local trails / paths	3.5	28	24	288	327
Long-distance hiking (back packing)	7.0	28	24	587	475
Jogging / running on streets / sidewalks	7.0	46	58	469	496
Jogging / running on trails / paths	7.0	23	29	582	536
Horseback riding	3.8	46	9	343	419
Bicycling on unpaved trails	5.8	23	23	581	634
Bicycling on paved trails	3.5	23	23	492	453
Bicycling on roads, streets / sidewalks	3.5	35	43	388	401
Motorized Activities					
Class I – All-terrain vehicle riding	4.0	25	21	243	372
Class III – Off-road motorcycling	4.0	46	44	426	292
Class IV – Riding UTVs / side-by-side ATVs	4.0	48	16	292	272
Snowmobiling	3.5	42	29	597	478
Personal water craft – jet ski	7.0	14	23	319	430
Non-motorized Snow Activities					
Downhill skiing / snowboarding	4.3	25	23	409	402
Cross-country / Nordic skiing on groomed trails	6.8	12	9	578	483
Cross-country / Nordic skiing on ungroomed trails	6.8	12	12	528	582
Snowshoeing	5.3	7	7	433	475
Sledding, tubing, or general snow play	7.0	7	7	357	384
Other Outdoor Activities					
Dog walking / going to dog parks / off-leash areas	3.0	35	58	331	390
Tennis (played outdoors)	4.5	6	11	296	322
Outdoor court games other than tennis	5.5	17	17	523	454
Soccer	7.0	23	35	293	413
Futsal	7.0	12	20	600	599
Golf	3.5	28	28	220	265
Collecting (rocks, plants, mushrooms, berries)	3.0	17	12	243	374
Crabbing	4.5	14	11	288	342
White-water canoeing, kayaking, rafting	5.0	14	9	456	386
Swimming / playing in outdoor pools / spray parks	6.0	14	16	247	316

And lastly, energy expended is expressed in terms of per user occasion. The top three activities with the largest energy expenditure include Long-distance hiking (backpacking) (3,254 kcal);

[108] Urban includes urban and suburban community types as self-identified by respondents.

Horseback riding (2,073 kcal); and Cross-country / Nordic skiing on ungroomed trails (1,988 kcal). These activities rate high in energy expenditure per user occasion due to their duration and / or intensity of physical activity. The bottom three activities with the lowest energy expended per user occasion include Walking on local streets / sidewalks (377 kcal); Walking on local trails / paths (508 kcal); and Dog walking / going to dog parks / off-leash areas (533 kcal). These low energy expended per user occasion activities also have high participation and frequency, which leads them to be sources of large amounts of aggregate energy expended per year. Regardless of each outdoor recreation activity's ranking, they all are contributing to the overall health of participants.

Health Benefits – Cost of Illness Savings Estimates

The ITHIM tool estimates Cost of Illness (COI) savings for eight primary illnesses (breast cancer; colon cancer; stroke; ischemic heart disease; depression; dementia; diabetes; and hypertensive heart disease), and given sustained physical activity has many other health benefits these COI savings are underestimated. The COI savings also only include morbidity costs of these illnesses, and do not include avoided deaths (mortality) due to physical activity. Cost estimates are based on a meta-analysis of national cost of illness studies scaled to the Oregon population and adjusted to 2010 USD, which are subsequently inflation-adjusted to 2018 USD. These cost estimates include direct public and private costs (treatments) and indirect costs (absenteeism)[109].

Cost of Illness estimates reflect the change in physical activity relative to a baseline amount of physical activity for the median participant. ITHIM includes a baseline level of non-transportation related physical activity that may or may not include rates of physical activity in the 30 outdoor recreation activities. Therefore, two variants of baseline physical activity or used when estimating health benefits of outdoor recreation:

a. One-trip baseline – this variant assumes all other outdoor recreation activity minutes = 0 with the exception of activity rates embedded in the tool. The one-trip baseline will provide relatively higher COI estimates given participants are located lower on the dose-response function.
b. ∑J-j baseline – Total weekly minutes of outdoor recreation are calculated for each SCORP participant excluding the target activity (j), or ∑J-j minutes. The baseline activity ∑J-j is input into the model, which is automatically added to the embedded physical activity in the model. This variant assumes that the sum of all other outdoor recreation physical activity minutes are held constant at their median participant's rate. The ∑J-j baseline will provide relatively lower COI estimates given participants are located higher on the dose-response function.

Table 7.2 provides the median weekly minutes for ∑J-j outdoor recreation activities. For example, the median weekly minutes for a participant in a rural area is 171, and in an urban area is 201 when the j^{th} activity is Walking on local streets / sidewalks. The median level of participation is 101 and 162 for rural areas and urban areas, respectively. Therefore, when measuring the health outcomes associated with the j^{th} activity median weekly minutes, in

[109] Haggerty, B., Hamberg, A. 2015. Transportation Options Health Impact Estimator User Guide. Portland OR: Oregon Health Impact Assessment Program, Oregon Health Authority.

scenario a) it is relative to the embedded level of physical activity, assuming all other outdoor recreation are captured in the baseline; and in scenario b) it is relative to the embedded baseline plus the ∑J-j median weekly minutes, or moving from 171 weekly minutes to 272 weekly minutes for rural and from 201 weekly minutes to 363 weekly minutes for urban. The range in COI savings is based on these two ways to treat baseline physical activity, with the larger estimate associated with scenario a) and the smaller estimate associated with scenario b).

The total annual Cost of Illness savings estimate to Oregon from Oregonians' participation in 30 outdoor recreation activities is $735 million to $1.416 billion (Table 7.1). As noted in the issue introduction, it is estimated that Oregonians spend $39.1 billion on health care each year. The conservative estimate of COI savings is about 2-3.6% of total health care expenditures, respectively. Haggerty and Hamberg[110] state that Oregonians spend $3.6 billion on cardiovascular diseases, $1.9 billion on cancer, $1.7 billion on diabetes, and $892 million on depression, for a total of $8.1 billion per year. Estimated COI savings from Oregonians participating in 30 outdoor recreation activities is 9-17% of expenditures, respectively, on cardiovascular disease, cancer, diabetes, and depression.

Physical activity rates that inform COI savings are primarily a function of frequency (user occasions per year), duration (time per user occasion), and intensity (MET-value). The three outdoor recreation activities with the largest COI savings per year include Walking on local streets / sidewalks ($385-$630 million); Walking on local trails / paths ($72-$126 million); and Jogging / running on streets / sidewalks ($33-$146 million). The bottom three activities with lowest annual COI savings include Futsal ($0.2-$1.4 million); Tennis (played outdoors) ($1.2-$2.1 million); and Snowshoeing ($1.2-$2.1 million). These low annual COI savings activities provide positive benefits, but there are few participants.

Total annual COI savings may then be divided by the estimated number of participants to derive a COI savings per participant (not per person) for each outdoor recreation activity (Table 7.1). The top three activities with the largest COI savings per participant include Walking on local streets / sidewalks ($165-$232); Jogging / running on streets / sidewalks ($43-$166); and Soccer ($26-$112). The three activities with the lowest COI savings per participant include Snowshoeing ($3-$7); White-water canoeing, kayaking, rafting ($6-$10); and Tennis (played outdoors) ($5-$11). COI savings per participant are affected by the MET-value and frequency of activity.

COI savings per user occasion are also derived by dividing total annual COI savings by the total number of user occasions (Table 1). The top three activities with the largest COI savings per user occasion include Cross-country / Nordic skiing on ungroomed trails ($1-$8); Long-distance hiking (backpacking) ($1-$7); and Jogging / running on streets / sidewalks ($1-$4). The bottom three activities with the lowest COI savings per user occasion include Collecting (rocks, plants, mushrooms, berries) ($0.14-$0.59); Bicycling on paved trails ($0.59-$0.70); and Outdoor court games ($0.48-$0.89). COI savings per user occasion are affected by the MET-value and duration of activity.

[110] Haggerty, B., Hamberg, A. 2015. Transportation Options Health Impact Estimator User Guide. Portland OR: Oregon Health Impact Assessment Program, Oregon Health Authority.

Variations in Outdoor Recreation Physical Activity by Respondent Characteristics

ITHIM estimates COI savings based on age-sex cohort-specific DALYs, or relative risks for various diseases. The TO Estimator, and subsequently the OR Estimator, was adapted to age and sex distributions within each Oregon county. However, it may be of interest how average weekly minutes of outdoor recreation participation vary by respondent characteristics. While the energy expenditure and COI savings estimates are aggregated to Oregon's adult population, the following data is based on the respondents to the Oregon SCORP Survey and may not be representative of the adult population in Oregon.

Table 7.3 provides the average total weekly minutes spent in outdoor recreation across the 30 outdoor recreation activities included in this analysis, and broken out by respondent characteristics. As expected, average weekly minutes decline with age, showing the younger cohort (18-34 years) averaging 509 weekly minutes participating in the outdoor recreation activities, and young-old (60-74 years) averaging 334 weekly minutes, middle-old (75-84 years) averaging 185 weekly minutes, and old-old (85+ years) averaging 92 weekly minutes. Average weekly minutes participating in the outdoor recreation activities are relatively even for income categories, education levels, sex, and community type. Average weekly minutes generally increase as workplace activity increases, ranging from 429 to 539 average weekly minutes for 'Mostly sitting or standing' to 'Mostly heavy labor or physically demanding work', respectively. And average weekly minutes participating in the outdoor recreation activities decreases with BMI status, with normal weight at 460 minutes, overweight at 415 minutes, and obese at 335 minutes.

Horseback Riding and Dog walking show an increase in 35-59 year olds before declining with additional age, and Golf showing an overall increase in average weekly minutes with increases in age (except for 75-84 year olds).

Table 7.3 also shows respondents who do not have a high school degree (or equivalent) have substantially lower total average weekly minutes in outdoor recreation activities than all other education levels.

Table 7.3. Average weekly minutes of outdoor recreation physical activity by SCORP survey respondent characteristics

	Average Weekly Minutes	No. Respondents		Average Weekly Minutes	No. Respondents
Age Category			**Sex**		
18-34	509	714	Female	407	1,894
35-59	478	1,559	Male	420	1,617
60-74	334	716	**Community Type**		
75-84	185	460	Rural	413	1,115
85 or older	92	32	Suburban	392	1,339
Income Category			Urban	428	776
<$25k	456	420			
$25K-$75K	387	1,255	**Workplace Activity**		
$75K or more	438	1,267	Mostly sitting or standing	429	1,330
Education Level			Mostly walking	502	428
Did Not Complete High School	247	105	Mostly heavy labor or physically demanding work	539	245
High School Diploma (or equivalent)	405	438	**BMI**		
Some College, But No Degree	441	760	Normal Weight (18.5-24.9)	460	1,212
Associate Degree	410	349	Overweight (25-29.9)	415	1,036
Bachelor Degree	428	818	Obese (30-45)	335	680
Graduate or Professional Degree	393	707			

Conclusions

Total energy expended by Oregonians for the 30 outdoor recreation activities included in this analysis is a conservative 503 billion kcal per year. The total annual Cost of Illness savings estimate to Oregon from Oregonians' participation in 30 outdoor recreation activities is $735 million to $1.416 billion. Their COI savings is approximately 2-3.6% of total health care expenditures in the state including 9-17% of expenditures in treating cardiovascular diseases, cancers, diabetes, and depression.

The Oregon SCORP outdoor recreation participation survey and the estimates of energy expenditures and Cost of Illness savings are consistent with findings that the lived environment influences people's physical activity participation, and that parks and recreation providers can play a key role in increasing their physical activity participation. This is particularly relevant in close-to-home settings where physical activity benefits most often occur. Walking on local streets / sidewalks; Walking on local trails / paths; Jogging / running on streets / sidewalks; Jogging / running on trails / paths; Bicycling on roads, streets / sidewalks; and Dog walking account for 77% of total annual user occasions, 62% of total annual energy expenditures, and 80% of total Cost of Illness savings associated with Oregonians participating in 30 outdoor recreation activities of moderate- to vigorous-intensity.

Community development / design and transportation planning significantly affect the health of people attempting to engage in daily physical activity to meet recommended levels for a healthy lifestyle[111,112]. The management of parks and recreation are often not recognized for the health impacts they [at least indirectly] promote through providing environments and facilities that enable people to engage in physical activity through outdoor recreation. Estimating the health benefits obtained through outdoor recreation-related physical activity demonstrates that parks and recreation providers have a role in increasing the public health and wellbeing of Oregonians[113]. Collaboration between health, transportation, and parks and recreation providers, among others, has the potential to significantly influence community health and may be a cost-effective health prevention strategy for the state of Oregon.

[111] Cohen, D., Han, B. Nagel, C., Harnik, B., McKenzie, T. Evenson, K., Marsh, T. 2016. The first national study of neighborhood parks: Implications for physical activity, American Journal of Preventative Medicine 51(4): 419-426.
[112] Larson, L., Jennings, V. Cloutier, S. 2016. Public parks and wellbeing in urban areas of the United States. PLoS One 11(4): e0153211.
[113] Rosenberger, R., Bergerson, T., Kline, J. 2009. Marcro-linkages between health and outdoor recreation: The role of parks and recreation providers. Journal of Park and Recreation Administration 27(3): 8-20.

CHAPTER EIGHT: TOTAL NET ECONOMIC VALUE FROM RESIDENT'S OUTDOOR RECREATION PARTICIPATION IN OREGON

Issue Introduction: Total Net Economic Value

Outdoor recreation participation is the source of many benefits to individuals, communities, and society[114]. It has been the subject of numerous assessments on participation, trends, impacts, and benefits conducted at various scales[115,116,117,118,119]. Total net economic value or benefits (i.e., total economic value net of the costs) is a measure of the contribution to societal welfare for use in cost-benefit analyses. Nonmarket valuation techniques, such as travel cost and contingent valuation methods, are economic tools used to estimate the economic value associated with goods not traditionally traded in formal markets, such as outdoor recreation and ecosystem services[120]. These tools have been in wide use since the 1950s and applied to a variety of nonmarket goods and services, including outdoor recreation[121,122].

Economic impacts (or contributions) assessment is another common tool used to measure economic outcomes associated with outdoor recreation[123,124,125,126]. Economic impact measures are often referred to as economic benefits or values; however, this is not conceptually correct and conflates economic terms and meanings. Economic impact (or contribution) assessments measure how spending by recreationists (often defined as non-resident or non-local visitors /

[114] California State Parks. 2005. The Health and Social Benefits of Recreation. An Element of the California Outdoor Recreation Planning Program. Sacramento, CA: California State Parks, Planning Division, p46.
[115] Cordell, H.K. (editor). 2012. Outdoor Recreation Trends and Futures: A Technical Document Supporting the Forest Service 2010 RPA Assessment. Gen. Tech Rep. SRS-150. Asheville, NC: USDA Forest Service, Southern Research Station. 167p.
[116] Oregon Parks and Recreation Department. 2018. SCORP: Research and Reports. https://www.oregon.gov/oprd/PLANS/Pages/SCORP_overview.aspx#Research_Reports (accessed Oct 8, 2018).
[117] Rosenberger, R.S. 2016a. Recreation Use Values Bibliography: 1958-2015. Corvallis, OR: Oregon State University, College of Forestry. 33p. [http://recvaluation.forestry.oregonstate.edu/sites/default/files/RUVD_biblio_2016.pdf]
[118] Rosenberger, R.S.; Dunn, T. 2018. Health Benefits Estimates for Oregonians from Their Outdoor Recreation Participation in Oregon. Corvallis, OR: Oregon State University, College of Forestry. 67p.
[119] Rosenberger, R.S.; White, E.M.; Kline, J.D.; Cvitanovich, C. 2017. Recreation Economic Values for Estimating Outdoor Recreation Economic Benefits from the National Forest System. Gen. Tech. Rep. PNW-GTR-957. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 33p.
[120] Champ, P.A; Boyle, K.J.; Brown, T.C. (editors). 2017. A Primer on Nonmarket Valuation, 2nd edition. Boston, MA: Kluwer Academic Publishers. 504p.
[121] Rosenberger, R.S. 2016a. Recreation Use Values Bibliography: 1958-2015. Corvallis, OR: Oregon State University, College of Forestry. 33p. [http://recvaluation.forestry.oregonstate.edu/sites/default/files/RUVD_biblio_2016.pdf]
[122] Rosenberger, R.S. 2016b. Recreation Use Values Database – Summary. Corvallis, OR: Oregon State University, College of Forestry. [http://recvaluation.forestry.oregonstate.edu/]
[123] Outdoor Industry Association. 2017. The Outdoor Recreation Economy. Boulder, CO: Outdoor Industry Association. 20p.
[124] Outdoor Industry Association. 2018. Oregon Outdoor Recreation Economy Report. https://outdoorindustry.org/resource/oregon-outdoor-recreation-economy-report/ [accessed Oct 8, 2018].
[125] White, E.M.; Bowker, J.M.; Askew, A.E.; Langner, L.L.; Arnold, J.R.; English, D.B.K. 2016. Federal outdoor recreation trends: Effects on economic opportunities. Gen. Tech. Rep. PNW-GTR-945. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 46p.
[126] White, E.M. 2018. Economic Activity from Recreation Use of Oregon State Properties—System Report. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 35p.

tourists) affects economies within a given geography (e.g., community, region, state, or nation). Economic impacts or outcomes are typically associated with changes in sales, tax revenues, income and jobs due to spending on outdoor recreation activity.

By contrast, economic value for outdoor recreation is a monetary measure of the benefits received by an individual or group who participates in outdoor recreation. At the individual level, the net economic value of a recreation activity is measured as the maximum amount the individual is willing to pay to participate in the activity minus the costs incurred in participating. In economic terms, this monetary measure is also known as consumer surplus. Consumer surplus is the economic value of a recreation activity above what must be paid by the recreationist to enjoy it.

However, participation costs are not equivalent to consumer spending amounts used in economic impact analyses. Recreation costs used in travel cost models typically only include out-of-pocket costs (e.g., gasoline, entrance fees, and equipment rentals) and opportunity costs of time while traveling for the purpose of or engaging in an activity on site. Recreation spending in economic impact analyses, by contrast, includes spending on lodging, food, souvenirs, and other expenses as well as gasoline, entrance fees, and equipment rentals, but not opportunity costs of time. Economic impact analyses may also restrict the region within which spending occurs, whereas costs of participating in outdoor recreation may occur anywhere. Another contrast between economic value and economic impact may be shown through the role of costs in each model. An increase in the costs of participating in outdoor recreation (e.g., increase in gasoline prices or entrance fees) would result in smaller net benefits, and larger economic impacts, ceteris paribus.

Total Net Economic Value from Residents' Outdoor Recreation Participation in Oregon

This research project was conducted by Dr. Randall Rosenberger from Oregon State University's College of Forestry and was funded by the Oregon Parks and Recreation Department for the 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan. The research project estimates the total net economic value for recreation participation in Oregon to Oregonians from their participation in 56 outdoor recreation activities in 2017.

The full research report including a more detailed description of study methods and county-level estimates is included on the OPRD SCORP planning website at: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2018TotalNetEconomicValue.pdf.

Methods

Consumer surplus is generally estimated in primary research by inferring it from revealed preference data (i.e., generate the demand function and then calculate consumer surplus), or directly estimated using stated preference data (i.e., people state their maximum net willingness to pay within constructed market conditions via surveys). However, when resources are not available (e.g., funds and time), consumer surplus may be inferred from existing information provided by prior studies conducted elsewhere. This approach is called benefit transfer, and it applies benefit estimates obtained through primary research for one location to other unstudied

locations of interest[127]. Benefit transfer has been used for decades in estimating economic values for nonmarket goods and services[128,129,130].

Benefit transfer methods include two primary types: value transfer and function transfer. Value transfer is the use of a single estimate of value or a weighted average of multiple estimates of value obtained from previously published studies. Value transfer can be an attractive method for estimating recreation economic benefits when time, funding, and expertise are insufficient to conduct an original study. Moreover, new estimates of economic value based on original or primary research are not needed if resulting value estimates do not statistically differ from estimates derived from benefit transfer methods. However, original or primary research may provide additional information that is necessary to evaluating or assessing management implications at a site; e.g., how values relate to changes in resource or site quality, proposed management options, or other attributes held constant in the benefit transfer estimation process.

Function transfer is the use of a statistical model to derive recreation economic values. The model is estimated from participant or survey data available from one or more previously published studies and is adjusted for characteristics of the site or collection of sites being considered. Function transfers can also rely on data summarizing value estimates reported in a body of literature (such as the Recreation Use Values Database[131]), using a technique known as meta-analysis. Function transfer using meta-analysis can be a more statistically rigorous and robust method for conducting benefit transfer, but is dependent on the availability of information about the characteristics of a specific site, or collection of sites, being considered. Conceptual backgrounds and issues / advantages of these benefit transfer methods may be found in a number of studies[132,133,134,135]. It is this latter method, meta-regression benefit function transfer that is used in this project to predict net economic values for recreation participation in Oregon.

[127] Rosenberger, R.S.; Loomis, J.B. 2017. Benefit transfer. In Champ, P.A; Boyle, K.J.; Brown, T.C., eds. (2017). A Primer on Nonmarket Valuation, 2nd edition. Boston, MA: Kluwer Academic Publishers. Pp.431-462.
[128] Johnston, R.J.; Rosenberger, R.S. 2010. Methods, trends and controversies in contemporary benefit transfer. Journal of Economic Surveys 24(3):479-510.
[129] Johnston, R.; Rolfe, J.; Rosenberger, R.; Brouwer, R. (editors). 2015. Benefit Transfer of Environmental and Resource Values: A Handbook for Researchers and Practitioners. New York, NY: Springer. 606 p.
[130] Rosenberger, R.S.; Loomis, J.B. 2017. Benefit transfer. In Champ, P.A; Boyle, K.J.; Brown, T.C., eds. (2017). A Primer on Nonmarket Valuation, 2nd edition. Boston, MA: Kluwer Academic Publishers. Pp.431-462.
[131] Recreation Use Values Database. 2016. Corvallis, OR: Oregon State University, College of Forestry. Retrieved [accessed Oct 8, 2018], from http://recvaluation.forestry.oregonstate.edu/.
[132] Johnston, R.J.; Rosenberger, R.S. 2010. Methods, trends and controversies in contemporary benefit transfer. Journal of Economic Surveys 24(3):479-510.
[133] Johnston, R.; Rolfe, J.; Rosenberger, R.; Brouwer, R. (editors). 2015. Benefit Transfer of Environmental and Resource Values: A Handbook for Researchers and Practitioners. New York, NY: Springer. 606 p.
[134] Rosenberger, R.S.; White, E.M.; Kline, J.D.; Cvitanovich, C. 2017. Recreation Economic Values for Estimating Outdoor Recreation Economic Benefits from the National Forest System. Gen. Tech. Rep. PNW-GTR-957. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 33p.
[135] Rosenberger, R.S.; Loomis, J.B. 2017. Benefit transfer. In Champ, P.A; Boyle, K.J.; Brown, T.C., eds. (2017). A Primer on Nonmarket Valuation, 2nd edition. Boston, MA: Kluwer Academic Publishers. Pp.431-462.

Data

Oregon SCORP Data

In preparation for the 2019-2023 Oregon SCORP, the OPRD conducted a statewide survey[136] of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about park and recreation management. The survey was conducted using a random sample of Oregon households. In order to generate sufficient responses for each demographic group, the sample was stratified to differentiate between those residing in urban, suburban, and rural areas of the state for the general population and for the demographic groups. There were two versions of the survey: 1) participants – those who engaged in outdoor recreation in Oregon in 2017; and 2) non-participants – everyone else.

Surveying Oregonians consisted of 17,016 mail outs, with 15,351 surveys deliverable (90%). Of those delivered, 3,069 completed surveys were obtained, for an overall response rate of 20%. With respect to format, 74% of the surveys were completed online and 26% in paper format. Due to variable sampling intensity and response rates across target demographic groups, the probability sample was complemented by an online research sample administered by Qualtrics. A total of 481 respondents completed a survey (50% response rate) through the Qualtrics online sample. In total, most (94%) of the surveys were by participants, with the remainder (6%) by non-participants.

Based on previous SCORP outdoor recreation activity lists and recommended by the SCORP advisory committee comprised of parks and recreation managers across Oregon, fifty six (56) recreation activities were identified as important recreation activity types. These activities were grouped into eight (8) categories including Non-motorized Trail or Related Activities, Motorized Activities, Non-motorized Snow Activities, Outdoor Leisure and Sporting Activities, Nature Study Activities, Vehicle-based Camping Activities, Hunting and Fishing Activities, and Non-motorized Water-based and Beach Activities.

Total user occasions for all outdoor recreation activities were estimated using population-weighted sample data adjusted by household members participating in each activity over a one-year period. User occasions are the number of times individuals, in aggregated, participated in outdoor recreation activities in 2017.

Recreation Use Values Database (RUVD)

The RUVD (Recreation Use Values Database[137]) summarizes recreation economic value estimates from more than 50 years of published economic research (1958-2015) characterizing the value of outdoor recreation in the US and Canada[138]. The RUVD includes all documented

[136] Bergerson, T. 2018. 2017 Oregon Resident Outdoor Recreation Survey: 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Salem, OR: Oregon Parks and Recreation Department. URL: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

[137] Recreation Use Values Database. 2016. Corvallis, OR: Oregon State University, College of Forestry. Retrieved [accessed Oct 8, 2018], from http://recvaluation.forestry.oregonstate.edu/.

[138] Rosenberger, R.S. 2016b. Recreation Use Values Database – Summary. Corvallis, OR: Oregon State University, College of Forestry. [http://recvaluation.forestry.oregonstate.edu/]

estimates of recreation economic values whether they are published in journal articles, technical reports, book chapters, working papers, conference proceedings, or graduate theses. Included studies encompass a variety of methods, regional and activity foci, sample sizes, and site characteristics. The RUVD contains 3,194 use value estimates derived from 422 published studies.

Results

User Occasions – Activity Days

Table 8.1 lists the SCORP Activities grouped by category and the 2017 total user occasions derived from the Oregon SCORP statewide survey (Bergerson[139], Table 2.2). Estimates range from a high of 313 million user occasions for *Walking on local streets / sidewalks*, to 0.4 million user occasions for playing *Futsal*. User occasions estimates are based, in part, on the question about how many times the respondent participated in the outdoor recreation activity during the past 12-months. For some activities, this could mean more than one user occasion per day (e.g., *Walking on local streets / sidewalks*) to multiple days per user occasion (e.g., *Hunting*). In the case of *Vehicle-based Camping Activities*, the questions asked for number of trips and average number of nights for a typical trip.

The RUVD reports economic values per activity day, where an activity day might differ from a user occasion. An activity day is defined as one person recreating for some portion of a day. For example, one person *Walking on local streets / sidewalks* for 30-minutes twice in one day would be one activity day but two user occasions. Backpacking or overnight hiking trips, by definition, span more than one day. For a backpacking trip that lasts one night would be equal to two activity days. Therefore, user occasions were adjusted to activity days as identified in Table 8.1, column 4.

Sixteen activities were identified in which user occasion ≠ activity day. Activities with multiple user occasions per day are *Walking on local streets / sidewalks*; *Walking on local trails / paths*; *Bicycling on roads / streets / sidewalks*; and *Dog walking / going to dog parks / off-leash areas*. The adjustment factor for these activities was derived by dividing total reported user occasions by total reported user occasions censored at 365 times in a year. This adjustment only captures those individuals who reported more than 365 user occasions in a year.

Activities with multiple activity days per user occasion included *Long-distance hiking (backpacking)*; *Bird watching*; *Whale watching*; *Exploring tidepools*; *Other nature / wildlife / forest / wildflower observation*; *RV / motorhome / trailer camping*; *Car camping with a tent*; *Yurts / camper cabins*; *Hunting*; *Fishing*; *Crabbing*; and *Shellfishing / clamming*. In the case of *Vehicle-based Camping Activities* were adjusted by [(number of trips * number of nights) + 1] = activity days, using information provided in the Oregon SCORP statewide survey. *Long-distance hiking (backpacking)* adjustment factor (i.e., number of days per user occasion) was derived from McCollum, et al. (1990) for the Pacific Northwest Region and verified by the average number of

[139] Bergerson, T. 2018. 2017 Oregon Resident Outdoor Recreation Survey: 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Salem, OR: Oregon Parks and Recreation Department. URL: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

days per trip for backpacking as recorded in the RUVD. Average activity days per user occasion for *Hunting*; *Fishing*; *Crabbing*; *Shellfishing / clamming*; *Bird watching*; *Whale watching*; *Exploring tidepools*; and *Other nature / wildlife / forest / wildflower observation* were derived from Dean Runyan Associates[140] study. All other activities assume that one user occasion = one activity day.

Table 8.1 reports activity days by SCORP activity and activity category. For example, Nature Study Activities were estimated to contain 119 million user occasions, or 192 million activity days; and Vehicle-based Camping Activities were estimated to contain 15 million user occasions, or 58 million activity days.

Economic Value per Activity Day

Data for estimating recreation economic values for SCORP outdoor recreation activities were drawn from the RUVD. The current version of the RUVD contains 3,194 individual recreation economic value estimates from 422 individual studies and numerous outdoor recreation activities. The RUVD activities were clustered or segregated to match the SCORP activities, resulting in 30 RUVD outdoor recreation activities. The data were reduced by 1) eliminating 180 estimates for Canada, and 2) removing 106 outlier estimates (i.e., unreasonably small or large, which significantly affects average values) as less than $5 or greater than $450 per person per activity day, resulting in 2,908 estimates from 395 studies. About five percent of the total number of estimates (158 out of 2,908) is reported for the Pacific Northwest Region (Oregon and / or Washington) from primary studies that evaluated recreation demand within this spatial scale. This is one of the reasons a meta-regression analysis on the broader RUVD data is used to project recreation use value estimates for Oregon—information on recreation use values and their distributions informs values for Oregon that otherwise are not available.

Mega-Regression Analysis

Dummy variables (binary 0, 1 coding) identify the RUVD activity, where the mean is its representation in the underlying data. To capture variations in value estimates, dummy variables are created for each USFS region. The variable of interest is the Pacific Northwest Region. Each underlying primary study is based on a random sample of participants for the activity / location being evaluated. These samples may include only residents, only nonresidents, or a mix of both residents and non-residents. Given the SCORP analysis is based on residents only, a dummy variable identifying those underlying primary studies that estimated residents' values is included in the model. Value estimates that are based on resident-only samples are about 34% of the data. Substitute price is a key variable in recreation demand analyses and reflects a switching point in which recreationists would choose to go to a different location if the price of the destination was too high. Substitute price exerts a downward pressure on willingness to pay. Primary studies that directly incorporated substitute price are about 27% of the data. Trend is a variable defined as the year the primary data for each study was collected minus 1955 (the earliest year data was collected). This variable captures changes in methods and values over time.

