Regional Habitat Connectivity Working Group

Strategic Action Plan

2024-2034

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Overview

Contributors

The 2024 Intertwine Regional Habitat Connectivity Working Group (RHCWG) Strategic Action Plan (SAP) was completed with funding from an U.S. Fish and Wildlife Recovery Grant, administered by the Intertwine Alliance. Funds were provided by Clean Water Services and Metro to support the Equity Audit and integration phases of the work.

Creating the Strategic Action Plan involved many stages and contributors along the way. A complete list of participants can be found in Appendix 1. An abbreviated list includes:

- RHCWG Steering Committee members
- RHCWG Committee members
- Strategic Action Plan contributors
- Supporting organizations that provided significant staff time, funding, or fiscal support
  - Metro
  - Urban Greenspaces Institute
  - Clean Water Services
  - U. S. Fish and Wildlife Service
  - Portland State University
  - Samara Group
  - City of Portland
    - Bureau of Environmental Services
    - Portland Parks and Recreation
  - Bird Alliance of Oregon (formerly Portland Audubon)
  - Clackamas Soil and Water Conservation District
  - Oregon Watershed Enhancement Board
  - The Intertwine Alliance

- Equity Integration Report: provided external support to review the draft SAP, draft a Community Engagement Framework, and produce a geospatial mapping methodology and dataset based on indicators of community vulnerability (see Appendix 4).
  - Knot Studio
  - MultiCultural Collaborative

- Portland State University graduate students participated in an Environmental Science and Management department course to provide a detailed analysis of the SAP and help integrate the equity integration report recommendations into the plan.

Acronyms, Abbreviations, & Key Definitions

BIPOC   Black, Indigenous, and People of Color
BMP   Best Management Practice
CBO   Community Based Organization
GIS   Geographic Information System
ITEK   Indigenous Traditional Ecological Knowledge
JEDI   Justice, Equity, Diversity, and Inclusion
Toolkit   Habitat Connectivity Toolkit
HCZ   Habitat Connectivity Zone
OCAMP   Oregon Connectivity Assessment and Mapping Project
ODFW   Oregon Department of Fish and Wildlife
OWEB   Oregon Watershed Enhancement Board
PPR   Portland Parks and Recreation
PSU   Portland State University
PWCA   Priority Wildlife Connectivity Area
RCS   Regional Conservation Strategy
RHCWG   Regional Habitat Connectivity Working Group
Region   Greater Portland-Vancouver Intertwine Region
RTP   Regional Transportation Plans
SAP   Strategic Action Plan
SWCD   Soil and Water Conservation District

Community Vulnerability: The potential negative effects on communities caused by external stresses on human health. Such stresses include natural or human-caused disasters, disease outbreaks, or other environmental burdens.

Data Justice: An approach that redresses ways of collecting and disseminating data that have invisibilized and harmed systematically marginalized communities.

Eco-social Connectivity: Captures how spatial features, infrastructure and social properties of landscapes facilitate people's access to nature and its benefits.

Environmental Burden: Any activity affecting the environment or any consequence of such activity which has caused or continues to cause environmental pollution, environmental risk or impairment of natural resources.

Environmental Justice: The just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making.

Systematically Marginalized Communities: Peoples, populations, or groups that experience discrimination and exclusion (social, political and economic) because of unequal power relationships across economic, political, social and cultural dimensions.

Executive Summary

This Strategic Action Plan, developed by the Regional Habitat Connectivity Working Group (RHCWG), is intended to increase habitat connectivity, improve ecological resilience, and support environmental justice in the Greater Portland-Vancouver Region. Over the next 10 years (2024-34), implementation of the Strategic Action Plan (SAP) will enhance the network of conserved core wildlife habitats, the Habitat Connectivity Zones (HCZs) connecting them, and the communities that surround them. This effort will be coordinated and implemented by the RHCWG, a regional partnership of over 40 public agencies, academic institutions, parks districts, non-profits, consultants, watershed councils, and interested community members.

The Strategic Action Plan incorporates a racial equity and environmental justice lens by identifying and prioritizing areas with the highest levels of ecological burden and social vulnerability for connectivity initiatives and investments. To be successful, the Strategic Action Plan must reflect the needs and desires of systematically marginalized communities including Black, Indigenous, and People of Color (BIPOC), who will be affected by implementation. This will require RHCWG members to recognize the legacy of racism within predominantly white conservation organizations, address the on-going impacts of past and current conservation work to communities, and commit to ongoing growth. Incorporating racial equity and environmental justice into this work will help repair past injustices and avoid additional marginalization to bring the region further along in reaching both conservation and community goals.

The SAP is organized into four core elements:

- Element A: Data, Research and Science strategies develop and maintain ecological and environmental justice geospatial datasets that can identify and prioritize core habitats and HCZs across the region, and identify intersections with connected communities.
- Element B: Outreach, Education, Engagement and Advocacy strategies engage systematically marginalized communities, and inform community-driven data, prioritization criteria, and community advocates on regional eco-social connectivity needs.
- Element C: Planning and Policy strategies emphasize integrating habitat connectivity and environmental justice considerations into regional policies and planning frameworks, and aligning funding programs to support these initiatives.
- Element D: Conservation, Restoration, Stewardship, and Management strategies identify and implement on-the-ground conservation projects through inclusive and collaborative processes.

The Strategic Action Plan offers a vision and framework for moving forward together to protect and restore our natural systems. These goals and strategies will facilitate the movement of species, improve ecosystem resilience, and support biodiversity conservation. These efforts will also enhance community health and well-being, create thriving landscapes by increasing access to nature, improved land management policies and practices, and fostering positive community engagement. In summary, the Strategic Action Plan offers a holistic approach to conservation and restoration by addressing ecological, social, and environmental justice dimensions to create positive and lasting impacts on landscapes and communities.

Introduction

Located in Northwest Oregon and Southwest Washington, the Greater Portland-Vancouver Region (Region) sits at the confluence of two rivers, the Willamette and Columbia. These major waterways, their associated riparian areas, and surrounding landscapes provide wildlife corridors to many aquatic and terrestrial wildlife species. Access to nature is among the reasons people choose to live here. Movement is an integral element of survival for these and most other Pacific Northwest native wildlife species. Whether black bear, heron, or butterfly, every species must travel to find food, shelter, water, mates, and to avoid predators and harsh conditions. Further, the changing climate brings altered weather patterns and more extreme weather events. Many plants and animals will have to migrate to survive these changes, whether to cope with short-term issues like seasonal droughts and floods, or long-term alterations like shifting habitat zones, changes in seasonal timing, and warmer temperatures.

The Region is a mosaic of landscapes and habitats for both people and wildlife. To create functional connectivity that meets multiple needs, we have to look at all the layers that make up this diverse landscape. Maintaining robust and resilient populations of all of our native wildlife, invertebrate and plant species is essential to maintaining functional ecosystems and the important services we derive from them. People are an integral part of the landscape and need to be able to have resilient communities as well. We have to find the balance of protecting habitat integrity and function, while supporting the connection of people to the landscape. We are calling this eco-social connectivity.

Restoration of forests, planting of street trees, and creation of park lands have historically been concentrated in areas of high income, providing inequitable delivery or services to only those with proximity and access. Urban conservation projects that attempt to create safe passages across developed areas are frequently implemented at small scales, based on specific opportunities, and often have limited connection with actual community needs. Conservation in rural areas tends to focus on working with landowners while overlooking other groups that are directly connected to the land. In addition, we have a long history of imposing environmental burdens on systematically marginalized communities, including Black, Indigenous, and People of Color (BIPOC).

This unequal distribution of environmental benefits and burdens across our communities is embedded in our landscape by 200+ years of settler colonialism and systemic racism. These systemic impacts have also created barriers and corridors affecting the movement of plants and animals. Without a method of prioritizing the eco-social benefits of reconnecting ecosystems in marginalized communities, equity across urban and rural areas cannot be achieved. Initiatives that support connectivity and environmental justice can help amend these issues.

When these goals are pursued more holistically, in partnership with those most affected by the outcomes, they can achieve orders of magnitude more efficacy and meaning. This Strategic Action Plan is intended to guide our collective actions over the next 10 years (2024-34) to protect biodiversity, increase ecological connectivity, improve resilience of environmental and eco-social systems and support environmental justice in the Region. This work can only be achieved in consultation and collaboration with all affected communities.

What is Habitat Connectivity?

Our Region, which includes Clackamas, Multnomah and Washington counties in Oregon and Clark County in Washington is home to over 338 vertebrate wildlife species, not including fish. Their survival depends not only on the amount and quality of remaining habitat but, as importantly, on the extent to which habitat patches are interconnected. Plants, animals and other organisms also require connected habitats to complete their life cycles.

Habitat connectivity is a measure of how easy it is for individual organisms to move between patches of suitable habitat. Some species use linear landscape features such as a stream corridor. Highly, mobile species such as birds, bats and winged insects may hop-scotch across smaller patches to reach a desired destination. Biodiversity corridors provide connectivity within and between larger habitat patches, so that species can cross less suitable habitats to carry out essential life functions such as dispersing, migrating, finding a mate, or overwintering. Habitat connectivity can be difficult to regain after urbanization, yet it is critically important to the Region's wildlife, especially in light of climate change. Maintaining and improving connectivity will help retain and increase the region's biodiversity, migration, genetic flow between populations as well as foster resilient ecosystems.

Figure 1. Connections between different habitats. For more information on thriving habitats, visit
https://tualatinswcd.org/priorities/thriving-habitat/#habitat-connectivity

A Regional Context

In 2012, more than 100 regional partners collaborated to create the _Regional Conservation Strategy for the Greater Portland-Vancouver Region_ and its companion document, the _Biodiversity Guide for the Greater Portland-Vancouver Region_. Together with mapping and GIS modeling of upland and riparian habitat, these documents strive to build a shared understanding of the biodiversity of our region, define the challenges facing local wildlife and ecosystems, and offer a vision and framework for moving forward together to protect and restore our natural systems. The Regional Conservation Strategy (RCS) identified several top priorities. High among them was mapping and conserving the region's biodiversity corridors, information the process lacked when modeling RCS habitat.

