SECTION 8. DEVELOPING A SUCCESSFUL SYSTEM

This plan aims to lay the framework for a citywide network of off-road bike trails and parks for users of all ages and abilities. Creating a system that is successful in the long-term will require intentional planning, design, construction, maintenance, management, and enforcement.

Planning, Design and Construction

While City staff are familiar with a project's life cycle, the process can seem confusing, overly burdensome, and mysterious to community stakeholders. City projects and processes are multifaceted, and may include a team of staff, multiple bureaus (depending on the location and infrastructure needed for a project), and stakeholder involvement committees. As such, it is important to clarify a projects journey from beginning to end for transparency, as well as being able to review the process to identify unnecessary hurdles and opportunities for efficiencies.

The following graphic and table offers a step-by-step look at how an off-road cycling project goes from a thought to completion (this process could and should be changed as the City completed more off-road cycling projects and gains lessons learned):

Throughout: Community Engagement

Community engagement is integral to any park or trail project. The engagement process should follow applicable City polices and protocols and this Plan's Equity in Engagement and Decision-making recommendations, page **. Engagement during the planning, design and construction of off-road cycling trails and parks might include:

- Initial and ongoing community information and notification, via options like project websites, emails, announcements, and social media.
- Opportunities for community members to engage in, and inform, the project's design and management, potentially through surveys, open houses and community events, stakeholder committees, and online input opportunities.
- Notification of neighbors, the neighborhood association, and district coalition as the planning efforts start, during the input process, and before construction begins.

Step 1. Project Identification and Master Planning

Future project should first be identified in the adopted Off-road Cycling Master Plan and/or an adopted site-specific Master Plan. Ideally, projects listed in this document will be incorporated into Master Plans for each proposed park or natural area. This may require amending an existing Master Plan or, for site that lack plans, adopting a new plan, both with community input.

Initial Master Plans establish the scope, scale, budget and complexity of a project and provide a visual representation of the potential layout of site amenities, including trails and bike parks, as well as infrastructure like parking and restrooms. This Master Plan can be used during initial engagement of public agency partners, neighboring landowners, businesses, park advocates, and the local community and for funding requests.

During this phase of planning, the City should also:

- Explore opportunities for concurrence with other City projects/goals, meeting multi-objective goals (partnership opportunities)
- Review relevant policies and plans to identify requirements in adopted plans, zoning codes, bureau policies, trail guidelines, etc.
- Involve natural resource experts and planners to better respond to site conditions and identify potential enhancement and mitigation opportunities. See the Design with Nature section for additional recommendations.
- Identify significant permitting requirements
- Identify relevant design, planning, management best management practices

Step 2. Prioritization and Funding

Once a project is identified, Portland Parks & Recreation (PP&R) and the City would consider the new projects for funding through the capital improvement and budget processes. In this step, they would be measured against PP&R goals and against other park, recreation and citywide needs and priorities. Off-road cycling projects should be prioritized based on factors like:

- Community input and support
- Potential to serve under-served communities
- Ease of implementation
- Opportunity to advance multiple City or community goals.

Both the PP&R and City budget processes include opportunities for community input. Funding for the design and construction may occur in two separate steps, depending on funding source and availability

Step 3. Site Design

If a project is funded, the City could begin to design the project. Design work involves detailing the proposed trail or bike park, gathering community input, assessing environmental impacts (such as on wildlife, habitat and water), designing for the needs and safety of intended users, and identifying any needed mitigation strategies. Site design should be based on site conditions, community and partner feedback, and goals for the site. It is a good idea to involve various experts in the design process to provide expertise. For example, City staff should be included to:

- Parks & Recreation (PP&R) Provide planning, design and implementation expertise, community outreach, as well as information on recreational programming and education.
- Transportation (PBOT) Provide insight into the connections to the City's bike network and cycling outreach.
- Environmental Services (BES) Provide expertise on stormwater requirements, erosion control, and/or other environmental mitigation aspects.
- Development Services (BDS) Serve as a continuous liaison on permitting issues and requirements.