[140] Dean Runyan Associates. 2009. Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon, 2008. Portland, OR. 72p.

Table 8.1. User occasions, activity days, and total net economic value

SCORP Activity	**RUVD Activity**	**2017 SCORP User Occasions (million)**	**Activity Days per User Occasion**	**2017 Activity Days (million)**	**MRA RUVD Value / Person / Activity Day ($; 2018 USD)**	**Total Net Economic Value ($million; 2018 USD)**
Non-motorized Trail Activities						
Walking on local streets / sidewalks	Walking	312.726	0.993	310.586	$14.47	$4,493.226
Walking on local trails / paths	Walking	113.083	0.998	112.843	$14.47	$1,632.495
Walking / day hiking on non-local trails / paths	Hiking	44.035	1	44.035	$87.66	$3,860.354
Long-distance hiking (backpacking)	Backpacking	4.915	2.080	10.222	$23.33	$238.470
Jogging / running on streets / sidewalks	Jogging / running	37.224	1	37.224	$69.29	$2,579.240
Jogging / running on trails / paths	Jogging / running	17.284	1	17.284	$69.29	$1,197.586
Horseback riding	General other recreation	2.626	1	2.626	$72.00	$189.074
Bicycling on unpaved trails	Mountain biking	11.403	1	11.403	$131.03	$1,494.086
Bicycling on paved trails	Leisure biking	26.105	1	26.105	$58.14	$1,517.812
Bicycling on roads / streets / sidewalks	Leisure biking	51.251	0.996	51.061	$58.14	$2,968.863
Sub-total - Non-motorized Trail Activities		620.651	---	623.390	---	$20,171.206
Motorized Activities						
Class I – All-terrain vehicle riding (3 & 4 wheel ATVs, straddle seat and handle bars)	Off-road vehicle driving	5.746	1	5.746	$50.38	$289.475
Class II – Off-road 4-wheel driving (jeeps / pick-ups / dune buggies / SUVs)	Off-road vehicle driving	8.895	1	8.895	$50.38	$448.157
Class III – Off-road motorcycling	Off-road vehicle driving	2.038	1	2.038	$50.38	$102.672

SCORP Activity	RUVD Activity	2017 SCORP User Occasions (million)	Activity Days per User Occasion	2017 Activity Days (million)	MRA RUVD Value / Person / Activity Day ($; 2018 USD)	Total Net Economic Value ($million; 2018 USD)
Class IV – Riding UTVs / side-by-side ATVs (non-straddle seat in the vehicle, steering wheel for steering control)	Off-road vehicle driving	2.734	1	2.734	$50.38	$137.761
Snowmobiling	Snowmobiling	1.000	1	1.000	$36.82	$36.832
Personal water craft – jet ski	Motorboating / jet skiing / water skiing	3.139	1	3.139	$38.65	$121.320
Power boating (cruising / water skiing)	Motorboating / jet skiing / water skiing	6.949	1	6.949	$38.65	$268.587
Sub-total - Motorized Activities		30.502	---	30.502	---	$1,404.804
Non-motorized Snow Activities						
Downhill (alpine) skiing / snowboarding	Downhill skiing / snowboarding	4.228	1	4.228	$83.20	$351.771
Cross-country / Nordic skiing / skijoring on groomed trails	Cross- country skiing	1.235	1	1.235	$57.21	$70.651
Cross-country / Nordic skiing / skijoring on ungroomed trails / off designated trails	Cross- country skiing	0.582	1	0.582	$57.21	$33.317
Snowshoeing	Cross- country skiing	1.278	1	1.278	$57.21	$73.142
Sledding / tubing / general snow play	Cross- country skiing	6.435	1	6.435	$57.21	$368.124
Sub-total - Non-motorized Snow Activities		13.759	---	13.759	---	$897.006
Outdoor Leisure / Sporting Activities						
Sightseeing / driving or motorcycling for pleasure	Sightseeing	54.803	1	54.803	$56.01	$3,069.288
Picnicking	Picnicking	21.673	1	21.673	$39.62	$858.584

SCORP Activity	RUVD Activity	2017 SCORP User Occasions (million)	Activity Days per User Occasion	2017 Activity Days (million)	MRA RUVD Value / Person / Activity Day ($; 2018 USD)	Total Net Economic Value ($million; 2018 USD)
Taking your children / grandchildren to a playground	Nature study	57.312	1	57.312	$32.48	$1,861.386
Dog walking / going to dog parks / off-leash areas	Walking	77.872	0.992	77.292	$14.47	$1,118.174
Relaxing / hanging out / escaping heat / noise / etc.	Nature study	92.609	1	92.609	$32.48	$3,007.729
Attending outdoor concerts / fairs / festivals	Visiting nature centers / arboretums / historic sites / aquariums	11.840	1	11.840	$41.83	$495.249
Tennis (played outdoors)	Walking	2.526	1	2.526	$14.47	$36.539
Pickleball (played outdoors)	Walking	1.423	1	1.423	$14.47	$20.589
Outdoor court games other than tennis (basketball / beach volleyball / badminton / etc.)	Walking	11.148	1	11.148	$14.47	$161.271
Soccer	Walking	10.928	1	10.928	$14.47	$158.101
Futsal	Walking	0.444	1	0.444	$14.47	$6.418
Golf	Walking	6.592	1	6.592	$14.47	$95.367
Orienteering / geocaching	Hiking	2.944	1	2.944	$87.66	$258.048
Visiting historic sites / history-themed parks (history-oriented museums / outdoor displays / visitor centers / etc.)	Visiting nature centers / arboretums / historic sites / aquariums	15.018	1	15.018	$41.83	$628.173
Sub-total - Outdoor Leisure / Sporting Activities		367.131	---	366.552	---	$11,774.917
Nature Study Activities						
Bird watching	Wildlife viewing – birds	18.697	2.182	40.797	$58.04	$2,368.014
Whale watching	Wildlife viewing – whales	3.430	2.939	10.081	$80.65	$813.057

SCORP Activity	RUVD Activity	2017 SCORP User Occasions (million)	Activity Days per User Occasion	2017 Activity Days (million)	MRA RUVD Value / Person / Activity Day ($; 2018 USD)	Total Net Economic Value ($million; 2018 USD)
Exploring tidepools	Wildlife viewing – other	5.542	3.145	17.430	$60.88	$1,061.212
Other nature / wildlife / forest / wildflower observation	Wildlife viewing – other	24.718	2.323	57.421	$60.88	$3,495.959
Taking your children / grandchildren to nature settings	Nature study	24.355	1	24.355	$32.48	$790.982
Visiting nature centers	Visiting nature centers / arboretums / historic sites / aquariums	5.569	1	5.569	$41.83	$232.943
Outdoor photography / painting / drawing	Photography	19.706	1	19.706	$34.16	$673.080
Collecting (rocks / plants / mushrooms / berries)	Gathering forest products (non-timber but includes firewood)	16.872	1	16.872	$83.34	$1,406.139
Sub-total - Nature Study Activities		118.890	---	192.233	---	$10,841.387
Vehicle-based Camping Activities						
RV / motorhome / trailer camping	Developed camping	6.493	4.662	30.271	$30.63	$927.148
Car camping with a tent	Developed camping	7.548	3.262	24.616	$30.63	$753.963
Yurts / camper cabins	Developed camping	0.966	3.498	3.380	$30.63	$103.526
Sub-total - Vehicle-based Camping Activities		15.007	---	58.267	---	$1,784.636
Hunting and Fishing Activities						

SCORP Activity	**RUVD Activity**	**2017 SCORP User Occasions (million)**	**Activity Days per User Occasion**	**2017 Activity Days (million)**	**MRA RUVD Value / Person / Activity Day ($; 2018 USD)**	**Total Net Economic Value ($million; 2018 USD)**
Hunting	Hunting (big game / small game / waterfowl)	4.981	2.225	11.083	$82.36	$912.809
Fishing	Fishing (freshwater / saltwater)	12.399	2.195	27.216	$81.37	$2,214.657
Crabbing	Shellfishing	1.858	2.496	4.638	$49.88	$231.324
Shellfishing / clamming	Shellfishing	1.012	2.496	2.527	$49.88	$126.057
Sub-total - Hunting and Fishing Activities		20.251	---	45.464	---	$3,484.846
Non-motorized Water-based and Beach Activities						
White-water canoeing / kayaking / rafting	Whitewater kayaking / canoeing / rafting	2.614	1	2.614	$128.87	$336.920
Flat-water canoeing / sea kayaking / rowing / stand-up paddling / tubing / floating	Flatwater kayaking / canoeing / rafting	3.703	1	3.703	$49.98	$185.063
Beach activities – ocean	Beach – ocean	22.536	1	22.536	$91.23	$2,056.037
Beach activities – lakes / reservoirs / rivers	Beach – lake / reservoir / river	22.008	1	22.008	$31.48	$692.789
Swimming / playing in outdoor pools / spray parks	Swimming	13.993	1	13.993	$41.10	$575.132
Sub-total - Non-motorized Water-based and Beach Activities		64.855	---	64.855	---	$3,845.941
GRAND TOTAL		**1,251.047**	**---**	**1,395.022**	**---**	**$54,204.743**

It is common for a single primary study to contain multiple value estimates, which is reflected in the numbers of estimates (n = 2,908) and studies (n = 395). The distribution of study numbers across the 30 RUVD activity sets reflects the relative volume of scientific studies and does not reflect the relative popularity or importance of each activity set. Wildlife-related activities, such as fishing and hunting, have historically been the focus of much recreation benefit research. Conversely, downhill skiing and backpacking have received less attention in the research literature. And SCORP activities such as *Outdoor Sporting Activities* (i.e., tennis, soccer, golf, etc.) have not been the target of nonmarket valuation research, lacking estimates of the value per person per activity day.

There are wide ranges of recreation value estimates across most activities[141]. The range of value estimates reflects variation across individual study sites (e.g., site quality, attributes and recreation facilities) and study participants, as well as differences in study methods. Accounting for this variation is one reason why an MRA benefit transfer function is especially attractive for developing economic estimates of recreation values.

An MRA statistical model is fit to the value estimates for RUVD activities, and associated data contained in the RUVD. The regression measures the effect or relationship of select independent variables from the RUVD to the Value per activity day data characterizing the standardized consumer surplus per person per activity day.

Theoretically, when a variable is correlated with the variation in recreation benefit values, its partial effect will measure the magnitude and direction of this relationship. Combining these variables in a multivariate model provides a transparent and consistent way to estimate average values based on a policy site's specific characteristics. Given the large sample size, the overall model performance has a grand mean —that is, the mean of the sample means— with ±2.5% margin of error. Thus, the MRA model provides more robust estimates than an average value transfer[142]. It has also been shown that there are information gains from including broader recreation valuation data to predict value estimates for activities and regions[143,144].

Meta-Regression Analysis Predicted Values

The MRA RUVD value per person activity day estimates for all RUVD recreation activities (Table 8.1) are predicted by weighting the measured partial effect of variables relevant for the target activity. Given the MRA model was constructed to enable prediction of value estimates for recreation participation in Oregon by Oregonians, the predictions will reflect relevant adjustments to the model.

Table 8.1 reports the MRA RUVD predicted Value per Activity Day in the 6th column. The predicted values per activity day range from a high of $131.03 for *Mountain biking* and $128.87 for *Whitewater*

[141] Rosenberger, R.S. 2016b. Recreation Use Values Database – Summary. Corvallis, OR: Oregon State University, College of Forestry. [http://recvaluation.forestry.oregonstate.edu/]
[142] Rosenberger, R. 2015. Benefit transfer validity, reliability and error. In: Johnston, R.; Rolfe, J.; Rosenberger, R; Brouwer, R. (eds.), Benefit Transfer of Environmental and Resource Values: A Handbook for Researchers and Practitioners. Netherlands: Springer. pp. 307-326.
[143] Moeltner, K.; Rosenberger, R.S. 2008. Predicting resource policy outcomes via meta-regression: Data space, model space, and the quest for 'optimal scope'. The B.E. Journal of Economic Analysis & Policy 8(1):article 31.
[144] Moeltner, K.; Rosenberger, R.S. 2014. Cross-context benefit transfer: A Bayesian search for information pools. American Journal of Agricultural Economics 96 (2): 469-488.

kayaking / canoeing / rafting, to $14.47 for *Walking* and $23.33 for *Backpacking*. These estimates reflect the average values of consumer surplus per person per activity day. The MRA RUVD predicted values are constant measures (i.e., each activity day is worth exactly the same amount regardless of differences in time, location and site attributes).

These estimates of value per person per activity day should not be interpreted as being indicative of which activities are best to promote through management. For example, even though the value for Mountain biking is much larger on a per person per activity day basis than Walking, there are many more people who engage in Walking activities than Mountain biking activities. The total net economic value for a recreation activity is the value per activity day times the number of activity days.

Total Net Economic Values

Table 8.1 identifies the RUVD activity that is paired with each SCORP activity. SCORP includes 56 activity types, whereas only 30 activity types were identified in the RUVD. In most cases there is a one-to-one correspondence; for example, hunting and fishing directly correspond to each other in both activity sets. In other cases, some assumptions were made in order to match the RUVD activity predicted values with SCORP activities. The primary assumptions used include:

- *Walking*, and *Jogging / Running* are not differentiated by activity attributes;
- *Long-distance hiking (backpacking)* = *Backpacking* (i.e., all are overnight trips);
- *Horseback riding* is proxied by *General other recreation*;
- *Bicycling on unpaved trails* = *Mountain biking*, otherwise bicycling is not differentiated by activity attributes;
- Class I-IV motorized riding = *Off-road vehicle driving*;
- *Personal water craft* and *Power boating* = *Motorboating / jetskiing / waterskiing*;
- *Cross-country skiing* value estimate is used for all *Non-motorized Snow Activities* except *Downhill skiing*;
- All *Outdoor Sports and Court Games Activities* use the predicted activity value for *Walking*; and
- All *Vehicle-based Camping Activities* use the *Developed camping* activity day value.

These assumptions may lead to under- or over-estimation for some activities. For example, the *Walking* activity day value was used for outdoor sports activities because it was the lowest estimate provided by the MRA model, and not because Walking activity best reflects the magnitude of value derived from participating in outdoor sports. Given it is expected that this value is a lower bound to the actual value for outdoor sports participation, this assumption leads to conservative total economic value estimates. A primary study that estimates the value for these types of activities would confirm whether using the *Walking* value as a proxy is conservative or not.

Total net economic value (= $value per activity day * #activity days) is reported in Table 8.1, last column, for each activity type, as well as for the sub-total by activity category. The total net economic value for recreation participation in Oregon by Oregonians is estimated to be **$54.2 billion (2018 USD)** annually based on 2017 use levels. Figure 8.1 reports the ten SCORP activities with the largest total net

economic values, in descending order. And Figure 8.2 reports the total economic value by SCORP recreation category, in descending order. These are all measures of the value of access, or with versus without access to a site or activity.

Figure 8.1. Top ten SCORP activities by total net economic value

SCORP Activity	Total Net Economic Value
Walking on local streets / sidewalks	$4.5 billion
Walking / day hiking on non-local trails / paths	$3.9 billion
Other nature / wildlife / forest / wildflower observation	$3.5 billion
Sightseeing / driving or motorcycling for pleasure	$3.1 billion
Relaxing / hanging out / escaping heat / noise, etc.	$3.0 billion
Bicycling on roads / streets / sidewalks	$3.0 billion
Jogging / running on streets / sidewalks	$2.6 billion
Bird watching	$2.4 billion
Fishing	$2.2 billion
Beach activities - ocean	$2.0 billion

Figure 8.2. SCORP activity categories by total net economic value

SCORP Activity	Total Net Economic Value
Non-motorized Trail Activities	$20.2 billion
Outdoor Leisure / Sporting Activities	$11.8 billion
Nature Study Activities	$10.8 billion
Non-motorized Water-based and Beach Activities	$3.8 billion
Hunting and Fishing Activities	$3.5 billion
Vehicle-based Camping Activities	$1.8 billion
Motorized Activities	$1.4 billion
Non-motorized Snow Activities	$0.9 billion

Conclusions

This project estimates that the total net economic value associated with outdoor recreation participation in Oregon by Oregonians is $54.2 billion (2018 USD) annually, based on 2017 use levels. This total economic value was derived by combining information from the Oregon SCORP 2017 statewide outdoor recreation participation survey that estimated total annual user occasions for 56 outdoor recreation activity types. User occasions were then converted into activity days units to be consistent with how economic values are expressed in the Recreation Use Values Database (2016).

A meta-regression analysis model was estimated on 2,908 estimates of outdoor recreation use values in the US and across 30 activity types. Controlling for activity type and region, among other attributes, the estimated meta-regression model was used to predict values per person per activity day for 30 activity types. These activity types were then paired with the 56 SCORP activity types, some with a one-to-one correspondence, and others as a proxy for value. Total net economic value was calculated for all 56 SCORP activity types.

Total net economic values may be used to compare the relative worth of different assets, in this case, outdoor recreation resources and facilities based on resident participation. They also may be used in benefit-cost analysis that compares net benefits from outdoor recreation with investments in expanding outdoor recreation resources and opportunity sets. This is because nonmarket values are those that are not addressed or represented in typical market transactions and can include things such as the value someone has for the opportunity to view nature or the loss of well-being from residents who must endure more traffic from users of recreation opportunities. This project focused on the computation of recreation economic values by developing "direct use values" representing the benefits to individual recreationists directly engaged in outdoor recreation activities. These values represent "access" to a particular site or to an activity relative to that location or activity not being available or accessible to recreationists. Thus, these economic values measure the total net benefits of recreation and not marginal changes in site or activity access and quality.

CHAPTER NINE: NEED FOR NON-MOTORIZED TRAILS FUNDING IN OREGON

Issue Introduction

The OPRD was given responsibility for recreational trails planning in 1971 under the "State Trails Act" (OR 390.950 to 390.990). In general the policy of the statute is as follows: "In order to provide for the ever-increasing outdoor recreation needs of an expanding resident and tourist population, and in order to promote public access to, travel within and enjoyment and appreciation of, the open-air, outdoor areas of Oregon, trails should be established both near the urban areas in this state and within, adjacent to or connecting highly scenic areas more remotely located."

In addition, ORD 390.010 states that: "It shall be the policy of the State of Oregon to supply those outdoor recreation areas, facilities and opportunities which are clearly the responsibility of the state in meeting growing needs; and to encourage all agencies of government, voluntary and commercial organizations, citizen recreation groups and others to work cooperatively and in a coordinated manner to assist in meeting total recreation needs through exercise of their appropriate responsibilities." The policy also states that it is in the public interest to increase outdoor recreation opportunities commensurate with the growth in need through necessary and appropriate actions, including, but not limited to, the provision of trails for horseback riding, hiking, bicycling and motorized trail vehicle riding; the provision for access to public lands and waters having recreational values; and encouragement of the development of winter facilities.

For the purposes of this chapter, non-motorized trail uses include, but are not limited to, hikers, backpackers, mountain bike riders, equestrians, runners, walkers, bicycle riders, inline skaters and individuals with functional impairments. A non-motorized trail is defined as a regularly maintained recreational pathway typically used by a variety of non-motorized trail users. The designated trail should be purposefully planned and constructed for non-motorized trails purposes, but in some cases can be used for commuter purposes. Non-motorized trails do not include city streets and sidewalks and bike lanes incorporated into the design of city streets and rural highways.

Findings from recent statewide planning efforts identify a critical need for additional funding for non-motorized trails in the state of Oregon. Specifically, funding is needed for routine and preventative maintenance and repair of facilities; major rehabilitation; acquisition of trail corridors and right-of-ways; trail development including connectivity; trail landscape enhancement; and trail signage. This need has been identified for non-motorized trails located within Urban Growth Boundaries and those located in dispersed settings in the state.

Such need is compounded by the fact that Oregon's population has increased from 3.43 million in 2000 to 4.09 million in 2018, or an additional 657,000 residents. By 2030, the population is projected to grow to 4.76 million or an additional 671,000 residents to the 2018 population. Recreation providers report that increased usage associated with population growth is putting considerable strain on the existing non-motorized trail infrastructure and on the quality of recreational trail experience provided. They feel that additional non-motorized trail funding is necessary to address the needs of this growing trail user base.

According to United States Forest Service (USFS) Pacific Northwest Region 6 Office, the USFS provides approximately 11,320 miles of recreational trails in the state of Oregon (Table 9.1). In Fiscal Year (FY) 2016, approximately 25% of these trail miles (2,789 miles) met current agency maintenance standards (Table 9.1). In that year, 47% of those trail miles (5,301 miles) on Oregon USFS lands received maintenance by the USFS through the use of volunteers, partners, or paid for by contract or force account. Of the 5,301 trail miles maintained, 43% of these trail miles (2,279 miles) were maintained by partners/ volunteers[145] (Table 9.2).

Table 9.1. USFS recreational trail maintenance by Fiscal Year, 2011-2016, Oregon[146]

Fiscal Year	Total Trail Miles	Trail Miles Maintained	% of Total Trail Miles Maintained	Trail Miles Improved	% of Total Trail Miles Improved	Total Trail Miles Meeting Standard	% Trail Miles Meeting Standard
2011	10,896	4,057	37.2%	55.4	0.5%	1,928	17.7%
2012	11,395	4,398	38.6%	123.6	1.1%	1,593	14.0%
2014	11,089	4,323	39.0%	21.0	0.2%	1,891	17.1%
2015	10,334	4,919	47.6%	31.1	0.3%	1,836	17.8%
2016	11,320	5,301	46.8%	82.9	0.7%	2,789	24.6%

Note: FY 2013 information not provided.

Table 9.2. USFS recreational trail maintenance by partners / volunteers by Fiscal Year, 2011-2016, Oregon[147]

Fiscal Year	Trail Miles Maintained	Trail Miles Maintained By Partners/ Volunteers	% of Total Trail Miles Maintained By Partners/ Volunteers
2011	4,057	1,543	38%
2012	4,398	1,775	40%
2014	4,323	1,921	44%
2015	4,919	1,885	38%
2016	5,301	2,279	43%

Note: FY 2013 information not provided.

Figure 9.1 includes the annual USFS recreational trails budget for the state of Oregon for period from FY 2006 to FY 2016[148]. The FY 2016 annual trails budget of $2.6 million was less than the $3.1 million budget the peak in FY 2011. In FY 2016, the USFS estimated that the deferred trail maintenance cost for trails in Oregon was $19.4 million (Table 9.3). In addition, the estimated FY 2016 annual maintenance costs for Oregon USFS trails was estimated at $4.1 million − considerably higher than the FY 2016 annual trails budget of $2.6 million.

[145] Many national forests receive external support for trail maintenance via volunteers and partnerships with private and nonprofit entities.
[146] United States Forest Service Pacific Northwest Region 6 Office, Portland, Oregon
[147] United States Forest Service Pacific Northwest Region 6 Office, Portland, Oregon
[148] Since data are not available on the amount of trail maintenance conducted annually on only non-motorized trails, the recreational trails information provided for the USFS includes both motorized and non-motorized costs.

Figure 9.1. USFS recreational trails budget by Fiscal Year, 2006-2016, Oregon[149]

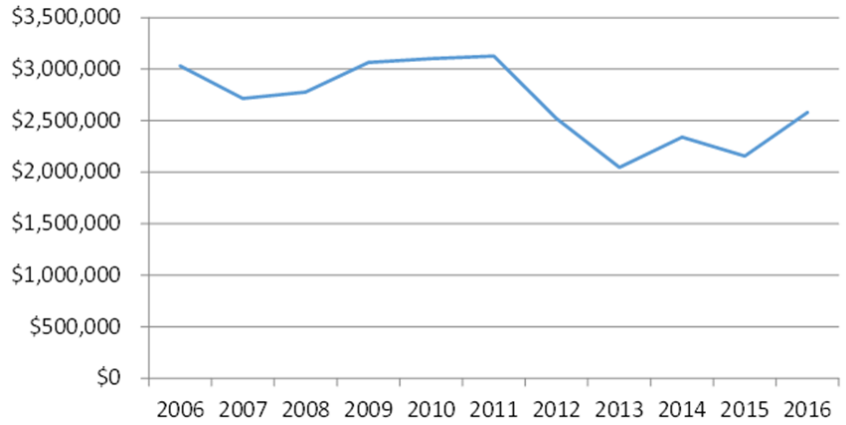


Table 9.3. Estimated USFS recreational trail maintenance needs Fiscal Year 2016, Oregon[150]

Funding Category	**Amount**
Deferred Maintenance[151]	$19,377,580
Annual Maintenance[152]	$4,150,456
Capital Improvements[153]	$12,618,432
Operations[154]	$1,475,220
Total	$37,621,688

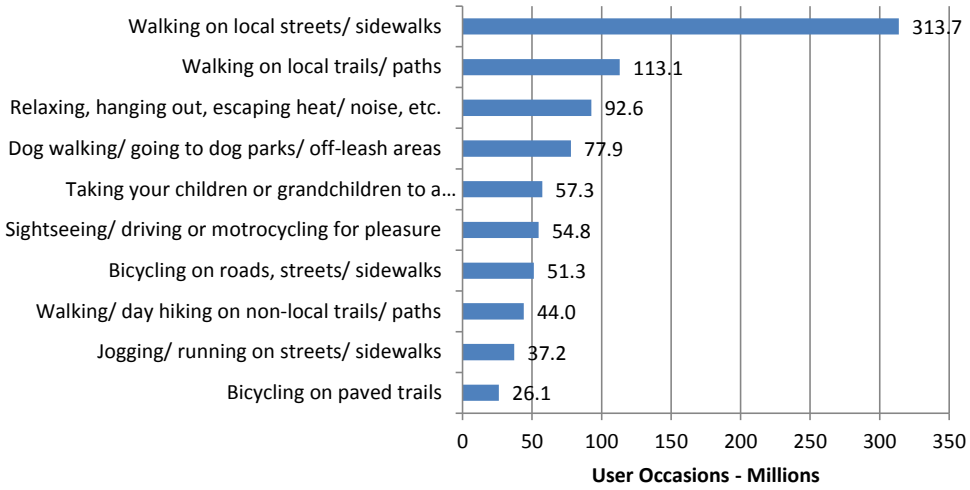
Since the majority of USFS recreational trails in Oregon do not meet current maintenance standards, annual maintenance budgets fail to cover annual maintenance expenses, and deferred maintenance costs are approximately 7½ times the annual trail maintenance budget, the long-term sustainability of the Oregon USFS recreational trail system is on questionable footing. Lack of trail maintenance can have a range of negative effects, including inhibiting trail use, posing potential safety hazards, harming natural resources, and adding to agency costs. This problem is exacerbated by the growing wildfire-related trail rehabilitation need in recent years. Without additional funding for maintenance[155] through existing or new dedicated sources, non-motorized trail opportunities on Oregon's national forests are likely to decline, which in turn will place greater stress on other trail systems in the state.

As part of the SCORP, OPRD conducted a statewide survey of Oregon residents regarding their 2017 outdoor recreation participation in Oregon, as well as their opinions about parks and recreation management. Study findings show that overall, 95% of Oregonians participated in at least one outdoor

[149] United States Forest Service Pacific Northwest Region 6 Office, Portland, Oregon
[150] United States Forest Service Pacific Northwest Region 6 Office, Portland, Oregon
[151] Deferred maintenance is maintenance that was not performed when it should have been, including repair, rehabilitation, or replacement of an asset−in this case, trails−to restore it to serviceable conditions.
[152] Annual maintenance includes repair, preventive maintenance, or cyclic maintenance needed to maintain serviceability.
[153] Capital improvement refers to new construction, alteration, changing a trail's original function (e.g., changing from a hiking trail to an all-terrain vehicle trail), or expanding or changing a trail's capacity.
[154] Operations refers to the Forest Service's estimate of annual operations costs for the trail maintenance program.
[155] The OPRD-administered All-terrain Vehicle Grant Program provides funding for ongoing maintenance of motorized trails and trail-related facilities in Oregon. However, there is no state funding available for ongoing maintenance of non-motorized trails and trail-related facilities in the state.

recreation activity in Oregon during the past year. The top outdoor recreation activities based on total user occasions for Oregonians in 2017 (Figure 9.2) were dominated by a number of linear activities including walking on local streets/ sidewalks (313.7 million user occasions), walking on local trails/ paths (113.1 million user occasions), dog walking/ going to dog parks/ off-leash areas (77.9 million user occasions), bicycling on roads, streets/ sidewalks (51.3 million user occasions), walking/ day hiking on non-local trails/ paths (44.0 million user occasions), jogging/ running on streets/ sidewalks (37.2 million user occasions), and bicycling on paved trails (26.1 million user occasions).

Figure 9.2. Top ten activities for Oregon residents, 2017, user occasions

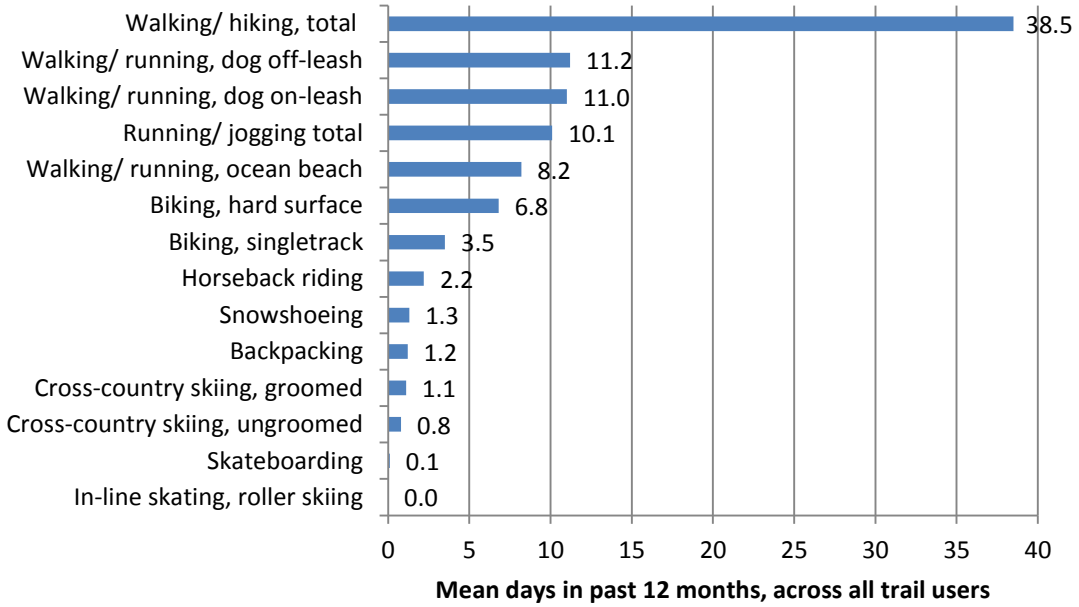


Oregonians were asked their opinions about priorities for the future, by rating several items for investment by park and forest agencies in the state. The second top priority need for both "in our community" and "outside your community" was for soft surface walking trails (top priority was cleaner restrooms). A similar question asked of Oregon's public recreation providers showed the highest need for "within community" providers was for community trail systems and the 5th highest need for trails connected to public lands. For "outside communities" the need for day-use hiking trails was the 3rd highest need and connecting trails into larger trail systems was the 4th highest need.