The term "Region" can describe areas defined by geographical or political boundaries or by flora and fauna. The Intertwine region spans a watershed-based geography that encompasses the Greater Portland-Vancouver area -- a particularly useful delineation because watersheds are nested within one another, allowing ecologically meaningful ways to scale up or down. Although the Intertwine spans a large area, it is crucial that we coordinate connectivity work with others doing similar work at smaller scales within this boundary as well as at broader scales and multi-state efforts.
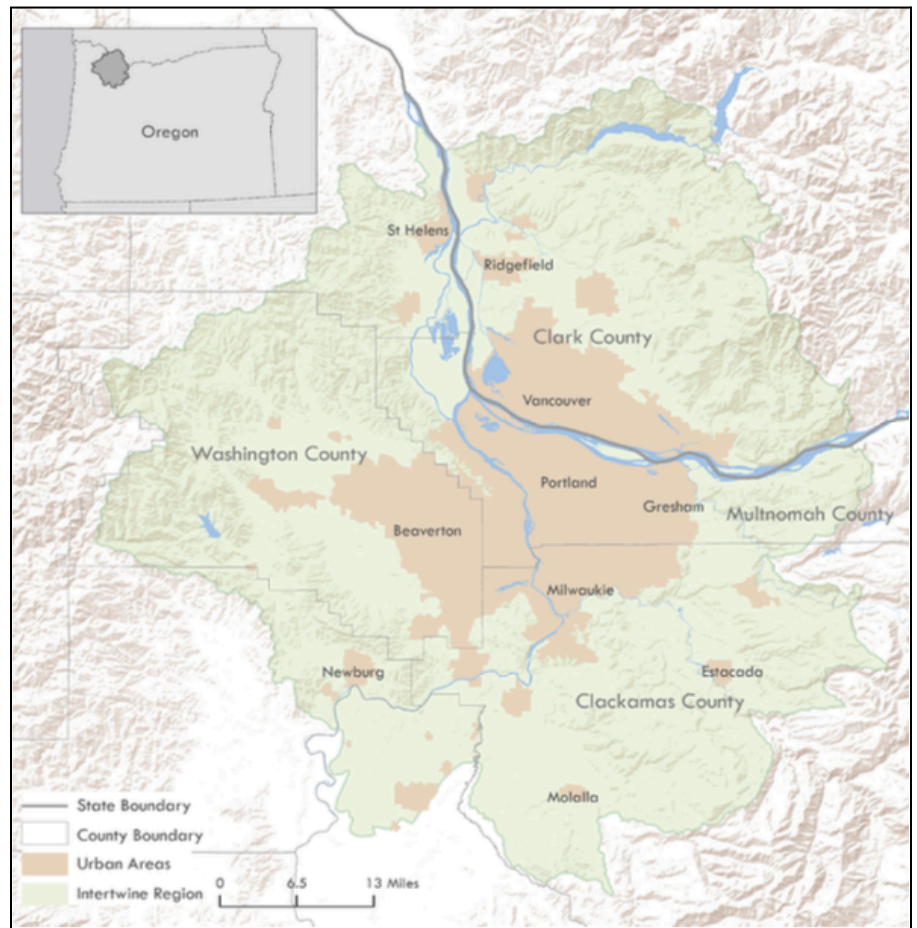

Figure 2.
The Greater Portland-Vancouver Intertwine Region (Region)

About the Regional Habitat Connectivity Work Group

The Regional Habitat Connectivity Work Group (RHCWG): The RHCWG formed in 2016 to map the region's remaining connectivity, improve conservation outcomes over existing conditions, support enhanced stewardship and public education, and coordinate a regional partnership of over 40 public agencies, academic institutions, parks districts, non-profits, consultants and watershed councils, and interested community members.

This SAP supports goals set forth in multiple state, regional, city, county and community plans that aim to protect and restore the natural environment while supporting eco-social connectivity. The SAP supports initiatives that specifically address conservation and restoration of wildlife habitats, biodiversity pathways for species, community engagement of systematically marginalized communities, and integration of natural features into the built environment, that center equity and environmental justice.

Developing the SAP was quite a journey, both in time, and the need for personal and professional growth of RHCWG members. The group started with a wildlife centric perspective and slowly evolved to consider that people also needed to be part of the picture. The next leap was in recognizing that we needed to look at the legacy of racism in predominantly white conservation organizations in the Region and recognize the on-going impacts to systematically marginalized communities. This is a continuing evolution where the group takes steps forwards and backwards along the path to being part of a larger solution. It will take significant effort and additional growth to continue forward.

Through an Equity Lens

Habitat connectivity concerns also impact human health and well-being. In 2020, the RHCWG decided to pause our strategic action planning process and work to incorporate a Justice, Equity, Diversity, and Inclusion (JEDI) framework into the plan. The Steering Committee created a JEDI committee and recruited members to start the work. The JEDI committee worked with Knot Studio and Multicultural Collaborative to perform an equity integration report (Appendix 4) for the SAP. The SAP, and other supporting sub-committees, worked on incorporating the recommendations from the equity integration report into the Strategic Action Plan with the goal of creating an inclusive space for systematically marginalized communities to be an integral part of future planning and implementation processes.

To be successful, the SAP must reflect the needs and desires of systematically marginalized communities, including BIPOC, who will be affected by plan implementation. BIPOC communities bear an inequitable burden from the impacts of our policy structures surrounding land development, neighborhood disinvestment, urbanization, gentrification, and ecosystem fragmentation as a result of systemic racism in the past and present. While other marginalized groups such as people with disabilities, LGBTQIA+ communities, women, elderly, young people, and low-income residents are all taken into evaluation, we recognize that BIPOC community members intersect strongly with each of those groups and experience deeper systemic inequality due to institutional racism. Because of this fundamental, race-based inequality, our efforts to address ecosystem fragmentation will employ a racial equity lens as our primary equity focus and seek to redress environmental justice issues to maximize outcomes for all people and the environment.

We are looking beyond individual acts to undo the legacy harm of institutionalized racism and the systemic barriers within our policies. We can't undo what has happened in the past. However, with continuous work we can move towards a more just system where racial inequities are avoidable. Incorporating racial equity into this work will improve and help avoid additional disenfranchisement and bring everyone further along in reaching our conservation goals. Therefore, the SAP's strategies and actions prioritize systematically marginalized communities. This will open doors to greater participation in environmental and conservation efforts and increase access to nature for all.

To assess if we are taking in the perspectives of systematically marginalized communities while achieving these goals, the RHCWG utilized the following nine equity lens questions in developing strategies and actions in the SAP. The SAP is a start but there is still a lot of work to be done to continue to use this lens during implementation.

1. Are our Justice, Equity, Diversity, Inclusion (JEDI) definitions embodied in each component of our SAP?
2. What are the historical racial inequities that we know about?
3. Who benefits and who is burdened by decisions?
4. Who is making decisions and is the decision-making process equitable?
5. Are the decision makers the people that are most impacted with the least amount of influence by the decision?
6. What data is being used? Are the data collected and analyzed using data justice practices?
7. Are restorative justice practices integrated into the process? If not, what should they be?
8. How will we keep ourselves accountable to communities most impacted?
9. How do we measure success using this racial equity lens?

The equity integration work for the SAP is rooted in the belief that embedded in this workgroup is undeniable capacity: for advocacy, for collaboration, for intersectionality, and for the ability to leverage science in service of equity. Our guiding principles seek progress not only through product but by process. Equitable and just solutions must be achieved through collective participation, not simply through words. All communities and corridors are unique in their needs. It is important to look at the co-benefits of environmental justice and habitat connectivity to ensure both goals are simultaneously worked towards and advanced in the unique ways each area needs them to be. Our work is guided by a willingness to learn and adapt with every new insight, allowing the results to continue evolving and growing as time goes on, because the work for equity and justice is work that never truly ends.

Examples of our work

The RHCWG has created tools and conducted research that are foundational to the work moving forward. These products exemplify the dedicated work the RHCWG has advanced in the last 10 years. However, there is still a lot to be done to integrate environmental justice and eco-social connectivity into the working group's efforts. We will need to bridge the gap between perceived established conservation practices and power structures and a holistic approach to supporting eco-social connectivity and environmental justice.

- **Habitat Connectivity Toolkit (Toolkit):** The RHCWG has been active since 2016, but prior to that Metro was working with Portland State University to develop the Toolkit for a suite of surrogate species. After a series of peer reviews and adjustments, the models were completed in 2024.

- Earlier drafts of the Toolkit were used to inform Metro's 2018 natural areas bond target area selection. The final models are being used to inform the target areas' ecological assessments. The models were also used to assess Regional Transportation Plan proposed projects in 2023-24.

- **Development of field methods:** RHCWG members have developed field-based methods to assess habitat and potential barriers. Each surrogate species has its own score-card based on field results. Some field assessments have already been accomplished, including:
    - Tonquin Geologic Area, which was our pilot project area; both habitat and barrier assessments have been done in this area.
    - East Buttes: both habitat and barrier assessments have been done in this area for Northern red-legged frogs.
    - Smith and Bybee Wetlands area: Habitat and barrier assessments have been completed.
    - Metro's 2021 Target Area Ecological Assessments include field surveys for potential barriers in a given target area.

- **Information sharing**: A sub-committee, led by Metro staff, is currently providing connectivity and other natural resource information for major proposed transportation projects, new urban area planning, and other efforts that may significantly impact (or could help improve) the region's habitat connectivity.

- **Desktop environmental conservation support**: Municipal land managers used the RHCWG Toolkit to identify project locations that should be considered when evaluating potential impacts of a project, i.e., the "Westside Wildlife Corridor Inventory Report" (draft available in 2024).

- **Collaboration with other regional efforts:** The RHCWG has strong ties with the Oak Prairie Working Group and the Oregon Connectivity Assessment and Mapping Project. We are learning from each other's collective efforts at both the regional and state level.

Examples of work from communities: There is a whole body of work being done by a wide range of organizations in the region. Here are a few examples to learn from:
- City efforts to integrate habitat connectivity and community planning:

    - City of Milwaukie's Urban Forest Management Plan describes a vision for 2040 of a community that is "entirely equitable, delightfully livable, and completely sustainable." While protecting and fostering a flourishing tree canopy is vital to sustainability and livability, urban forest management is also intrinsically connected to equity.

    - City of Beaverton's Cooper Mountain Community Plan (6/14/23 Draft) describes the vision and intended outcomes for the next 20 or more years of growth in Cooper Mountain. The Community Plan's vision is to create a community of walkable neighborhoods that honors the unique landscape and ensures a legacy of natural resource protection and connection. The Community Plan is intended to create an equitable and inclusive community. It was prepared with the involvement of a wide variety of community members, including those from traditionally underserved and underrepresented groups. The outcomes described in this plan reflect the ideas and feedback of those participants.

- Verde's Urban Habitat and [Rain Garden](#) program for low-income homeowners that installs Nature-scapes and rain gardens for free and works to reclaim and heal land in NE Portland. Verde works with Habitat for Humanity and other partners such as Taking Ownership PDX, Multnomah Youth Cooperative, Columbia Slough Watershed Council, Backyard Habitat Certification Program, and property owners to do the work. The Portland Bureau of Environmental Services provides funding for grants to support the work.