The design process results in a site plan, which visually represents the proposed facility. This site plan is used for environmental assessments, permitting, fundraising, and the creation of construction documents.

At this step in the process, it is also useful to create an **Operations Plan**. This plan outlines an overall approach, protocols and actions to ensure the highest quality construction, maintenance, operation and management of the facility. Operations Plans should also ensure that comprehensive integrated risk management practices and protocols are established and maintained by all parties for the lifetime of the facility.

The design process should also result in plans for maintenance, operations, staffing, events, and programming to ensure the long-term success of the project.

Step 4. Permitting and Final Plan

Permitting ensures projects are When a project is ready for permitting, the Project Manager brings the site design to the Bureau of Development Services' (BDS) permit center to review the design and identify what permits will be required.

Depending on the reviewer's advice, an Early Assistance Meeting may be required. An Early Assistance Meeting is an opportunity for the project manager and support staff to talk with staff from all the bureaus that may be offering guidance on permitting. This meeting will be especially useful if environmental mitigation is required or substantial topographical change is planned. Early assistance meetings can also be held in the field, so all parties can view site conditions first hand.

Once a permit application is submitted, BDS and other agency staff review it based on established codes and requirements. They may approve the permit outright or offer guidance on changes that are required before a permit can be issued. If required, these changes are incorporated into the Final Site Design and resubmitted for approval.

As part of the permitting process, any project located in an environmental zone would go through environmental review. The goal of environmental review is to safeguard natural resources and the ecological health of the park. It also requires public notification of proposed changes and allows for public comments and appeal of the decision.

Once the permit and site plan is approved, construction can begin.

Step 5. Construction

The project is built to the specifications details in the Final Plan. Care should be taken to limit adverse impacts to soils, nearby vegetation, waterways, and wildlife habitat during construction. When construction is complete, a BDS Inspector completes an on-site review of the project to ensure it was built to specifications and code. Any issues identified by the inspector are then remedied. Upon a successful inspection, the project is complete and ready to use!

Step 6. Ongoing Maintenance and Management

Management of existing or any new trails or bike parks involves continuous maintenance; monitoring for unintended negative impacts on wildlife, water, habitat, or users; enforcing trail rules; and acting to address any recurring problems. Maintenance and Management are discussed later in this section.

Related Recommendations

Planning, Design and Permitting

- 1. Consider opportunities for off-road cycling facilities in new or updated park master plans for locations recommended by the Off-road Cycling Master Plan.
- 2. Involve and stakeholders early in the design process to document equity issues as well as existing environmental conditions and to identify potential enhancement and mitigation opportunities.

- 3. Develop and maintain trail and bike park design guidelines that are based on best practices.
- 4. Ensure codes and permitting requirements for trails and bike parks forward goals to protect and enhance ecological health, provide recreational opportunities, support equity, public transparency, and steward public funds for facility construction and maintenance.

Construction

- 1. Develop construction documents and specifications that reflect best practices in trail and bike park design as appropriate to the planned facility and site conditions.
- 2. Involve a multi-disciplinary design team in the development of construction documents, such as a bike park/trail designer; civil, structural and/or geotechnical engineers; landscape architects; and environmental and technical specialists. natural resource experts
- 3. Use qualified trail or bike park builders to perform or manage facility construction.
- 4. Clearly define the boundaries of construction, resource protection areas, staging areas, etc. during construction activities.
- 5. Manage construction activities to minimize exposure to disturbed earth during the wet season and near sensitive water resources.
- 6. Work within seasonal work "windows" and build trails and bike parks outside of breeding seasons for species using the site (i.e. avoid bird nesting season see TEES Guidelines on Avoiding Impacts on Nesting Birds).
- 7. Minimize the spread of ecological/invasive species by cleaning tools, boots and equipment prior to entering the project area and make sure imported soil is weed free.