The recreation provider survey also asked respondents to identify the degree to which 15 funding issues are challenges or concerns for your agency. For "within community" providers the top issue was obtaining adequate funding for facility rehabilitation/ replacement. The 3rd top issue was obtaining adequate funding for building more non-motorized trails and support facilities. For "outside community" providers the top issue was obtaining adequate funding for facility rehabilitation/ replacement. The 2nd top issue was obtaining funding for routine maintenance for existing park and recreation areas. The 3rd top issue was obtaining adequate funding for routine maintenance of non-motorized trails and support facilities. In comparing differences between within community and outside community provider results, although top issues are similar, obtaining adequate funding for building more non-motorized trails and support facilities are more of a challenge for within community providers and funding for routine maintenance of non-motorized trails and support facilities are a more of a challenge for outside community providers.

In addition to the current SCORP, the state has also completed a statewide trails plan entitled, "Oregon Trails 2016: A Vision for the Future." The plan includes separate motorized (ATV/OHV), snowmobile, non-motorized, and water trail components. For this plan, Oregon State University conducted a survey of Oregon resident non-motorized trail users regarding their current use patterns, user experiences, and the economic contribution of recreation activities. Trail respondents reported how many days they participated in various activities on trails in Oregon during the past 12 months. As shown in Figure 9.3, the activity with the most participation was walking/ hiking, with the "total" category for walking including days participating in sub categories. The sub categories include walking and/ or running on ocean beaches, with a dog on-leash, and with a dog off-leash. A given walking or running occasion may fall into none, one, two, or all three of these sub categories.

Figure 9.3. Non-motorized trail participation by activity, 2015, frequency by activity



Top non-motorized trail funding priorities were identified separately for trails within Urban Growth Boundaries and in dispersed settings. Top funding need for non-motorized trails within Urban Boundaries included #1: connecting trails into larger trail systems, #2: routine upkeep of the trails themselves, and #3: more signs along trails/ wayfinding. For non-motorized trails in dispersed settings, top funding needs included #1: routine upkeep of the trails themselves, #2: connecting trails into larger trail systems, and #3: more trail maps/ trail information/ wayfinding.

Top non-motorized trail issues were also identified for trails within Urban Growth Boundaries and in dispersed settings. Top statewide issues for non-motorized trails within Urban Growth Boundaries included Issue #1: the need for more trails connecting towns/ public places, Issue #2: the need for improved trail maintenance (including routine trail maintenance and trail rehabilitation/ restoration), and Issue #3: the need for more trail signs (directional and distance markers and level of difficulty). For non-motorized trails in dispersed settings, top statewide issues included Issue #1: the need for improved trail maintenance, Issue #2: the need for more trails connecting towns/ public places, and Issue #3: the need for more trail signs.

The Oregon Outdoor Recreation Initiative Phase One Report,[156] produced by Travel Oregon, includes strategies for expanding access to outdoor recreation and increasing the economic impact and sustainability of Oregon's outdoor recreation industry. The report identified a number of key strategies for developing a world-class outdoor recreation experiences in Oregon that will further enhance our reputation as a premier recreation destination.

A key strategy included the development and ongoing maintenance of priority signature trail systems that have the potential to be world-class and, when completed, will make a major difference in Oregon. Non-motorized trails mentioned in the report included the Historic Columbia River Highway State Trail, Gorge Towns to Trails, Oregon Coast Trail, Oregon Timber Trail, Salmonberry Trail and Joseph Branch Rail Trail. Other potential signature non-motorized trails, not included in this report, include the Corvallis to the Sea Trail, Oregon Desert Trail, Helvetica Trail, New Oregon Trail/ Northern Intertie, Southern Oregon Intertie Trail, Mainline Trail, and the Nez Perce National Historic Trail. Finally, those trails which have received Oregon Scenic Trail or Oregon Regional Trail designation under the State Trail Designation Program[157] should also be considered under this signature trail system. Developing priority trail systems into world-class assets and maintaining them over the long-term will create a ripple effect that will generate additional activities and investments.

On March 2, 2017, a presentation was made to members of the 2019-2023 Oregon SCORP Advisory Committee regarding the need for additional non-motorized trail funding in Oregon. The groups' general consensus was that the SCORP planning effort should address the need for additional funding for non-motorized trails as a top statewide issue. The group also recommended a separate sub-committee to assist OPRD in examining the issue.

An 11 member sub-committee was formed including representation from Travel Oregon, local, county, and state agencies, the Oregon Public Health Division, the Oregon Recreation Trails Advisory Committee, consultants, and the retail sector to further address the need for non-motorized funding in Oregon. A subcommittee meeting was held on October 19, 2017. The consensus of this group was that funding is needed for non-motorized trail development and major rehabilitation within Urban Growth Boundaries (UGBs) and for non-motorized trail maintenance and major rehabilitation in dispersed settings in Oregon. The subcommittee identified the following nine key components to address in this chapter including:

1. Identifying the primary benefits of a new non-motorized trails fund for the state;
2. Identifying the existing sources of funding for non-motorized trails;
3. Identifying a dollar estimate for the current level of need for additional non-motorized trail funding in the state;
4. Recommending a total annual dollar amount needed for a proposed dedicated non-motorized trails fund;
5. Describing the objectives of a non-motorized trails fund;

[156] http://industry.traveloregon.com/content/uploads/2017/09/Oregon-Outdoor-Recreation-Initiative_Phase-One-Summary-Report_FINAL.pdf
[157] https://www.oregon.gov/oprd/Trail_Programs_Services/Pages/Trails-Designation-Programs.aspx

6. Identifying the types of non-motorized projects to be funded and specific organizations/ agencies that would qualify for funding;
7. Identifying examples of funding sources;
8. Describing options for administering a new non-motorized trails fund; and
9. Identifying implementation actions for moving forward with establishing a dedicated non-motorized trails fund for Oregon.

The remainder of this chapter addresses each of these nine critical components in making a case for additional non-motorized trails funding for Oregon.

Primary Benefits of New Non-Motorized Trails Fund for Oregon

Non-motorized trail participation is the source of many benefits to individuals, communities, and society. There are three primary benefits that have been quantified in this planning effort to support the need for additional non-motorized trail funding in the state including health savings (Cost of Illness Savings), net economic value, and economic impact.

Health Benefits

Parks and recreation, community development / design, and transportation planning significantly contribute to the health of Oregonians by enabling them to engage in daily physical activity. The Oregon State University SCORP Health Benefits[158] study demonstrates that park and recreation providers have a role in increasing the public health and wellbeing of Oregonians. The study suggests that an investment in state resources for non-motorized trail development has the potential to significantly influence community health and may be a cost-effective health prevention strategy for the state of Oregon.

Daily physical activity may decrease the risk of many chronic illnesses such as heart disease, stroke, depression, dementia, diabetes and several cancers[159]. About 60% of adult Oregonians meet this recommended level, with an additional 17% being physically inactive (i.e., they are sedentary). Any amount of sustained physical activity results in health benefits, and greater amounts of activity are correlated with additional health benefits. Therefore, increasing Oregonians physical activity may help reduce the estimated $39.1 billion they spend on health care each year.

The OSU study reported that adult Oregonians engaged in the 30 outdoor recreation activities on 794 million user occasions that expended 503 billion kcals of energy, which is equivalent to 144 million pounds of body fat that would fill 29.5 Olympic-sized swimming pools. They also realized $735 million to $1.416 billion in Cost of Illness Savings (COI) associated with eight chronic illnesses affected by physical activity. Their COI savings is approximately 2-3.6% of total health care expenditures in the state including 9-17% of expenditures in treating cardiovascular diseases, cancers, diabetes, and depression. These estimates are conservative and underestimate the total health benefits derived from

[158] R. Rosenberger, T. Dunn. (2018). Health Benefits Estimates for Oregonians from their Outdoor Recreation Participation in Oregon. 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Oregon State University, College of Forestry.
[159] 2018 Physical Activity Guidelines Advisory Committee. 2018. 2018 Physical Activity Guidelines Advisory Committee Scientific Report. Washington DC; U.S. Department of Health and Human Services.

physical activity because they do not include impacts on other illnesses and diseases, avoided deaths, or other activities, along with the use of conservative modeling assumptions.

This is particularly relevant in close-to-home settings where physical activity benefits most often occur. Close-to-home non-motorized linear / trail-based activities (i.e., activities that occur on trails, paths, roads, streets, and sidewalks) account for the largest proportion of health benefits. Outdoor recreation activities including walking and jogging / running on local streets / sidewalks / trails / paths, bicycling on roads / streets / sidewalks, and dog walking account for 77% of total annual user occasions, 62% of total energy expenditures, and 80% of total COI savings associated with Oregonians participating in 30 outdoor recreation activities of moderate- to vigorous-intensity.

The 2017 Oregon SCORP survey asked Oregonians to rate (1=no effect, 2=lead to small increase, 3=lead to large increase) 16 potential in your community program or facility creation or expansion actions that would cause them or members of their household to become more physically active. Results for the Oregon general population and target demographic groups are included in Table 9.4. The results show that expanding the existing walking trail or path system is the top in your community action to increase physical activity for the general population and all target demographic groups in the study.

Table 9.4. Top in your community actions, How would actions effect physical activity, — mean for 3-point Likert (1= "No effect", 2 = "Lead to small increase", 3 = "Lead to large increase"), Oregon demographic group, 2017

Actions	Demographic Group											
	General Population	**Latino**	**Asian**	**Families with Children**	**Urban**	**Suburban**	**Rural**	**Low Income**	**Young Old**	**Middle Old**	**Male**	**Female**
Walking trails or paths	**2.21**	**2.36**	**2.30**	**2.30**	**2.23**	**2.25**	**2.10**	**2.21**	**2.09**	**1.76**	**2.14**	**2.29**
More parks closer to where I live	**1.96**	**2.25**	**2.14**	**2.13**	**2.01**	**1.99**	**1.82**	**2.03**	**1.76**	**1.50**	**1.91**	**2.01**
Improved walking routes to parks	**1.93**	**2.20**	**2.07**	2.05	1.94	**1.98**	**1.77**	**1.95**	**1.77**	**1.49**	1.87	**1.99**
Bicycle trails or paths	1.90	2.00	1.92	**2.07**	**1.95**	1.94	1.73	1.87	1.65	1.29	**1.93**	1.87

Top actions bolded

Net Economic Value

Total net economic value or benefits (i.e., total economic value net of the costs) is a measure of the contribution to societal welfare for use in cost-benefit analyses. Nonmarket valuation techniques, such as travel cost and contingent valuation methods, are economic tools used to estimate the economic value associated with goods not traditionally traded in formal markets, such as outdoor recreation and ecosystem services. These tools have been in wide use since the 1950s and applied to a variety of nonmarket goods and services, including outdoor recreation.

Economic value for outdoor recreation is a monetary measure of the benefits received by an individual or group who participates in outdoor recreation. At the individual level, the net economic value of a recreation activity is measured as the maximum amount the individual is willing to pay to participate in the activity minus the costs incurred in participating. In economic terms, this monetary measure is also

known as consumer surplus. Consumer surplus is the economic value of a recreation activity above what must be paid by the recreationist to enjoy it.

The Oregon State University Net Economic Value study[160] estimates that the total net economic value associated with outdoor recreation participation in Oregon by Oregonians is $54.2 billion (2018 USD) annually, based on 2017 use levels. This total economic value was derived by combining information from the Oregon SCORP 2017 statewide outdoor recreation participation survey that estimated total annual user occasions for 56 outdoor recreation activity types and the Recreation Use Values Database of economic values for recreation participation.

Again, close-to-home non-motorized linear / trail-based activities (i.e., activities that occur on trails, paths, roads, streets, and sidewalks) account for the largest proportion (27% of total net economic value) of this net economic value −approximately $14.4 billion (2018 USD) annually. Dispersed-setting non-motorized trail-based activities (walking / day hiking on non-local trails / paths, long-distance hiking (backpacking), horseback riding, and bicycling on unpaved trails) account for $5.5 billion (2018 USD) annually (10% of total outdoor recreation net economic value).

Oregon's non-motorized trail users place a value of participation in non-motorized trail activities in the state at $19.9 billion annually. This number is associated with participation on existing trail infrastructure in the state. An investment in non-motorized trail maintenance and rehabilitation would allow Oregonians to continue to experience this value associated with trail use in years to come.

Economic Impact

Economic impacts (or contributions) assessment is another common tool used to measure economic outcomes associated with outdoor recreation. Economic impact (or contribution) assessments measure how spending by recreationists (often defined as non-resident or non-local visitors / tourists) affects economies within a given geography (e.g., community, region, state, or nation). Economic impacts or outcomes are typically associated with changes in sales, tax revenues, income and jobs due to spending on outdoor recreation activity.

A 2015 statewide survey of non-motorized trail users[161] identified the economic contribution of non-motorized trail activities in Oregon based on the following expenditure categories:

- Hotel, motel, condo, cabin, B&B, or other lodging except camping;
- Camping (RV, tent, etc.);
- Restaurants, bars, pubs;
- Groceries;
- Gas and oil;
- Other transportation;
- Park / forest entry, parking, or recreation use fees;

[160] Rosenberger, R. (2018). Total Net Economic Value from Residents' Outdoor Recreation Participation in Oregon. 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Oregon State University, College of Forestry.

[161] Lindberg, K., Bertone-Riggs, T. (2015). Oregon Non-Motorized Trail Participation and Priorities. Report in Support of the 2015-2024 Oregon Trails Plan. Oregon State University.

- Recreation and entertainment, including guide fees;
- Sporting goods, and
- Other expenses, such as souvenirs.

Statewide, non-motorized trail use by Oregon residents (Table 9.5) contributes 21,730 jobs, $672 million in labor income, and $1.04 billion in value added (2014 USD). Inclusion of out-of-state non-motorized trail users is estimated to add another 11% to in-state amounts. When out-of-state visitors are included, the estimated amounts increase to 24,340 jobs, $753 million in labor income, and $1.16 billion in value added. Unfortunately, it is not possible to allocate these economic impact contributions by close to home and dispersed setting trail classification.

Table 9.5. Multiplier effects of non-motorized trail user trip expenditure in Oregon, out-of-state trail users included; employment in jobs, other measures in dollars

Origin	Employment	Labor Income	Value Added	Output
In-state	21,730	672,448,000	1,038,317,000	1,725,751,000
Out-of-state	2,610	80,694,000	124,598,000	207,090,000
Combined	**24,340**	**753,142,000**	**1,162,915,000**	**1,932,841,000**

An investment of state resources in non-motorized trails would promote tourism spending, particularly in rural towns and in more economically disadvantaged areas of the state. Many of the people traveling to a trail and spending a night or more in the area are economically well off and have significant discretionary income.

Existing Non-Motorized Trails Funding Sources for Oregon

The following is a list of existing grant funding sources for non-motorized trail projects in Oregon along with annual grant distribution estimates.

Recreational Trails Program

The Recreational Trail Program (RTP) is a Federal-aid assistance program which provides funds to States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses, including water trails. The Oregon RTP funds represent a portion of the federal gasoline tax attributed to recreation on non-gasoline tax supported roads. Annual apportionments to states are based on funds voted on by the U.S. Congress. The Oregon RTP is administered by the Oregon Parks and Recreation Department. Grant funds can be used for new trail construction; heavy trail restoration; trailhead facilities; purchase of tools to construct and/or renovate trails; land acquisition for trail purposes; and safety and educational programs. RTP Legislation requires that States use 30 percent of funds in a fiscal year for uses relating to motorized recreation (e.g., snowmobile and off-highway vehicle use), 30 percent for uses relating to non-motorized recreation, and 40 percent for diverse recreational trail use (e.g., pedestrian and bicycle use). During a period from 1998-2018, the fund's average distribution was approximately $1.6 million per year in Oregon. Eligible recipients of RTP funding include federal, state, and local government agencies, Indian Tribes, and nonprofit organizations.

Local Government Grant Program

The Local Government Grant Program (LGGP) is an Oregon State Lottery funded program administered by the Oregon Parks and Recreation Department. The program provides grant assistance for outdoor park and recreation areas and facilities, acquisition of property for park purposes, trails, bicycle recreation opportunities, and non-motorized water-based recreation. Eligible applicants to the program are Cities, Counties, Metropolitan Service Districts, Park and Recreation Districts, and Port Districts.

In recent years, the LGGP has awarded approximately $5.5 million per year in grant funding. One focus of the program has been non-motorized trails, particularly those that provide some type of connectivity between parks or communities, or trails that connect to a larger trail system. From 2006 to 2016 the program made 349 grant awards of which 39 were trail related projects totaling $6.9 million in grant funding (average of $627,000 per year for non-motorized trail projects).

Land and Water Conservation Fund Program

The Land and Water Conservation Fund (LWCF) Program is a National Park Service funded program administered by the Oregon Parks and Recreation Department. The program provides grant assistance for acquiring land for parks and recreation purposes; building or redeveloping recreation and park facilities; providing riding and hiking trails, enhancing recreation access; and conserving open space, forests, estuaries, wildlife; and natural resource areas through recreation projects. Eligible applicants to the program are Cities, Counties, Metropolitan Service Districts, Park and Recreation Districts, Port Districts, Indian Tribes, and Oregon State Agencies (OPRD, Department of State Lands, Department of Fish and Wildlife, and Department of Forestry).

In recent years, the LWCF has awarded approximately $750,000 per year in grant funding. From 2006 to 2016 the program made 39 grant awards of which only three were non-motorized trail related projects totaling $452,000 in grant funding (7.4% of total LWCF grant funding during that period).

Connect Oregon

Connect Oregon is a lottery-backed bond grant competition administered by the Oregon Department of Transportation to invest in air, rail, marine, and bicycle/pedestrian infrastructure to ensure Oregon's transportation system is strong, diverse, and efficient. In 2016, the program awarded approximately $8 million of the $49.5 million grant funds available to seven bicycle/ pedestrian projects around the state. The Keep Oregon Moving Act (HB 2017) made changes to the program including diversification of funding sources to include the new vehicle dealer privilege fees and bicycle excise taxes and a set aside of seven percent of the Connect Oregon Fund for bicycle and pedestrian grants only for projects outside the road right of way that expand and improve commuter routes (including bicycle trails, footpaths and multiuse trails). Bicycle excise tax revenues will only go towards bicycle/ pedestrian projects that expand and improve commuter routes (including bicycle trails, footpaths, and multiuse trails. No funding is available for this program in the 2017-2019 biennium. If/ when funding is available competitive grant rounds may occur in the 2019-2021 or 2021-2023 biennia.

Travel Oregon Competitive Grants Program

Travel Oregon has established a program to make grant awards "to eligible applicants for projects that contribute to the development and improvement of communities throughout the state by means of the

enhancement, expansion and promotion of the visitor industry." Eligible applicants include local government, port districts, federally recognized tribes and non-profit entities that are doing business in Oregon and can demonstrate direct work in support of improving economic impacts of Oregon's travel and tourism industry. Eligible projects must provide for the improvement or expansion of the tourism economy in Oregon. Projects are intended to increase the likelihood of visitation from 50 miles outside the local area. Since opening its Competitive Grants program in the Fall of 2017, approximately 15 percent of Travel Oregon's Competitive Small and Competitive Medium Grant dollars have funded non-motorized trail development projects. Travel Oregon has awarded $260,000 to both trail planning as well as trail development/construction. Travel Oregon's Competitive Small Grants program opens annually.

Regional Flexible Funds - METRO

Regional Flexible Funds (RFF) are Portland metropolitan region's transportation dollars that can be spent on the widest variety of needs. They are comprised of federal Surface Transportation Block Grant (STBG) and Congestion Mitigation and Air Quality (CMAQ) funds. Funding is passed through ODOT to Metro, which leads a regional decision-making process on how these funds will be spent. RFF represent less than five percent of all the available transportation funding in the region, but has the most flexibility on how it can be used. Metro Council develops policy which determines the most appropriate uses for these funds. In recent years, RFF has been spent on expanding the transit network, region-wide investment programs (transit-oriented development, regional travel options, system management and operations), regional planning, and project development or capital funds for Active Transportation and Freight projects. Funding is allocated for three-year periods of time. The next RFF Allocation (RFFA) cycle is for the 2022-2024 timeframe. RFF totaled $130 million in the 2019-2021 cycle, of which $25.81 million was allocated to active transportation and regional trail projects through a competitive grant process.

Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program, also known as the STIP, is the Oregon Department of Transportation's capital improvement program for state and federally-funded projects. The Oregon Transportation Commission (OTC) and ODOT develop the STIP in coordination with a wide range of stakeholders and the public. Previously, the Enhance Program funded projects that enhance or expand the transportation system including many off-system path projects. The 21-24 STIP is currently under development. With the passage of the Keep Oregon Moving Act (HB 2017), over $600 million worth of projects were directed by the Oregon state legislature to enhance state, county and local roads. For this round of funding, the OTC approved a STIP that directs most of ODOT's discretionary funding to Fix-It programs that preserve roads, bridges, and other assets on the state system. At this time, there is no STIP Enhance Program. However, $6 million dollars from the 21-24 STIP was set aside for off-system trails and will be distributed through a forthcoming competition. Local agencies will be eligible applicants.

Federal Lands Access Program

The Federal Lands Access Program (FLAP) is a Federal Highway Administration program intended to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. State

DOTs, Tribes, and/ or local governments are eligible. Funding allocation for Oregon is approximately $33 million. Typically, ten percent ($3.3 million) of the funding goes to enhancement type projects like trailhead amenities and interpretive signage.

Discussion

The Oregon RTP is the only statewide grant program dedicated to funding recreational trail projects in Oregon. However, even though Oregon has a dedicated motorized (ATV) grant program and a snowmobile grant program, Federal rules require that 30 percent of funds in a fiscal year for uses relating to motorized recreation (e.g., snowmobile and off-highway vehicle use). As a result, the average annual amount of RTP funds available for non-motorized trail projects is approximately $1.12 million.

The ODOT administered trail-related grant programs focus resources on bicycle/ pedestrian multi-use trails intended for commuting purposes to relieve pressure on the road system. However, recreational non-motorized trails discussed in this chapter are built for recreation purposes, not commuter purposes[162]. Recreational non-motorized trails do not include city streets and sidewalks and bike lanes incorporated into the design of city streets and rural highways. As such, ODOT bicycle/ pedestrian grants target a different user group than typical recreational trail users.

In conclusion, this analysis demonstrates that very few resources in Oregon are directed towards recreational non-motorized trail projects, even though SCORP surveys continue to show that linear trail activities such as walking / hiking, bicycling, and dog walking dominate the total outdoor recreation user occasions for Oregon residents.

Identification of Funding Need

To help determine the types of funding mechanisms to consider, it is necessary to establish a preferred revenue target, or funding need. As a result, OPRD planning staff reached out to Oregon non-motorized trail providers to collect information on the current need for non-motorized trails funding across the state. Data was collected from close-to-home (within Urban Growth Boundary) recreation providers for non-motorized trail development and major rehabilitation need. A separate effort collected information from dispersed-setting (in areas outside UGBs) providers for non-motorized deferred trail maintenance and major rehabilitation need.

Close-to-Home Data Collection Methods

For the close-to-home data collection effort, development need was defined as proposed, but not yet developed, non-motorized trail corridor and support facilities included in a local planning document (e.g., Comprehensive, Transportation, or Trails Plan) including a public outreach effort, located within UGBs and those providing connectivity from areas within UGBs to nearby trail systems in surrounding areas.

Major rehabilitation was defined as non-motorized trail projects involving extensive trail repair (e.g., resurfacing of asphalt trails or complete replacement, regrading, and resurfacing of all trails) needed to

[162] The 2015 Oregon Non-Motorized Trail Participation and Priorities survey reported that 11% of non-motorized trail users reported using recreation-oriented trails to walk or bicycle to work. See Figure 2.5 (page 20) of the report: https://www.oregon.gov/oprd/PLANS/docs/Statewide%20Trails%20Plan/Nonmotorized_%20trail_report.pdf.

bring a facility up to standards suitable for public use (not routine maintenance[163]). In some cases, trail rehabilitation may include necessary relocation of minor portions of the trail. Such non-motorized trail rehabilitation projects are necessitated by one or more of the following:

- the non-motorized trail or trail corridor facility is beyond its normal life expectancy (a "Non-Motorized Trail Life Expectancy Schedule" was provided in the packet to help make this determination),
- the non-motorized trail or trail corridor facility is destroyed by fire, flood, natural disaster or vandalism,
- the non-motorized trail or trail corridor facility does not meet health & safety codes/ requirements, and
- the non-motorized trail or trail corridor facility requires rehabilitation to insure critical natural resource protection.

For close-to-home non-motorized trail development need, information was collected from each provider for all trail corridor facilities, support facilities, and land and easement acquisition items included in Table 9.6. A full set of instructions, reporting forms, and glossary of terms was provided in the information request packet sent to each provider. The forms collected information regarding the number of facilities. After collection, these numbers were converted to estimated development costs by OPRD staff. Since real estate prices vary considerably across the state, providers were requested to report total land and easement purchase costs at current market value for reported trail development projects.

[163] Respondents were asked to not report routine maintenance or repair work as major rehabilitation.

Table 9.6. Close-to-home trail development need data collection

Non-motorized Trail Corridor Facilities		
Asphalt Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Concrete Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Natural/ Native Surface Trail (dirt, gravel, or rock)	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Non-motorized Trail Corridor Support Facilities		
Boardwalk- Wood	Linear miles (rounded to nearest 1/10th mile	Width in feet
Boardwalk- Fiberglass	Linear miles (rounded to nearest 1/10th mile	Width in feet
Boardwalk- Composite	Linear miles (rounded to nearest 1/10th mile	Width in feet
Trail Bridge- Steel	Length in feet	Width in feet
Trail Bridge- Wood	Length in feet	Width in feet
Trail Bridge- Fiberglass	Length in feet	Width in feet
Trail Bridge- Concrete	Length in feet	Width in feet
Culvert (minimum 18" diameter)	Length in feet	Diameter in inches
Restroom building	Type -Vault	Number of stalls
Restroom building	Type- Flush	Number of stalls
Asphalt parking	Number of spaces	
Concrete parking	Number of spaces	
Gravel parking	Number of spaces	
Asphalt trailhead access road	Linear miles (rounded to nearest 1/10th mile	
Concrete trailhead access road	Linear miles (rounded to nearest 1/10th mile	
Gravel trailhead access road	Linear miles (rounded to nearest 1/10th mile	
Non-motorized Trail Corridor Land/ Easement Purchase		
Land purchase: Total land purchase need for all planned trail development projects in trail miles.		
Land purchase trail miles (rounded to nearest 1/10 mile)		
Easement purchase: Total easement purchase need for all planned trail development projects in trail miles.		
Easement purchase trail miles (rounded to nearest 1/10 mile)		
Estimate of land and easement purchase costs (at estimated current market value) for the land and easement purchase need reported above.		

For close-to-home non-motorized trail major rehabilitation need, information was collected from each provider for items included in Table 9.7. As with development need collection, the major rehabilitation

forms collected information regarding the number of facilities. After collection, these facility numbers were converted to actual major rehabilitation costs by OPRD staff.

Table 9.7. Close-to-home major rehabilitation need data collection

Non-motorized Trail Corridor Facilities		
Asphalt Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Concrete Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Natural/ Native Surface Trail (dirt, gravel, or rock)	Linear miles (rounded to nearest 1/10th mile	Trail width in feet
Non-motorized Trail Corridor Support Facilities		
Boardwalk- Wood	Linear miles (rounded to nearest 1/10th mile	Width in feet
Boardwalk- Fiberglass	Linear miles (rounded to nearest 1/10th mile	Width in feet
Boardwalk- Composite	Linear miles (rounded to nearest 1/10th mile	Width in feet
Trail Bridge- Steel	Length in feet	Width in feet
Trail Bridge- Wood	Length in feet	Width in feet
Trail Bridge- Fiberglass	Length in feet	Width in feet
Trail Bridge- Concrete	Length in feet	Width in feet
Culvert (minimum 18" diameter)	Length in feet	Diameter in inches
Restroom building	Type -Vault	Number of stalls
Restroom building	Type- Flush	Number of stalls
Asphalt parking	Number of spaces	
Concrete parking	Number of spaces	
Gravel parking	Number of spaces	
Asphalt trailhead access road	Linear miles (rounded to nearest 1/10th mile	
Concrete trailhead access road	Linear miles (rounded to nearest 1/10th mile	
Gravel trailhead access road	Linear miles (rounded to nearest 1/10th mile	

Dispersed-Setting Data Collection Methods

For the dispersed-setting (trails located outside UGBs) data collection effort, routine trail maintenance was defined as work that is conducted on a frequent basis in order to keep a trail in its originally constructed serviceable standards (e.g., mowing, tree and brush pruning, leaf and debris removal, cleaning and repair of drainage structures such as culverts and drain dips, maintenance of water crossings, and repairs to signs and other amenities). Routine maintenance work is usually limited to minor repair or improvements that do not significantly change the trail location, width, surface, or trail

structure. Major rehabilitation was defined in the same manner as previously described for close-to-home reporting.

Using these definitions, each provider generated an itemized list of all non-motorized trail and trail-related facilities they managed according to packet instructions and identified the percent of each facility that was either well maintained, not maintained (deferred maintenance), and in need of major rehabilitation.