- [Shwakuk](#) Wetlands is a unique site co-managed by the local Indigenous community and Portland's Bureau of Environmental Services. Along with restoring the wetlands, the site is used to cultivate first foods, medicine and basketry plants, and to reconnect area residents with the land.

Element A: Spatial Data, Research and Science

Introduction

The Habitat Connectivity Toolkit (Toolkit) - including species' specific habitat needs, GIS modeling, and ground truthing - will enable the RHCWG and other partners to identify core habitats and the Habitat Connectivity Zones (HCZs) connecting them. These data and geospatial analyses are an important starting point to guide RHCWG SAP implementation efforts. While not the sole guiding framework, these data tools are critical in identifying habitat needs and connections. Building on this, the RHCWG needs to go beyond a focus on conserving only the highest quality existing biodiversity corridors by prioritizing actions that help to restore habitat connectivity in areas that align with the goals and priorities of communities, and support environmental and data justice. To create more representative data, priorities should also be informed by diverse perspectives, varying lived experiences, and Indigenous Traditional Ecological Knowledge (ITEK).

Without intentional efforts to integrate and inform our actions by broader ways of knowing, these habitat connectivity efforts can inadvertently lead to continued oppression, disempowerment, inequalities, and lack of environmental justice that have been historically perpetuated in the Portland-Vancouver Region. Therefore, it is vitally important to include impacted communities in the authorship of these definitions in order to create accessible language and increase early involvement in decision making processes.

The strategies in the Spatial Data, Research, & Science chapter strive to accomplish this vision by including lenses and measuring success of co-benefits that reflect broader community priorities. This will ground the RHCWG data practices in truth and transparency and hold us accountable to show up authentically, consistently, and with a long-term focus. Data collection will expand to include monitoring and evaluation of efforts that can ensure goals are being met and implementation partners are accountable to these goals.

This ongoing work will require attention to identifying and acknowledging biases, promoting transparency, and ensuring data justice. Our practices need to adapt to the ever changing effects of climate change, environmental impacts, loss of habitat, and community needs and support the regional collective interests, values, and benefits.

Goals

⇒ **Near term (within 2-3 years):**

- Habitat Connectivity mapping efforts build environmental justice layers into RHCWG's modeling processes to identify focal communities for engagement within HCZs with the highest levels of ecological burden and social vulnerability.
- RHCWG members are able to utilize the models in the Toolkit and supporting criteria to select potentially viable areas for movement by native flora and fauna and prioritize core connectivity processes and habitats (see Appendix 6).
- Ensure that any publicly available information is user-friendly and uses language that is accessible for community members and organizations.

⇒ **Long term (within 3-10 years):**

- Identified data layers are updated with clear responsibilities and goals while including inputs from BIPOC communities through equitable engagement efforts.
- Trust between communities and implementing organizations is built through continued engagement and adaptive implementation of best management practices to inform future implementation and planning projects.

Current status

Existing spatial information resources can help inform a connectivity mapping effort. These include the Regional Conservation Strategy habitat data, fish and wildlife passage barriers and fish-bearing streams, and records of wildlife incident hotspots. The Oregon Department of Fish and Wildlife's Priority Wildlife Connectivity Areas (PWCAs) will help support efforts in the Region and connect to statewide efforts.

To address this gap, Portland State University (PSU) researchers, Samara Group, and Metro created the Habitat Connectivity Toolkit (completed in 2021) and associated regional Omniscape connectivity models (completed in 2023). The Toolkit was developed to provide an assessment and valuation of connectivity at a very localized scale (5-m resolution). The Toolkit process employs empirically derived GIS models for eight surrogate species – a subset of wildlife species that represent the habitat and connectivity needs of many other species – to identify potential core habitats and HCZs (see Appendix 5 for more details). First, habitat suitability models are run for each surrogate species to identify potential habitat patches, then connectivity models between those habitats are run. Field-based habitat and barrier assessments are conducted where connectivity looks promising. The final reports for both the Toolkit and the Omniscape regional models, in Appendices 5 and 6, provide details on applying the toolkit process to a given connectivity zone. The regional Omniscape connectivity models provide a specific look at where connectivity is existing but constrained in the Region. Models are available for each habitat type individually (water/wetlands, oak woodlands, mature Douglas fir dominated forest) and with combined model scores for all surrogate species.

In order to progress beyond a traditional Western science approach to connectivity, RHCWG needs to complement the Toolkit with environmental justice-focused spatial data, identifying layers related to community needs and environmental burdens. The results of this analysis will help inform opportunities for working with communities to identify their needs and intersections with connectivity opportunities. In addition, engaging with communities in conversations around how data is being used in the planning and decision making, would help ensure that data justice practices are being applied. Communities should be included in ground-truthing and long-term data management efforts.

Strategies

Strategy A1. Promote Toolkit and Develop Layered GIS-based Mapping

Explanation: The Toolkit provides a rigorous approach for identifying key wildlife core habitats and evaluating connectivity between those habitats based on habitat quality, permeability and barrier assessments. This foundational piece needs to be layered with other eco-social factors to create a holistic understanding of the interface between habitat and community needs.

Current status: The Toolkit is complete and consists of a user's guide and appendices including individual species' scorecards and field-based habitat and barrier assessments. The Toolkit's core habitats and Habitat Connectivity Zones (HCZ) within the Region will be used to help prioritize actions that can be taken to maintain or restore connectivity. The Toolkit has been ground-truthed, and an implementation plan will need to be written and put into effect. The RHCWG will identify opportunities to disseminate information about core habitats and HCZs, like an online viewing platform. Metro released the draft Omniscape models, which translated our former habitat permeability data to actual habitat connectivity data to the work group for review. Once this review is complete, Metro will release this work more broadly to the public. Additional resources are needed to address potential accessibility and language barriers for the data. There are multiple efforts in the Region to identify the spatial distribution of systematically marginalized communities that is needed for a holistic understanding of eco-social connectivity factors. One model for looking at the community Vulnerability and Environmental Burden is described in the Equity Integration report in Appendix 4.

Actions:

A1.1 Layer environmental justice, community vulnerability and environmental burdens data into RHCWG's modeling processes to identify focal communities for engagement. The layers will need to be made accessible to work group members and external groups.

A1.2 Provide workshops to train RHCWG members and partners to use the Toolkit, including field methods. Make sure these are accessible and inclusive to different audiences.

A1.3 Implement a pilot project to identify intersections of habitat connectivity, Regional Transportation Plans (RTP), and environmental justice layers.

A1.4 Develop recommended methodologies for integrating ecological and social data in the context of regional habitat connectivity. This can include approaches for quantifying relationships between ecological and social factors and processes for making defensible decisions based on those relationships and input from communities.

A1.5 Maintain the Toolkit and associated guidebook with updated on-the-ground conditions, species' needs, or procure superior GIS data such as land cover.

Outcomes:

- The workshops will recruit and teach additional RHCWG partners to use the Toolkit.
- Additional resources will support integration with a layered mapping approach and community engagement efforts.
- Spatial data will include eco-social factors in the RHCWG's modeling process, such as community vulnerability and environmental burdens.

Strategy A2. Identify and characterize priority core habitats and associated HCZs with an intersectional approach

Explanation: With limited resources, it will be necessary to prioritize the Region's most important core habitats and HCZs for initial larger scale conservation efforts. There is a need for everyone to move forward with a prioritization process that integrates community needs to include areas that may not have existing corridors or large habitat patches, but have high levels of vulnerability and the potential to

improve regional habitat connectivity. Once priority HCZs are identified, field work will be necessary to assess habitat conditions and barriers.

Current status: To be initiated.

Actions:

A2.1 Conduct a workshop(s) to develop core habitat prioritization criteria and methods, including both ecological and eco-social factors (e.g., environmental burden and community impacts); assess tradeoffs between habitat quality and barrier permeability in HCZs. Ensure that the workshops for developing core habitat prioritization criteria and methods include diverse partners, including representatives from marginalized communities and groups. Strive to engage individuals with local ecological and socioeconomic knowledge to incorporate their perspectives in decision-making.

A2.2 Secure existing and develop new information to determine where criteria are met using Toolkit modeling results and ancillary data, and use a data-driven approach to select and document the attributes of a subset of high priority habitat cores and associated HCZs for further analysis. Financial resources to hire a consultant may be needed for this action.

A2.3 Conduct fieldwork to assess priority HCZ habitat quality, barriers and barrier strength for priority HCZs to confirm and refine model results; employ community science and collaborate with RHCWG partners as appropriate. Identify priority actions to improve habitat and remove or modify barriers to increase habitat permeability.

A2.4 Create a document and associated GIS layers/map describing each core habitats' importance, condition, current state of connectivity between core habitats, and priority actions. Make sure this is easy to access and understand for community members and organizations to utilize the information.

A2.5 RHCWG partners will define the measures of success for land preservation, restoration of core habitats and associated HCZs, and collaborative partnerships, including short and long term goals. This process should include a public participation and values mapping exercise with the community to incorporate needs in next steps and to continue to build trust.

Outcomes:

- Identify criteria and methods for prioritization with community needs incorporated.
- Develop a prioritized geospatial dataset that reflects priority ecological and eco-social factors throughout the Region.
- Conduct field assessments of priority habitat.

Strategy A3. Maintain connectivity data and provide background information to support engagement and conservation efforts

Explanation: This Strategy will provide the means for RHCWG and other partners to use the most current information in their connectivity projects. The platform will be designed so that it is easy for other parties to incorporate habitat and connectivity considerations into land use projects such as transportation infrastructure and new urban area planning; to help spatially prioritize conservation

efforts such as community outreach to facilitate natural area acquisition decisions; to share with city/county councils and planners; and to work with land managers.

Current status: To be initiated.

Actions:

A3.1 Determine who holds, displays and maintains the data (e.g., PSU, Oregon Explorer, RCS viewer, Metro's RLIS GIS data, etc.), and set up a viewing/data distribution platform that is user-friendly with language that is more accessible to community members.

A3.2 Develop methods to engage communities to review the connectivity data used to ensure that data sources, models and applications support data justice best practices (supported by Strategy B1).

A3.3 Collaborate with other partners (such as SWCD's, watershed councils, agencies, and NGOs) to incorporate core habitat and HCZ information and priorities into future efforts to influence connectivity and other relevant projects.

A3.4 Establish who will perform periodic data updates on a web-based platform (timing to be determined under implementation plan) as more HCZs are surveyed, lands protected, habitats enhanced, barriers removed and new information is available; update priorities and implementation plan as appropriate.