Signage, Education & Programming

Signage & Wayfinding

Clear and consistent signage is at the core of successful off-road cycling facility design and management. Signage should enhance the user experience and minimize risk by informing users of trail conditions including park rules, trail difficulty, enhanced terrain and technical features, trail etiquette, riding technique, appropriate safety equipment and emergency medical services. In the context of a bike park or skills trails, providing recreational interpretation, which shares riding techniques promotes progression and skills improvement and will improve user experiences and safety. Well-thought out signage and wayfinding materials can also improve accessibility for those using handcycles or other adaptive or non-traditional bicycles.

Best Practices

Following these best practices can improve user experience, minimize risk, establish rules and expectations, and promote stewardship:

- Provide public education and signage that supports stewardship off-road cycling facilities and surrounding public lands.
- Install positive wayfinding signage, including mapping kiosks; clear and consistent signage at trail entrances and along trail routes. Use wayfinding best practices like confirmation signs a few hundred feet into the route to ensure cyclists are on the right trail.
- Develop clear and easy to understand graphics to direct cyclist to designated/appropriate trails, and to indicate skill level and what riders might encounter along the trail (shared use, equestrians, etc.).
- Incorporate recreational interpretive signage into bike parks and skill trails. This type of signage provides recreational instruction and techniques for safe and fun riding. It promotes progression and user safety.
- Providing natural, historic and cultural interpretive information for natural and urban trail routes.



This trail sign, at Phil's Trail System in Bend, provides information on the trail's name, allowed users, direction of travel, level of difficulty, and trail etiquette.

Education & Programming

The City of Portland has multiple public and nonprofit educational programs related to off-road cycling or cycling generally, including recreational classes and trips, school-based programs, and public information campaigns aim to provide riders with the knowledge and skills necessary to enjoyably and safely ride in the City. Some of these programs are targeted to traditionally underserved communities (such as people with limited incomes or limited English-language ability), youth, or commuters. Expanding these educational and experience-based programs to incorporate off-road cycling knowledge and skills will help extend the opportunity to more Portlanders.

In addition, the city should explore other ways to address barriers to off-road cycling, such as access to bicycles and other equipment. For example, loaner or rental bicycles, provided through

partnerships with non-profit or private partners, could allow Portlanders without a suitable bicycle to try off-road cycling.

Related Recommendations

Signage & Wayfinding

- 1. Provide public education that supports stewardship of the trail system and associated parks and natural areas. Recognize and support the need for continued education and enforcement of park and trail rules.
- 2. Use clear and consistent signage, maps, and public information to enhance user experience, minimize risk, establish rules and expectations, and promote stewardship based on best practices.

Education & Programming

- 1. Pursue opportunities to partner with public, private, and non-profit organizations to provide educational programs and equipment to expand the accessibility of off-road cycling.
- 2. Prioritize partnerships and programs that increase accessibility for historically under-served communities.
- 3. Explore opportunities to expand existing City programs and partnerships, such as recreational classes and trips, Safe Routes to Schools, and the Schools Uniting Neighborhoods (SUN) Program, to incorporate off-road cycling instruction and opportunities.
- 4. Develop partnership agreements and protocols that document and support such programs.

Maintenance

Off-road cycling facilities require regular, ongoing maintenance. Trail surface and upkeep is a key concern of trail users, as it is critical to both usability and minimizing safety and environmental risks.

Trails maintenance tasks include vegetation pruning, removal of fallen trees/branches, and inspection and maintenance of signage and any edge protection or drainage crossings (bridges, etc).

Typical maintenance tasks at bike park facilities include, but are not limited to watering, compacting, shaping and otherwise maintaining the dirt features. Tasks also include routine inspection and maintenance of signage, clearing potentially hazardous debris from fall zones, inspecting and repairing any damaged hardware on wooden structures, inspecting rock and wood features for structural integrity, and maintaining drainage control features and landscaping.