Table 9.8. Dispersed-setting deferred maintenance and major rehabilitation data collection

Non-motorized Trail Corridor Facilities			**Condition Assessment**		
Asphalt/Concrete Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet	% well maintained	% not maintained	% in need of major rehab
Compacted Gravel Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet	% well maintained	% not maintained	% in need of major rehab
Native Soil Trail	Linear miles (rounded to nearest 1/10th mile	Trail width in feet	% well maintained	% not maintained	% in need of major rehab
Non-motorized Trail Corridor Support Facilities			**Condition Assessment**		
Boardwalk- Wood	Linear miles (rounded to nearest 1/10th mile	Width in feet	% well maintained	% not maintained	% in need of major rehab
Boardwalk- Fiberglass	Linear miles (rounded to nearest 1/10th mile	Width in feet	% well maintained	% not maintained	% in need of major rehab
Boardwalk- Composite	Linear miles (rounded to nearest 1/10th mile	Width in feet	% well maintained	% not maintained	% in need of major rehab
Trail Bridge- Steel	Length in feet	Width in feet	% well maintained	% not maintained	% in need of major rehab
Trail Bridge- Wood	Length in feet	Width in feet	% well maintained	% not maintained	% in need of major rehab
Trail Bridge- Fiberglass	Length in feet	Width in feet	% well maintained	% not maintained	% in need of major rehab
Trail Bridge- Concrete	Length in feet	Width in feet	% well maintained	% not maintained	% in need of major rehab
Culvert (minimum 18" diameter)	Length in feet	Diameter in inches	% well maintained	% not maintained	% in need of major rehab
Restroom building	Type -Vault	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Restroom building	Type- Flush	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Asphalt parking	Number of spaces	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Concrete parking	Number of spaces	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Gravel parking	Number of spaces	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Asphalt trailhead access road	Linear miles (rounded to nearest 1/10th mile	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Concrete trailhead access road	Linear miles (rounded to nearest 1/10th mile	Number of stalls	% well maintained	% not maintained	% in need of major rehab
Gravel trailhead access road	Linear miles (rounded to nearest 1/10th mile	Number of stalls	% well maintained	% not maintained	% in need of major rehab

Data Collection Results

A non-motorized trails data collection information packet was sent to 300 close-to-home recreation providers in Oregon including Counties, Cities without Park and Recreation Departments, Municipal Park and Recreation Departments, Park and Recreation Districts, Ports, and Tribes. This data collection occurred between February 5, 2018 and May 31, 2018. Of the 300 recreation providers contacted, 110 completed and returned the forms to OPRD. It is important to note that the list of 300 included many local jurisdictions which do not provide non-motorized trail facilities. The 110 completions include the majority of providers with recreation departments and staff across the state.

A similar trails data collection information packet was sent to 44 dispersed-setting recreation providers in Oregon including Counties, State Agencies, and Federal Agencies. This data collection effort occurred between March 1, 2018 and August 31, 2018. Of these recreation providers, seven Counties, three Federal Agencies, and two State Agencies completed and returned the forms for their trail systems. It is important to note that the trail systems reported by respondents include the majority of dispersed-setting non-motorized trails in the state. For example, most Counties do not have substantial non-motorized trail mileage within their jurisdictions. The U.S. Forest Service did provide statewide trail maintenance backlog information (see Table 9.3), but did not use the information packet to provide information on all trail corridor and support facilities as shown in Table 9.8[164]. For final reporting, U.S. Forest Service statewide deferred maintenance and major rehabilitation totals were allocated to specific facility types based on statewide dispersed-setting averages for all respondents.

As previously mentioned, number and condition information was collected from recreation providers for non-motorized trail corridor and support facilities. During data collection preparation, OPRD staff and SCORP Advisory Committee members felt it critical that an objective unit of measure be applied to determining consistent cost estimates for data collection across the state. As a result, OPRD hired DCW Cost Management, an independent third-party cost consultancy to develop a non-motorized trail cost estimator spreadsheet for determining non-motorized trail development, rehabilitation, and maintenance costs for all non-motorized trail corridor and trail support facilities included in Tables 9.6 – 9.8. All reported development, major rehabilitation, and maintenance data collected from trail providers were run through the DWC Cost Management trail cost estimator to determine final 2018 non-motorized trail cost estimates included in the following summary.

The inventory process identifies a $640.4 million total non-motorized trail need for Oregon (Table 9.9). Close-to-home trail development need is by far the largest total cost of non-motorized trail need in the state at $502.8 million, followed by dispersed-setting non-motorized trail rehabilitation ($62.0 million), and close-to home trail major rehabilitation need ($60.9 million). Dispersed-setting non-motorized trail deferred maintenance is the lowest of the cost of non-motorized trail need at $14.7 million.

[164] Since data are not available on the amount of trail maintenance conducted annually on only non-motorized trails, the recreational trails information provided for the USFS includes both motorized and non-motorized costs.

Table 9.9. Total non-motorized trail need cost estimates, Oregon, 2018

Trail Need Category	Estimated Cost
Close-To-Home Trail Development	$502,800,000
Close-To-Home Trail Major Rehabilitation	$60,900,000
Dispersed-Setting Trail Deferred Maintenance	$14,700,000
Dispersed-Setting Trail Major Rehabilitation	$62,000,000
Total	**$640,400,000**

Table 9.10 includes close-to-home non-motorized trail development need for the Oregon. Trail corridor development[165] ($309.8 million) and land and easement acquisition ($89.0 million) are the top development category costs for close-to-home non-motorized trail development need.

Table 9.10. Close-to-home non-motorized trail development need cost estimates, Oregon, 2018

Development Category	Estimated Development Cost
Trail corridor	$309,800,000
Boardwalks	$36,500,000
Bridges	$42,800,000
Culverts	$900,000
Parking	$6,400,000
Access roads	$8,800,000
Restrooms	$8,600,000
Land & easement acquisition	$89,000,000
Total	**$502,800,000**

Table 9.11 includes close-to-home non-motorized trail major rehabilitation need for Oregon. Trail corridor rehabilitation ($46.1 million) is the top rehabilitation category cost for close-to-home non-motorized trail rehabilitation need.

Table 9.11. Close-to-home non-motorized trail major rehabilitation need cost estimates, Oregon, 2018

Rehabilitation Category	Estimated Rehabilitation Cost
Trail corridor	$46,100,000
Boardwalks	$5,800,000
Bridges	$3,500,000
Culverts	$400,000
Parking	$1,000,000
Access roads	$1,600,000
Restrooms	$2,500,000
Total	**$60,900,000**

[165] Includes asphalt, concrete, and natural/ native surface trail (dirt, gravel, or rock) trail construction.

Table 9.12 includes dispersed-setting non-motorized trail deferred maintenance need for Oregon. Trail corridor maintenance ($8.3 million) is the top deferred maintenance category cost for dispersed-setting non-motorized trail deferred maintenance need.

Table 9.12. Dispersed-setting non-motorized trail deferred maintenance cost estimates, Oregon, 2018

Maintenance Category	Estimated Deferred Maintenance Cost
Trail corridor	$8,300,000
Boardwalks	$300,000
Bridges	$400,000
Culverts	$30,000
Parking	$1,200,000
Access roads	$3,400,000
Restrooms	$1,100,000
Total	**$14,730,000**

Finally, Table 9.13 includes dispersed-setting non-motorized trail major rehabilitation need for Oregon. Access road rehabilitation ($28.9 million) and trail corridor rehabilitation ($18.6 million) are the top rehabilitation category costs for dispersed-setting non-motorized trail rehabilitation need.

Table 9.13. Dispersed-setting non-motorized trail major rehabilitation cost estimates, Oregon, 2018

Rehabilitation Category	Estimated Rehabilitation Cost
Trail corridor	$18,600,000
Boardwalks	$1,400,000
Bridges	$900,000
Culverts	$100,000
Parking	$6,300,000
Access roads	$28,900,000
Restrooms	$5,800,000
Total	**$62,000,000**

Signature Trails

The non-motorized trails need data collection effort did estimate the development cost need for proposed signature trail system[166] development in the state. Oregon Coast Trail soft surface trails have an estimated development cost of $18,000 to $40,000 per mile, depending on tread width and grading. There is an estimated 40 miles of trail development needed to complete the Oregon Coast Trail. Salmonberry Trail multi-use hard surface trails have an estimated development cost of $1-$4 million per mile depending on rail with trail design challenges, tread width, grading, and the existing infrastructure

[166] Examples of signature trails include the Salmonberry Trail, Oregon Coast Trail, Joseph Branch Rail Trail, and trails with Scenic or Regional trail designation.

integrity (e.g., bridges, tunnels, rail bed). There is an estimated 84 miles of trail development needed to complete the Salmonberry Trail, including hard surface and soft surface sections. It is important to point out that additional resources will be required for ongoing maintenance of completed signature trail systems.

Discussion

This analysis identifies a $640.4 million total non-motorized trail need for Oregon, not including development and ongoing maintenance costs for signature trail development. This is a conservative estimate, since many trail providers did not complete the reporting exercise. Along with limited resources currently available for non-motorized trail projects, it demonstrates the need for additional resources for maintaining, rehabilitating, and building on the existing non-motorized trail system in Oregon.

Assuming a 20% applicant match; and equal priority for addressing close-to home trail development, close-to-home major rehabilitation, dispersed-setting deferred maintenance, dispersed-setting major rehabilitation, and signature trail development and maintenance; there is a need of approximately $512.3 million without considering signature trails. It would also be reasonable to assign a time period for addressing such need, such as 20 or 30 years.

Table 9.14 identifies suggested annual funding allocations by trail need category for two planning scenarios – addressing identified funding need in a 20 year timeframe and a 30 year timeframe. Annual funding allocations for all trail need categories, with the exception of signature trail development and maintenance, are based on the percentage of total need identified in the data collection effort. Annual funding allocations for signature trail development and maintenance are based on the number of trails to be developed and maintained and the importance placed on tourism development in the state.

Table 9.14. Annual non-motorized trail annual funding allocation for two planning scenarios, Oregon

Trail Need Category	**Scenario #1 20 year timeframe**	**Scenario #2 30 year timeframe**
	Annual funding allocation	
Close-To-Home Trail Development	$20.1 million	$13.4 million
Close-To-Home Trail Major Rehabilitation	$2.4 million	$1.6 million
Dispersed-Setting Trail Deferred Maintenance	$0.6 million	$0.4 million
Dispersed-Setting Trail Major Rehabilitation	$2.5 million	$1.7 million
Signature Trail Development and Maintenance	$9.4 million	$7.9 million
Total Annual Allocation	**$35 million**	**$25 million**
Total Scenario Allocation	**$700 million**	**$750 million**

This analysis identifies a non-motorized trail funding need of $50 - $70 million a biennium. A further analysis is needed to determine the timing for funding distribution across trail need categories. For example, the analysis could identify early funding priority to close the gap on deferred maintenance in dispersed settings or close-to-home trail connectivity to better use the state's existing non-motorized trail infrastructure and provide more trail opportunities.

Funding Objectives

The purpose of a trail fund is to provide, expand, maintain, and improve public recreational trails in Oregon for non-motorized trail use. Based on SCORP findings, a new dedicated funding source for non-motorized trails would encompass the following seven major objectives:

1. Expand the state's outstanding non-motorized trail infrastructure to meet the needs of a growing population.
2. Provide high-quality non-motorized trail experiences that meet the demands of Oregonians.
3. Increase non-motorized trail connectivity[167] to better use the state's existing non-motorized trail infrastructure and provide more trail opportunities.
4. Strengthen the individual health of Oregonians by enabling them to engage in daily physical activity on non-motorized trails.
5. Strengthen Oregon community health by enabling residents to engage in a range of highly valued non-motorized trail activities.
6. Strengthen the economic health of local economies by providing high-quality non-motorized trail opportunities for non-local residents and out-of-state tourists.
7. Support the development and maintenance of priority signature trail systems in the state.

Projects Eligible for Funding

Project users include hikers, backpackers, mountain bike riders, cross-country skiers, equestrians, runners, walkers, bicycle riders, inline skaters and individuals with functional impairments. Eligible funding projects would include non-motorized trail development and major rehabilitation within Urban Growth Boundaries (UGBs)[168] and non-motorized trail maintenance and major rehabilitation in dispersed settings in Oregon. Signature trail system development, major rehabilitation, and trail maintenance projects would also be eligible both within UGBs and in dispersed settings in Oregon.

In general, trail funding is recommended for the following types of non-motorized projects.

Within UGBs:

- New trail construction.
- Heavy trail restoration.
- Development and rehabilitation of trailhead facilities.
- Land and easement acquisition for trail purposes.
- Purchase or lease of trail construction equipment.

[167] Trail connectivity involves linking urban trails to outlying Federal trail systems; linking neighborhood, community and regional trails; connecting community parks and other recreational and public facilities; connecting parks to supporting services and facilities; and connecting neighborhood communities (e.g., Ashland to Medford); and providing alternative transportation routes.

[168] Non-motorized trail projects in dispersed-settings which are intended to make connections to within UGB trail systems can be considered for new trail construction and eligible for new trail construction, trailhead development, land and easement acquisition, and trail construction equipment funding.

- Trail planning and engineering.

Dispersed-settings:

- Heavy trail restoration.
- Rehabilitation of trailhead facilities.
- Routine trail maintenance.
- Purchase or lease of trail maintenance equipment.
- Trail planning and engineering.

Eligible project elements for these types of projects include:

New trail construction. This category includes construction of entirely new trails, expansion of trails, and new linkages between existing trails. This category may include construction of new trail bridges or providing appropriate wayfinding signage along the newly constructed trail.

Heavy trail restoration. This may be interpreted broadly to include any kind of trail restoration, rehabilitation, or relocation. This category may include trail bridge replacements, heavy tread restoration, trail reroutes, or providing appropriate wayfinding signage along an existing trail.

Development and/or rehabilitation of trailhead facilities. This can include parking or staging areas for trails and can include items such as restrooms and trail information kiosks.

Land acquisition for trail purposes. This includes land or easement acquisition for trail development. Acquisition can be by fee simple title or by whatever lesser rights that will insure public access for a minimum of 25 years. Acquisition of any kind of interest in property must be from a willing landowner or seller (not including condemnation).

Purchase or lease of trail construction equipment. The intent is for equipment which is dedicated for trail building. The equipment cannot be used for other activities such as law enforcement of non-trail related construction and maintenance. Vehicles used for transportation, such as trucks, ATVs, side-by-sides, and snowmobiles are not eligible. Renting or leasing of equipment for the purpose of completing specific work elements along an eligible recreation trail, versus purchasing, is recommended when possible.

Routine trail maintenance. This includes work that is conducted on a frequent basis in order to keep a trail in its originally constructed serviceable standard (e.g., mowing, tree and brush pruning, leaf and debris removal, cleaning and repair of drainage structures, culverts, water bars, drains, dips) maintenance of water crossings, and repairs to signs and other amenities. Routine maintenance work is usually limited to minor repair or improvements that do not significantly change the trail location, width, surface, or trail structure.

Purchase or lease of trail maintenance equipment. The intent is for equipment which is dedicated for trail maintenance. The equipment cannot be used for other activities such as law enforcement of non-trail related construction and maintenance. Vehicles used for transportation, such as trucks, ATVs, side-by-sides, and snowmobiles are not eligible. Renting or leasing of equipment for the purpose of completing specific work elements along an eligible recreation trail, versus purchasing, is recommended when possible.

Trail planning and engineering. This includes costs for a land managing agency to complete planning and engineer of a site-specific trail project prior to construction. This category may include hiring a consultant or professional trail planner, or costs for agency staff, to fully develop construction specifications for a trail already identified in a comprehensive plan or other planning document. Associated costs may include environmental evaluation, archaeological review, permits, and other approvals.

Organizations eligible for project funding would include municipal agencies, state agencies, federal government agencies, Tribal governments, other government entities, and non-profit organizations (registered with the State of Oregon as a non-profit for a minimum of 3 years with a Federal Tax ID number).

Alternative Funding Sources

There are many ways to fund recreation trails. The examples listed in this chapter are not exhaustive, and do not reflect an endorsement by any particular agency or organization. Based on input from the non-motorized trails funding advisory committee, this planning effort has identified a list of eight examples of funding sources for a new non-motorized trails fund for Oregon for potential consideration including:

1. State cell phone tax.
2. E-cigarettes.
3. State lodging tax.
4. State rental car tax.
5. Sugary drink excise tax.
6. Employee payroll tax.
7. Gas tax revenues for roads not maintained by ODOT.
8. Lottery bond.

A description of each of these potential funding sources follows. This planning effort did not attempt to recommend a top funding option from this list, and actual trail funding could come from some other source. The background below is offered for comparative purposes only.

State Cell Phone Tax

Oregon currently taxes cell phones with the Emergency Communications Tax, commonly known as the 9-1-1 tax[169]. This tax is 75 cents per month for devices capable of reaching 9-1-1, meaning cell phones are not the only device subject to the tax. As the name implies, the tax revenue is used to pay for the infrastructure of the 9-1-1 system across the state. In recent years, the revenue from this tax has totaled about $43 million annually[170].

[169] Oregon Office of Emergency Management, https://www.oregon.gov/OEM/911/Pages/911-Tax-Distribution.aspx
[170] Oregon Office of Emergency Management, https://www.oregon.gov/OEM/911/Pages/911-Tax-Distribution.aspx

Across the U.S., Oregon has the lowest tax rate on cell phones and wireless devices[171]. Oregon's monthly charge is less than 2% of the U.S. average monthly bill of $41.50. The states bordering Oregon have tax rates both on the high and low ends of the spectrum: Washington has the highest rate in the U.S. (19.24%), California has the 15th highest rate (12.82%), Idaho has the 48th highest rate (2.41%), and Nevada has the 49th highest rate (2.35%). (Note: these rates include local and states sales tax, as well as utility taxes applied to telecommunication devices.)

As mentioned in the youth chapter, a 2017 study[172] identified that ninety-five percent of U.S. families with children eight years and under now have a smartphone, and 78 percent have a tablet. Forty-two percent of children now have their own tablet device. This study found that children 8 and under spend an average of about two-and a-quarter hours a day with screen media, up from 1:55 in 2013. An expanded Oregon cell phone tax could help to reverse a continuing shift towards a virtual indoor reality among Oregon youth by providing close-to-home non-motorized trail opportunities – getting them more physically active outdoors.

The potential revenue from expanding the state cell phone tax is calculated under a number of scenarios. A trails funding appendix contains a detailed explanation of these calculations. From April 2017 through March 2018, the Emergency Communications Tax receipts totaled $43.9 million[173]. This amount implies that there are approximately 4.9 million devices subject to the $0.75 per month ($9 per year) tax. Using this base, the following chart shows additional revenue that could be raised at different tax rates. The tax rates in the chart are selected to show the potential revenue from relatively small increases ($0.25 per month increase) and relatively larger increases ($2.25 per month increase) in the tax. Under the largest tax in the chart ($3 per month), Oregon's total sales tax on cell phones would be 47th highest across U.S. states[174].

Table 9.15. Potential revenue from cell phone tax expansion

Tax increase ($)		Total tax ($)		Approximate	
Annual	**Monthly**	**Annual**	**Monthly**	**tax rate^**	**Additional revenue***
1.20	0.10	10.20	0.85	2.0%	$5.8 to $5.9 million
3	0.25	12	1.00	2.4%	$14.5 to $14.6 million
6	0.50	15	1.25	3.0%	$28.5 to $29.3 million
9	0.75	18	1.50	3.6%	$42.3 to $43.9 million
12	1.00	21	1.75	4.2%	$55.6 to $58.6 million
18	1.50	27	2.25	5.4%	$81.3 to $87.8 million
27	2.25	36	3.00	7.2%	$116.9 to $131.8 million

^Based on average monthly bill of $41.50.
*Additional revenue is calculated by subtracting revenue raised by the current $0.75 tax from the total tax revenue at the new tax rate.

In Table 9.15, there is a range of potential revenue associated with each tax rate. These ranges reflect different levels of consumer responsiveness to tax changes. It is estimated that a $0.10 increase in the monthly tax would generate an additional $5.8 to $5.9 million in revenue. Slightly higher increases of $0.25 and $0.50 per month are estimated to increase revenue by $14.5-$14.6 million and $28.5-$29.3

[171] Tax Foundation, "Wireless Taxes and Fees in 2017," https://taxfoundation.org/cell-phone-taxes-2017/
[172] Common Sense 2017. The common sense consensus: Media use by kids age zero to eight. Online at: https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-kids-age-zero-to-eight-2017
[173] Oregon Office of Emergency Management, https://www.oregon.gov/OEM/911/Pages/911-Tax-Distribution.aspx
[174] Tax Foundation, https://taxfoundation.org/cell-phone-taxes-2017/

million. Revenue estimates continue to increase steadily at higher tax rates, topping out at $116.9 to $131.8 million with a $2.25 per month increase.

Expanding the cell phone tax has the potential to finance non-motorized trail development and maintenance, which may increase physical activity and offset some of the negative health impacts linked to the use of wireless devices. This tax has the potential to generate a large amount of revenue without a large tax hike because there is a large tax base (nearly 5 million devices) and because Oregon currently has the lowest sales tax on wireless devices in the country. For instance, increasing the tax from $0.75 to $0.85 per month could raise almost $6 million per year in revenue and raising the tax to $1.00 per month could raise $14.5-14.6 million. Oregon would still have one of the lowest wireless taxes in the U.S. under these tax increases. In addition, the tax base is likely to be stable in the future as wireless devices remain prevalent, providing steady and predictable revenue flow.

E-Cigarettes

An e-cigarette is a device used for inhaling nicotine vapor. Unlike traditional cigarettes, there is no flame or burning in an e-cigarette. As of 2018, eight states, the District of Columbia, and a number of smaller municipalities levy an excise tax on e-cigarettes and e-cigarette products[175]. In some locations, the tax is charged per unit of vapor liquid. For example, Kansas, Louisiana, North Carolina, and Delaware each have a $0.05 per ml tax. In other cases, the tax is charged as a percentage of the e-cigarette wholesale price, which may include both the e-cigarette device and vapor fluid. This type of tax is levied by California (65.08%), Minnesota (95%), Pennsylvania (40%), and D.C. (60%). Oregon does not currently have a tax on e-cigarettes; however, an e-cigarette tax (65% of wholesale price) was proposed in 2015[176].

Scientists are still discovering the long-term health effects of e-cigarettes[177]. These vapor products are not as detrimental to health as traditional cigarettes and may serve as a cigarette substitute for those looking to quit. Nonetheless, e-cigarettes contain nicotine which is highly addictive, toxic to developing fetuses, and can harm adolescent brain development. In addition, there can be harmful substances in e-cigarette aerosol. A tax on these products can be used to fund other efforts aimed at further improving public health, such as non-motorized trail development and maintenance, which can increase physical activity.

The potential revenue from establishing a statewide e-cigarette tax is calculated under a number of scenarios. The trails funding appendix contains a detailed explanation of these calculations. Since this tax does not currently exist, there is no readily-available data on the amount of e-cigarette sales that would be subject to the tax (i.e. the tax base). However, the tax collections from Pennsylvania are available and can be used to approximate the potential revenue in Oregon. Pennsylvania's tax (40% of wholesale price) generated $7 million during the first 9 months of the 2017 fiscal year[178]. In order to apply

[175] "Vapor Taxes by State, 2018," by Scott Drenkard at the Tax Foundation (March 28, 2018), https://taxfoundation.org/vapor-taxes-2018/
[176] "Vapor Products and Tax Policy," by Scott Drenkard at the Tax Foundation (March 22, 2016), https://taxfoundation.org/vapor-products-and-tax-policy/
[177] Electronic Cigarettes, Centers for Disease Control and Prevention, https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm
[178] "After a rough 2016, vape shops fight back against new e-cigarette tax," by Wallace McKelvey at Penn Live (April 27, 2017), https://www.pennlive.com/politics/index.ssf/2017/04/pa_vape_tax_law_e-cigarettes.html

Pennsylvania's outcome to Oregon, the amount of e-cigarette usage in each state must be approximated. State-specific e-cigarette use is not available but the National Health Interview Survey includes information on e-cigarette use across the U.S.[179] Based on this survey, it is estimated that 3.2% of adults in the U.S. regularly use e-cigarettes. This value, along with census data, is used to estimate Oregon tax collections based on Pennsylvania data by assuming that tax collections are proportional to the number of e-cigarette users in each state. This approach also accounts for different levels of responsiveness to price changes resulting from a tax. Table 9.16 shows revenue projections for tax rates of 20-70% of the e-cigarette wholesale price, which mostly covers the range of tax rates levied by other states.

Table 9.16. Potential revenue from e-cigarette tax

Tax rate (% wholesale price)	Potential Revenue (Annual)
20%	$1.5 to $2 million
30%	$2.2 to $2.6 million
40%	$3 million
50%	$3.1 to $3.8 million
60%	$3 to $4.5 million
70%	$2.6 to $5.3 million

At a tax rate of 20%, revenue is predicted to be $1.5 to $2 million annually. Revenue estimates rise steadily up to the 50% tax rate ($3.1 to $3.8 million). At the two highest tax rates in this analysis (60% and 70%), the revenue ranges become relatively large and illustrate that revenue is highly dependent on consumer response to large price increases. Revenue is projected to be $3 to $4.5 million at a tax of 60%, while the range is $2.6 to $5.3 million at a 70% tax rate. It's possible that e-cigarette use becomes more common since these products are still fairly new to the market. In that case, an e-cigarette tax would generate more revenue than shown in the chart above.

E-cigarettes contain nicotine and aerosol that can negatively impact health. Taxing these products could lower their consumption and raise revenue for health improvement efforts. Non-motorized trail development and maintenance is one area where funding could be applied to achieve better health as trail access may increase physical activity. A tax of 20% of the e-cigarette wholesale price could raise $1.5 to $2 million per year in Oregon. At a tax rate of 70%, revenue is projected between $2.6 and $5.3 million. Revenue projections vary greatly based on the tax rate and consumer responsiveness to higher prices.

There are some notable issues with an e-cigarette tax. The tax may lead to a large reduction in e-cigarette use because there are many tobacco substitutes. This outcome could actually have a negative impact on health because e-cigarettes may be helpful for smokers looking for a substitute for traditional cigarettes[180]. Furthermore, there does not appear to be a large tax base currently. A small tax base can lead to a more volatile revenue source (especially given the aforementioned substitutes). Pennsylvania

[179] QuickStats: Percentage of Adults Who Every Used an E-cigarette and Percentage Who Currently Use E-cigarettes, by Age Group, National Health Interview, United States, 2016, Morbidity and Mortality Weekly Report, https://www.cdc.gov/mmwr/volumes/66/wr/mm6633a6.htm

[180] Electronic Cigarettes, Centers for Disease Control and Prevention, https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm

ran into this issue: revenue was expected to be $13.3 million in fiscal year 2017 ($1.1 million per month), but the state only collected $7 million in the first 9 months ($778k per month)[181].

State Lodging Tax

The lodging tax was established in 2003 to provide funding for Travel Oregon. Over the years, the tax has expanded to fund regional tourism programs and grants for improving communities through tourism. Transient lodging taxes are considered one of the most direct means for collecting revenues from visitors because the tax is paid by in-state and out-of-state travelers. It can be argued that well-developed trail systems contribute to outdoor recreation and tourism. As such, expanding the lodging tax to fund non-motorized trail development and maintenance is consistent with the goals of the tax.

The 2018 Oregon Tourism Stakeholder Survey was designed on behalf of Travel Oregon and regional tourism partners to get feedback from individuals and organizations linked to the tourism industry. The final report[182] states that respondents were asked to indicate how they would prioritize a list of 13 product development opportunities to advance the economic impact of tourism and ensure its vitality and sustainability (page 21). Developing and expanding trail systems important for outdoor recreation or multi-modal transport was the second highest rated opportunity (tied with providing more opportunities for visitors to experience locally grown and produced food), with developing/ improving infrastructure for visitors to experience outdoor recreation and nature-based tourism as the highest rated opportunity.

As of July 1, 2016, the tax rate is 1.8%; but it will drop to 1.5% on July 1, 2020. The tax applies to stays of less than 30 consecutive days at the following:

- Hotels and motels
- Bed and breakfast facilities
- RV sites in RV parks or campgrounds
- Resorts and inns
- Lodges and guest ranches
- Cabins
- Condominiums
- Short-term rental apartments and duplexes
- Vacation rental houses
- Tent sites and yurts in private and public campgrounds
- Any other dwelling unit, or portion of a dwelling unit, used for temporary overnight stays

Across the United States (including D.C. and select territories), 30 states charge lodging taxes and Oregon has one of the lowest rates. When sales tax is also considered, the total state tax on lodging in Oregon is 4th lowest in United States. The median total tax is 6%. Sales tax and lodging tax for each state are shown in the appendix. It is important to note that cities and counties in Oregon charge lodging

[181] "After a rough 2016, vape shops fight back against new e-cigarette tax," by Wallace McKelvey at Penn Live (April 27, 2017), https://www.pennlive.com/politics/index.ssf/2017/04/pa_vape_tax_law_e-cigarettes.html

[182] http://industry.traveloregon.com/content/uploads/2018/11/Driftline_TO_Statewide_2018_Engagement_Survey_-Report.pdf

taxes as well. During 2017, ninety-one cities and sixteen counties in Oregon levied a local lodging tax, ranging from 2% to 13.5%.

The potential revenue from expanding the state lodging tax is calculated under a number of scenarios. The trails funding appendix contains a detailed explanation of these calculations. In FY 2018, lodging tax receipts totaled $38.1 million. This amount implies a lodging tax base of $2.1 billion. Using this base, the following chart shows additional revenue that could be raised at different tax rates. The tax rates in the chart are selected to show the potential revenue from relatively small increases (0.1% to 0.5%) and relatively larger increases (1% to 4%) in the tax. It's worth pointing out that the larger increases still keep the Oregon total sales tax on lodging (sales tax plus lodging tax) below the median across U.S. states.

Table 9.17. Potential revenue from lodging tax expansion

Tax rate increase	New tax rate	Additional revenue*
0.1%	1.9%	$2.1 million
0.5%	2.3%	$10.5 to $10.6 million
1.0%	2.8%	$20.7 to $21.2 million
2.0%	3.8%	$40.6 to $42.4 million
3.0%	4.8%	$59.6 to $63.6 million
4.0%	5.8%	$77.7 to $84.7 million

*Additional revenue is calculated by subtracting 1.8% of the tax base (current tax rate) from the total tax revenue at the new tax rate.

In Table 9.17, there is a range of potential revenue associated with each tax rate. These ranges reflect different levels of consumer responsiveness to tax changes (see appendix for more details). It is estimated that a 0.1% increase in the tax rate would generate an additional $2.1 million in revenue. A slightly higher increase of 0.5% is estimated to increase revenue by $10.5 to $10.6 million. Revenue estimates continue to increase steadily at higher tax rates.