Outcomes:

- Set up and maintain a user-friendly viewing/data distribution platform.
- Develop methods for community engagement that support data justice practices.

Strategy A4. Stay informed and pursue new research projects that support connectivity actions and adaptive management approaches

Explanation: Habitat corridor ecology is an evolving field of study. Local studies may be particularly important to inform adaptive management approaches to core habitat and HCZ conservation. For example, wildlife research assessing effectiveness of barrier removal versus, or in combination with, habitat quality improvements could generate useful management recommendations. There is a need to look at additional papers and research, including participatory action mapping, to provide context on factors that have created current inequities to move beyond the focus on white community value.

Current status: Connectivity research is rapidly advancing, therefore the work group will need to stay current on the scientific literature, including new habitat connectivity information and ecosystem services provided by ecological connectivity. Local research can help inform an adaptive management approach to conserving a functional, interconnected habitat system in a rapidly changing region.

Actions:

A4.1 Produce a brief literature summary of recent connectivity research, focusing on urban research and issues. Periodically review (at least every 5 years) new information to inform habitat corridor research, planning and project implementation, and include anti-displacement assessment components.

A4.2 Create a clearinghouse website to share existing and new connectivity information, including peer-reviewed and alternative sources of literature, with RHCWG members and interested parties.

A4.3 Support local, relevant connectivity studies to inform RHCWG's connectivity implementation plan through collaboration and as feasible, funding contributions.

A4.4 Develop mechanisms to continually check in with participants and incorporate feedback into adaptive management approaches.

Outcomes:

- Finalize the brief literature review update on connectivity research and eco-social connections.
- Established the connectivity information clearinghouse website.
- Support at least one research project to inform the RHCWG models and/or implementation plan.
- Develop feedback mechanisms for community participation and integration.

Challenges, Gaps, and Opportunities

Working collaboratively. Creating a connectivity map and action plan for the whole of the RCS planning area will require collaboration on several levels. Once the Toolkit is publicly available, a diverse group must be assembled to set criteria and prioritize core habitats and HCZs, with both ecological and equity lenses. Substantial collaboration will be needed to ensure consistent methodologies and results; conduct field work to verify and refine information for priority areas; conduct community engagement efforts; create an implementation plan to guide projects; and develop an online tool to share the results with RHCWG partners.

It will be important to integrate the RHCWG's work with larger scale connectivity (e.g., PWCAs), conservation efforts, community initiatives, and infrastructure planning processes such as urban growth boundary expansions or proposed Regional Transportation Plan projects.

Map integration beyond the RCS planning area. Connectivity for plants and animals occurs at multiple spatial scales, and the largest habitat patches usually lie outside of urban boundaries. Several larger scale connectivity mapping efforts are in process. To ensure the most effective outcomes the RHCWG must integrate its work with efforts done in adjacent areas and efforts conducted within the RCS boundary. At a minimum, this will include:

- Oregon statewide PWCA connectivity mapping efforts
- Connectivity mapping in Washington
- Other regional habitat mapping efforts such as Gary oak
- Habitat conservation plans for federal and state-listed species

Element B: Outreach, Education, Engagement, and Advocacy

Introduction

To effectively address the inextricably linked systems of environmental degradation and social oppression, solutions to improve habitat connectivity must meaningfully include environmental justice considerations and eco-social connectivity benefits. Such intersectional solutions will address root causes of connectivity issues across landscapes and empower systematically marginalized communities in the Region, creating long-lasting impacts. Strategies to accomplish this vision should recognize the need for community agency in the decisions and investments that affect community members, adhering to the principle of "nothing about us without us." As RHCWG partners design and implement projects for habitat connectivity and restoration, we will ensure that the people who are part of the landscape have a voice regarding the strategic actions occurring in their areas.

To achieve this level of collaboration with impacted communities, RHCWG recognizes that historical and current laws, regulations, practices, and systems have excluded, and continue to exclude, a large segment of our community. Increased knowledge and information exchange should be a priority of the outreach and engagement process to ensure that systematically marginalized communities are able to allocate resources to areas of need and come up with shared, sustainable solutions to enact restorative justice through conservation strategies and projects. By recognizing power dynamics in communities through outreach, education, engagement, and advocacy, our goal is to empower community decision-making and resource allocation that provides equitable access for those most impacted with the least amount of influence and allows for opportunities for collective impact for the RHCWG.

Goals

⇒ **Near term (within 2-3 years)**:

- RHCWG members commit to and develop authentic relationships with systematically marginalized communities across the Region.
- Partners and organizations use communication materials developed by RHCWG that integrate regional habitat connectivity, environmental justice, and eco-social connectivity benefits that reflect community needs.
- Partners and organizations use the RHCWG engagement plan to provide effective outreach to targeted audiences to support habitat connectivity.
- RHCWG advocacy efforts support policy changes that reflect priorities identified through community engagement.

⇒ **Long term (within 3-10 years)**:

- RHCWG communication materials are adaptive to cultural shifts and changing communication needs.
- A strong network of partnerships across sectors in housing, transportation, and access to nature, supporting the co-benefits of habitat connectivity and environmental justice.

- Create a positive perception of habitat connectivity to generate public support and encourage project implementation.

Current Status

People are generally unaware of wildlife habitat connectivity issues and what they can do to help. This lack of awareness limits the planning and implementation of any strategy or policy that could effectively and positively impact regional habitat connectivity. Success in improving habitat connectivity will rely on effective education, and outreach and engagement with multiple key audiences, including systematically marginalized communities, decision-makers, developers, landowners, land managers, park planners, recreationists, and others. Building an understanding of and concern for wildlife habitat connectivity in the Portland- Vancouver Region--and the multiple benefits it provides--underpins success in moving forward the goals of this SAP.

This chapter provides a framework for developing a community engagement plan, collaborating with community advocates, and developing feedback mechanisms to track the efficacy and success of such efforts. In addition, this chapter presents strategies for effective advocacy by RHCWG members that complement the community engagement plan. To see real progress towards integrating this intersectional approach into policy development and planning, RHCWG members will need to make the case to policy makers, community members and residents of the Region why these actions should be pursued.

Strategies

Strategy B1. Develop and execute a community engagement plan that informs priority actions, stewardship approaches, policy positions, and desired outcomes of RHCWG's work.

Explanation: Systematically marginalized communities should have a key role in identifying the potential range of actions, management and stewardship approaches, policy positions, and desired outcomes and benefits of RHCWG's work. To do this, there is a need for significant opportunities for the community to be part of the process, describe their priorities, and influence decision making. Providing meaningful collaboration will help build trust, facilitate long-term participation in the group, and foster partnerships with systematically marginalized community groups. This effort should focus on engaging groups identified by a Community Vulnerability assessment and updated Power Analysis results. Prioritize engagement with Tribes, Indigenous people and BIPOC communities with relationships to the land.

Current Status: Knot Design and MultiCultural Collaborative's Equity Integration Report (see Appendix 4) outlines guiding principles for RHCWG's community engagement strategy. The Habitat Connectivity Toolkit is ready for community-driven data in addition to the current geospatial data layers. This engagement work is pivotal for advancing many other actions in the SAP. Funding and working group capacity are needed to advance this work further.

Actions:

B1.1 Create a RHCWG Community Engagement sub-committee. Review existing resources on best practices for community engagement, including the Community Engagement Framework

put together by MultiCultural Collaborative for RHCWG, PSU resources and other government learning tools (Appendices 2, 3, 4). Develop RHCWG's goals, values, and objectives of engaging communities in connectivity efforts.

B1.2 Develop a broader, more inclusive Community Vulnerability Assessment and Power Analysis based on the findings and recommendations of the Equity Integration Report (Appendix 4).

B1.3 Develop a communications toolkit identifying goals, key audiences, objectives, key messages, intended short- and longer-term outcomes and planning needs. Identify needed resources which may include support for web site development and sponsorship, presentation materials, publication and image library. Special consideration will be needed to integrate messaging to support habitat connectivity, environmental justice and eco-social benefits.

B1.4 Hire a consultant to assist in developing an iterative community engagement plan focused on the communities identified. The engagement plan should account for the unique coalition structure of the RHCWG and determine ways to coordinate engagement between different jurisdictions and use partner organizations' existing engagement efforts. The plan will also include evaluation and accountability procedures to support adaptive and effective engagement efforts.

B1.5 Implement a community engagement plan designed to meet community needs. Support opportunities that empower and enable communities to meaningfully contribute to conversations. This should include speaking to systemic racism and historical injustices as interconnected with habitat connectivity issues. These events can be community workshops/focus groups (in person or online) with hourly compensation for participants as needed; coordinated engagement across jurisdictional boundaries along priority corridors, including resources, budget and staff relationships; etc..

B1.6 Evaluate RHCWG engagement efforts to ensure they are equitable, community feedback is heard and meaningfully incorporated, and systematically marginalized voices are heard and lifted up in the process. Adapt process and engagement efforts based on evaluation feedback to continuously be more responsive.

Outcomes:

- Development of trusting relationships with community members, groups, and leaders that expand the RHCWG and centers the cultural relevance of our work.
- Consistent messaging that maintains credibility and cohesion of RHCWG work and supports community communicators and advocates.
- Development and implementation of an Engagement Plan to direct outreach, education, and engagement for the RHCWG SAP.

Strategy B2: Develop and maintain evaluation and accountability procedures to support adaptive and effective engagement efforts.

Explanation: Ensure effective engagement and collaboration regarding the co-benefits of environmental justice and habitat connectivity by tracking engagement, conducting targeted interviews, and conducting surveys, among others. Use the results of these engagements to adaptively refine RHCWG's SAP

priorities and continuously update engagement methods. This will improve cultural relevance and collaboration.

Current Status: An engagement plan needs to be completed to support this strategy.

Actions:

> **B2.1** Create community engagement and collaboration benchmark objectives for the RHCWG SAP implementation process that align with the results of the Community Vulnerability Assessment and Power Analysis exercises in Action B1.2.

> **B2.2** Monitor changes in awareness, inclusion in connectivity-related planning and decision-making, levels of support and shared values for habitat connectivity and environmental justice in the Intertwine area across the continuum of urban and rural settings through periodic tracking surveys (including baseline, midpoint, and ending surveys within RHCWG SAP timeline) and in-person interviews with priority audiences. Provide survey results periodically in public-friendly communication pieces.

> **B2.3** The RHCWG Engagement sub-committee and hired consultant(s) evaluate community engagement effectiveness and develop a plan to improve engagement strategies and materials as necessary. Use adaptive management methods to optimize engagement.

> **B2.4** SAP strategies and implementation actions will be routinely updated to stay aligned with community feedback, best practices, and updated science.