Staffing

Maintenance can be conducted by staff, volunteers, professional contractors or a hybrid of these options. Ideally, maintenance staff of any kind should have experience or be trained in park maintenance and natural resource protection. Volunteer efforts should be supervised by a qualified and dependable manager and involve a formalized stewardship agreement.

Budgeting for Maintenance

Maintenance costs should be identified and factored into planning and operations budgets. See Table 2 and Table 3 for typical annual maintenance costs for various types of trails and bike parks.

Inventorying Facilities

Maintaining an inventory of off-road cycling trails and facilities, including location and type, supports informed maintenance planning, budgeting, and activities. Such an inventory also provides a way to identify off-road cycling trail segments or facilities that do not meet current design guidelines. These segments should be either improved to standard or decommissioned based on system needs.

Maintenance Plans

Ongoing maintenance is most successful when a Maintenance Plan establishes regular activities, inspections, protocols, and schedules. A site's maintenance plan should identify who is allowed to and responsible for performing maintenance activities. It should also identify thresholds for unacceptable environmental impacts (disturbances) and methods to address the impacts, such as adaptive management strategies (e.g. seasonal closures).

Maintenance Logs

Maintenance activities should be logged and tracked to become the basis for budget and resource planning. Over time, maintenance logs can help in identifying trail segments or riding elements with chronic functional problems or unacceptable environmental impacts, which need to be addressed.

Related Recommendations

Maintenance

- 1. Create and maintain an inventory of off-road cycling trails and facilities across the City. Identify trail segments or facilities that do not meet current design guidelines and work to either restore or decommission these facilities based on system needs.
- 2. Identify and incorporate ongoing maintenance costs into planning for sites and operations budgets. Track maintenance activities as a basis for budget and resource planning.

- 3. Establish inspection and maintenance activity schedules and protocols. Perform regular maintenance on all facilities in compliance with maintenance plan protocols to ensure trails and facilities remain in a safe, rideable condition appropriate to their technical difficulty.
- 4. Use maintenance logs to identify trail segments or riding elements with chronic functional problems or unacceptable environmental impacts which should be addressed. For example, remedy or relocate problem trail sections rather than performing continuous maintenance to repair damage.
- **5.** Use experienced staff, trained volunteers, or professional contractors, or a combination of these options, to conduct maintenance as appropriate.

Stewardship, Management and Enforcement

Stewardship

Stewardship is an important strategy for protecting and enhancing natural resources, as demonstrated by the city's Natural Areas Stewardship program. Resource agencies with many acres of open space, like Portland, often rely on volunteers to help maintain large natural areas and open space. Volunteers, in turn, contribute to their community while also spending time outdoors.

Developing a sustainable system of trails and offroad cycling facilities in Portland will require a community that is committed to creating and maintaining off-road cycling facilities and their surrounding public lands, both for their own enjoyment as well as the enjoyment of others.

The off-road cycling community is rooted in a strong communal, grass-roots ethic around the stewardship of trails that extends to the environment in which they are located.

... COMMUNITY SUPPORT AND VOLUNTEER WORK ...IS AN EXCELLENT WAY TO ENCOURAGE HEALTHY HABITS AND ACTIVITIES AND FOSTER INTEREST IN NATURE FOR FUTURE GENERATIONS.

COMMUNITY MEMBER

WHAT HAS HAPPENED SO FAR AT GATEWAY GREEN IS A GREAT EXAMPLE OF WHAT THE MOUNTAIN BIKE COMMUNITY CAN DO! GIVEN THIS OPPORTUNITY, THE CYCLISTS CAME TOGETHER AND ARE DEVELOPING GREAT SUSTAINABLE TRAILS. HUNDREDS OF CYCLISTS SHOW UP FOR WORK PARTY DAYS. NO OTHER USER GROUP IN PDX MAINTAINS THEIR TRAILS BETTER THAN CYCLISTS. WE ARE GREAT STEWARDS OF THE LAND AND HOPEFULLY GG SHOWS THIS!