Expanding the state lodging tax may be a straightforward way to fund non-motorized trail development and maintenance. First, trail funding can contribute to tourism, the purpose of the tax, by increasing outdoor recreation opportunities throughout the state. Moreover, expanding the lodging tax can generate a considerable amount of revenue without a large tax hike because there is a large lodging tax base and because Oregon currently has one of the lowest state lodging tax rates. As such, a small tax increase can generate millions of dollars in revenue while keeping the total tax rate relatively low (e.g. 2.3%). However, local lodging taxes may be a barrier to further increases in the state lodging tax. For example, the tax rates in jurisdictions with the highest 2017 tax receipts are 8% in Portland, 5.5% in Multnomah County, 9% in Washington County, 10.4% in Bend, and 9.5% in Lincoln City.

Rental Car Tax

As shown by the non-motorized trail economic impact analysis, non-motorized trail participation in Oregon makes a significant contribution to tourism. As such, a rental car tax may be suitable for funding non-motorized trail development and maintenance because rental car taxes are expected to primarily impact tourists. Currently, Oregon is one of seven states without a statewide rental car tax or fee in the

US[183]. Table 9.18 shows rental car taxes in a number of western states. Along with Oregon, neither California nor Idaho imposes a rental car tax. The other states charge tax rates between 2.5% and 10%.

Table 9.18. Rental car taxes in Western U.S. states

State	Rental Car Tax Rate
Arizona	5%
California	None
Colorado	$2 fee/day
Idaho	None
Montana	4%
Nevada	10%
New Mexico	5% + $2/day
Oregon	**None**
Utah	2.50%
Washington	5.90%
Wyoming	4% surcharge

Source: National Conference of State Legislatures, http://www.ncsl.org/research/fiscal-policy/rental-car-taxes.aspx

Oregon may not have a statewide rental car tax but Multnomah County and Lane County levy taxes on rental cars. These counties are notable in the rental car market because they contain the state's two largest airports. Multnomah County has a 17% tax and took in over $28 million in 2017[184]. In Lane County, the tax rate is 10% and 2017 tax receipts equaled $1.9 million[185].

The potential revenue from establishing a statewide rental car tax is calculated under a number of scenarios. The trails funding appendix contains a detailed explanation of these calculations. Since this tax does not currently exist, there is no readily-available data on the amount of rental car sales that would be subject to the tax (i.e. the tax base). However, the tax collections from county rental car taxes are available (as mentioned above). Based on county tax receipts, Multnomah County's implied tax base is about $170 million and Lane County's implied tax base is about $19 million. In the 2017 calendar year, Portland and Eugene airports, located in Multnomah and Lane counties, accounted for 92.3% of all boarding passengers in Oregon[186]. Since air travelers are some of the most likely individuals to rent cars, it is assumed that the rental car sales in these two counties also make up 92.3% of statewide rental car sales. With this assumption, the approximate statewide rental car tax base is $204.6 million. This value is used to calculate the potential revenue from a statewide rental car tax.

It is important to point out that this tax base is likely an underestimate of the true value for two reasons. First, air travel may not account for all car rentals such that tax collections would come from areas of the state that are not near an airport. Second, some travelers to Portland and Eugene airports may choose to

[183] National Conference of State Legislatures, http://www.ncsl.org/research/fiscal-policy/rental-car-taxes.aspx
[184] Multnomah County Comprehensive Financial Report, https://multco.us/file/68536/download
[185] Lane County Comprehensive Annual Financial Report, https://www.lanecounty.org/UserFiles/Servers/Server_3585797/File/Government/County%20Departments/County%20Administration/Operations/Financial%20Services/FiscalYearEndReports/Lane%20County%20FY17%20CAFR%20Final%20-ALL%20Inserts%20(Reduced%20size).pdf
[186] FAA Passenger Boarding Data for U.S. Airports, https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/

rent cars outside of Multnomah and Lane counties in an effort to avoid the tax, thereby lowering the tax base calculated from county tax receipts.

Using the approximated tax base, Table 9.19 shows the potential revenue that could be raised at different rental car tax rates. Tax rates of 1% to 5% are considered; rates above 5% may be untenable since the existing county tax rates are reasonably high. There is a range of potential revenue associated with each tax rate. These ranges reflect different levels of consumer responsiveness to tax changes (see trails funding appendix for more details). A rental car tax of 1% may raise about $2 million per year. The potential revenue increases by about $2 million for every percentage increase in the tax rate, topping out at $9-10 million under a 5% rate.

Table 9.19. Potential revenue from statewide rental car tax

Tax rate	Tax revenue
1%	$2 million
2%	$3.9 to $4.1 million
3%	$5.8 to $6.1 million
4%	$7.5 to $8.2 million
5%	$9.2 to $10.2 million

Non-motorized trail development and maintenance has the potential to increase tourism by bolstering outdoor recreation throughout Oregon. Due to this connection, a rental car tax, primarily paid by out-of-state travelers, may be a logical approach to fund trails. A considerable amount of funding could be devoted to trails without a high tax rate because Oregon does not currently have a rental car tax and the tax base is likely over $200 million. However, there may be opposition to the tax because there are relatively high rental car taxes levied by Multnomah and Lane counties, which contain the state's two largest airports. Additionally, the tax revenue could be somewhat volatile if the economy fluctuates in the future. In Multnomah County, tax collections declined by about 14 percent from fiscal year 2008 to fiscal year 2010 (i.e. during the "great recession") but have steadily increased since[187]. Lastly, there may be restrictions imposed on sources of the highway fund that would impact a on a tax on vehicles[188].

Sugary Drink Excise Tax

A sugary drink tax is a tax on beverages that are sweetened with sugar (e.g. soda, sports drinks, energy drinks). In general, the tax is charged per ounce of the beverage (e.g. $0.01 per ounce). High sugar consumption is associated with a number of health issues, such as obesity, type 2 diabetes, and hypertension[189]. Researchers and public health advocates have promoted these taxes as a means to decrease sugary drink consumption and improve public health[190]. The generated tax revenue can be used

[187] Multnomah County Comprehensive Financial Report, https://multco.us/file/68536/download
[188] HB 2402 Joint Interim Task Force: Funding for Fish, Wildlife and Related Outdoor Recreation and Education, https://www.dfw.state.or.us/agency/budget/docs/HB%202402%20TASK%20FORCE%20--%20%20FINAL%20REPORT.pdf
[189] "Soda Tax May Cut Sugary Drink Consumption, New Study Finds," by Jesse Hirsch at Consumer Reports (April 12, 2018), https://www.consumerreports.org/soda/soda-tax-may-cut-sugary-drink-consumption-new-study-finds/
[190] Roache and Gostin. The Untapped Power of Soda Taxes: Incentivizing Consumers, Generating Revenue, and Altering Corporate Behavior. International Journal of Health Policy and Management. 2017 Sep; 6(9): 489–493. doi: 10.15171/ijhpm.2017.69

to fund other efforts aimed at further improving public health, such as non-motorized trail development and maintenance. The potential benefits of trail funding include increased physical activity.

In the U.S., no states have passed a sugary drink tax but a number of smaller municipalities levy this type of tax. Berkeley (CA) has a $0.01 per ounce tax which generated $1.6 million in 2016[191]. It has been estimated that this tax lowered sugary drink consumption by 21% in low-income neighborhoods in Berkeley[192]. Philadelphia (PA) also has a sugary drink tax, charging $0.015 per ounce. This tax generated over $70 million from July 2017 to May 2018 (11 months)[193]. The impact of the tax on consumption in Philadelphia is unclear: after the tax, bottlers' sales of sugary drinks declined by roughly 29% in Philadelphia and increased by about 26% in the region surrounding the city[194]. Currently, there are no sugary drink taxes in Oregon. However, there has been a push for such a tax in Multnomah County, although efforts to get on the 2018 ballot have stalled[195].

The potential revenue from establishing a statewide sugary drink tax is calculated under a number of scenarios. The trails funding appendix contains a detailed explanation of these calculations. Since this tax does not currently exist, there is no readily-available data on the amount of sugary drink consumption that would be subject to the tax (i.e. the tax base). However, the tax collections from Berkeley and Philadelphia are available (as mentioned above) and can be used to approximate the potential revenue in Oregon. Based on city tax receipts, the taxable per-capita consumption of sugary beverages is 110.9 ounces per month in Berkeley and 269.7 ounces per month in Philadelphia. The difference in per-capita consumption can be attributed to the Philadelphia tax covering more types of beverages (namely diet soda) and due to different preferences between citizens of these two cities. It is not clear if sugary drink consumption in Oregon is more similar to Berkeley or Philadelphia. As such, potential tax revenue in Oregon is calculated under a number of different per-capita consumption levels. This approach accounts for different levels of sugary drink preference and different levels of responsiveness to price changes resulting from a tax. Table 9.20 shows potential revenue from tax rates of $0.01 and $0.015 per ounce.

Table 9.20. Potential revenue from sugary drink tax

Tax Rate ($/oz)	**Potential Revenue (Annual)**
0.01	$49.7 to $124.3 million
0.015	$74.6 to $186.4 million

Based on Oregon population of 4,142,776 (Source: US Census)

A tax rate of $0.01 per ounce of sugary drink could raise $49.7 to $124.3 million per year. Revenue projections are higher under a tax rate of $0.015, ranging from $74.6 to $186.4 million. The large ranges

[191] City of Berkeley, Sugar Sweetened Beverage Tax Revenues, https://www.cityofberkeley.info/uploadedFiles/Clerk/Level_3_-_General/SSB%20Tax%20Revenues%20032917.pdf

[192] Falbe et al. Impact of the Berkeley Excise Tax on Sugar-Sweetened Beverage Consumption. American Journal of Public Health. 2016 Oct;106(10):1865-71. doi: 10.2105/AJPH.2016.303362

[193] City of Philadelphia, FY 2018 city monthly revenue collections, https://beta.phila.gov/documents/fy-2018-city-monthly-revenue-collections/

[194] Oxford Economics (December 2017), "The Economic Impact of Philadelphia's Beverage Tax." https://www.ameribev.org/files/resources/oe-economic-impact-study.pdf

[195] "Backers of Multnomah County Soda Tax Delay Again, Will Not Pursue November Ballot Spot," by Nigel Jaquiss at Willamette Week (February 23, 2018), http://www.wweek.com/news/2018/02/23/backers-of-multnomah-county-soda-tax-delay-again-will-not-pursue-november-ballot-spot/

in revenue reflect how tax revenue is dependent on whether per-capita consumption in Oregon is more closely related to that of Berkeley (low) or Philadelphia (high).

Frequent consumption of sugary drinks has potentially negative impacts on public health. Taxing these drinks could lower their consumption and raise revenue for health improvement efforts. Non-motorized trail development and maintenance is one area where funding could be applied to achieve better health as trail access is likely to increase physical activity. A sugary drink tax is expected to generate considerable revenue as well. Even at low levels of sugary drink consumption, a $0.01 per ounce tax could generate about $50 million and a tax of $0.015 could generate about $75 million per year. It is worth noting that revenue projections show wide variation across plausible per-capita consumption levels, indicating that the state may need more precise data on Oregonians sugary drink consumption before passing this type of tax.

There are a number of potential problems associated with levying a tax on sugary drinks[196]. Evidence has indicated that this tax could be regressive, imposing a higher burden on those with lower income than those with higher income. In addition, the health benefits of this tax may be overstated due to beverage substitution and tax avoidance. Individuals may substitute other unhealthy beverages (e.g. alcohol) for sugary drinks and shop in untaxed jurisdictions to avoid the tax (e.g. leaving Portland area and shopping over in Washington).

Employee Payroll Tax

An employee payroll tax is collected as a percentage of the salaries received by employees in the state. This type of tax has a large tax base (statewide payroll) and, as a result, large amounts of revenue can be raised with relatively low tax rates. This revenue could be used to fund non-motorized trail development and maintenance, which has the potential to increase physical activity and overall health for many Oregonians.

The Oregon Legislature recently passed an employee payroll tax as part of a transportation investment bill, HB 2017[197]. This large investment in transportation is projected to benefit Oregonians for decades to come. The payroll tax is 0.1% ($1 for every $1000 in payroll) and is allocated to improve public transportation service in rural and urban communities. This tax rate equates to less than $1 per week for the average Oregon worker[198].

The potential revenue from establishing a payroll tax to fund non-motorized trails is calculated under a number of tax rates. ODOT's revenue forecast for the HB 2017 payroll tax is used as a basis for these calculations[199]. This forecast estimates fiscal year collections from 2019-23 for the 0.1% payroll tax. Forecasted tax collections are calculated by multiplying annual statewide payroll by the payroll tax rate. Payroll data come from the Oregon Department of Employment and annual payroll growth is projected using forecasted growth rates in wages and salaries from the Oregon Office of Economic Analysis.

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[196] "The Case Against Soda Taxes," by John Buhl at the Tax Foundation (March 15, 2017), https://taxfoundation.org/case-against-soda-taxes/

[197] Keep Oregon Moving (HB 2017), ODOT, https://www.oregon.gov/odot/pages/hb2017.aspx

[198] Keep Oregon Moving (HB 2017) Frequently Asked Questions, ODOT, https://www.oregon.gov/ODOT/Documents/HB2017-FAQ.pdf

[199] June 2018 Revenue Forecast- HB 2017 New Tax Programs, https://www.oregon.gov/ODOT/Data/Documents/June-2018-Revenue-Forecast-New-HB2017-Tax-Programs.pdf

ODOT's forecast assumes the compliance rate is initially 75% and increases each quarter to a high of 90% by the third quarter of 2020. Table 9.21 shows ODOT's forecasted payroll tax collections from 2019-23. It is estimated the tax will raise $81.6 million in 2019 and that collections will increase up to $113.3 million in 2023.

Table 9.21. ODOT HB 2017 tax revenue

	Collections by Fiscal Year ($)				
ODOT Transit Tax	**2019**	**2020**	**2021**	**2022**	**2023**
0.1% of Payroll	81.6	95.0	102.9	107.9	113.3

Revenue collections are shown in millions.

The ODOT forecast is adapted to calculate potential revenue at different payroll tax rates. Table 9.22 shows the potential funding for non-motorized trails with a payroll tax between 0.01% and 0.05%.

Table 9.22. Potential revenue from payroll tax

Payroll Tax Rate for Trails	**Collections by Fiscal Year ($)**					**How much payroll is required to raise $1 in tax? ($)**
	2019	**2020**	**2021**	**2022**	**2023**	
0.01%	8.2	9.5	10.3	10.8	11.3	10000
0.015%	12.2	14.2	15.4	16.2	17.0	6667
0.02%	16.3	19.0	20.6	21.6	22.7	5000
0.025%	20.4	23.7	25.7	27.0	28.3	4000
0.03%	24.5	28.5	30.9	32.4	34.0	3333
0.035%	28.6	33.2	36.0	37.8	39.7	2857
0.04%	32.7	38.0	41.2	43.2	45.3	2500
0.045%	36.7	42.7	46.3	48.6	51.0	2222
0.05%	40.8	47.5	51.4	54.0	56.7	2000

Revenue collections are shown in millions.

The potential revenue varies widely across tax rates. With a 0.01% tax, collections are forecasted to start at $8.2 million in 2019 and increase up to $11.3 million in 2023. At that tax rate, $1 in tax revenue is raised for every $10,000 in payroll. Meanwhile, the highest tax rate in the table, 0.05%, is forecasted to raise $40.8 to $56.7 million annually during 2019-23. A 0.05% tax requires $2000 in payroll to raise $1 in tax revenue.

Introducing a new payroll tax has the potential to finance non-motorized trail development and maintenance, which may increase physical activity for a large number of Oregonians. This tax has the potential to generate a large amount of revenue with a low tax rate because there is a large, stable tax base. For instance, a tax of 0.02% ($1 tax for every $5000 in payroll) could generate over $16 million annually.

Gas Tax Revenues for Roads Not Maintained by ODOT

In many instances, trail access requires the use of roads that are not maintained by a Department of Transportation (e.g. U.S. Forest Service and BLM roads) and are not constructed and maintained with gas tax revenue. A program could be established to fund non-motorized trail development and maintenance with gas tax revenue generated by the usage of these roads. The proportion of total gas used on these roads could represent the proportion of gas tax revenue dedicated to the program.

The State of Washington currently has this type of program, called the Nonhighway and Off-road Vehicle Activities (NOVA) program. NOVA is a grant program that provides funding to develop and manage recreation opportunities for such activities as cross-country skiing, hiking, horseback riding, mountain biking, hunting, fishing, sightseeing, motorcycling, and riding all-terrain and four-wheel drive vehicles[200]. By statute, activities supported by the NOVA Program must be accessed via a "Non-highway Road", a road open to the public but not constructed with gas tax revenue[201]. NOVA funding comes from off-road vehicle permits and a portion of the state gasoline tax (about 1%) paid by users of off-road vehicles and non-highway roads. As of 2013, the program had about $3.5 million per year in funding[202].

In 2001-02, Washington surveyed state residents about miles driven and fuel used on public roads, back roads and off of roads, as well as recreational activities associated with use of the vehicle on back roads and off of roads. The goal of the study was to measure the proportion of gas tax generated by different types of vehicles operating off-road and on non-highway roads for various recreational purposes[203]. The results of this study showed that an estimated 25.6 million gallons of fuel are used each year on back roads and off of roads, which represents approximately 1% of the gasoline sold in the State of Washington in 2002. This value is used to determine the amount of Washington gas tax revenue allocated to the NOVA program.

The amount of motor fuel tax revenue generated by non-highway use in Oregon can be estimated with a similar methodology. Oregon motor fuel tax revenue was $546.6 million for the fiscal year ending June 30, 2017[204]. Under a $0.34 per gallon tax, this amount of tax revenue implies that motor fuel consumption was about 1.6 billion gallons. The U.S. Energy Information Administration reports a similar amount of motor fuel consumption for Oregon in 2016 (38 million barrels, or 1.6 billion gallons)[205]. The next important piece of information is the amount of fuel consumption used on non-highway roads. According to the Federal Highway Administration, recreational non-highway gas usage in Oregon was estimated at 25.9 million gallons in 2015[206] and 28.2 million gallons in 2016[207]. Considering all of these values, non-highway fuel use is estimated to account for roughly 1.75% of total fuel use in Oregon (28.2 million barrels on non-highway roads divided by 1.6 billion gallons of total use). An Oregon NOVA program would have about $9.6 million in funding if this rate were to determine the amount of gas tax revenue dedicated to it. Since these values are not exact, Table 9.23 shows potential NOVA funding at different proportions of total fuel tax revenue. If the program received

[200] Washington State Recreation and Conservation Office, https://www.rco.wa.gov/grants/nova.shtml
[201] Washington Department of Fish and Wildlife, https://wdfw.wa.gov/grants/nova/
[202] 2013-2018 Washington State Nonhighway and Off-road Vehicles Activities Plan, https://www.rco.wa.gov/documents/rcfb/nova/2013-2018NOVA_Plan&Appendices.pdf
[203] Washington State Nonhighway and Off-road Vehicle Activities Fuel Use Survey, https://www.rco.wa.gov/documents/rcfb/nova/NOVA_Fuel_Report.pdf
[204] ODOT Annual Financial Report, https://www.oregon.gov/ODOT/About/Finance/2017AFR.pdf
[205] US Energy Information Administration, State Profile and Energy Estimates, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/sum_use_tot.html&sid=OR
[206] Federal Highway Administration, Private and Commercial Nonhighway Use of Gasoline – 2015, https://www.fhwa.dot.gov/policyinformation/statistics/2015/pdf/mf24.pdf
[207] Federal Highway Administration, Private and Commercial Nonhighway Use of Gasoline – 2016, https://www.fhwa.dot.gov/policyinformation/statistics/2016/pdf/mf24.pdf

as little as 0.5% of motor fuel tax revenue, annual funding would be about $2.7 million. Meanwhile, funding could be as high as $10.9 million with 2% of motor fuel tax revenue.

Table 9.23. Potential revenue from reallocation of ODOT gas tax revenues

Proportion of motor fuel revenue	Funding ($)*
0.5%	$2.7 million
1.0%	$5.5 million
1.5%	$8.2 million
2.0%	$10.9 million

* Based on 2017 total fuel tax revenue of $546.6 million.

A non-highway and off-road vehicle activities program, funded by gas tax revenue, may be a viable way to support non-motorized trail development and maintenance. Non-highway roads are important for trail access and their users generate motor fuel tax revenue. This relationship illustrates the connection between trail funding and motor fuel tax revenue. In addition, considerable funding could be available using a small proportion of gas tax revenue because this revenue source is so large (over half a billion dollars). For example, 1% of annual gas tax revenue would provide about $5.5 million for trail funding (this is the proportion that Washington's program receives). Nonetheless, there are hurdles associated with developing a non-highway and off-road vehicle activities program. For example, a fuel use study may be necessary in order to determine how much of the gas tax revenue should be allocated to the program. In Washington, this type of study took place for a year and was administered by an outside contractor.

Lottery Bond

The final funding option for consideration is a lottery bond such as the Oregon Parks for the Future Fund[208]. Under ORS 390.067, this statute allows for State Park lottery bonds to be issued at the request of the State Parks and Recreation Director in an amount sufficient to provide a $105 million of net proceeds to pay costs of state park projects, plus the amounts required to pay bond-related costs. The net proceeds from the sale of state park lottery bonds are available to pay costs of state park projects are credited to the Oregon Parks for the Future Fund. The state of Oregon may consider a similar fund with proceeds going into an Oregon Non-motorized Trails Fund.

Administering the Fund

Based on input from the non-motorized trails funding advisory committee, this planning effort has identified a list of four potential administrative options to consider if a non-motorized trails fund for Oregon materializes:

1. OPRD administers the fund in a similar manner as the existing Recreation Trail Program.
2. Create a Semi-Independent Board and Agency similar to the Oregon Tourism Commission.
3. Establishing an Oregon Recreational Trails Investment Trust Fund.
4. Establish an independent nonprofit organization.

[208] https://www.oregonlaws.org/ors/390.067

A description of each of these potential funding administration options follows. This planning effort did not attempt to recommend a top funding administration option from this list.

OPRD Administration

The first option is to have OPRD administer the fund in a similar manner as the existing Recreational Trails Grant Program. As previously mentioned, the Oregon RTP is administered by the OPRD. The agency has experience with administering a program that can be used for new trail construction; heavy trail restoration; trailhead facilities; purchase of tools to construct and/or renovate trails; land acquisition for trail purposes; and safety and educational programs. As a result, the agency has grant administrators and accounting support which could take advantage of existing resources in a cost effective manner. OPRD grant administrators provide technical support to local governments, helping make projects competitive and align with program criteria. This is particularly important for rural or small communities, which often lack professional park and recreation planners and staff. It would be advisable to add a professional trail planner or engineer with trail development expertise to provide technical design and development assistance for grant applicants.

Biennial funding priorities could be set by an advisory group such as the existing Oregon Recreation Trails Advisory Council (ORTAC). ORTAC consists of seven members, at least one from each congressional district and not less than two members from separate counties bordering upon the ocean shore. Members of the Council are appointed by the Oregon Parks and Recreation Commission. Commission members, appointed by the Governor and confirmed by the State Senate, currently provide oversight for all grant programs administered by the agency. This Commission role could be expanded to include oversight of a new non-motorized trail fund.

Create a Semi-Independent Board and Agency

The second option involves the creation of a Semi-Independent Board and Agency similar to the Oregon Tourism Commission to administer the fund. Other examples include Oregon Public Broadcasting, the Oregon Health Sciences University, and the SAIF Corporation. Semi-independent agencies are set apart from typical state agencies in the following ways:

- They are self-funded with no access to General Funds or Emergency Board bailouts.
- They are exempt from some statutes which are better suited for or designed for governance of larger boards or agencies.
- They have fiscal accountability through published annual financial reports to the Department of Administrative Services (DAS), subject to biennial outside independent financial or audit review, validated and published by SOS Audits Division.
- Their budgets are set by rule-making via the public hearing process, with notices to all interested parties.
- Their policies are approved by DAS. A Biennial Board key performance measurement report goes to the Governor, Legislators, and Legislative Fiscal Office.

Advantages of Semi-Independent agencies include savings of time and money and better customer services through quicker response times, shortened budget cycles, no charges for use of DAS time and services, ability to comparison shop, and best practices shared between like agencies.

Disadvantages of Semi-Independent agencies include as a different form of governance, they are often a target for challenge and change during every legislative session. The Executive Director also takes on all of the functions typically provided by DAS Shared Client Services for most small agencies such as accounting and payroll.

Establish an Oregon Recreational Trails Investment Trust Fund.

The Trust Fund would serve as a repository for both public and private moneys for the creation of a long-term, protected endowment. An example is the Oregon Cultural Trust administered by the Oregon Arts Commission. Funding sources for the Oregon Cultural Trust include charitable donations with tax credit incentives. A credit is allowed against personal or corporation income tax for contributions made to the Trust for Cultural Development. In order to qualify for the credit, the taxpayer must first make a contribution to one of the more than 1,300 Oregon cultural organizations that is exempt from federal income taxes and then make a contribution of equal or lesser value to the Trust for Cultural Development Account. The Oregon Arts Commission provides leadership, funding and arts programs through its grants, special initiatives and services. Nine commissioners, appointed by the Governor, determine areas needs and establish policies for public support of the arts. The Arts Commission became part of the Oregon Business Development Department in 1993. In 2003, the Oregon legislature moved the operations of the Oregon Cultural Trust to the Arts Commission, streamlining operations and making use of the Commission's expertise in grant-making, arts and cultural information and community cultural development. The Arts Commission is supported with general funds appropriated by the Oregon legislature, federal funds from the National Endowment for the Arts and funds from the Oregon Cultural Trust.

Establish an Independent Nonprofit Organization.

An example of an independent nonprofit organization is the Energy Trust of Oregon. The Energy Trust of Oregon, based in Portland, Oregon, helps utility customers in Oregon benefit from efficient energy use and generating renewable energy. Energy Trust offers services, cash incentives and other energy solutions to customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas in Oregon and customers of NW Natural in Washington.

In 1999, the Oregon Legislature passed an electric industry restructuring law, SB 1149, with the intent of establishing a stable, consistent funding source for residential, commercial and industrial electric efficiency, renewable energy and market transformation programs. The legislation requires the state's largest investor-owned utilities to collect a 3 percent public purpose charge and authorize the Oregon Public Utility Commission (OPUC) to direct a portion of those funds to an independent, non-government entity.

In 2000 and 2001, the OPUC and interested parties helped form the nonprofit Energy Trust of Oregon. The nonprofit has an independent board of directors and operates consistent with a grant agreement with the OPUC. In 2001, Energy Trust articles of incorporation and bylaws were adopted and the first executive director hired. Energy Trust also has two advisory councils, the Conservation Advisory Council and Renewable Energy Advisory Council, to provide stakeholder perspectives on its programs, budgets and actions plans.

Energy Trust is funded by customers of Portland General Electric, Pacific Power, NW natural and Cascade Natural Gas. Customers of all four utilities pay a dedicated percentage of their utility bills to support a variety of energy efficiency and renewable energy services and programs.

As part of its oversight of Energy Trust, the OPUC adopted performance measures against which to benchmark Energy Trust's performance. OPUC performance measures are typically updated annually. Energy Trust provides the OPUC with quarterly and annual reports measuring actual performance against the target metrics. Energy Trust also maintains detailed goals for energy savings and generation of its Five Year Strategic Plan.

Such an approach could potentially work with an expanded cell phone tax, where telephone companies providing local exchange access services in Oregon collect this tax from their customers, with oversight from OPRD.

Implementation Actions

This chapter identified eight example funding options that the SCORP non-motorized trail funding subcommittee agreed are worthy of further consideration though there are undoubtedly others. More work is needed to identify other options, evaluate fiscal and economic implications, look at implementation requirements (legal review, etc.), social acceptability, and degree of association with intended use. Any funding option that involves re-allocating existing funding sources would affect the entities or programs currently receiving that funding there would be related trade-offs. This assessment can also consider potential economic effects and determine realistic limits on tax rates or revenue obtained. The assessment will need to consider and compare the benefits of each funding option against the challenges involved in its implementation. Revenue options with limited funding potential and significant implementation challenges may be discarded from consideration. The assessment should also examine the funding administrative options included in this chapter for potential revenue sources. Stakeholder outreach and vetting will be required to garner and ensure political support. (Note: See HB 2402 Joint Interim Task Force Report Funding for Fish, Wildlife and Related Outdoor Recreation and Education for use as a guide for advancing further study and implementation.[209])

State-funded non-motorized trails funding requires a combination of an enabling mechanism creating the program (e.g., statute or constitutional amendment) and a revenue source. The most successful, secure programs link a dedicated funding source to the program from the outset. There are two primary methods to enable funds for non-motorized trails in Oregon relevant to the list of potential funding sources, including statutes that dedicate specific revenue and a statewide ballot initiative. An analysis should be conducted to identify if a statute or constitutional amendment is the preferred method of advancing the effort for non-motorized trail funding. A proposed bill may come from an individual, group, or state agency. Initiative is the process by which registered voters can place on the ballot any issue that amends the Oregon Constitution, the Oregon Revised Statutes. Essentially, initiative allows the people to create new law apart from the Legislature. Anyone acting individually or on behalf of an organization may sponsor an initiative or referendum petition as a chief petitioner. No single method is immune to challenges, including diversion or borrowing by the legislature, declines in general fund revenue, economic volatility, and sunset clauses that require renewal efforts.

[209] https://www.dfw.state.or.us/agency/budget/docs/HB%202402%20TASK%20FORCE%20--%20%20FINAL%20REPORT.pdf

The funding options identified will require some form of State action and related implementation. A program can be prepared that provides a technical profile for each funding option that specifies the legislative or procedural changes necessary for implementation. This information must be sufficient for legislative or procedural drafting.

These implementation steps comprise a substantial technical and policy review effort before a sound legislative and implementation program can be determined. As a result, it will be necessary to assemble a coordinating body with the necessary skills and resources to complete the draft legislation and other implementation measures. The new Oregon Office of Outdoor Recreation, within OPRD, would be a likely candidate for spearheading such an effort. As the entity responsible for coordinating outdoor recreation policy between local, state, federal and tribal government entities, and with the private sector, the Office of Outdoor Recreation is well-positioned to lead this assignment. Enabling legislation specifically states "the office may recommend, adopt, or assist in the implementation of policies and initiatives that[210]:

a. Encourage development of the outdoor recreation industry in a manner that improves recreational opportunities in Oregon;
b. Maximize public and private investment in the outdoor recreation industry and in outdoor recreation activities in Oregon.