Outcomes:

- The evaluation system, tracking surveys, and targeted interviews will allow a clear understanding of the efficacy of engagement efforts to collaborate with priority audiences on eco-social connectivity initiatives.
- Results from tracking efforts will inform adaptive management approaches to improving the efficacy of engagement and collaboration efforts. Tracking efforts will inform adaptive management approaches to improve cultural relevance and effectiveness.
- The RHCWG's SAP remains aligned with community and ecosystem priority needs throughout the lifespan of the 10-year SAP.

Strategy B3. Support and coordinate inclusive efforts of RHCWG member organizations and community advocates to support habitat connectivity and its co-benefits, including climate resilience, environmental justice and access to nature.

Explanation: Advocacy can be defined as the act or process of supporting a cause or proposal. This action plan proposes a profound and systemic change in approach to conservation planning and community engagement that will only be implemented if RHCWG member organizations and community partners advocate for its adoption and implementation. That will take different forms depending on the role and focus of each organization. It will be incumbent upon RCHWG members to carry this message forward within their own organizations, to build alliances and to support community advocacy efforts as well. RHCWG engagement plans need to support advocacy needs (identified in Element C).

The policy and investment gap analysis (from Strategy C2) will serve as an important tool and is vital to understanding how various inter-jurisdictional responsibilities and regulations work together to hinder or impede safeguards and restorative actions supporting connectivity and environmental justice needs. Regional advocacy to align and galvanize support and close these critical gaps will help create cohesive ecosystem connectivity while addressing environmental justice considerations. Measures must be developed that support near-term advocacy efforts focused on retaining key connection points and meeting identified community needs.

Current status: A number of advocacy groups work together or individually within their various spheres of influence to affect change. Policy and funding gaps need to be identified to develop a comprehensive advocacy strategy for habitat connectivity within the Portland-Vancouver Region.

Actions:

> **B3.1** Work with a diverse group of advocates that represent systematically marginalized communities to review the gap analysis results from Strategy C2 and prioritize advocacy efforts around city, county, Metro and state policies, codes, spending, and procedures.

> **B3.2**   Identify areas and issues for potential leverage, including avenues that represent strategic opportunities for reform current conservation practices to integrate intersectional co-benefits of habitat connectivity and environmental justice.

> **B3.3** Gather and synthesize this information into audience-specific messaging that promotes ecosystem connectivity and environmental justice throughout the region, and that offers opportunities to advance these goals.

> **B3.4** Develop ongoing communication channels between cross-sector advocates that can be used to mobilize partners when opportunities or threats to priority habitats and corridors arise.

Outcomes:

- The completed analysis of gaps in protection and spending to support the co-benefits of habitat connectivity and environmental justice reshapes local policies, programs, and spending in a manner that strengthens and improves considerations for eco-social connectivity.
- Relationships are built to strengthen ongoing advocacy efforts and mobilize critical support when needed.

Challenges, Gaps, and Opportunities

Funding and Capacity. This chapter identifies ambitious actions that will require dedicated staff time from various partners. Staff work plans will need to be updated to include new responsibilities. Significant funding will be required to create and execute a Community Engagement Plan including support for community member participation.

Political will and public support. The goals identified in this chapter depend on moving both decision-makers and the public toward awareness, understanding, and buy-in of the co-benefits of habitat connectivity and environmental justice. This will require thoughtful communication between and coalition building across different interests to make it relevant to everyone who needs to be involved.

Element C: Planning and Policy

Introduction

Policies and planning processes are important means through which a society articulates its values and priorities, and reveals historic and current systems of marginalization. These values are often reflected in land use and transportation planning practices, which are central to shaping a Region's development patterns. To accomplish the Planning and Policy goals, the RHCWG's actions must address the systems of colonialism and oppression that permeate our land use practices and the Region's existing planning processes and policies. The primary goal of this element is to incorporate and elevate the benefits of habitat connectivity and environmental justice intersections into state, regional and local land use, development, transportation and other infrastructure (parks, stormwater, water, sewer, urban forest), and climate-related policies and plans. Maintaining connections for species, ecological processes, and eco-social benefits, and resilient communities is critical to preserve ecological function in cities, suburban areas, and working landscapes where fragmentation frequently occurs.

Local, regional, and county governments are largely responsible for regulating how development and infrastructure unfolds in their jurisdictions but can be influenced by voters, special interests, media, and public perception. Wildlife habitat and migration routes within the greater metropolitan area cross a variety of land uses and a multitude of local, regional, state and federal jurisdictions, each with its own policies and codes developed to achieve a wide variety of societal objectives. While many existing land use and transportation plans have aims of conserving high-quality habitat, there is still significant room for improvement in implementation through integrating various connectivity-related practices into local/regional development policies and regulations.

Establishing policies supporting habitat and eco-social connectivity, coupled with a clear understanding of roles and responsibilities for coordination within and between jurisdictions, is the first step to help ensure cohesion throughout the landscape's habitat corridors and facilitate species mobility/migration. Desired regulatory and planning outcomes of this SAP include development of common policy and code language for regional jurisdictions, best practices for green infrastructure design and low-impact development adopted across the Region, specific connectivity goals integrated into regional and local plans, and protocols for centering systematically marginalized community needs in planning processes.

The following strategies identify approaches to habitat connectivity and land-use policy and planning that offers the greatest potential to deliver intersectional co-benefits to communities. This includes systematically marginalized communities in urban, suburban, and rural areas. The actions address both systemic inequity and habitat connectivity, and leverage the potential of RHCWG members and associated agencies and partners to effectively advocate for policy outcomes that advance environmental justice.

The desired outcomes include, but are not limited to, protecting wildlife corridors, increasing the urban tree canopy, integrating wildlife habitat into new development, mitigating impacts of transportation planning and public infrastructure, reducing barriers to affordable housing, addressing houselessness, and extending access to nature and green workforce development. The specific strategies to meet communities' needs ultimately need to be identified by impacted communities.

Goals

⇒ **Near term (within 2-3 years)**:

- Regional policies and investment gaps in habitat connectivity and environmental justice are identified and prioritized.
- Key landscape level planning processes align with the principles and science of ecosystem connectivity.
- Eco-social connectivity standards are used across the Region by multiple agencies for land use, road, utility, and other decision-making.
- RHCWG broadens priority advocacy areas into transportation, housing, and equitable access to nature to promote co-benefits of habitat connectivity and environmental justice.

⇒ **Long term (within 3-10 years):**

- RHCWG's best management practices and 'model codes' are adaptive to community, partner and practitioner feedback. The improved standards are integrated into local and regional plans, administrative rules, and municipal codes.
- As comprehensive plans, transportation spending, and development codes are revised, measures for eco-social connectivity and environmental justice are strengthened, and agency spending supports integration.

Current Status

Although many regional plans acknowledge the importance of protecting and connecting habitats and protecting natural features, the Region lacks consistent policies, regulations, and codes that support best practices to minimize disruption and reconnect ecosystems in support of wildlife habitats and movement. Current policies that protect natural areas rarely extend to corridors or greenspaces that are not designated public parks, open spaces, or mapped natural resource areas. In the few regulatory instances where habitat connectivity is considered, the natural resource protections on private land is usually limited to development application review processes. Where habitat connectivity is addressed, there are little or no implementing regulations that specifically consider species mobility. Preserving or repairing connectivity is generally listed as a policy statement in plans or as a metric for determining habitat quality in natural resource inventories and conservation zones. As a result, protections are not sufficient or consistently applied at a regional level.

There are a few examples of more recent planning processes that address the intersectionality of habitat connectivity, environmental justice and community livability and resilience in the face of climate change. Some cities are incorporating these elements in climate change actions plans, changes in tree code and urban forest management, and planning for new communities. Examples include community planning by the City of Beaverton and the City of Milwaukie's forest management plan (see the Introduction for more information).

Strategies

Strategy C1. Foster ongoing collaboration opportunities between communities, practitioners, and agencies to align on the priority opportunities with co-benefits for ecosystem connectivity and community resilience.

Explanation: Land use, transportation, housing and utility planning is being led by agencies and land managers who may work in different spheres from natural resource practitioners focused on regional habitat connectivity, and community based networks focused on the human health benefits and environmental justice. This planning often focuses on the site-scale and may consider alignment with comprehensive plans goals, but often lacks a consideration of landscape-level connectivity issues. To support more robust collaboration and education between sectors, ownerships, and uses at a landscape scale, we need forums, communication, and resource sharing opportunities. We need to demonstrate how habitat connectivity goals align with other community aspirations around equity, climate change, public health, equitable access to green infrastructure, resilient transportation, affordable housing, water, wastewater, stormwater, forest, utility networks, and other factors.

Current status: Although discipline-specific forums and educational networks exist, there is an absence of opportunities for regular dialog between community-based organizations, ecologists, planners, engineers, utility managers, and others around the topic of ecosystem connectivity at appropriate landscape-scales relevant to project design and decision-making. Collaboration between impacted communities, ecologists and local and regional planners at all scales from system plans down to proposals for development or farm/forest management on individual properties is uncommon. There is currently little opportunity to communicate spatially-explicit goals of habitat connectivity within appropriate and accessible professional networks. Planners, landowners, developers, and others are not generally required to seek out or use this information in planning and implementing projects. Typically, impacted communities and ecologists are left responding to proposals with suggested mitigation measures after plans have been made, not having the opportunity to engage with project proponents during the scoping or design phases.

Actions:

    C1.1 Seek opportunities to join coalitions advocating for environmental justice in planning and policy. Collaborate with local Indigenous people and Tribes on habitat connectivity, restoration and conservation priorities, projects and initiatives. Prioritize engagement in networks working with priority communities identified in the Vulnerability Assessment and Power Analysis (Supported by Action B1.2).

    C1.2 Implement feedback loops to adapt policy priorities to community identified priorities and ground truth emerging policies with communities. Develop evaluation measures that identify missing pieces of information and community voices. Identify additional engagement opportunities, coalitions, and relationships to build that integrate these missing voices and perspectives.

    C1.3 Create forums for collaborative learning about the co-benefits for ecosystem connectivity, affordable housing, alternative and safe transportation and equitable access to nature. Develop shared analysis of the problems and range of solutions among community groups, planners,

project managers, decision makers, natural resource professionals, nonprofit organizations, and academia across these sectors.