COMMUNITY MEMBER

Volunteer Protocols

Where volunteers will be used, the City should establish protocols to ensure their safety. Such protocols may include requiring all volunteers participating in construction, routine maintenance operations or other special events to sign a liability waiver; requiring all volunteers to wear standard safety equipment (e.g. sturdy closed-toe shoes, pants, gloves) during all construction and maintenance operations and activities.

Management

The first step to ensuring effective, long-term management of a trail system or bike park is developing a Risk Management Plan. A facility's Risk Management Plan should address both risks to users and the environment. It should establish effective management protocols and demonstrate an intent to manage the facility responsibly. Risk Management Plans for trails and bike park facilities should, at a minimum, address signage, incident and accident reporting, maintenance and inspection activities, environmental risk, and volunteer activities.

Once a trail or bike park is built, the managing agency should:

- Establish and implement incident and accident reporting protocols that enable the managing agency to record, monitor and respond to safety hazards. Regular evaluation of incidents and accidents should take place to prioritize where maintenance and/or design changes should take place to improve safety.
- Monitor for unanticipated/unintended impacts of trails or other facilities on natural resources, such as excessive erosion and adverse impacts on vegetation, streams and wetlands, habitat, and wildlife.

Adaptive management strategies, potentially including the improvement or the conditional or permanent closure of trails or facilities, should then be used to address unsustainable conditions (e.g. saturated soil conditions after particularly heavy rains) or unintended negative impacts.

Enforcement

Even with the best of intensions, there may be individuals who do not follow the rules of a bike park, trail system, or other facility. The managing agency should establish enforcement protocols that define the rules for facilities (e.g., use hours, direction of travel, etc.), penalties for not following the rules, and the roles and responsibilities of enforcement agencies.

Unsanctioned Trail Use - Management Hierarchy

Where unsanctioned trail use occurs, despite positive signage and public information on appropriate trail use, use an escalating management hierarchy (outlined below) to reinforce sanctioned trail use and etiquette. More intensive interventions (such as physical barriers and paid patrols) can have drawbacks, including increased system costs and deterrence of other allowed users.

- Step 1. Actively maintain trail systems to ensure sanctioned trails remain rideable and signage legible.
- Step 2. Close entrances to unsanctioned trails and rehabilitate impacted areas.
- Step 3. Use volunteer-based patrols and outreach programs to actively patrol trail systems and encourage desired use. Patrols can also provide educational, skill-building, and stewardship opportunities. The International Mountain Bicycling Association's (IMBA) mountain bike patrol program could serve as a model that educates riders about sustainable trail concepts, stewardship opportunities, and trail etiquette.
- Step 4. Install prohibitive signage that announces unsanctioned user groups and directs users to nearby trail opportunities.
- Step 5. Install physical structures at the entrance to unsanctioned trails that make access on a bicycle difficult (by, for example, requiring a cyclist to dismount as they pass through). Such barriers can include natural materials, like rocks or logs, or manmade gates. A second barrier, within sight of the first structure, can be used to further discourage access.
- Step 6. Expand City Ranger Programs and other paid patrols of trail systems and parks.

IMBA's National Mountain Bike Patrol (NMBP) consists of dedicated volunteers partnering with land managers, landowners and emergency personnel to assist, educate and inform all trail users to enhance their recreational experience. There are over 50 NMBP programs nationwide. Since 1994, the NMBP has provided hundreds of thousands of hours of volunteer service to countless land management agencies and trail users. Patrols operate as a volunteer group for the local land management agency and may or may not be affiliated with an area mountain bike club. Patrollers promote responsible mountain biking through IMBA's philosophy of environmentally sound and socially responsible riding, embodied in the universally recognized IMBA Rules of the Trail.