In addition, this group must create a coordination structure necessary for a successful advocacy effort. Building a strong, diverse team of advocates from nonprofits, businesses, professional associations, and local communities will benefit not only the passage of the legislation, but also ensure broad support and balanced oversight going forward. Establishing strong coalitions that support the funding ensures long-term success and accountability, and can help sustain population and political support[211]. Coalition support could come from the following organizations in the state (Table 9.24). Table 9.25 includes a list of public health and health care/ health system organizations that might support additional funding for non-motorized trails.

Note: These lists are provided as a reference. Undoubtedly, there will be other important interested parties that emerge during the coalition building process.

Table 9.24. List of organizations to approach about forming a potential non-motorized trail fund coalition

40 Mile Loop Land Trust	Greater Oakridge Area Trail Stewards	Oregon Outdoors
44 Trails Association	Happy Valley Hikers	Oregon Recreation & Park Association
Access Recreation	High Cascades 100	Oregon Timber Trail Association
African American Outdoors Association	Historic Columbia River Highway Advisory Committee	Oregon Trail State Volkssport Association
American Hiking Society	Hood River Area Trail Stewards	Oregon Trails Coalition
American Trails	International Mountain Biking	Oregon Wild

[210] https://www.oregonlaws.org/ors/390.233
[211] State Funding Mechanisms for Outdoor Recreation. Outdoor Industry Association. August 2017.

	Association	
Applegate Trails Association	Jackson County Horseman's Association	Oregon-California Trails Association
Ashland Mountain Adventure	Jacksonville Woodlands Association	Outdoor Industry Association
Ashland Woodlands and Trail Association	Joseph Branch Trail Consortium	Pacific Crest Trail Association
Association of Oregon Counties	Klamath Trails Alliance	Pendleton on Wheels
Back Country Horsemen of Oregon	Land of Umpqua Mountain Bike Riders	Rogue Area Trail Stewards
Bear Creek Greenway Foundation	League of Oregon Cities	Rogue River Greenway Foundation
Blackrock Mountain Bike Association	Lower Umpqua Mountain Bike Riders	Rogue Valley Mountain Bike Association
Blue Mountain Single Track Trails Club	Mazamas	Sagebrush Cycles
Cascade Cream Puff, LLC	Molalla River Watch	Salem Area Trail Alliance
Central Oregon Trails Alliance	National Coast Trail Association	Siskiyou Mountain Club
Coalition For A Healthy Oregon	Nearby Nature	Siskiyou Upland Trails Alliance
Conservation Alliance	North Umpqua Trail Stewards	Sisters Trail Alliance
Corvallis to the Sea Trail Partnership	Northwest Coast Trail Alliance	Southern Oregon Running Enthusiasts
Crater Lake Institution	Northwest Trail Alliance	Southern Oregon Trail Alliance
Deschutes Trails Coalition	Northwest Youth Corps	Team Dirt
Disabilities Recreation Project	npGreenway	The Intertwine
Disciples of Dirt	Oregon Adaptive Sports	The Nature Conservancy
Discover Your Forest	Oregon Caves Natural History Association	The Salmonberry Coalition
Eastern Oregon Trail Alliance	Oregon Equestrian Trails	Tillamook Estuaries Partnership
Forest Park Conservancy	Oregon Horse Council	Trailkeepers of Oregon
Friends of Gateway Green	Oregon Medical Association	Trust For Public Lands
Friends of the Columbia Gorge	Oregon Mountain Biking Coalition	Tualatin Riverkeepers
Friends of the Umpqua Hiking Club	Oregon Natural Desert Association	Unlikely Hikers
Friends of the Yamhelas Westsider Trail	Oregon Nordic Club	Vive Northwest
Friends of Tryon Creek State Park	Oregon Outdoor Alliance	Yachats Trails Committee

Table 9.25. List of public health and health care/ health system organizations that might support additional funding for non-motorized trails

American Association of Retired People	Linn-Benton Health Equity Alliance	Oregon Primary Care Association
American Cancer Society	Mid-Columbia Health Equity Alliance	Oregon Public Health Association
American Diabetes Association	Northeast Opportunity Network	Oregon Public Health Institute
American Heart Association	Oregon Community Health Workers Association	Sky Lakes Medical Center (Klamath County)
American Lung Association	Oregon Health Equity Alliance	Southern Oregon Health Equity Coalition
Kaiser Permanente-Community Benefit	Oregon Medical Association	Upstream Public Health
Knight Cancer Institute	Oregon Nurses Association	

CHAPTER TEN: NEEDS ASSESSMENT

Introduction

The 2019-2023 SCORP effort included two distinct methods to identify recreational need. The first method involved a survey of Oregon public recreation providers during a period between May 11 and June 4, 2018[212]. Two separate survey instruments were used for the survey, one completed by recreation providers with the majority of their managed parklands located within an Urban Growth Boundary (UGB), unincorporated community boundary, or a tribal community; and the other by recreation providers with the majority of parklands outside of such boundaries.

The sample included municipal, special park district, port district, county, state, federal, and Tribal recreation providers. The survey was conducted online, on the Survey Monkey website. Of the 417 providers contacted, 214 completed the survey for a 51% response rate. Survey respondents included 139 providers with the majority of their managed parklands located within an UGB and 75 respondents with the majority of parklands outside of an UGB. Respondents were asked to rate the importance of county-level funding need for a variety of recreation projects in their jurisdiction in the coming five years. State and county-level priorities identified from this analysis are included below.

The second method was a component of the statewide survey of Oregon residents (2017 Oregon Resident Outdoor Recreation Survey) conducted by the Oregon Parks and Recreation Department[213]. Residents were asked to rate a list of 21 priorities by answering the following question. "Now please tell us about your priorities for the future – what should park and forest agencies invest in? For each of the following amenities, please indicate the level of priority for future investment – separately for in your community and outside your community". Specific items were rated using a 5-point Likert scale (1=Lowest priority need to 5=Highest priority need). General population and key demographic group priorities identified from this analysis at the urban, suburban, and rural levels are included below. Priority needs listed include the top five priorities by average score of visitor responses using a 5-point Likert scale (1=Lowest priority need to 5=Highest priority need).

The public recreation provider survey identified need at the statewide and county levels. The Oregon resident survey identified need at the statewide level and urban, suburban, and rural levels for the general population, young old (age 60-74 years), middle old (age 75-84 years), Latino, Asian, families with children, and low income populations.

Public Recreation Provider Need

The following are recreational needs identified in the statewide survey of Oregon public recreation providers.

[212] Bergerson, T. 2018. 2018 Oregon Park and Recreation Provider Survey: 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Salem, OR: Oregon Parks and Recreation Department. URL: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2018OregonParksRecreationProviderSurvey.pdf.
[213] Bergerson, T. 2018. 2017 Oregon Resident Outdoor Recreation Survey: 2019-2023 Oregon Statewide Comprehensive Outdoor Recreation Plan Supporting Documentation. Salem, OR: Oregon Parks and Recreation Department. URL: https://www.oregon.gov/oprd/PLANS/docs/scorp/2019-2023SCORP/2017OregonResidentOutdoorRecreationSurvey.pdf.

Statewide Need

Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Score**	**Dispersed-Area Priorities**	**Score**
Community trail systems	3.98	Restrooms	3.96
Restrooms	3.74	RV / trailer campgrounds & facilities	3.83
Children's playgrounds and play areas built with manufactured structures	3.70	Day-use hiking trails	3.74
Picnic areas and shelters for small visitor groups	3.48	Connecting trails into larger trail systems	3.69
Trails connected to public lands	3.45	Interpretive displays	3.43
Picnicking/ day use and facilities	3.45		

County-level Need

BAKER COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Amphitheater / band shell	4.50	Restrooms	4.00
Visitor center and program facilities	4.50	Cabins and yurts for visitors	4.00
Community trail system	3.00	Connecting trails into larger trail systems	3.75

BENTON COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	4.50	Connecting trails into larger trail systems	5.00
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	4.50	Acquisition of trail corridors and rights of way	4.00
Interpretive displays	4.50	Restrooms	4.00

CLACKAMAS COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connecting adjacent communities	4.86	Restrooms	4.50
Community trail system	4.71	Group campgrounds and facilities	4.50
Trails connected to public lands	4.71	Connecting trails into larger trail systems	4.25

CLATSOP COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Urban bike paths (separate from street traffic)	4.00	Restrooms	4.14
Community trail system	3.80	Day-use hiking trails	4.00
Picnic areas and shelters for large visitor groups	3.40	Interpretive displays	3.71

COLUMBIA COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Land acquisition for access to public waterways	5.00	Connecting trails into larger trail systems	5.00
Community trail system	5.00	Mountain biking (single track) trails/ areas	5.00
Trails connecting adjacent communities	5.00	Cabins and yurts for visitors	4.67

COOS COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	4.29	Restrooms	3.70
Trails connecting adjacent communities	3.83	Day-use hiking trails	3.40
Tennis/ basketball/ volleyball courts (outdoors)	3.83	Mountain biking (single track) trails/ areas	3.40

CROOK COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	5.00	Restrooms	4.63
Restrooms	5.00	Connecting trails into larger trail systems	4.38
Land acquisition for public access to waterways	5.00	Cabins and yurts for visitors	4.38

CURRY COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Restrooms	4.33	Acquisition of trail corridors and rights of way	4.40
Motorized boat launches and support facilities	4.00	Restrooms	4.40
Picnicking/ day use and facilities	3.67	Land acquisition for access to public waterways	3.50

DESCHUTES COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	5.00	Connecting trails into larger trail systems	4.44
Community trail system	4.50	Day-use hiking trails	4.44
Trails connected to public lands	4.50	Restrooms	4.22

DOUGLAS COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	4.00	Restrooms	4.13
Restrooms	3.90	Connecting trails into larger trail systems	4.00
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	3.80	Day-use hiking trails	4.00

GILLIAM COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Picnic areas and shelters for small visitor groups	4.00	Restrooms	4.67
River or lake fishing from bank or pier	3.60	Cabins and yurts for visitors	4.67
Trails connected to public lands	3.40	Land acquisition for access to public waterways	4.33

GRANT COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connected to public lands	4.00	Connecting trails into larger trail systems	4.33
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	4.00	Mountain biking (single track) trails/ areas	4.00
Dog off-leash areas/ dog parks	4.00	Restrooms	4.00

HARNEY COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of parklands for developed recreation	5.00	Connecting trails into larger trail systems	3.83
Community trail system	5.00	Acquisition of trail corridors and rights of way	3.67
Skateboard parks	5.00	Restrooms	3.67

HOOD RIVER COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of trail corridors and rights of way	5.00	Picnic areas and shelters for large visitor groups	5.00
Community trail system	5.00	Cabins and yurts for visitors	4.50
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	5.00	Group campgrounds and facilities	4.50

JACKSON COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of trail corridors and rights of way	4.75	Restrooms	4.40
Community trail system	4.75	Cabins and yurts for visitors	4.40
Dog off-leash areas/ dog parks	4.75	Tent campgrounds and facilities (car camping)	4.20

JEFFERSON COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Exercise trails	4.75	Restrooms	4.75
Trails connecting adjacent communities	4.75	RV/ trailer campgrounds and facilities	4.75
Community trail system	4.50	Motorized boat launches and support facilities	4.50

JOSEPHINE COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of trail corridors and rights of way	5.00	Restrooms	4.33
Acquisition of parklands for developed recreation	5.00	Day-use hiking trails	4.00
Community trail system	5.00	Cabins and yurts for visitors	3.83

KLAMATH COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of parklands for developed recreation	5.00	Restrooms	4.00
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	5.00	Tent campgrounds and facilities (car camping)	4.00
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	5.00	Day-use hiking trails	3.80

LAKE COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Acquisition of parklands for developed recreation	5.00	RV/ trailer campgrounds and facilities	4.20
Exercise trails	5.00	Tent campgrounds and facilities (car camping)	4.20
Skateboard parks	4.60	Long-distance hiking/ backpacking trails	4.00

LANE COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connecting adjacent communities	4.50	Connecting trails into larger trail systems	4.71
Urban bike paths (separate from street traffic)	4.50	Day-use hiking trails	4.57
Community trail system	4.00	Off-highway vehicle trails/ areas	4.43

LINCOLN COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connecting adjacent communities	4.00	Restrooms	4.43
Community trail system	3.86	RV/ trailer campgrounds and facilities	4.29
Restrooms	3.57	Day-use hiking trails	4.00

LINN COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	4.00	Connecting trails into larger trail systems	4.60
Picnicking/ day use and facilities	3.88	Day-use hiking trails	4.60
Trails connected to public lands	3.63	Group campgrounds and facilities	4.40

MALHEUR COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	5.00	Cabins and yurts for visitors	3.75
Urban bike paths (separate from street traffic)	5.00	Restrooms	3.50
Outdoor pool/ spray park	5.00	Connecting trails into larger trail systems	3.25

MARION COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	4.17	Day-use hiking trails	4.38
Acquisition of parklands for developed recreation	3.83	Connecting trails into larger trail systems	4.25
Picnicking/ day use and facilities	3.83	Group campgrounds and facilities	4.25

MORROW COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connected to public lands	4.00	Restrooms	4.50
Picnic areas and shelters for small visitor groups	4.00	RV/ trailer campgrounds and facilities	4.50
Community trail system	3.50	Cabins and yurts for visitors	4.50

MULTNOMAH COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connected to public lands	5.00	Cabins and yurts for visitors	5.00
Urban bike paths (separate from street traffic)	5.00	Connecting trails into larger trail systems	4.67
Acquisition of natural open space	4.67	Day-use hiking trails	4.67

POLK COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	5.00	Day-use hiking trails	4.33
Exercise trails	5.00	Restrooms	4.33
Tennis/ basketball/ volleyball courts	5.00	Picnicking/ day use and facilities	4.00

SHERMAN COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Outdoor pool/ spray park	5.00	Restrooms	4.75
Picnic areas and shelters for small visitor groups	4.00	Land acquisition for access to public waterways	4.25
Restrooms	3.00	Cabins and yurts for visitors	4.25

TILLAMOOK COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connected to public lands	4.25	Restrooms	4.63
Trails connecting adjacent communities	4.25	Connecting trails into larger trail systems	4.25
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	4.25	Tent campgrounds and facilities (car camping)	4.00

UMATILLA COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	4.00	Restrooms	4.50
Restrooms	3.80	RV/ trailer campgrounds and facilities	4.50
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	3.60	Cabins and yurts for visitors	4.50

UNION COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
RV/ trailer campgrounds and facilities	4.25	Restrooms	4.75
Community trail system	3.75	Acquisition of trail corridors and rights of way	4.50
Outdoor pool/ spray park	3.75	Connecting trails into larger trail systems	4.50

WALLOWA COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Community trail system	3.45	Restrooms	4.75
Exercise trails	3.45	Acquisition of trail corridors and rights of way	4.50
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	3.45	Connecting trails into larger trail systems	4.50

WASCO COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Tent campgrounds and facilities (car camping)	4.50	Cabins and yurts for visitors	4.50
Urban bike paths (separate from street traffic)	4.25	Connecting trails into larger trail systems	4.17
RV/ trailer campgrounds and facilities	4.25	Land acquisition for access to public waterways	4.00

WASHINGTON COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Trails connecting adjacent communities	5.00	Day-use hiking trails	4.13
Community trail system	4.80	Interpretive displays	4.00
Acquisition of parklands for developed recreation	4.60	Nature study/ wildlife sites	4.00

WHEELER COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Restrooms	4.33	Connecting trails into larger trail systems	4.50
RV/ trailer campgrounds and facilities	4.33	Restrooms	4.50
Group campgrounds and facilities	4.00	Cabins and yurts for visitors	4.50

YAMHILL COUNTY NEED			
Oregon Public Recreation Provider Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	5.00	Day-use hiking trails	5.00
Community trail system	4.50	Connecting trails into larger trail systems	4.67
Restrooms	4.50	Restrooms	4.67

Oregon Resident Need

The following are recreational needs identified in 2017 Oregon resident outdoor recreation survey. Table 10.1 summarizes all top rated recreational funding priorities by demographic group

Statewide Need

Oregon Resident Outdoor Recreation Survey[214]			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Dirt/ other soft surface walking trails and paths	3.71	Dirt/ other soft surface walking trails and paths	3.68
More restrooms	3.62	Nature and wildlife viewing areas	3.65
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.54	More restrooms	3.59
Nature and wildlife viewing areas	3.52	Public access sites to waterways	3.57
Public access sites to waterways	3.52	More places and benches to observe nature and others	3.36

Statewide Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Dirt/ other soft surface walking trails and paths	3.70	Nature and wildlife viewing areas	3.74
Nature and wildlife viewing areas	3.64	More restrooms	3.73
More restrooms	3.63	More places and benches to observe nature and others	3.64
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.62	Dirt/ other soft surface walking trails and paths	3.61
Public access sites to waterways	3.60	Public access sites to waterways	3.53

Statewide Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Dirt/ other soft surface walking trails and paths	3.78	More restrooms	3.76
More restrooms	3.61	Nature and wildlife viewing areas	3.73
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.52	Dirt/ other soft surface walking trails and paths	3.71
Nature and wildlife viewing areas	3.52	Public access sites to waterways	3.66
Public access sites to waterways	3.46	More places and benches to observe nature and others	3.47

[214] Since Oregon grant programs do not fund ongoing maintenance, "cleaner restrooms" has been removed from this funding priority list.

Statewide Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.63	Public access sites to waterways	3.63
Public access sites to waterways	3.57	More restrooms	3.59
Dirt/ other soft surface walking trails and paths	3.55	Dirt/ other soft surface walking trails and paths	3.55
Picnic areas & shelters for small visitor groups	3.50	Nature and wildlife viewing areas	3.51
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.48	Picnic areas & shelters for small visitor groups	3.37

Young Old Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.88	Nature and wildlife viewing areas	3.87
Public access sites to waterways	3.80	More restrooms	3.85
Nature and wildlife viewing areas	3.79	Dirt/ other soft surface walking trails and paths	3.77
Dirt/ other soft surface walking trails and paths	3.76	Public access sites to waterways	3.70
More places and benches to observe nature and others	3.60	More places and benches to observe nature and others	3.63

Young Old Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.81	More restrooms	3.80
Dirt/ other soft surface walking trails and paths	3.71	Nature and wildlife viewing areas	3.68
Nature and wildlife viewing areas	3.58	Dirt/ other soft surface walking trails and paths	3.68
Security cameras in key places	3.54	Public access sites to waterways	3.54
Public access sites to waterways	3.50	More places and benches to observe nature and others	3.46

Young Old Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.65	Public access sites to waterways	3.82
Public access sites to waterways	3.65	Dirt/ other soft surface walking trails and paths	3.71
Dirt/ other soft surface walking trails and paths	3.60	Nature and wildlife viewing areas	3.68
Picnic areas and shelters for small visitor groups	3.46	More restrooms	3.64
Nature and wildlife viewing areas	3.42	Picnic areas and shelters for small visitor groups	3.38

Middle Old Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Picnic areas and shelters for small visitor groups	3.69	Nature and wildlife viewing areas	3.75
Public access sites to waterways	3.68	Public access sites to waterways	3.75
More restrooms	3.66	More restrooms	3.65
Security cameras in key places	3.56	Picnic areas and shelters for small visitor groups	3.58
More places and benches to observe nature and others	3.54	More places and benches to observe nature and others	3.48

Middle Old Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.54	Nature and wildlife viewing areas	3.59
Picnic areas and shelters for small visitor groups	3.41	More restrooms	3.50
More places and benches to observe nature and others	3.41	Public access sites to waterways	3.40
Nature and wildlife viewing areas	3.37	More places and benches to observe nature and others	3.35
Security cameras in key places	3.30	Dirt/ other soft surface walking trails and paths	3.24

Middle Old Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.49	More restrooms	3.60
More places and benches to observe nature and others	3.37	More places and benches to observe nature and others	3.41
Security cameras in key places	3.37	Security cameras in key places	3.36
Picnic areas and shelters for small visitor groups	3.31	Nature and wildlife viewing areas	3.33
Nature and wildlife viewing areas	3.29	Picnic areas and shelters for small visitor groups	3.22

Latino Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	4.07	More restrooms	3.76
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.97	Nature and wildlife viewing areas	3.68
More shaded areas	3.90	More places and benches to observe nature and others	3.65
More places and benches to observe nature and others	3.89	Security cameras in key places	3.59
Security cameras in key places	3.89	Dirt/ other soft surface walking trails and paths	3.59

Latino Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Nature and wildlife viewing areas	3.95	Nature and wildlife viewing areas	3.93
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.85	More restrooms	3.79
More restrooms	3.82	Security cameras in key places	3.71
More places and benches to observe nature and others	3.79	Dirt/ other soft surface walking trails and paths	3.67
Security cameras in key places	3.77	More places and benches to observe nature and others	3.62

Latino Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	4.07	More restrooms	3.93
More shaded areas	3.88	More shaded areas	3.81
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.84	More places and benches to observe nature and others	3.74
More places and benches to observe nature and others	3.84	Picnic areas and shelters for small visitor groups	3.58
Picnic areas and shelters for small visitor groups	3.79	Picnic areas and shelters for large visitor groups	3.56

Asian Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Security cameras in key places	3.86	Nature and wildlife viewing areas	3.81
More restrooms	3.80	More restrooms	3.75
Dirt/ other soft surface walking trails and paths	3.79	Dirt/ other soft surface walking trails and paths	3.72
More places and benches to observe nature and others	3.74	Security cameras in key places	3.68
Picnic areas and shelters for small visitor groups	3.71	More places and benches to observe nature and others	3.67

Asian Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Security cameras in key places	3.81	More restrooms	3.80
More restrooms	3.75	Security cameras in key places	3.68
More places and benches to observe nature and others	3.69	More places and benches to observe nature and others	3.67
Additional lighting	3.67	Nature and wildlife viewing areas	3.65
Paved/ hard surface walking trails and paths	3.57	Additional lighting	3.51

Families With Children Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	4.21	Nature and wildlife viewing areas	3.71
Children's playgrounds and play areas built with manufactured structures like swingsets, slides, and climbing apparatuses	3.76	Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.63
Dirt/ other soft surface walking trails and paths	3.62	More restrooms	3.59
More restrooms	3.62	Dirt/ other soft surface walking trails and paths	3.58
Picnic areas and shelters for small visitor groups	3.61	Public access sites to waterways	3.57

Families With Children Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.92	Dirt/ other soft surface walking trails and paths	3.68
Dirt/ other soft surface walking trails and paths	3.78	More restrooms	3.64
Children's playgrounds and play areas built with manufactured structures like swingsets, slides, and climbing apparatuses	3.69	Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.59
More restrooms	3.64	Nature and wildlife viewing areas	3.53
Picnic areas and shelters for small visitor groups	3.57	Public access sites to waterways	3.51

Families With Children Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	4.01	More restrooms	3.65
More restrooms	3.75	Public access sites to waterways	3.58
Children's playgrounds and play areas built with manufactured structures like swingsets, slides, and climbing apparatuses	3.67	Dirt/ other soft surface walking trails and paths	3.54
Picnic areas and shelters for small visitor groups	3.66	Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.51
Dirt/ other soft surface walking trails and paths	3.59	Picnic areas and shelters for small visitor groups	3.49

Low Income Urban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.84	Nature and wildlife viewing areas	3.73
Picnic areas and shelters for small visitor groups	3.73	More places and benches to observe nature and others	3.69
More places and benches to observe nature and others	3.69	More restrooms	3.62
More restrooms	3.62	Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.62
Nature and wildlife viewing areas	3.59	Public access sites to waterways	3.52

Low Income Suburban Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.94	More restrooms	3.79
Dirt/ other soft surface walking trails and paths	3.80	Nature and wildlife viewing areas	3.77
Nature and wildlife viewing areas	3.77	Dirt/ other soft surface walking trails and paths	3.65
Security cameras in key places	3.74	More places and benches to observe nature and others	3.62
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	3.71	Security cameras in key places	3.62

Low Income Rural Need

Oregon Resident Outdoor Recreation Survey			
Close-To-Home Priorities	**Mean**	**Dispersed-Area Priorities**	**Mean**
More restrooms	3.92	More restrooms	3.80
Picnic areas and shelters for small visitor groups	3.78	Public access sites to waterways	3.73
Nature and wildlife viewing areas	3.63	Nature and wildlife viewing areas	3.71
Public access sites to waterways	3.63	Dirt/ other soft surface walking trails and paths	3.71
Dirt/ other soft surface walking trails and paths	3.62	More places and benches to observe nature and others	3.59

Table 10.1. Top rated recreational funding priority by demographic group and urban, suburban, rural

	General Population			Young Old			Middle Old		
Highest within community funding need	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Dirt & other soft surface trails & paths	1	1	3	4	2	3			
More restrooms	3	2	1	1	1	1	3	1	1
Nature play areas	4	3	5						
Nature & wildlife viewing areas	2	4		3	3	5		4	5
Public access sites to waterways	5	5	2	2	5	2	2		
Picnic areas & shelters for small visitor groups			4			4	1	2	4
More places & benches to observe nature & others				5			5	3	2
Security cameras in key places					4		4	5	3
	General Population			**Young Old**			**Middle Old**		
	Urban	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Highest outside community funding need									
Dirt & other soft surface trails & paths	4	1	3	3	3	2		5	
Nature & wildlife viewing areas	1	2	4	1	2	3	1	1	4
More restrooms	2	3	2	2	1	4	3	2	1
Public access sites to waterways	5	4	1	4	4	1	2	3	
More places and benches to observe nature & others	3	5		5	5		5	4	2
Picnic areas & shelters for small visitor groups			5			5	4		5
Security cameras in key places									3

Table 10.1. Continued.

	Latino			Asian		Families with Children			Low Income		
Highest within community funding need	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Dirt & other soft surface trails & paths				3		3	2	5		2	5
More restrooms	1	3	1	2	2	4	4	2	4	1	1
Nature play areas	2	2	3			1	1	1	1	5	
Nature & wildlife viewing areas		1							5	3	3
Public access sites to waterways											4
Picnic areas & shelters for small visitor groups			5	5		5	5	4	2		2
More places & benches to observe nature & others	4	4	4	4	3				3		
Security cameras in key places	5	5		1	1					4	
More shaded areas	3		2								
Additional lighting					4						
Paved/ hard surface walking trails					5						
Children's playgrounds built with manufactured structures						2	3	3			
	Latino			**Asian**		**Families with Children**			**Low Income**		
	Urban	**Suburban**	**Rural**	**Urban**	**Suburban**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Highest outside community funding need											
Dirt & other soft surface trails & paths	5	4		3		4	1	3		3	4
Nature & wildlife viewing areas	2	1		1	4	1	4		1	2	3
More restrooms	1	2	1	2	1	3	2	1	3	1	1
Public access sites to waterways						5	5	2	5		2
More places and benches to observe nature & others	3	5	3	5	3				2	4	5
Picnic areas & shelters for small visitor groups			4					5			
Security cameras in key places	4	3		4	2					5	
More shaded areas			2								
Picnic areas & shelters for large visitor groups			5								
Additional lighting					5						
Nature play areas						2	3	4	4		

CHAPTER ELEVEN: STATEWIDE OUTDOOR RECREATION STRATEGIC ACTIONS

Introduction

This chapter provides a description of the strategic actions identified during the planning process to better serve the needs of Oregonians as related to the top statewide planning issues including:

1. An aging population and outdoor recreation in Oregon.
2. An increasingly diverse population and outdoor recreation in Oregon.
3. Lack of youth engagement in outdoor recreation in Oregon.
4. Low income and outdoor recreation in Oregon.
5. Health benefits of physical activity in Oregon.

These strategic actions were finalized during the October 25, 2018 SCORP Advisory Committee meeting.

Note: See Tables 11.1 – 11.7 for 2017 Oregon resident outdoor recreation survey results related to relevant action items.

Statewide Issue 1: An aging population and outdoor recreation in Oregon.

In Oregon and nationally, the percentage of people age 60 and older is increasing. By the year 2030, over one in four (27%) Oregonians will be over the age of 60. Oregon is projected to be the state with the fourth highest proportion of older adults by 2025.

The 2017 Oregon resident outdoor recreation survey results suggest that, when examining both the total number of activities participated in and the average number of days of participation across the year, the Oregon young old (ages 60-74) and middle old (ages 75-84) populations are underserved in comparison to the overall Oregon population in terms of outdoor recreation participation.

An enhanced focus on promoting and preserving the health of older adults is essential if we are to effectively address the health and economic challenges of an aging society. Clearly, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of older adults through encouraging and facilitating their involvement in outdoor recreation activities.

Strategic actions for addressing this issue include:

Action 1.1: Recreation providers should prioritize the addition of drive-in tent campsites and cabins or yurts with heat and lights for the young old population and RV sites and cabins or yurts with heat, lights, bathroom, and kitchen to better serve the camping needs of middle old Oregonians.

Action 1.2: OPRD will provide priority in grant programs for "within your community" and "outside your community" priorities as identified in the 2017 Oregon resident outdoor recreation survey by young old and middle old populations.

Action 1.3: Municipal recreation providers should consider actions such as ensuring clean and well-maintained parks and facilities, providing more free-of-charge recreation opportunities, making parks safer from crime, developing walking / hiking trails closer to home, and expanding park facilities as potential actions to increase outdoor recreation engagement by young old Oregonians.

Action 1.4: Municipal recreation providers should consider actions such as ensuring clean and well-maintained parks and facilities, making parks safer from crime, providing more free-of-charge recreation opportunities, expanding park facilities, and placing more benches and restroom facilities along trails as potential actions to increase outdoor recreation engagement by middle old Oregonians.

Action 1.5: Municipal recreation providers should use the SCORP parkland mapping website to identify specific locations within their service area where young / middle old resident parkland and facility need exists. The website identifies relative need, based on how well these populations are being served, within a ½ mile of a park boundary for the Urban Growth Boundary (UGB) service area.

Action 1.6 Municipal recreation providers should examine how well young old resident needs are being met by current farmer's market, concert, historical tour, and water exercise program offerings within their service areas.

Action 1.7: Municipal recreation providers should examine how well middle old resident needs are being met by farmer's market, concert, historical tour, water exercise, and computer education program offerings within their service areas.

Action 1.8: Recreation providers should examine top young old access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, distance to parks, bad roads in dispersed settings, lack of public transportation, disabilities, dangerous cross walks / intersections, and too much road traffic.

Action 1.9: Recreation providers should examine top middle old access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including disabilities, lack of parking, public transportation, too much road traffic, and needing easier access from the parking lot to facilities.

Action 1.10: Municipal providers should consider providing more walking trails, improved walking routes to parks, and more parks closer to where they live as strategies to increase the level of physical activity for the young old population.

Action 1.11: Municipal providers should consider providing more walking trails, senior activity centers, and classes tailored to specific health concerns (e.g., heart disease, arthritis, diabetes, or falls) as strategies to increase the level of physical activity for the middle old population.