C1.4 Communicate spatially-explicit mutually-beneficial goals between habitat connectivity and environmental justice, developed from the Data modeling and community priorities developed in site specific community engagement efforts. Share this information across inclusive listservs, collaboration forums, and amongst RHCWG partners to enable planners to access and utilize the information in decision-making around projects. (Supported by Strategies A1 & B5)

Outcomes:

- Establish ongoing information sharing and coordination with environmental justice focused coalitions. Support a forum for community groups, activists, planners, ecologists, and natural resources professionals to participate in mutually-beneficial learning about priority habitat connectivity corridors, large development/infrastructure projects, upcoming plans/plan revisions, and measures individual agencies are implementing to integrate identified priority co-benefits of habitat connectivity and environmental justice into their local plans and processes.
- Launch a website and associated listserv is to share prioritized regional ecosystem connectivity maps and showcase how these maps and other RHCWG tools can support thoughtful planning and decision-making around land use, transportation, utility, farm/forest, and other planning networks.

Strategy C2: Determine the current status of policies, codes, funding criteria, and planning capacity on the co-benefits of environmental justice and habitat connectivity across the Region.

Explanation: It is critical to develop an inventory of current regulatory and non-regulatory policies, codes, practices, staffing and political approaches to environmental justice and wildlife corridor conservation from the Region's cities and counties, state agencies, and special districts. Providing case studies, code and policy language where protections and improvements to intersectional benefits of wildlife habitat connectivity has been successfully codified will likely help encourage adoption of similar practices by other regional agencies and organizations. Prototypes of policy and code language for enforceable actions that support intersectional connectivity goals will aid communities by reducing barriers to development and highlight compatibility with other regional policies.

Current status: The resource list in Appendix 3 provides an overview of a planning analysis for local, regional and state plans that consider eco-social connectivity as a planning goal, or in policies, or requirements. Since planning processes vary by jurisdiction, we lack a comprehensive understanding of planning processes and where opportunities lie to improve considerations for eco-social connectivity in decision-making and project review. There is no funding or desire by policymakers to update and revise Statewide Planning Goal 5 or Metro Title 13 inventories, though there is a demonstrated need to incorporate new science and understanding of eco-social connectivity in plans and planning processes. Nonetheless, there are opportunities to elevate the profile of habitat connectivity with increased attention on climate change mitigation/adaptation, equity, environmental justice, and public health, transportation safety, and active transportation network needs.

Actions:

> **C2.1** Build on an existing survey (in Appendix 3) of these identified policies and investments throughout city, county, special districts, Metro, and state. Establish an understanding of jurisdictional responsibilities and requirements for the community identified desired outcomes and benefits (cities, counties, state, and federal agencies).

> **C2.2** Research and assemble best practices, case studies, model code templates on habitat connectivity, environmental justice, considerations for land back approaches to acquisitions (identified in Strategy D1) and other specific community articulated eco-social connectivity benefits. Research policies with effective regulatory tools, identify what it took to reach completion including supportive legislation, political decisions, staff and budgetary resources, and community support. Vet this with systematically marginalized communities, coalitions, and groups.

> **C2.3** Perform a gaps analysis of existing plans, regulations, and planning processes across the Region to identify potential linkages programmatically, politally, and physically on the landscape. Compare with community priorities and best practices to identify gaps in the policies and investments. Share the results with regional policy makers and planners.

> **C2.4** For the prioritized gaps, compile and provide model policy language examples to planners, policy makers and elected officials.

Outcomes:

- Inventory of best practices, case studies, model code templates on habitat connectivity, environmental justice, and other specific community articulated eco-social connectivity benefits. Including supportive policies, legislations, political decisions and points of advocacy if apparent.
- Ability to share a gap analysis of policies and investments in habitat connectivity, environmental justice, and other community identified eco-social connectivity in the Region. As well as a consolidated overview on existing policies, plans, and code language.

Strategy C3. Develop standards, best management practices, and other tools, for incorporating habitat and eco-social connectivity into decision-making and project design.

Explanation: Beyond the need for better maps of habitat corridors, eco-social connectivity and the delivery and use of this information to local planners, there is a need for more explicit standards, best management practices, and other planning and policy tools to protect and restore habitat connectivity for individual projects. These practices can include low impact development, bird-safe window glazing, dark sky-friendly lighting, open space and canopy preservation and enhancement, ecoroofs, wildlife crossings, impervious area limits/depaving, native plant/pollinator naturescaping, xeriscaping, invasive species management, climate-smart/carbon farming, anti-displacement practices, and other actions.

Current status: The lack of clear and objective standards, discretionary review processes and criteria, and best management practices for wildlife habitat connectivity for individual development, transportation, utility and other projects, results in ongoing loss and fragmentation of healthy, connected habitats for wildlife. For example, at the State level, Oregon has fish passage criteria but currently lacks wildlife passage criteria or standards. While some project managers may be interested in

habitat-friendly practices, they lack a systematic decision support framework for selecting options that are most appropriate for their site context.

Actions:

> **C3.1** Working with regional partners, developing standards, other regulatory tools, model code, and policy language that supports habitat connectivity and environmental justice in the Region while aligning with existing code, regional priorities such as affordable housing, and addressing perceived barriers to adoption.

> **C3.2** Identify planning opportunities to avoid and minimize habitat connectivity and environmental justice impacts in road/highway planning, utility, and other linear public infrastructure projects.

> **C3.3** Identify anti-displacement policies and planning opportunities to avoid the impacts of green gentrification during landscape-scale investments and projects.

> **C3.4** Create a decision framework for practitioners to integrate eco-social connectivity practices early in project planning and design based upon their local codes, ordinances, operating procedures, or site-specific factors. (In support of Element D6).

Outcomes:

- Develop draft eco-social connectivity standards, like new road/transportation infrastructure and utility projects, and mitigation approaches that can be used across the Region by multiple agencies for all land use, road, utility, and other decision-making.
- Create a catalog of eco-social connectivity practices listed above and a decision framework for their use. Demonstrate appropriate settings for their use in example projects (e.g. case studies).
- Develop model codes and ordinances for use by local agencies to adopt and integrate in their own work.

Strategy C4. Identify, support and provide incentives for projects and investments that maintain/restore habitat connectivity, expand urban tree canopy and develop greater access to nature for underserved communities.

Explanation: Beyond updating plans and planning processes to prioritize habitat connectivity, there is a need to incorporate the co-benefits of habitat connectivity and environmental justice in near-term land use, transportation, utility, and other project planning, design and decision-making processes. We cannot forestall investments in ecosystem connectivity until policies are strengthened within long-term regional and local plans - we must begin this work at the same time that plans and regulations undergo updating. Project prioritization should consider potential layers of impacts and benefits to eco-social connectivity versus projects that just preserve smaller or existing habitats that have limited connections.

Current status: Current land use, transportation, utility, farm, and forest plans lack consideration of habitat connectivity and/or do not prioritize it. With or without connectivity goals, practitioners can work to include measures that strengthen the protection and restoration of extensive connectivity opportunities within upcoming projects under existing enhanced public benefit project criteria.

Actions:

C4.1 Identify and support project opportunities that prioritize connectivity with integration of Indigenous Traditional Ecological Knowledge (ITEK). These efforts can be increasing the urban canopy through street tree planting and maintenance programs, habitat-friendly design integrated into new and renovated residential/commercial development and streetscapes, supporting First Foods and culturally important animals and habitats, or green infrastructure utilizing native plant communities.

C4.2 Use the evaluation framework (developed in Action C2.3) to determine which policies or practices resonate with communities and prioritize inclusion in project planning processes. The engagement process needs to include a real-time feedback mechanism for decision-making.

C4.3 Advocate for incentives to promote initiatives that link habitat connectivity with community identified benefits, like environmental justice, climate change mitigation/adaptation, air and water quality, crash reduction, neighborhood design, tree preservation, public health, active transportation, and others. Advocate for these eco-social connectivity measures to be required as a condition for approval (or an alternative to system development charges) for projects that impact mapped connectivity zones.

Outcomes:

- Strategically align with efforts that create high-profile landscape-scale successes and reclaim ecosystem connectivity. Use these projects to change the narrative away from loss/destruction of natural habitats, and towards positive messaging that links reclaimed habitat connectivity with public investments in climate-smart infrastructure, and healthy connected communities.
- Seek out opportunities to create incentives and rebates for project proponents that include these practices in their proposed projects. Align these incentives with emerging markets for ecosystem services including clean water, wetland function, and carbon sequestration.

Challenges, Gaps, and Opportunities

Planning Constraints. Plan and project reviewers have limited resources and/or authority to update local and regional review criteria and/or codes to elevate and prioritize habitat connectivity, particularly in uplands Major policy changes require the buy-in of local staff, managers, and elected officials as well as the community. Review and approval criteria are generally prescribed unless the project needs to provide "public benefits," e.g., as compensation for flexibility with code standards. Opportunities to revise project review criteria and/or local codes are sporadic and often arise in response to a specific problem or issue, e.g. the current local and state level response to the housing crisis.

Looking Forward. RHCWG partners often feel that they lack the means to bring science, partnerships, and resources to support local planners, developers, project managers, and communities who are interested in protecting or restoring habitat connectivity. Identifying opportunities for connection between groups working towards common objectives will help bridge this gap. Communication between local planners/project managers and regional technical assistance staff needs to be strong enough so that each group knows how to collaborate with the others, and has the resources to do so when these

opportunities to strengthen programs arise. New types of community planning efforts will help to bring more opportunities to collaborate.

Element D: Conservation, Restoration, Management, and Stewardship

Introduction

Restoring habitat connectivity will require lasting and co-developed partnerships between individuals and organizations working together to address local ecological issues through an equity lens. This requires us to ask what sorts of actions will restore past harms done through institutional systems and systemic racism. Creating a more holistic social and ecologically sound world starts with creating environmental justice for communities, and the habitats that share space with human development. We seek this as an opportunity to engage individuals and groups which have been historically marginalized, with goals of preserving land for the stewardship of current and future generations and creating more resilient communities. For example, there is a particular need to center Indigenous Traditional Ecological Knowledge (ITEK) to understand the landscapes we are working in.

We seek to build coalitions of communities and partners who can speak to local issues, framed from both the environment and concern for human health, which will allow us to center our dialogue around specific areas of intervention and restoration of both natural and human systems. Addressing habitat connectivity from the perspective of justice, equity, diversity and inclusion (JEDI) requires us to take a step back from existing assumptions about humans and nature, and instead investigate what can best serve the eco-social relationships that connect all of us.

Establishing a functional, connected system of protected areas provides the essential framework of functional native ecosystems. Such a network, when combined with creating resilient communities, supports water quality, healthy habitat and native wildlife, and creates opportunities for people to experience and benefit from nature.

In a world with rapidly accelerating climate change, we find that areas with less investment, typically defined by racial segregation, to be most susceptible to natural disaster and negative impacts on human health. Understanding how these issues of environmental justice are intrinsically intersectional with natural systems highlights the needs for meaningful community engagement with those who occupy these vulnerable areas, and a responsibility towards framing these issues to ensure collective action and urgency. While engaging the community, it is important that we make sure that there is clear communication between all partners in order to ensure that different needs are met by the process.