NMBP volunteers:

- Assist in medical and mechanical emergencies
- Educate trail users of proper etiquette
- Inform land managers, land owners and trail users of trail conditions through monitoring efforts
- Work with land managers to maintain and/or gain trail access for mountain bikers
- Offer volunteer services at outdoor races and events
- Collaborate with local clubs on trail work days, clinics, group rides and Take a Kid Mountain Biking Day

Related Recommendations

Stewardship

- 1. Support and build partnerships with park users and community organizations for trail and bike park construction and maintenance, park restoration and enhancement, and education.
- 2. Partner with trail-based organizations with expertise in planning, constructing, maintaining, and programming off-road cycling facilities.
- 3. Create formal partnership documents, such as Memorandums of Understanding (MOUs), to establish a framework of cooperation between the project owner and volunteer groups or organizations who will be assisting in the construction, maintenance and operation of a facility.
- 4. Encourage volunteer stewardship activities. Enhance trail stewardship programs, through improvements like increased use of volunteers and partnerships, additional volunteer training, trail adoption programs, tool libraries, and expansion of the City's Youth Conservation Corps.

Management

- 1. Develop a Risk Management Plan, addressing both user risk and environmental risk, for each facility or type of facility.
- 2. Monitor trail and bike park use, including any incidents and accidents, and any safety or environmental risks. Encourage community reporting of safety risks. Use adaptive management practices to address any problem areas.

Enforcement

- 1. Establish enforcement protocols that define the rules for facilities, associated penalties, and enforcement mechanisms.
- 2. Use the escalating management hierarchy address unsanctioned trail use and reinforce sanctioned trail use and etiquette.

Funding

The Off-Road Cycling Master Plan will not be realized unless there is associated funding to complete the identified efforts and projects. There are multiple sources of funding for cycling efforts from the state, regional government, and private opportunities. This section seeks to provide a preliminary resource of funding sources that can be used to plan for and build Portland's future off-road cycling infrastructure.

Related Recommendations

Funding

1. Develop funding strategies for site development and maintenance. Explore options for creative financing (such as grants, sponsorships and donations) to secure capital funds.

Portland Parks & Recreation Funding Sources

Most of the recommendations in this plan would be carried out by Portland Parks & Recreation, who is the City's provider of park and recreation services. Portland Parks & Recreation is primarily funded through the City's General Fund, which incorporates revenues from property taxes, service charges, bond proceeds, and other sources. Additional funding and support comes by way of grants and financial and in-kind donations. To be built, the off-road cycling improvements envisioned in this plan will need to be recommended for funding through the Portland Parks & Recreation (PP&R) and the City capital improvement and budget processes. As part of this process, they would be measured against PP&R goals and against other park, recreation and citywide needs and priorities. Both the PP&R and City budget processes include opportunities for community input.

Statewide Funding Opportunities

Statewide Transportation Improvement Program (STIP)

HTTPS://WWW.OREGON.GOV/ODOT/TD/STIP/

The STIP is Oregon's four-year capital transportation improvement program. It identifies transportation projects for all systems (federal, state, city, and county) as well as multimodal projects. The STIP is divided into two funding buckets – Enhance and Fix-it.

- Enhance funding is for projects and activities that "enhance, expand, or improve the transportation system." In efforts to be multimodal and mode-agnostic, the project list for Enhance funding is created by looking at the system holistically, not by individual modes. ODOT requests local jurisdictions to submit a list of proposed Enhance projects that move "people and goods through the transportation system."
- **Fix-It** funding is solely for maintenance and preservation of the existing transportation system.

Opportunities for the Off-Road Cycling Master Plan: This is an extremely competitive funding mechanism, both between jurisdictions and within jurisdictions. Projects purely identified for off-road cycling and/or recreational purposes would not be strong competitors for these funding streams. Instead, these funding mechanisms might be more appropriate for the on-road links between off-road cycling areas that will create a more cohesive system.