Action 1.12: Recreation providers should consider accommodations such as more accessible recreation facilities, more accessible parking, benches along trails, paved trails, and accessible restrooms to better serve Oregon's young old population.

Action 1.13: Recreation providers should consider accommodations such as more safe walking areas (free of fall risk), benches / places to sit, public transportation to parks, affordable swimming opportunities, and allowing electric mobility devices on trails to better serve Oregon's middle old population.

Statewide Issue 2: An increasingly diverse population and outdoor recreation in Oregon.

Oregon's population is rapidly becoming more diverse. The state's population has increased by about 255,000 residents since 2010. While whites make up approximately 88 percent of Oregon's population, they only accounted for 67 percent of this population growth. For two of the fastest growing Oregon minority groups, Hispanics currently represent 13.1 percent and Asians 4.7 percent of the Oregon population, and these percentages will continue to grow. By the year 2030, over one in four (26.7%) Oregonians will be Hispanic and 5.5 percent Asian.

The 2017 Oregon resident outdoor recreation survey results suggest that, when examining the total number of activities participated in, the Asian population is an underserved population from an outdoor recreation perspective in Oregon. When examining the average number of days of participation across the year, the Oregon Latino and Asian populations are underserved populations in Oregon. These findings for Oregon reinforce the current national understanding that minorities are less likely than whites to participate in outdoor recreation.

As Oregon's population continues to change, it is critical to understand how different ethnic groups participate in outdoor recreation activities, and how to encourage their involvement in outdoor recreation participation in Oregon.

Strategic actions for addressing this issue include[215]:

Action 2.1: Recreation providers should prioritize the addition of drive-in tent campsites; cabins or yurts with heat, lights, bathroom, and kitchen; and cabins or yurts with heat and lights to better serve the camping needs of Oregon's Latino and Asian populations.

Action 2.2: OPRD will provide priority in grant programs for "within your community" and "outside your community" priorities as identified in the 2017 Oregon resident outdoor recreation survey by Latino and Asian populations.

[215] While data limitations only enabled focus on Latino and Asian groups, these actions could be extended to other underserved minority groups in Oregon.

Action 2.3: Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, making parks safer from crime, developing walking / hiking trails closer to home, and developing parks closer to home as potential actions to increase outdoor recreation engagement by the Oregon Latino population.

Action 2.4: Municipal recreation providers should consider actions such as ensuring clean and well-maintained parks and facilities, making parks safer from crime, providing more free-of-charge recreation opportunities, developing walking / hiking trails closer to home and developing parks closer to home as potential actions to increase outdoor recreation engagement by the Oregon Asian population.

Action 2.5: Municipal recreation providers should use the SCORP parkland mapping website to identify specific locations within their service area where Latino and Asian resident parkland and facility need exists. The website identifies relative need, based on how well these populations are being served, within a ½ mile of a park boundary for the UGB service area.

Action 2.6 Municipal recreation providers should examine how well Latino resident needs are being met by current farmer's markets concerts historical tours and arts and crafts program offerings within their service areas.

Action 2.7: Municipal recreation providers should examine how well Asian resident needs are being met by farmer's market, concert, quiet zones for reading or meditating, outdoor sport, and arts and crafts program offerings within their service areas.

Action 2.8: Recreation providers should examine top Latino access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, distance to parks, bad roads in dispersed settings, lack of public transportation, disabilities, dangerous cross walks / intersections, and too much road traffic.

Action 2.9: Recreation providers should examine top Asian access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, too much road traffic, distances to parks, no car, and no sidewalks.

Action 2.10: Municipal providers should consider providing more walking trails, more parks closer to where I live, and improved walking routes to parks as strategies to increase the level of physical activity for the Latino and Asian populations.

Action 2.11: Recreation providers should consider accommodations such as more accessible recreation facilities, benches along trails and accessible parking to better serve Oregon's Latino population.

Action 2.12: Recreation providers should consider accommodations such as more benches or places to rest, easier trails, and more information about accessible facilities to better serve Oregon's Asian population.

Statewide Issue 3: Lack of youth engagement in outdoor recreation in Oregon.

Although Oregon is a state with abundant natural resources, there is growing evidence that Oregon's youth are gravitating away from outdoor experiences and towards a virtual indoor reality. Analysis of past Oregon SCORP results indicates that participation in traditional outdoor recreation activities such as picnicking, motor boating, fishing and hunting has dramatically decreased. This disconnect from nature has serious long-term implications for the health and well-being of our state and to the future stewardship of our public lands.

By providing Oregon's youth with opportunities to learn outdoor recreation skills in outdoor settings, we have the opportunity to rebuild the foundation for future outdoor recreation participation and reestablish personal connections with nature and their public lands. In addition, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of youth through encouraging and facilitating their involvement in active outdoor recreation activities. Because the recreation behavior of children and their parents may be relatively inseparable, managers should strive to conceptualize recreation from the family-based perspective.

Action 3.1: Recreation providers should prioritize the addition of drive-in tent campsites to better serve the camping needs of Oregon's families with children.

Action 3.2: OPRD will provide priority in grant programs for "within your community" and "outside your community" priorities as identified in the 2017 Oregon resident outdoor recreation survey by Oregon's families with children.

Action 3.3: Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, developing walking / hiking trails closer to home, developing parks closer to home, and making parks safer from crime as potential actions to increase outdoor recreation engagement by Oregon's families with children.

Action 3.4: Municipal recreation providers should use the SCORP parkland mapping website to identify specific locations within their service area where families with children resident parkland and facility need exists. The website identifies relative need, based on how well these populations are being served within a ½ mile of a park boundary for the UGB service area.

Action 3.5: Municipal recreation providers should examine how well families with children in the home needs are being met by current farmer's market, concert, outdoor sports, outdoor movie, and arts and craft program offerings within their service areas.

Action 3.6: Recreation providers should examine top families with children access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, dangerous traffic / road crossings, distances to parks, poor access roads / parking in dispersed settings, lack of sidewalks, no car / don't drive, and lack of public transportation.

Action 3.7: Municipal providers should consider providing families with children with more walking trails, more parks closer to where they live, and bicycle trails or paths as strategies to increase their level of physical activity.

Action 3.8: Recreation providers should consider accommodations such as more accessible trails (flat / paved / benches / access to restrooms), more accessible parking, accessibility education for staff and visitors, lower fees, and more accessible playgrounds / park activities to better serve Oregon's families with children with disabilities.

Action 3.9: Federal, state, and local recreation providers should collaborate with school districts and youth oriented organizations to provide outdoor recreation/ interpretive programs/ classes/ curriculum.

Action 3.10: OPRD should consider providing priority in grant programs for interactive interpretive displays that encourage students to learn more about their environment/ history.

Statewide Issue 4: Low income and outdoor recreation in Oregon.

In 2016, 13.3% of Oregonians (approximately 536,000 people) were living in households with incomes below the poverty threshold. Poverty in Oregon is concentrated among certain segments of the population including residents of certain counties, children, single women with children, and people of color.

An extensive literature indicates that individuals of lower socio-economic status are less likely to use publicly funded park and recreation resources. Low-income groups and ethnic minorities tend to be underserved in terms of access to parks and recreational facilities. Children growing up in persistent poverty are unlikely to acquire the same skills, knowledge, and appreciation of outdoor recreation activities and destinations as those who are more affluent. The costs associated with structured and unstructured recreation activities and programs can also be problematic for low-income families. In addition, children who live in low-income communities are also more likely to be overweight or obese than children from more affluent backgrounds.

The 2017 Oregon resident outdoor recreation survey results suggest that, when examining both the total number of activities participated in and the average number of days of participation across the year that the Oregon low-income population is underserved in terms of outdoor recreation participation. These findings for Oregon reinforce the current national understanding that individuals of lower socio-economic status are less likely to use publically funded park and recreation resources. The survey also identified that an extremely high percentage (45%) of low-income respondents indicated that they or someone in their household had a disability − twice as high as reported by the general population (23%).

Oregon's park and recreation providers have an opportunity to examine and address the special needs of the underserved low-income population in the state. Not only is this a matter of service equity, but there is a strong economic incentive for action based on health care costs associated with physical inactivity and obesity levels.

Action 4.1: Recreation providers should prioritize the addition of drive-in tent campsites to better serve the camping needs of low-income Oregonians.

Action 4.2: OPRD will provide priority in grant programs for "within your community" and "outside your community" priorities as identified in the 2017 Oregon resident outdoor recreation survey by low-income Oregonians.

Action 4.3: Municipal recreation providers should consider actions such as providing more free-of-charge recreation opportunities, ensuring clean and well-maintained parks and facilities, developing walking / hiking trails closer to home, making parks safer from crime, and developing parks closer to home as potential actions to increase outdoor recreation engagement by low-income Oregonians.

Action 4.4: Municipal recreation providers should use the SCORP parkland mapping website to identify specific locations within their service area where low-income resident parkland and facility need exists. The website identifies relative need, based on how well these populations are being served, within a ½ mile of a park boundary for the UGB service area.

Action 4.5: Municipal recreation providers should examine how well families with children in the home needs are being met by current farmer's market, concert, outdoor movie, arts and craft, historical tour, quiet zones for reading or meditating, and water exercise program offerings within their service areas.

Action 4.6: Recreation providers should examine top low income access or transportation difficulties they face in traveling to the place they most often visit for outdoor recreation including lack of parking, distance to parks, and lack of public transportation.

Action 4.7: Municipal providers should consider providing more walking trails, more parks closer to where they live, and improved walking routes to parks as strategies to increase the level of physical activity for the low-income population.

Action 4.8: Recreation providers should consider accommodations such as adding more benches / places to rest on trails, accessible trails (flat / paved / access to restrooms), accessible restrooms, accessible park facilities, and public transportation to better serve low-income Oregonians.

Statewide Issue 5: Health benefits of physical activity in Oregon.

In 2010, physical inactivity and poor diet were the two most influential risk factors for mortality in the U.S., surpassing tobacco, motor vehicles, and firearms. Physical activity may decrease the risk of many chronic illnesses such as heart disease, stroke, depression, dementia, diabetes and several cancers (e.g., breast, colon, endometrial, esophageal, kidney, stomach, lung). In 2014, these chronic conditions made up five of the top ten leading causes of death. Daily physical activity provides multiple benefits to people such as increased memory function and improved quality of sleep.

Yet, 23.1% of all U.S. adults report no physical activity or exercise outside of work. Oregonians are above average in their non-work physical activity among all states in the U.S.; however, there is a reported 17.2% of adults who are physically inactive (i.e., they are sedentary) outside of work in 2016, down from 18.8% in 2015. About 60% of adults met the aerobic activity recommendation, 30% met the muscle strengthening recommendation, with 23% meeting both the aerobic and muscle strengthening recommendation. Blackwell and Clarke report that 25.8% of Oregon adults aged 18-64 met the guidelines for both aerobic and anaerobic activities during LTPA in 2010-2015.

This state of physical inactivity and associated chronic illnesses is a public health concern, as well as an economic burden. In the U.S., 11.1% of aggregate health care expenditures can be attributed to insufficient physical activity and sedentarism. Substantial cost of illness savings (or conversely, health benefits) could be realized through increased physical activity in Oregon. Oregonians spent over $39.1 billion on health care in 2014.

The Oregon SCORP outdoor recreation participation survey and the estimates of energy expenditures and Cost of Illness savings identified in the Oregon SCORP physical activity study are consistent with findings that the lived environment influences people's physical activity participation, and that parks and recreation providers can play a key role in increasing their physical activity participation. This is particularly relevant in close-to-home settings where physical activity benefits most often occur.

Action 5.1: The state of Oregon will set a goal to ensure every person in every community across the state lives within a 10-minute walk of a local park, trail, open space or recreation center. A recent survey by the National Recreation and Park Association (NRPA)[216], reported that 70% of Americans lived within a 10-minute walk of a park facility. The 2017 Oregon resident outdoor recreation survey results identify that about 77% of Oregonians met this 10-minute walk standard. However, only about half (49.8%) of rural Oregonians reported meeting this standard.

Action 5.2: OPRD will provide priority in grant programs for walking trails or paths, more parks closer to where people live, improved walking routes to parks, and bicycle trails or paths in priority areas identified through the parkland mapping website.

Action 5.3: OPRD will add park entry points, non-motorized trails, and within UGB walkability analysis to the parkland mapping database.

Action 5.4: The recreation community should pursue additional funding for non-motorized trail development and major rehabilitation within UGBs and ongoing non-motorized trail maintenance and major rehabilitation in dispersed-settings outside of UGBs.

[216] 2017 NRPA Americans' engagement with parks survey. National Recreation and Park Association. URL: https://www.nrpa.org/contentassets/257fe28053c6420786927fcffc2f9996/engagement-survey-report-2017.pdf.

Table 11.1. Top rated priority need for camping near community by demographic group

Highest camping priority need	**General Population**	**Young Old Population**	**Middle Old Population**	**Latino Population**	**Asian Population**	**Families with Children**	**Low Income Population**
Drive-in tent campsites	1	1	3	1	1	1	1
Cabins or yurts w/ heat, lights, bathroom, kitchen	2	3	2	3	2	2	2
Cabins or yurts w/ heat, lights	3	2	3	2	3	3	3
RV sites			1				

Table 11.2. Top rated recreational funding priority by demographic group and urban, suburban, rural

	General Population			**Young Old Population**			**Middle Old Population**		
Highest within community funding need	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Dirt & other soft surface trails & paths	1	1	3	4	2	3			
More restrooms	3	2	1	1	1	1	3	1	1
Nature play areas	4	3	5						
Nature & wildlife viewing areas	2	4		3	3	5		4	5
Public access sites to waterways	5	5	2	2	5	2	2		
Picnic areas & shelters for small visitor groups			4			4	1	2	4
More places & benches to observe nature & others				5			5	3	2
Security cameras in key places					4		4	5	3
	General Population			**Young Old Population**			**Middle Old Population**		
	Urban	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Highest outside community funding need									
Dirt & other soft surface trails & paths	4	1	3	3	3	2		5	
Nature & wildlife viewing areas	1	2	4	1	2	3	1	1	4
More restrooms	2	3	2	2	1	4	3	2	1
Public access sites to waterways	5	4	1	4	4	1	2	3	
More places and benches to observe nature & others	3	5		5	5		5	4	2
Picnic areas & shelters for small visitor groups			5			5	4		5
Security cameras in key places									3

Table 11.2. Continued.

	Latino Population			Asian Population		Families with Children			Low Income Population		
Highest within community funding need	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Dirt & other soft surface trails & paths				3		3	2	5		2	5
More restrooms	1	3	1	2	2	4	4	2	4	1	1
Nature play areas	2	2	3			1	1	1	1	5	
Nature & wildlife viewing areas		1							5	3	3
Public access sites to waterways											4
Picnic areas & shelters for small visitor groups			5	5		5	5	4	2		2
More places & benches to observe nature & others	4	4	4	4	3				3		
Security cameras in key places	5	5		1	1					4	
More shaded areas	3		2								
Additional lighting					4						
Paved/ hard surface walking trails					5						
Children's playgrounds built with manufactured structures						2	3	3			
	Latino Population			**Asian Population**		**Families with Children**			**Low Income Population**		
	Urban	**Suburban**	**Rural**	**Urban**	**Suburban**	**Urban**	**Suburban**	**Rural**	**Urban**	**Suburban**	**Rural**
Highest outside community funding need											
Dirt & other soft surface trails & paths	5	4		3		4	1	3		3	4
Nature & wildlife viewing areas	2	1		1	4	1	4		1	2	3
More restrooms	1	2	1	2	1	3	2	1	3	1	1
Public access sites to waterways						5	5	2	5		2
More places and benches to observe nature & others	3	5	3	5	3				2	4	5
Picnic areas & shelters for small visitor groups			4					5			
Security cameras in key places	4	3		4	2					5	
More shaded areas			2								
Picnic areas & shelters for large visitor groups			5								
Additional lighting					5						
Nature play areas						2	3	4	4		

Table 11.3. Top rated actions to increase outdoor recreation engagement in your community by demographic group

Action	General Population	Young Old Population	Middle Old Population	Latino Population	Asian Population	Families with Children	Low Income Population
Providing more free-of-charge recreation opportunities	1	2	3	1	3	1	1
Ensuring clean and well-maintained parks & facilities	2	1	1	2	1	2	2
Developing walking/hiking trails closer to home	3	4		4	4	3	3
Making parks safer from crime	4	3	2	3	2	5	4
Developing parks closer to home	5			5	5	4	5
Expanding park facilities		5	4				
Placing more benches & restroom facilities along trails			5				

Table 11.4. Highest need for community recreation programs by demographic group

Program	General Population	Young Old Population	Middle Old Population	Latino Population	Asian Population	Families with Children	Low Income Population
Farmer's markets	1	1	1	1	1	1	1
Concerts	2	2	2	2	2	2	2
Outdoor sports	3				4	3	
Outdoor movies	4					4	3
Water exercise	5	4	4				7
Historical tours		3	3	3			5
Computer education			5				
Arts & crafts				4	5	5	4
Quiet zones for reading or meditating					3		6

Table 11.5. Top difficulties in traveling to the place they visit the most for recreation by demographic group

Difficulties	**General Population**	**Young Old Population**	**Middle Old Population**	**Latino Population**	**Asian Population**	**Families with Children**	**Low Income Population**
Lack of parking	1	1	2	1	1	1	1
Lack of public transportation	2	4	3	5		6	5
Dangerous crosswalks/ intersections	3	6				2	
Too much road traffic	4	7	4	2	2		
Distance to parks	5	2		4	3	3	3
Bicycle safety	6						
Bad roads in dispersed recreation areas		3					
Disabilities		5	1				2
Easier access from the parking lot to park facilities			5				
No car				3	4	5	4
No sidewalks					5	4	

Table 11.6. Highest rated in your community actions to increase physical activity by demographic group

Actions	**General Population**	**Young Old Population**	**Middle Old Population**	**Latino Population**	**Asian Population**	**Families with Children**	**Low Income Population**
Providing more walking trails	1	1	1	1	1	1	1
Providing more parks closer to where I live	2	3		2	2	2	2
Improved walking routes to parks	3	2		3	3		3
Providing senior activity centers			2				
Providing classes tailored to specific health concerns			3				
Providing bicycle trails						3	

Table 11.7. Top accessibility accommodation to improve recreational experience by demographic group

Accommodations	General Population	Young Old Population	Middle Old Population	Latino Population	Asian Population	Families with Children	Low Income Population
More accessible paved trails	1	4				1	3
More benches along trails	2	3		2			1
Lower fees	3					4	2
More accessible recreation facilities	4	1		1		5	5
More accessible parking	5	2		3		2	
Public transportation to parks	6		3				6
More accessible restrooms		5					4
More safe walking areas (free of fall risk)			1				
More benches/places to sit			2		1		
More affordable swimming opportunities			4				
Allowing electronic mobility devices on trails			5				
Easier trails					2		
More information about accessible facilities					3		
Accessibility education for staff & visitors						3	

CHAPTER TWELVE: LWCF OPEN PROJECT SELECTION PROCESS REVIEW AND SCORING

Introduction

As a requirement of federal regulations, Oregon has developed an Open Project Selection Process (OPSP) that provides objective criteria and standards for grant selection that are explicitly based on Oregon's priority needs for the acquisition and development of outdoor recreation resources as identified in the Statewide Comprehensive Outdoor Recreation Plan (SCORP). The OPSP is the connection between SCORP and the use of Land and Water Conservation Fund (LWCF) grants to assist in meeting high priority outdoor recreation resource needs. The OPSP assures equal opportunity for all eligible project applicants and all sectors of the general public to participate in the benefits of the LWCF State Assistance Program and to affirmatively address and meet priority recreation needs. Oregon has developed a priority rating system for selecting projects that ensures the fair and equitable evaluation of all projects and a project selection process which evaluates and selects projects on the basis of quality and conformance with its priority rating system.

Below is a summary of the LWCF OPSP criteria point distribution.

LWCF GRANT RATING

CRITERIA POINT SUMMARY

CRITERIA TYPE	**Possible Points**
1. Technical Review – OPRD Staff	0
2. SCORP Criteria	
A. Consistency With Statewide Priorities	0-20
B. Consistency With Statewide Issues	0-10
C. Local Needs And Benefits	0-25
D. Physical Activity Benefits	0-5
E. Need For Major Rehabilitation	0-5
F. Accessibility Accommodations	0-5
3. Inclusive Outdoor Recreation Opportunities Criteria	0-5
4. Community Support Criteria	0-5
5. Financial Commitment Criteria	0-10
6. Discretionary Committee Criteria	0-10
Total Points Possible	**100**

1. Pre-Application Review

The Oregon Parks and Recreation Department (OPRD) will support high-quality outdoor recreation grant projects that have a reasonable likelihood of being funded. Project applicants are encouraged to contact OPRD grant staff with questions regarding the LWCF grant application process. New applicants who have not received prior LWCF funding are encouraged to participate in the program. Due to the large number of requests for LWCF funds, OPRD staff will review submitted pre-applications to determine if the project applicant and proposed project meets minimum requirements for LWCF grant funding. No scoring points will be awarded for the pre-application review. The following are factors that will be considered in the pre-application review.

A. Grant Performance and Compliance. The successful completion of projects in a timely and efficient manner is an important goal of the LWCF grant program. A project applicant's past performance in effectively meeting the administrative guidelines of the program is also an important factor in evaluating performance and compliance.

   a. The project applicant is on schedule with all active OPRD-administered grant projects (See Compliance Schedule in Section 2 of the LWCF Manual).
   b. The project applicant is in compliance with applicable guidelines at previously assisted project sites (e.g., no unresolved conversions, overhead utility lines, maintenance issues or public access restrictions).

   OR

   c. The project applicant has never received an OPRD-administered grant.

B. General Project Suitability/Minimum Program Requirements. Since LWCF grant funding is limited, OPRD wants to ensure that all proposed projects are a good fit with the intent of the program and meet minimum program requirements.

   a. Is the project a good fit for this particular grant program? If not, is there another grant program that would provide a better fit?
   b. Is the project's budget well researched and complete? Does it anticipate the time needed to navigate the application process and complete the project?
   c. Is the scope of work appropriate and complete? Does it follow "best practices" and incorporate the use of proven materials and products?
   d. Has the applicant demonstrated that they are capable of completing a project of this size and scope?
   e. Has the applicant demonstrated that this project is a priority in their community, that it has strong public support, and that an adequate public process has been followed in selecting it?

C. Accessibility Compliance. The Americans with Disabilities Act (ADA) is a law ensuring equal access to park and recreational facilities and services. Title II of the ADA prohibits state and local governments from discriminating on the basis of disability. In Oregon, there is a need for the retrofitting of existing facilities constructed before current ADA accessibility requirements were in place.

a. The project applicant has provided evidence of a board or city council adopted/approved ADA Transition Plan or an ADA Site Evaluation[217].

D. Readiness To Proceed. OPRD intends to ensure that available LWCF grant funds are used in a timely manner and appropriate local land use and consistent zoning is applied to the property once funding is awarded to a project applicant.

a. Planning / Design Status. The project applicant has demonstrated, through sufficient documentation:
- Land use compatibility (by providing a land use compatibility statement).
- Construction or concept plan completed.

b. Acquisition Status*. The project applicant has demonstrated, through sufficient documentation:
- Completed Appraisal.
- Proof of willing seller or donor.
- Land use compatibility by providing a land use compatibility statement.
- Can the sponsor demonstrate adequate legal ability to ensure the site is managed for public outdoor recreation purposes in perpetuity?

**Note: Acquisition Status does not apply to rehab/development projects.*

Technical Review

As part of the Land and Water Conservation Fund grant evaluation process, OPRD and National Park Service (NPS) grant personnel conduct a technical review of all grant applications. Each submitted grant application packet will need to include all of the materials requested in Section 2 (The Application) of the current Land and Water Conservation Fund Oregon Grants Manual. Ineligible or incomplete applications will be returned to the project applicant with an explanation of why their application was returned.

Project Priority Scoring System

Projects presented to OPRD for grant funding and that satisfy the requirements of the pre-application and technical reviews will be scored by Oregon Outdoor Recreation Committee (OORC) members according to the criteria, rating factors, and points shown in the following "Project Priority Scoring System." A project's final score will be calculated as an average of the sum of all individual committee member scores. The highest possible score for a project will be 100 points. Seventy of the 100 possible points are tied to specific priorities identified in the 2019-2023 Oregon SCORP. The priority rank of a project will depend on its score relative to other projects and in relation to the amount of LWCF grant funds available each year.

[217] If the project applicant does not have an approved ADA Transition Plan, the applicant needs to conduct an ADA Site Evaluation for the project. An ADA Site Evaluation should identify and propose how to fix problems that prevent people with disabilities from gaining equal access to programs, services, and activities. Grant program staff will provide a tool kit for ADA Site Evaluation upon request.

In the event that OPRD does not receive a sufficient amount of qualified project applications to obligate all available funding, at the Director's discretion, funds may be utilized in the next grant round, offered to eligible projects from the Local Government Grant Program ranking list, or used for eligible OPRD projects. OPRD may honor requests to amend projects to increase the cost of a project, including the grant amount, without further OPSP competition.

2. SCORP Criteria (0-70 Points)

OORC members will determine a value from 0 to 70 points based on the information provided by the applicant for addressing one or more of the five SCORP priorities (A-F), demonstrating that the project satisfies high priority needs identified within their jurisdiction through the SCORP needs assessment or local planning efforts.

(Note: Priorities for SCORP criteria are identified for both close-to-home and dispersed area projects. Applicants with projects located within community boundaries are instructed to use close-to-home priorities and applicants with projects located outside of these boundaries should use dispersed-setting priorities. There are some circumstances (e.g., lack of available land or high cost of land within the UGB) where recreation providers may choose to locate recreation facilities outside of community boundaries which are specifically intended serve the close-to-home needs of the nearby community (e.g., regional park, trails, or water access sites). In such cases, OPRD will consider the use of close-to-home priorities by project applicants. For such consideration, the project applicant must make the case for why the project is intended for primary use by the population within the nearby community. Such projects must be within a reasonably short distance of the community being served. In such cases, project applicants will use the parkland mapping information for the nearby community which is being served.)

A. Consistency With Statewide Priorities (0-20 points). The 2019-2023 Oregon SCORP effort included an analysis to identify priority projects using the following two methods. Please identify if the project satisfies needs identified by one or both of these methods.

- Public recreation provider identified need (See Table 12.1). The first method involved a survey of Oregon public recreation providers to identify priority projects for the distribution of LWCF funds for both close-to-home areas (located within an urban growth boundary (UGB), unincorporated community boundary, or a Tribal Community) and for dispersed areas (located outside of these boundaries). If the project is located within a UGB, unincorporated community boundary, or a Tribal community use the close-to-home area priorities. Projects outside of these areas will use the dispersed-area priorities. A map clearly identifying the project location and UGB or unincorporated community boundary or Tribal community boundary drawn on it must be submitted.

- Oregon resident identified need (See Table 12.2). The second method was a component of the statewide survey of Oregon residents. Residents were asked to rate several items for investment by park and forest agencies for both close-to-home and for dispersed areas. A map clearly identifying the project location and UGB or unincorporated community boundary or Tribal community boundary drawn on it must be submitted.

B. Consistency With Statewide Issues (0-10 points). To what extent does the project address one or more LWCF issue priorities identified in SCORP? The 2019-2023 SCORP identifies four priorities for LWCF grant support:

1. OUTDOOR RECREATION NEEDS OF AN AGING POPULATION.

   In Oregon and nationally, the percentage of people age 60 and older is increasing. By the year 2030, over one in four (27%) Oregonians will be over the age of 60. Oregon is projected to be the state with the fourth highest proportion of older adults by 2025. Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of older adults through encouraging and facilitating their involvement in outdoor recreation activities.

   OPRD would like to encourage the development of opportunities for an aging population in high-priority **young-old** (age 60-74 years) or **middle-old** (age 75-84 years) priority areas. There are two ways to identify high priority areas of the state for these two populations.

   a. **Priority Counties and UGB's** - The Portland State University Population Research Center has identified high-priority counties and Urban Growth Boundaries (UGBs) where a substantial increase in the aging population is projected to occur in coming years. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these high-priority counties and UGBs. See Tables 12.3-12.6 for a listing of high-priority counties and UGBs for the young old and middle old populations. (Note: For projects in dispersed settings, use county priority areas only.)

   b. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select either the "young old" or "middle old" demographic type. The mapping database will generate a map identifying specific areas of priority for the demographic choice selected. Your project will need to be located within one of these priority areas in order to be considered for this criterion.

   To be considered for scoring points for the **young-old** criteria, the project must satisfy one or more of the needs identified in Table 12.7. To be considered for scoring points for the **middle-old** criteria, the project must satisfy one or more of the needs identified in Table 8.

2. OUTDOOR RECREATION NEEDS OF AN INCREASINGLY DIVERSE POPULATION. Oregon's population is rapidly becoming more diverse. The state's population has increased by about 255,000 residents since 2010. While whites make up approximately 88 percent of Oregon's population, they only accounted for 67 percent of this population growth. For two of the fastest growing Oregon minority groups, Latinos currently represent 13.1 percent and Asians 4.7 percent of the Oregon population, and these percentages will continue to grow. By the year 2030, over one in four (26.7%) Oregonians will be Latino and 5.5 percent Asian. As Oregon's population continues to change, it is critical to understand how different ethnic groups participate in outdoor recreation activities, and how to encourage their involvement in outdoor recreation participation in Oregon.

OPRD would like to encourage the development of opportunities for an increasingly diverse population in high-priority Latino or Asian priority areas. There are two ways to identify high priority areas of the state.

a. **Priority Counties and UGB's -** The Portland State University Population Research Center has identified high-priority counties and UGBs where a substantial increase in the Latino and Asian populations is projected to occur in coming years. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these high-priority counties and UGBs. See Tables 12.9-12.12 for a listing of high-priority counties and UGBs for the Latino and Asian old populations. (Note: For projects in dispersed settings, use county priority only.)

b. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select either the "Latino" or "Asian" demographic type. The mapping database will generate a map identifying specific areas of priority for the demographic choice selected. Your project will need to be located within one of these priority areas in order to be considered for this criteria.

To be considered for scoring points for the **Latino** criteria, the project must satisfy one or more of the needs identified in Table 12.13. To be considered for scoring points for the **Asian** criteria, the project must satisfy one or more of the needs identified in Table 12.14.