Goals

⇒ **Near term (within 2-3 years)**:

- Project priority areas and opportunities are identified using layered, participatory eco-social mapping and engagement processes.
- Agency-led and grant-funded conservation and restoration initiatives are implemented with connectivity criteria and that support diverse green workforce development programs.
- Good working relationships are established with key land managers that share a mutual understanding of the eco-social benefits of connectivity and protecting core habitats and HCZs.

⇒ **Long term (within 3-10 years):**

- Restoration projects are planned and implemented with key partnerships with Indigenous and involved communities.
- Strategies are adaptive with monitoring efforts to meet changing or unanticipated conditions.
- A functional and linked network of conserved core wildlife habitat and HCZ in public and private ownership is maintained through an efficient network of conservation and stewardship.

Current Status

There is a long history of individuals, agencies and NGOs within the Region working to conserve and restore different habitat types including oak and prairie, high quality forest lands, and large areas of wetland and floodplain. Metro has purchased, protected, and restored thousands of acres within its jurisdiction and funds local communities to conserve habitat through grants programs. Park agencies and districts protect a wide range of habitats on public lands. Wastewater utilities fund and implement watershed health projects ranging from wetland construction and enhancement to riparian restoration to green stormwater infrastructure (GSI).

Conservation NGOs such as watershed councils and land trusts also work with land managers and land stewards across the Region to restore and protect habitat and natural resources, using grant and donor funding. Their efforts include land acquisition and conservation easements, development of land stewardship plans, invasive species and fuels management, habitat conservation and restoration, connectivity enhancement, community engagement, partnership facilitation, and education.

Soil and Water Conservation Districts (SWCDs) work with land managers across the Region to restore and protect habitat on private properties through technical assistance and District funding mechanisms. SWCDs have acquired funding from Natural Resources Conservation Service (NRCS) Farm Bill Programs for implementing habitat restoration on private lands including Oregon white oak, prairie and forest diversity focused funding sources.

Many groups are evaluating the need to engage systematically marginalized communities in conservation efforts. Some have made progress in re-centering their work. There is a substantial need to change the collective conservation approach to create meaningful connectivity projects that integrate habitat and community needs.

Strategies

Strategy D1. Greater Inclusion of Indigenous Traditional Ecological Knowledge (ITEK) and Collaboration

Explanation: Indigenous people are the original land tenders since time immemorial throughout this Region. Many local tribes and bands continue to be in relationship with and care for the land included in this plan. Indigenous people have cultivated and continue to cultivate traditional ecological knowledge. Weaving all types of knowledge into land management techniques decenters Western science and produces more holistic and effective management approaches. This work will require including indigenous people to continue the work of conserving culturally important species, habitats, and First Foods. This land was stolen from Indigenous people, and that history needs to be reckoned with and power redistributed and shared with Indigenous people.

Current Status: Portland has the 9th largest urban Indigenous population in the United States and there are many Tribes and Bands that call this place home. Indigenous people have been in relationship with this land since time immemorial so have traditional ecological and scientific knowledge to contribute. The Indigenous community in Portland has maintained a connection to nature, through such actions as harvesting traditional and non-traditional plants, in order to support the physical, emotional and mental well-being of both people and nature. Urban places, perhaps especially the chaotic, self-organized places represented by community gardens and civic ecology practices, create new experiences that enable the indigenous community to flourish.

Actions:

D1.1 Develop meaningful and intentional relationships with local Indigenous peoples and Tribes. As communities are willing, collaborate on habitat connectivity, restoration and conservation priorities, projects and initiatives. Identify funding to provide compensation for collaboration.

D1.2 Prioritize restoration and conservation projects that support First Foods and culturally important animals and habitats like oak savanna and salmon, and address the impacts of wetlands, streams, and rivers for salmon and other cultural keystone species.

D1.3 Develop considerations for land back approaches to acquisitions and biocultural/reciprocal approaches to stewardship.

D1.4 Invest in the fiscal and organizational capacity of Tribes and Indigenous-led organizations to take leading roles in habitat connectivity efforts.

Outcomes:

- Work with Indigenous partners and Tribal liaisons to identify the best pathways for consultation, collaboration, co-creation, and leadership to plan and implement conservation projects.
- Depending on the needs identified, support may include prioritizing habitats that support First Foods, looking at land-back opportunities with land acquisition, and looking for critical connections within urban areas.

Strategy D2. Identify Key Land Parcels and Issues through intersectional mapping

Explanation: Identification of habitat enhancement projects is often done by conservation organizations without a holistic look at the eco-social factors involved in both urban and rural landscapes. Identifying key land parcels will require a multilayer analysis of available data, and an acknowledgement of potential data gaps that need refinement over time. This process needs to consider a full spectrum of benefits for prioritization and develop mapping tools to capture intersection of multiple needs and available resources.

Current status: Green gentrification often results when areas see revitalization with new parks, green spaces, and green infrastructure. This displaces low income and BIPOC communities by pricing out local residents and institutions, and by disrupting the local social fabric, negatively impacting communities. Land acquisition and restoration efforts should include work with agencies and community based organizations to support anti-displacement policies and practices to prevent potential green gentrification. This process needs to look at the legacy of residential segregation related to policy (redlining), wealth acquisition, environmental condition, and social geography.

Actions:

D2.1 Identify land managers, community partners, and Tribal interests in key wildlife corridors by integrating habitat connectivity mapping efforts with existing eco-social layers (developed in Element A Strategy 1) to see how they overlap and interact. Identify how the land is currently being utilized and valued by the community and identified partners. Evaluate what data we are using to identify key land parcels with an equity lens. Integrate this prioritization information into RHCWG's regional geospatial dataset.

D2.2 Work with Tribes and community partners to apply prioritization criteria (developed in Element A Strategy 2) and rank importance of land parcels. Identify barriers to community engagement and work to increase participation opportunities in the design and implementation of habitat restoration processes.

D2.3 Convene RHCWG partners to identify areas of overlapping interest in the compiled regional map where respective agencies, communities, and land managers can contribute through habitat restoration activities, land stewardship programs, barrier mitigation and/or other means to support core habitats and associated HCZs. Align federal, state, and local funding programs to support investments in landscape-level habitat connectivity planning across rural and urban settings.

Outcomes:

- The creation of a regional map will provide a common tool for the RHCWG partners to use to develop a prioritized implementation plan with the goal of increasing the integration of habitat and eco-social connectivity into land management decisions.

- Developing a prioritized geospatial dataset will provide RHCWG a tool to identify the highest needs for habitat connectivity outreach, policy, and incentives with the goal of increasing the integration of habitat connectivity.

Strategy D3. Develop Habitat Connectivity resource library

Explanation: Create and maintain a go-to resource library to guide wildlife habitat connectivity work on private and public lands. The library will include information on priority HCZs and steps people can take to restore and conserve wildlife habitat connectivity, including information on: technical and financial assistance programs, land management incentives, certification programs, list of vetted vendors, consultants and contractors doing this work, and temporary and permanent land conservation tools. Identify gaps in incentives to support wildlife habitat connectivity efforts.

Current status: Many agencies and non-governmental organizations work with land managers, Tribes, and community based organizations to restore, conserve and steward native habitats. The financial, technical and capacity resources currently available to assist land managers in restoration and stewardship of HCZs vary by organization and typically do not address habitat connectivity directly. Instead, these resources prioritize specific habitat and/or wildlife needs and do not address all conservation needs proportionately. Without a coordinated HCZ toolkit to provide land managers with the information and resources to conserve, restore and steward HCZs, the Region will continue to struggle to conserve priority HCZs. Coordinated efforts from participating agencies, Tribes, and community based organizations are needed to be able to compile a HCZ resource library. This includes time to inventory current resources for HCZ conservation, a gap analysis of what resources are missing, inadequate, or outdated.

Actions:

> **D3.1** Using best practices for an inclusive planning process, compile a land manager guide to restoring, conserving and stewarding wildlife habitat connectivity. Look at gaps on who we have reached out to historically, compared to current residents, and identify who is already working with and providing resources to different communities.

> **D3.2** Collaborate with regional organizations to improve non-fee protection tools for the conservation of key HCZs. Develop materials that explain less than fee title approaches to land conservation i.e., donations, cooperative management agreements, conservation easements, funded restoration programs, leases, incentives or other temporary tools (e.g. ODFW's Wildlife Habitat Tax Incentives Programs).

> **D3.3** Collaborate with regional organizations to create partnerships to prioritize HCZ protection on private and public lands through a variety of approaches.

> **D3.4** Develop certification process, linked to the branding effort, for land managers who restore/preserve wildlife connectivity through key HCZs.

> **D3.5** Document best practices and opportunities for workforce development and community-driven conservation and restoration plans.

> **D3.6** Develop feedback loops that capture best practices and learning opportunities in the resource library from on-the-ground conservation projects.

Outcomes:

- Creating a HCZ resource library that includes information on priority HCZs and steps to restore and conserve wildlife habitat connectivity, will provide agency and non-governmental staff, private and public land managers, and community based organizations with a one-stop reference for conserving priority HCZs in the Region.

- The resources library will be continually bolstered with a diversified portfolio of funding mechanisms, conservation approaches, implementation partnerships, and adaptive management strategies.

Strategy D4. Restore and protect key core habitats and Habitat Connectivity Zones

Explanation: Informed by the intersectional map of prioritized core habitats (A2), this strategy implements on-the-ground conservation projects equitably distributed around the Intertwine region. These projects include fee acquisition of core habitats and HCZs with willing land managers of both public and private properties. Engaging local communities prior to implementation projects is important in order to hear specific concerns, needs, and share power with the community to collaboratively develop a plan for the resulting acquisition and site improvements. On-the-ground conservation projects should prioritize engaging communities directly adjacent to the areas of interest and those with meaningful ties to the neighborhood or site during acquisition planning or investment in restoration and/or site improvements. These efforts can increase the project's co-benefits for systematically marginalized communities and avoid unintended impacts like green gentrification.

Current status: Many agencies and non-governmental organizations work with land managers to restore and protect native habitats. But without an intersectional map that defines and identifies prioritized core habitats, the HCZs that link them together, and the eco-social layers (supported by Strategy D2), it is unknown if the highest priority areas are being restored and protected. Additionally, site-specific community engagement practices have yet to be initiated.

Actions:

D4.1 Work with Tribes, communities, and land managers to develop habitat restoration and management strategies, incorporating invasive species management and crisis resilience, for key parcel(s) and adaptive management strategies to address impacts related to climate change.