Connect Oregon

HTTPS://WWW.OREGON.GOV/ODOT/TD/TP/PAGES/CONNECTOR.ASPX

Connect Oregon is a lottery-backed funding source that can be used for all modes of transportation. Public, private, and non-profit entities can apply for Connect funds, which may cover up to 70% of project cost. Connect funds cannot be used on projects that are eligible for the Highway Trust Fund (fuel and motor vehicle tax). While there are six considerations for funding, the three primary ones are:

- 1. Whether a proposed transportation project reduces transportation costs for Oregon businesses or improves access to jobs and sources of labor;
- 2. Whether a proposed transportation project results in an economic benefit to this state; and
- 3. Whether a proposed transportation project is a critical link connecting elements of Oregon's transportation system that will measurably improve utilization and efficiency of the system

Opportunities for the Off-Road Cycling Master Plan

Connect Oregon's restriction not allowing projects that are eligible for gas and fuel tax revenue slims the pool of potential projects. In the past funding cycle, a number of off-street trails were approved, most notable for Portland, a segment of the Red Electric Trail. Access to employment and/or goods movement is a major factor in project selection and should be thoroughly analyzed before a proposal is submitted.

Transportation and Growth Management (TGM)

HTTPS://WWW.OREGON.GOV/LCD/TGM/PAGES/GRANTS.ASPX

TGM funds assist communities in coordinating land use and transportation planning to create livable, economically vital, and sustainable communities. TGM grants are only available for transit, walking, and bicycling projects. There are two categories of TGM grants:

- Category 1: Transportation System Planning, including TSP updates, to give Oregonians a range of transportation choices and meet requirements of the Oregon Transportation Planning Rule
- Category 2: Integrated Land Use & Transportation Planning, to promote compact, mixed-use development supported by improved pedestrian, bicycle, transit, and multi-modal street facilities

Opportunities for the Off-Road Cycling Master Plan

TGM funds are purely for planning purposes, not for building projects. As such, TGMs might be applicable for a site-planning or neighborhood planning effort which includes transportation to and from an off-road cycling destination. As with other state funding pots, TGM grants are highly competitive, and an off-road cycling project would only be a viable candidate if it were integrated into a transportation/land use focused planning effort.

Regional Transportation Funding

HTTP://WWW.OREGONMETRO.GOV/PUBLIC-PROJECTS/REGIONAL-FLEXIBLE-FUNDING-TRANSPORTATION-PROJECTS

Every three years, Metro allocates "regional flexible funds" to improve air quality, relieve congestion, and create more transportation options, and improve transportation system performance. This funding opportunity is unique given that the criteria used to prioritize and select projects is changed (nearly) every cycle by a regionally-representative body, the Joint Portland Advisory Committee (JPACT).

Opportunities for the Off-Road Cycling Master Plan

As with other funding sources, the combination of an off-road project with a greater transportation planning effort would be instrumental in identifying funding. In addition, any efforts that may be considered regionally significant could be an attractor for this funding pot given the regional charge of Metro.

Funding partnerships

Given the competitiveness and limitations of government funding sources, looking to foundations and companies as trail funding sources is recommended. The following foundations and companies were identified as potential funders of off-road cycling projects:

PeopleForBikes Community Grant Program

HTTP://WWW.PEOPLEFORBIKES.ORG/PAGES/COMMUNITY-GRANTS

PeopleForBike Community Grant Program is funded by bicycle industry partners and have funded Portland cycling efforts in the past, most notably the New Columbia Skills Park and Bike Hub. The following can be funded through this program:

- Bike paths, lanes, trails, and bridges
- Mountain bike facilities
- Bike parks and pump tracks
- BMX facilities
- End-of-trip facilities such as bike racks, bike parking, bike repair stations and bike storage

REI Community Partnerships

HTTPS://WWW.REI.COM/STEWARDSHIP/COMMUNITY/NON-PROFIT-PARTNERSHIPS-AND-GRANTS.HTML

REI provides funding and assistance for projects in communities where they have stores. There are no specific guidelines for funding, besides having a connection to a store and it's "team members." REI does not accept unsolicited grant applications. Many, if not all, of REI's partnerships focus on protecting the environment in locations that staff, members, and customers recreate.