3. OUTDOOR RECREATION NEEDS OF FAMILIES WITH CHILDREN.

By providing Oregon's youth with opportunities to learn outdoor recreation skills in outdoor settings, we have the opportunity to rebuild the foundation for future outdoor recreation participation and reestablish personal connections with nature and their public lands. In addition, Oregon's park and recreation providers have the facilities and programs in place across the state to take a leadership role in promoting and preserving the health of youth through encouraging and facilitating their involvement in active outdoor recreation activities. Because the recreation behavior of children and their parents may be relatively inseparable, managers should consider recreation from the family-based perspective.

OPRD would like to encourage the development of opportunities for **families with children** in high-priority areas. There are two ways to identify high priority areas of the state.

a. **Priority Counties and UGB's -** The Portland State University Population Research Center has identified high-priority counties and UGBs where a substantial increase in the youth population is projected to occur in coming years. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these high-priority counties and UGBs. See Tables 12.15-12.16 for a listing of high-priority counties and UGBs for Oregon families with children. (Note: For projects in dispersed settings, use county priority areas only.)

b. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select the "youth" demographic type. The mapping database will generate a map identifying specific areas of priority for the demographic choice selected. Your project will need to be located within one of these priority areas in order to be considered for this criteria.

To be considered for scoring points for the **families with children** criteria, the project must satisfy one or more of the needs identified in Table 12.17.

4. OUTDOOR RECREATION NEEDS OF A LOW-INCOME POPULATION.

Wealth and economic well-being are predictors of life chances, or the opportunities that people have to improve their lives. Low-income residents are far more restricted in their choice of employment, residence, schools for their children, access to food and health coverage, and modes of transportation. An extensive literature indicates that individuals of lower socio-economic status are less likely to use publicly funded park and recreation resources. There is also a strong relationship between family income and physical activity with low-income families being the most sedentary. Oregon's park and recreation providers have an opportunity to examine and address the special needs of the underserved low-income population in the state. Not only is this a matter of service equity, but there is a strong economic incentive for action based on health care costs associated with physical inactivity and obesity.

OPRD would like to encourage the development of opportunities for **low-income residents** in high-priority priority areas. There are two ways to identify high priority areas of the state.

a. **Priority Counties and UGB's** - The Portland State University Population Research Center has identified high-priority counties and UGBs where a substantial increase in household poverty is projected to occur in coming years. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these high-priority counties and UGBs. See Tables 12.18-12.19 for a listing of high-priority counties and UGBs for Oregon low-income residents. (Note: For projects in dispersed settings, use county priority areas only.)

b. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select the "low income" demographic type. The mapping database will generate a map identifying specific areas of priority for the demographic choice selected. Your project will need to be located within one of these priority areas to be considered.

To be considered for scoring points for the **low-income** criteria, the project must satisfy one or more of the needs identified in Table 12.20.

C. Local Needs and Benefits (0-25 points). Project applicants are strongly encouraged to develop project applications that meet high priority needs of their jurisdiction. Need can be demonstrated

through results of the SCORP needs assessments (item a. below), coordinated, long-range planning with a minimum of a 5-year planning horizon (item b. below), or through a substantive public involvement process (item c. below). If the project isn't identified as a county-level need by the SCORP needs assessment, local need should be demonstrated through the project's inclusion in a current local planning document, or by describing the project's public involvement process (item c below) Finally, the parkland mapping website can be used to conduct a ½ mile service area need assessment to show need for this project (item d. below).

a. The 2019-2023 Oregon SCORP effort included an analysis to identify priority projects using the following two methods. Please identify if the project satisfies needs identified by one or both of these methods.

- Public recreation provider identified need. The first method involved a survey of Oregon public recreation providers to identify priority projects for the distribution of LWCF funds for both close-to-home areas (located within an urban growth boundary (UGB), unincorporated community boundary, or a Tribal Community) and for dispersed areas (located outside of these boundaries). Data were collected and analyzed to identify need for each of Oregon's 36 counties. Results are included in Tables 12.21-12.56. If the project is located within a UGB, unincorporated community boundary, or a Tribal community use the close-to-home area priorities. Projects outside of these areas will use the dispersed-area priorities. A map clearly identifying the project location and UGB or unincorporated community boundary or Tribal community boundary drawn on it must be submitted.
- Oregon resident identified need. The second method is a component of the statewide survey of Oregon residents. Residents were asked to rate several items for investment by park and forest agencies for both close-to-home and for dispersed areas. Results are included in Tables 12.57-12.60. For close-to-home projects, priority need is identified at the urban, suburban, and rural areas. Please select one of these three community types that best describes your service area. For dispersed projects, priority need is identified at the statewide level.

b. The extent to which the project will satisfy priority needs, as identified in a current local planning document (park and recreation master plan, city or county comprehensive plan, trails master plan, transportation system plan or a bicycle and pedestrian plan).

c. If the project is not included in a current local planning document, describe the public involvement effort that led to the selection of the project including citizen involvement through public workshops, public meetings, surveys, and local citizen advisory committees during the project's planning process.

d. Use the parkland mapping website to conduct a ½ mile service area analysis to show need for this project.

D. Physical Activity Benefits. (0-5 points). The Oregon SCORP outdoor recreation participation survey and the estimates of energy expenditures and Cost of Illness savings identified in the Oregon SCORP physical activity study are consistent with findings that the lived environment

influences people's physical activity participation, and that parks and recreation providers can play a key role in increasing their physical activity participation. This is particularly relevant in close-to-home settings where physical activity benefits most often occur.

The SCORP Oregon resident survey asked participants to rate sixteen (16) potential "in your community" agency actions with respect to increasing the level of physical activity of the respondent or the respondent's household members. Priority will be given to projects addressing top statewide actions identified in this survey in high priority areas identified in the planning process.

Priority need is demonstrated at the statewide level and for high priority physical activity areas of the state. Highest number of points will be awarded to applicants demonstrating need at both the statewide level and with high-priority areas of the state.

a. Statewide Level. Please identify if the project satisfies one of the four **physical activity** priorities included in Table 12.61.

b. There are two ways to identify high priority physical activity areas in the state.

1. **Priority Counties and UGB's -** The Portland State University Population Research Center has identified high-priority Body Mass Index (BMI) counties and UGBs in the state. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these counties or UGBs. See Tables 12.62-12.63 for a listing of high-priority counties and UGBs for resident BMI. (Note: For projects in dispersed settings, use county priority only.)

2. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select the "BMI" demographic type. The mapping database will generate a map identifying specific areas of priority for BMI. Your project will need to be located within one of these priority areas in order to be considered for this criterion.

If your project is in a high-priority area, please identify if the project satisfies one of the four physical activity priorities included in Table 12.61.

E. Need For Major Rehabilitation (0-5 points). The 2018 Oregon recreation provider survey asked respondents to identify the degree to which 15 funding issues were challenges or concerns for their agency. Both within UGB and dispersed-setting providers reported that obtaining adequate funding for facility rehabilitation/ replacement was the top funding issue. Major rehabilitation projects involve the restoration or partial reconstruction of eligible recreation areas and facilities, which is necessitated by one or more of the following:

- The recreation area or facility is beyond its normal life expectancy,
- The recreation area or facility is destroyed by fire, natural disaster or vandalism,
- The recreation area or facility does not meet health and safety codes/requirements,

- The recreation area or facility requires rehabilitation to ensure critical natural resource protection, and
- Changing recreation needs (e.g., changes in demographics within the service area) dictate a change in the type of recreation area or facility provided.

OORC members will determine a value from 0 to 5 points based on the information provided for the project by the applicant for addressing this priority.

F. Accessibility Accommodations (0-5 points). The Americans with Disabilities Act (ADA) is a law ensuring equal access to parks and recreation facilities and services for people with disabilities. The ADA Standards establish design requirements for the construction and alteration of facilities subject to the law. These enforceable standards apply to places of public accommodation, commercial facilities, and state and local government facilities.

Parks and recreation areas and facilities provide opportunities for all Oregonians regardless of age, ethnicity, or ability. The SCORP Oregon resident survey identified that about one quarter (23%) of respondents indicated that they or someone in their household had a disability. OPRD would like to encourage disability accommodations identified through this survey for target populations in high-priority areas. Specifically, we are looking for accommodation actions that go beyond the scope of ADA requirements.

Priority need is demonstrated at the statewide level and for high priority areas by specific demographic group. Highest number of points will be awarded to applicants demonstrating need at both the statewide level and as a high-priority area identified in the planning process.

a. Statewide Level. Please identify if the project satisfies one or more of the following accessibility accommodation priorities included in Table 12.64.

b. There are two ways to identify high priority target population areas in the state.

1. **Priority Counties and UGB's -** The Portland State University Population Research Center has identified high-priority young old (Tables 12.3-12.4), middle old (Tables 12.5-12.6), Latino (Tables 12.9-12.10), Asian (Tables 12.11-12.12), families with children (Tables 12.15-12.16), and low income (Tables 12.18-12.19) counties and UGBs in the state. Consideration will be given for appropriate priority projects for any recreation provider with a proposed project in these counties and UGBs.

2. **Priority Areas -** Using the parkland mapping website (www.providelinkhere), use the pull-down menu to identify your jurisdiction's Urban Growth Boundary name. Next, use the demographic pull-down menu to select the appropriate demographic type. The mapping database will generate a map identifying specific areas of priority for the demographic type. Your project will need to be located within one of these priority areas in order to be considered for this criteria.

To be considered for scoring points for the accessibility criteria, the project must satisfy one or more of the needs identified in Table 12.65.

3. Inclusive Outdoor Recreation Opportunities Criteria (0-5 Points)
OORC committee members will determine a value from 0 to 5 points based on the information provided by the applicant related to use of Universal Design considerations in the project.

Universal design attempts to meet the needs of all people, and includes those of all ages, physical abilities, sensory abilities and cognitive skills. It includes the use of integrated and mainstream products, environmental features and services, without the need for adaptation or specialized design. Please describe how your project goes beyond ADA and strives to incorporate Universal Design concepts and design considerations[218].

4. Community Support Criteria (0-5 Points)
OORC committee members will determine a value from 0 to 5 points based on information provided by the applicant related to the degree to which the project demonstrates broad community support for the project is in place.

Project applicants should demonstrate broad community support for the project by providing information such as letters of support and/or survey analysis. Examples of how applicants could show broad community support include results or summary documentation of recent community or neighborhood meetings concerning the project, letters of support from park users, neighbors, and a variety of project stakeholders.

5. Financial Commitment Criteria (0-10 Points)
OORC committee members will determine a value from from 0 to 10 points based on information provided by the applicant related to the degree to which the project demonstrates that financing for the project is in place for successful completion.

Project applicants should demonstrate that finances are available for the project by showing agency budget information or other documents demonstrating financial commitment to the project. What is the source of local matching funds? Project applicants are encouraged to develop project applications involving partnerships between the project applicant, other agencies, or non-profit organizations. Project applicants are also encouraged to demonstrate solid financial commitment to providing necessary project maintenance and upkeep. To what extent does the project involve partnerships with other agencies or groups? Is the funding from other agencies or groups guaranteed? To what extent are local matching funds available? What is the local commitment to the project from the local community through donations? To what extent has enough money been budgeted to successfully complete the work?

> Note: Donations of land, cash, labor, equipment or materials cannot occur until written authorization to proceed has been received from OPRD.

[218] For acquisition projects where development of outdoor recreation facilities is planned at a future date, please describe how your project will be planned to go beyond ADA requirements and incorporate Universal Design concepts and design considerations. During the period between acquisition and development, the property should be open for public recreation purposes on a reasonable, limited basis (e.g., appropriate to environmental considerations and achieved with minimum public investment).

6. Discretionary Committee Member Criteria (0-10 Points)

The OORC membership is representative of state geographic regions, agencies and communities. This assessment allows committee members to bring their knowledge of statewide and local recreation patterns, resources, and needs into consideration. The determination of points awarded is an individual decision, based on informed judgment. OORC committee members will determine a value from 0 to 10 points. Applicants do not need to provide any additional material for this committee member review.

Table 12.1. Statewide priorities − Oregon public provider survey

Close-To-Home Priorities	**Dispersed-Area Priorities**
Community trail systems	Restrooms
Restrooms	RV / trailer campgrounds & facilities
Children's playgrounds and play areas built with manufactured structures	Day-use hiking trails
Picnic areas and shelters for small visitor groups	Connecting trails into larger trail systems
Trails connected to public lands	Interpretive displays
Picnicking/ day use and facilities	

Table 12.2. Statewide priorities − Oregon resident outdoor recreation survey

Close-To-Home Priorities	**Dispersed-Area Priorities**
Dirt/ other soft surface walking trails and paths	Dirt/ other soft surface walking trails and paths
More restrooms	Nature and wildlife viewing areas
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)	More restrooms
Nature and wildlife viewing areas	Public access sites to waterways
Public access sites to waterways	More places and benches to observe nature and others

Table 12.3. Young old population high priority counties

Clackamas	Lane	Sherman	Washington
Gilliam	Morrow	Umatilla	
Hood River	Multnomah	Wasco	

Table 12.4. Young old population high priority UGBs

Amity	Coquille	Gold Hill	Lafayette
Arlington	Depot Bay	Huntington	Lincoln City
Bay City	Donald	Independence	Lyons
Chiloquin	Estacada	Jordan Valley	Malin
Maupin	Medford	Philomath	Vernonia
McMinnville	Mill City	Reedsport	

Table 12.5. Middle old population high priority counties

Baker	Grant	Sherman	Yamhill
Clackamas	Lane	Union	
Columbia	Morrow	Wallowa	
Gilliam	Multnomah	Washington	

Table 12.6. Middle old population high priority UGBs

Bend	Dallas	Newberg	Seneca
Canby	Depoe Bay	Philomath	Shade Cove
Canyon City	Florence	Prineville	Sutherlin
Central Point	Independence	Redmond	Winston
Columbia City	Lakeside	Sandy	
Cove	Myrtle Creek	Scappoose	

Table 12.7. Young old population SCORP funding priorities – Oregon resident outdoor recreation survey

Camping Opportunities
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Providing more free-of-charge recreation opportunities
Making parks safer from crime
Developing walking / hiking trails closer to home
Expanding park facilities
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
More restrooms
Public access sites to waterways
Nature and wildlife viewing areas
Dirt / other soft surface trails and paths
More places and benches to observe nature and others
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
More restrooms
Dirt / other soft surface trails and paths
Nature and wildlife viewing areas
Security cameras in key places
Public access sites to waterways
Close to Home Priority Projects Within Urban Growth Boundaries – RURAL AREAS
More restrooms
Public access sites to waterways
Dirt / other soft surface trails and paths
Picnic areas and shelters for small visitor groups
Nature and wildlife viewing areas
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
Dirt / other soft surface trails and paths
Nature and wildlife viewing areas
More restrooms
Public access sites to waterways
More places and benches to observe nature and others

Table 12.8. Middle old population SCORP funding priorities – Oregon resident outdoor recreation survey

Camping Opportunities
Provide RV campsites
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Making parks safer from crime
Providing more free-of-charge recreation opportunities
Expanding park facilities
Placing more benches and restroom facilities along trails
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
Picnic areas and shelters for small visitor groups
Public access sites to waterways
More restrooms
Security cameras in key places
More places and benches to observe nature and others
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
More restrooms
Picnic areas and shelters for small visitor groups
More places and benches to observe nature and others
Nature and wildlife viewing areas
Security cameras in key places
Close to Home Priority Projects Within Urban Growth Boundaries – RURAL AREAS
More restrooms
More places and benches to observe nature and others
Security cameras in key places
Picnic areas and shelters for small visitor groups
Nature and wildlife viewing areas
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
Nature and wildlife viewing areas
Dirt /Other soft surface trails and paths
Public access sites to waterways
More restrooms
More places and benches to observe nature and others

Table 12.9. Latino population high priority counties

Clackamas	Marion	Washington
Lane	Multnomah	

Table 12.10. Latino population high priority UGBs

Albany	Hermiston	Milton-Freewater	The Dalles
Bend	Independence	Ontario	Umatilla
Canby	Klamath Falls	Redmond	Woodburn
Corvallis	McMinnville	Salem/ Keizer	
Eugene	Medford	Sheridan	
Grants Pass	Metro	Springfield	

Table 12.11. Asian population high priority counties

Clackamas	Multnomah	Washington

Table 12.12. Asian population high priority UGBs

Albany	Grants Pass	Newberg	Springfield
Bend	Klamath Falls	Redmond	St. Helens
Boardman	McMinnville	Roseburg	Unity
Canyonville	Medford	Salem/ Keizer	
Corvallis	Metro	Shaniko	
Eugene	Monmouth	Sheridan	

Table 12.13. Latino population SCORP funding priorities– Oregon resident outdoor recreation survey

Camping Opportunities
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Making parks safer from crime
Developing walking / hiking trails closer to home
Developing parks closer to home
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
More restrooms
Nature play areas
More shaded areas
More places and benches to observe nature and others
Security cameras in key places
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
Nature and wildlife viewing areas
Nature play areas
More restrooms
More places and benches to observe nature and others
Security cameras in key places
Close to Home Priority Projects Within Urban Growth Boundaries – RURAL AREAS
More restrooms
More shaded areas
Nature play areas
More places and benches to observe nature and others
Picnic areas and shelters for small visitor groups
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
More restrooms
Nature and wildlife viewing areas
More places and benches to observe nature and others
Security cameras in key places
Dirt /Other soft surface trails and paths

Table 12.14. Asian population SCORP funding priorities– Oregon resident outdoor recreation survey

Camping Opportunities
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Making parks safer from crime
Providing more free-of-charge recreation opportunities
Developing walking / hiking trails closer to home
Developing parks closer to home
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
Security cameras in key places
More restrooms
Dirt /Other soft surface trails and paths
More places and benches to observe nature and others
Picnic areas and shelters for small visitor groups
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
Security cameras in key places
More restrooms
More places and benches to observe nature and others
Additional lighting
Paved / hard surface walking trails
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
More restrooms
Nature and wildlife viewing areas
Security cameras in key places
More places and benches to observe nature and others
More shaded areas

Table 12.15. Families with children high priority counties

Clackamas	Gilliam	Sherman
Deschutes	Multnomah	Washington

Table 12.16. Families with children high priority UGBs

Adair Village	Harrisburg	Molalla	St. Helens
Albany	Hermiston	Newberg	Summerville
Aurora	Independence	Redmond	Ukiah
Banks	La Pine	Salem / Keizer	Woodburn
Bend	Lafayette	Sandy	
Canby	McMinnville	Scappoose	
Grants Pass	Metro	Sisters	

Table 12.17. Families with children SCORP funding priorities – Oregon resident outdoor recreation survey

Camping Opportunities
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Providing more free-of-charge recreation opportunities
Developing walking / hiking trails closer to home
Developing parks closer to home
Making parks safer from crime
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
Nature play areas
Children's playgrounds built with manufactured structures
Dirt / other soft surface trails and paths
More restrooms
Picnic areas and shelters for small visitor groups
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
Nature play areas
Dirt / other soft surface trails and paths
Children's playgrounds built with manufactured structures
More restrooms
Picnic areas and shelters for small visitor groups
Close to Home Priority Projects Within Urban Growth Boundaries – RURAL AREAS
Nature play areas
More restrooms
Children's playgrounds built with manufactured structures
Picnic areas and shelters for small visitor groups
Dirt / other soft surface trails and paths
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
Dirt / other soft surface trails and paths
More restrooms
Nature play areas
Nature and wildlife viewing areas
Public access sites to waterways

Table 12.18. Low income high priority counties

Lake	Klamath	Gilliam	Curry
Malheur	Harney	Union	Lincoln
Josephine	Jefferson	Douglas	Lane
Lincoln	Coos	Umatilla	

Table 12.19. Low income high priority UGBs

Cave Junction	Ontario	Malin	Woodburn
Powers	Coquille	Oakridge	Westfir
Prescott	Lostine	Lakeview	Cascade Locks
Metolius	Bandon	Riddle	

Table 12.20. Low income SCORP funding priorities– Oregon resident outdoor recreation survey

Camping Opportunities
Provide drive-in tent campsites
Actions to Increase Outdoor Recreation Engagement
Providing more free-of-charge recreation opportunities
Developing walking / hiking trails closer to home
Making parks safer from crime
Developing parks closer to home
Close to Home Priority Projects Within Urban Growth Boundaries – URBAN AREAS
Nature play areas
Picnic areas and shelters for small visitor groups
More places and benches to observe nature and others
More restrooms
Nature and wildlife viewing areas
Close to Home Priority Projects Within Urban Growth Boundaries – SUBURBAN AREAS
More restrooms
Dirt / other soft surface trails and paths
Nature and wildlife viewing areas
Security cameras in key places
Nature play areas
Close to Home Priority Projects Within Urban Growth Boundaries – RURAL AREAS
More restrooms
Picnic areas and shelters for small visitor groups
Nature and wildlife viewing areas
Public access sites to waterways
Dirt / other soft surface trails and paths
Dispersed-Setting Priority Projects Outside Urban Growth Boundaries
Nature and wildlife viewing areas
More restrooms
More places and benches to observe nature and others
Dirt / other soft surface trails and paths
Public access sites to waterways

Table 12.21. Baker County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Amphitheater / band shell	Restrooms
Visitor center and program facilities	Cabins and yurts for visitors
Community trail system	Connecting trails into larger trail systems

Table 12.22. Benton County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Connecting trails into larger trail systems
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Acquisition of trail corridors and rights of way
Interpretive displays	Restrooms

Table 12.23. Clackamas County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connecting adjacent communities	Restrooms
Community trail system	Group campgrounds and facilities
Trails connected to public lands	Connecting trails into larger trail systems

Table 12.24. Clatsop County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Urban bike paths (separate from street traffic)	Restrooms
Community trail system	Day-use hiking trails
Picnic areas and shelters for large visitor groups	Interpretive displays

Table 12.25. Columbia County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Land acquisition for access to public waterways	Connecting trails into larger trail systems
Community trail system	Mountain biking (single track) trails/ areas
Trails connecting adjacent communities	Cabins and yurts for visitors

Table 12.26. Coos County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Restrooms
Trails connecting adjacent communities	Day-use hiking trails
Tennis/ basketball/ volleyball courts (outdoors)	Mountain biking (single track) trails/ areas

Table 12.27. Crook County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Restrooms
Restrooms	Connecting trails into larger trail systems
Land acquisition for public access to waterways	Cabins and yurts for visitors

Table 12.28. Curry County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Restrooms	Acquisition of trail corridors and rights of way
Motorized boat launches and support facilities	Restrooms
Picnicking/ day use and facilities	Land acquisition for access to public waterways

Table 12.29. Deschutes County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Connecting trails into larger trail systems
Community trail system	Day-use hiking trails
Trails connected to public lands	Restrooms

Table 12.30. Douglas County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Restrooms
Restrooms	Connecting trails into larger trail systems
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Day-use hiking trails

Table 12.31. Gilliam County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Picnic areas and shelters for small visitor groups	Restrooms
River or lake fishing from bank or pier	Cabins and yurts for visitors
Trails connected to public lands	Land acquisition for access to public waterways

Table 12.32. Grant County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connected to public lands	Connecting trails into larger trail systems
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Mountain biking (single track) trails/ areas
Dog off-leash areas/ dog parks	Restrooms

Table 12.33. Harney County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of parklands for developed recreation	Connecting trails into larger trail systems
Community trail system	Acquisition of trail corridors and rights of way
Skateboard parks	Restrooms

Table 12.34. Hood River County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of trail corridors and rights of way	Picnic areas and shelters for large visitor groups
Community trail system	Cabins and yurts for visitors
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Group campgrounds and facilities

Table 12.35. Jackson County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of trail corridors and rights of way	Restrooms
Community trail system	Cabins and yurts for visitors
Dog off-leash areas/ dog parks	Tent campgrounds and facilities (car camping)

Table 12.36. Jefferson County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Exercise trails	Restrooms
Trails connecting adjacent communities	RV/ trailer campgrounds and facilities
Community trail system	Motorized boat launches and support facilities

Table 12.37. Josephine County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of trail corridors and rights of way	Restrooms
Acquisition of parklands for developed recreation	Day-use hiking trails
Community trail system	Cabins and yurts for visitors

Table 12.38. Klamath County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of parklands for developed recreation	Restrooms
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Tent campgrounds and facilities (car camping)
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Day-use hiking trails

Table 12.39. Lake County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Acquisition of parklands for developed recreation	RV/ trailer campgrounds and facilities
Exercise trails	Tent campgrounds and facilities (car camping)
Skateboard parks	Long-distance hiking/ backpacking trails

Table 12.40. Lane County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connecting adjacent communities	Connecting trails into larger trail systems
Urban bike paths (separate from street traffic)	Day-use hiking trails
Community trail system	Off-highway vehicle trails/ areas

Table 12.41. Lincoln County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connecting adjacent communities	Restrooms
Community trail system	RV/ trailer campgrounds and facilities
Restrooms	Day-use hiking trails

Table 12.42. Linn County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Connecting trails into larger trail systems
Picnicking/ day use and facilities	Day-use hiking trails
Trails connected to public lands	Group campgrounds and facilities

Table 12.43. Malheur County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Cabins and yurts for visitors
Urban bike paths (separate from street traffic)	Restrooms
Outdoor pool/ spray park	Connecting trails into larger trail systems

Table 12.44. Marion County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Day-use hiking trails
Acquisition of parklands for developed recreation	Connecting trails into larger trail systems
Picnicking/ day use and facilities	Group campgrounds and facilities

Table 12.45. Morrow County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connected to public lands	Restrooms
Picnic areas and shelters for small visitor groups	RV/ trailer campgrounds and facilities
Community trail system	Cabins and yurts for visitors

Table 12.46. Multnomah County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connected to public lands	Cabins and yurts for visitors
Urban bike paths (separate from street traffic)	Connecting trails into larger trail systems
Acquisition of natural open space	Day-use hiking trails

Table 12.47. Polk County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Day-use hiking trails
Exercise trails	Restrooms
Tennis/ basketball/ volleyball courts	Picnicking/ day use and facilities

Table 12.48. Sherman County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Outdoor pool/ spray park	Restrooms
Picnic areas and shelters for small visitor groups	Land acquisition for access to public waterways
Restrooms	Cabins and yurts for visitors

Table 12.49. Tillamook County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connected to public lands	Restrooms
Trails connecting adjacent communities	Connecting trails into larger trail systems
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Tent campgrounds and facilities (car camping)

Table 12.50. Umatilla County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Restrooms
Restrooms	RV/ trailer campgrounds and facilities
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Cabins and yurts for visitors

Table 12.51. Union County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
RV/ trailer campgrounds and facilities	Restrooms
Community trail system	Acquisition of trail corridors and rights of way
Outdoor pool/ spray park	Connecting trails into larger trail systems

Table 12.52. Wallowa County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Community trail system	Restrooms
Exercise trails	Acquisition of trail corridors and rights of way
Children's playgrounds and play areas built with manufactured structures like swing sets, slides, and climbing apparatuses	Connecting trails into larger trail systems

Table 12.53. Wasco County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Tent campgrounds and facilities (car camping)	Cabins and yurts for visitors
Urban bike paths (separate from street traffic)	Connecting trails into larger trail systems
RV/ trailer campgrounds and facilities	Land acquisition for access to public waterways

Table 12.54. Washington County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Trails connecting adjacent communities	Day-use hiking trails
Community trail system	Interpretive displays
Acquisition of parklands for developed recreation	Nature study/ wildlife sites

Table 12.55. Wheeler County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Restrooms	Connecting trails into larger trail systems
RV/ trailer campgrounds and facilities	Restrooms
Group campgrounds and facilities	Cabins and yurts for visitors

Table 12.56. Yamhill County funding priorities – recreation provider survey

Close-To-Home Priorities	Dispersed-Area Priorities
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees	Day-use hiking trails
Community trail system	Connecting trails into larger trail systems
Restrooms	Restrooms

Table 12.57. Statewide urban need: Close-to-home priorities – Oregon resident outdoor recreation survey

Dirt / other soft surface walking trails and paths
Nature and wildlife viewing areas
More restrooms
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)
Public access sites to waterways

Table 12.58. Statewide suburban need: Close-to-home priorities – Oregon resident outdoor recreation survey

Dirt / other soft surface walking trails and paths
More restrooms
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)
Nature and wildlife viewing areas
Public access sites to waterways

Table 12.59. Statewide rural need: Close-to-home priorities – Oregon resident outdoor recreation survey

More restrooms
Public access sites to waterways
Dirt/ other soft surface walking trails and paths
Picnic areas & shelters for small visitor groups
Children's playgrounds and play areas made of natural materials (logs, water, sand, boulders, hills, trees)

Table 12.60. Statewide need: Dispersed-area priorities – Oregon resident outdoor recreation survey

Dirt / other soft surface walking trails and paths
Nature and wildlife viewing areas
More restrooms
Public access sites to waterways
More places and benches to observe nature and others

Table 12.61. Statewide physical activity priorities – Oregon resident outdoor recreation survey

Walking trails or paths
More parks closer to where I live
Trails or paths that lead to parks
Bicycle trails or paths

Table 12.62. Body Weight Index (BMI) high priority counties

Morrow	Umatilla	Lincoln	Malheur
Coos	Jefferson	Lake	Clatsop
Curry	Linn	Harney	Columbia
Douglas	Klamath	Marion	

Table 12.63. Body Weight Index (BMI) high priority UGBs

Jordan Valley	Spray	Waterloo	Garibaldi
Grass Valley	Prescott	Lakeside	Elgin
Huntington	Monroe	Pilot Rock	Willamina
Monument	Chiloquin	Richland	

Table 12.64. Statewide accessibility accommodation priorities − Oregon resident outdoor recreation survey

More accessible paved trails
More benches along trails
Rehabilitation of a recreation area or facility which does not meet access requirements of the ADA
More accessible parking
Public transportation to parks

Table 12.65. Statewide accessibility accommodation priorities by demographic group− Oregon resident outdoor recreation survey

Young Old Population
Rehabilitation of a recreation area or facility which does not meet access requirements of the ADA
More accessible parking
More benches along trails
More accessible restrooms
Middle Old Population
More safe walking areas (free of fall risk)
More benches / places to sit
Public transportation to parks
Allow electric mobility devices on trails
Latino Population
Rehabilitation of a recreation area or facility which does not meet access requirements of the ADA
More benches along trails
More accessible parking
Asian Population
More benches / places to sit
Easier trails
More information about accessible facilities
Families With Children
More accessible paved trails
More accessible parking
Accessibility education for staff and visitors
More accessible playground facilities
Low-Income Population
More benches along trails
More accessible paved trails
More accessible restrooms
Rehabilitation of a recreation area or facility which does not meet access requirements of the ADA
Public transportation to parks