Partnerships with Health and Fitness Focused Companies

The Portland region is home to many recreation-focused companies. These companies include, among others, Nike, Adidas, Under Armour, Nutcase, and The Clymb. While each company has a different structure for community giving, they all have stewardship and community growth as tenants of their corporation.

In addition, health and medical companies have been interested and willing to fund bicycle-related activities in the past. Most notably is Kaiser-Permanente who sponsors both Sunday Parkways and BikeTown. Other large health care providers, such as OHSU and Legacy should be viewed as potential funders of off-road biking infrastructure and efforts.

Activity and User Fees

While projects may be successfully funded through a one-time grant or allocation, maintenance and operation of any off-road cycling infrastructure must be considered. Some communities charge user fees for their access to park and recreation facilities, although it is doubtful that user fees cover the operational costs of any of these facilities. However, such user fees can result in inequitable access by restricting access to public lands based on visitors' ability and willingness to pay. Examples include:

User Fees and Permits

- Indiana Department of Natural Resources. Off-road cyclists riding trails above beginner level are required to have a permit. An annual permit is \$20, and a daily permit is \$5. They can be purchased at recreation offices or online.
- Phoenix Competitive Tracks
- Snoqualmie Forest (Washington). The Snoqualmie Forest is privately-owned land used for timber production. Each person participating in non-motorized activities on the Snoqualmie Forest is required to have a permit. Annual individual and family permits are \$50, day user permits and \$8 and \$15 for an individual and family, respectively.
- Raccoon River Valley Trail. The Raccoon River Valley Trail in an 89-mile paved trail that travels through rural counties west of Des Moines, Iowa. Local conservation boards charge user fees of \$2 per day or \$10 per year to support trail improvements and maintenance. User fees are one of many revenue sources for trail maintenance. Fees are collected on an 'honor system', with permits sold in kiosks along the trail and at local businesses. Trail users under 18 are not required to have a permit. Users who live in cities along the trail are also exempt for trail segments within their city's limits.

Parking Fees

Currently, there are no parking fees at any current off-road cycling locations in Portland. However, the City does charge for parking at Washington Park and for on-street parking adjacent to many downtown parks. Nationwide, many parks that have off-road cycling (and other activities) sell parking passes that serve as partial funding for the upkeep of the property.

For example, Oregon's Sno-Park Permit supports the plowing and maintenance of parking lots for winter recreation. Permits are \$4 daily or \$25 annually. Oregon State Parks also charges vehicle entry fees for many state parks, some of which offer off-road cycling trails (L.L. Stub Stewart State Park, Silver Falls State Park, Milo McIver State Park, among others). Parking fees at Oregon State Parks are \$5 per day or \$30 annually. Visitors who arrive by bicycle are not required to pay parking fees.

Membership Dues

Membership dues, such as for membership in "Friends Of" type groups, are another way to support development and ongoing maintenance of parks and trail systems. For example, membership dues are one of many public and private sources of funding for the Katy Trail, a 3.5-mile paved trail in downtown Dallas, Texas. The Katy Trail is located in a public park but is maintained by the Friends of the Katy Trail, a non-profit organization responsible for raising funds for trail improvement and maintenance.

In 2015, membership dues amounted to nearly 20% of the group's \$865,000 in annual revenue (private donations were an additional 35% of revenue). Membership dues start at \$50 annually and provide members with access to special events and discounts at partnering businesses. Trail memberships are also available for canine "Katy Dogs". Membership dues help pay for regular maintenance, police patrols, and utilities.

Savings through Volunteer Engagement

Volunteer groups, including friends' groups and trail organizations, can become critical components of successful trail funding, through their volunteer work and fundraising. With supervision, volunteers can perform basic trail maintenance and restoration activities. They can also leverage their

membership, and the broader community, to fundraise for trail improvements and management. To maximize the potential of volunteer programs, partnerships should be formalized and documented. In addition, the land managing agency should support sufficient internal staff and the resources needed to oversee volunteer efforts.