D4.2 Explore permanent (fee title, CE) and non-permanent (leases, donations, cooperative management agreements, etc.) protection strategies. Ensure the voices and perspectives of systematically marginalized communities are included in the information gathering effort.

D4.3 Facilitate restoration through different strategies including applying for grants, identifying cost share options, and participating in certification and incentive programs. Ensure these efforts include adjacent community-specific concerns and preferences. Develop and build upon funding mechanisms that directly support work done by community based organizations.

D4.4 Identify opportunities to work with rural communities such as small farmers or small woodland managers that are shifting agricultural practices to regenerative or agroforestry techniques that increase biodiversity and create/restore habitats.

D4.5 Implement management strategies and monitor the success of habitat improvements and collaborative partnerships (defined by Strategy A2). Adapt strategies to meet changing or unanticipated conditions.

Outcomes:

- Strategies for acquiring, managing, and designing sites take into account community-identified specific concerns and preferences.

- Robust, inclusive, and durably effective conservation outcomes spanning core habitats and HCZs at the site, local, and regional scales, and to do so in an efficient and cost-effective manner, while working with communities and Tribes.

Strategy D5: Diverse Green Workforce Development

Explanation: The environmental movement has been exclusive and prioritized white leadership in many conservation organizations. This has created barriers that persist in conservation education programs and the job market. A diverse green workforce could provide more people with opportunities and engage a wider community in conservation work. BIPOC community leaders are often unacknowledged and their programs excluded from economic opportunities. There also needs to be a major shift in the perception that hiring diverse contract crews addresses the underlying issues of inequity.

Current Status: Several organizations in the Region are focused on providing workforce development, training workshops, and direct compensation with/for BIPOC community members for leadership, fieldwork, ground truthing, research, and analysis. There is a need to create additional connections between partners, support current efforts, and provide additional resources.

Actions:

D5.1 Prioritize contracting for project development, restoration and management efforts, and consultation services with BIPOC owned companies or BIPOC managed nonprofit organizations.

D5.2 Partner with organizations that are developing youth programming focused on green job training and placement, particularly those working with at-risk youth and/or historically disadvantaged communities, and supporting wellness and inclusivity in this programming.

D5.3 Consider funding options for compensating stewardship volunteers in partnership with community based organizations.

D5.4 Create opportunities for individual and institutional diversity in leadership in conservation efforts by supporting education and professional development beyond the entry level.

Outcomes:

- BIPOC and other systematically marginalized communities will be well-represented, fairly compensated, and empowered at all leadership levels across occupations and sectors in the regional conservation economy.

Strategy D6: Equitable, Meaningful Access to Nature and Greenspaces

Explanation: There are incredible benefits to being near and visiting nature and greenspaces that span physical and mental health, sense of place, community connection, and reducing urban heat island effects. White and wealthy people tend to live closer to and have more access to nature and greenspaces. There should be greater consideration to increase access for low income, BIPOC communities, and people with disabilities. This can be accomplished by incorporating habitat connectivity into many types of landscapes including (but not limited to) urban backyards, edges of farm fields, and transportation and utility networks.

People are coming to nature from/with different life experiences. We need to think about ways to have a combination of landscaped areas, transitions to more natural areas, as well as improved trails that lead to other outdoor connections that are safe and accessible for people of all identities to utilize and enjoy. These areas should be designed considering how the many different cultures of the Region experience and want to interact with nature beyond traditional playgrounds, recreation fields, and trail walking options. For example, harvesting plants for food, or medicinal use, large spaces for extended family gatherings, nature bathing, etc.. It is important to provide a gradation that meets folks partway and invites them to explore further. This also includes considerate design and programming for access to nature, such as universally accessible trails and facilities, free reservable outdoor spaces for groups, and guided/curated experiences led by diverse community members.

This provides an opportunity to broaden the definition of what habitat connectivity can look like from the spectrum of high quality core habitat to green spaces, community parks/gardens, to key tree species. It is important to not undervalue the benefits of small patches in the connectivity network which add real value, and easy access to nature, especially in the urban landscape.

Current status: The benefits of access to nature are not equitably distributed or experienced. Habitat connectivity, urban tree canopy health, regulated environmental zones, access to greenspaces, and air and water quality are all inter-related issues that have common solutions and BIPOC communities are typically left out of these conversations. There is a strong need to look at the intersections of meaningful access and natural resource protection based on community input.

Actions:

D6.1 Use the results of thoughtful engagement with different communities to direct investment and identify opportunities to improve habitat connectivity through actions that align with community priorities and redress inequitable distribution of ecological resources.

D6.2 Increase eco-social connectivity to outdoor spaces for diverse communities through approaches such as design for universal access, culturally-responsive landscape design, reservable and special-access natural spaces, and curated outdoor experiences.

D6.3 Incorporate the latest pollinator information into project planning and support integrating pollinator conservation into projects with funding and/or incentives.

D6.4 Identify opportunities to work with utilities and water related infrastructure to demonstrate native species planting and connectivity preservation management in utility and riparian corridors. Host field trips and tours of demonstration sites.

D6.5 Identify opportunities to develop projects in transportation corridors. Partner with transportation agencies to invest in specially designated zones for preservation in a coordinated landscape approach with other regional partners.

D6.6 Collaborate with certification programs such as Backyard Habitat Certification Program to incorporate connectivity priorities into residential projects. Provide technical resources to support work on public and private property.

Outcomes:

- Develop innovative connectivity projects working with communities to align needs and habitat gaps and create accessible multi-benefit landscapes.
- Create a map of existing projects to help identify connections between project areas and opportunity for additional investments across landscapes.
- Plan and implement connectivity demonstration projects with utilities, and transportation agencies, and/or community based organizations.
- Develop tools and demonstration projects to incorporate habitat connectivity in patches and along corridors, particularly for pollinators.

Challenges, Gaps, And Opportunities

Working collaboratively. Completing strategic mapping and an implementation strategy for projects within core habitats and HCZs will hopefully attract additional partners to the RHCWG. Other incentives should be determined to entice as many Key Partners to the table as possible. Research will determine gaps in educational materials and data needed to support managers, partners and land managers in implementing different project types within the various core habitat types and HCZs.

The RHCWG will need help from a wide variety of partners to organize references and/or create additional resources that will be synthesized into a resource library. Partnerships around core habitats and parcels should be established to support implementation of projects. These partnerships will use the resource library in planning (including permitting and possibly establishing easements), design, implementation, monitoring and long term management strategies.

One of the biggest challenges for the RHCWG will be the culture change required to center environmental justice in this conservation work. We will need to move away from looking at the science first and foremost and be able to look at community needs as a critical part of creating functional urban and rural landscapes with connected habitats and resilient communities.

The Takeaway

Overview

This Strategic Action Plan, developed by the Regional Habitat Connectivity Working Group (RHCWG), is intended to increase habitat connectivity, improve ecological resilience, and support environmental justice in the Greater Portland-Vancouver Region. Over the next 10 years (2024-34), implementation of the Strategic Action Plan (SAP) will enhance the network of conserved core wildlife habitats, the Habitat Connectivity Zones (HCZs) connecting them, and the communities that surround them. To be successful, the Strategic Action Plan must reflect the needs and desires of systematically marginalized communities including Black, Indigenous, and People of Color (BIPOC), who will be affected by implementation.

Large scale ecosystem connectivity is critical to maintaining ecological functions across the mosaic of urban and rural landscapes in the Greater Portland-Vancouver Region, which not only protects biodiversity but also human health and socio-economic resilience while mitigating climate change. This SAP, and the work of the RHCWG, supports a regional vision to protect and restore local and regional biodiversity, meet community needs, and provide equitable access to the benefits provided by functional natural systems and promote eco-social connectivity.

The SAP is organized into four core elements:
- **Element A**: Data, Research and Science strategies develop and maintain ecological and environmental justice geospatial datasets that can identify and prioritize core habitats and HCZs across the region, and identify intersections with connected communities.
- **Element B**: Outreach, Education, Engagement and Advocacy strategies engage systematically marginalized communities, and inform community-driven data, prioritization criteria, and community advocates on regional eco-social connectivity needs.
- **Element C**: Planning and Policy strategies emphasize integrating habitat connectivity and environmental justice considerations into regional policies and planning frameworks, and aligning funding programs to support these initiatives.
- **Element D**: Conservation, Restoration, Stewardship, and Management strategies identify and implement on-the-ground conservation projects through inclusive and collaborative processes.

The Strategic Action Plan offers a framework for moving forward together to protect and restore our natural systems. These goals and strategies will facilitate the movement of species, improve ecosystem resilience, and support biodiversity conservation. These efforts will also enhance community health and well-being, create thriving landscapes by increasing access to nature, improved land management policies and practices, and increase community engagement. In summary, the Strategic Action Plan offers a holistic approach to conservation and restoration by addressing ecological, social, and environmental justice dimensions to create positive and lasting impacts on landscapes and communities.

Goals

The following goals provide both near term and long term vision of what the SAP hopes to accomplish. They reflect an integrated approach that emphasizes the interconnectedness of ecological health, social equity, and community resilience. By aiming to facilitate effective coordination among partners, these

SAP goals underscore the importance of collaboration, innovation, and adaptability in addressing complex environmental challenges and advancing sustainable solutions.

Element A: Spatial Data, Research and Science

⇒ **Near term (within 2-3 years):**

- Habitat Connectivity mapping efforts build environmental justice layers into RHCWG's modeling processes to identify focal communities for engagement within HCZs with the highest levels of ecological burden and social vulnerability.
- RHCWG members are able to utilize the models in the Toolkit and supporting criteria to select potentially viable areas for movement by native flora and fauna and prioritize core connectivity processes and habitats (see Appendix 6).
- Ensure that any publicly available information is user-friendly and uses language that is accessible for community members and organizations.

⇒ **Long term (within 3-10 years):**

- Identified data layers are updated with clear responsibilities and goals while including inputs from BIPOC communities through equitable engagement efforts.
- Trust between communities and implementing organizations is built through continued engagement and adaptive implementation of best management practices to inform future implementation and planning projects.

Element B: Outreach, Education, Engagement, and Advocacy

⇒ **Near term (within 2-3 years)**:

- RHCWG members commit to and develop authentic relationships with systematically marginalized communities across the Region.
- Partners and organizations use communication materials developed by RHCWG that integrate regional habitat connectivity, environmental justice, and eco-social connectivity benefits that reflect community needs.
- Partners and organizations use the RHCWG engagement plan to provide effective outreach to targeted audiences to support habitat connectivity.
- RHCWG advocacy efforts support policy changes that reflect priorities identified through community engagement.

⇒ **Long term (within 3-10 years):**

- RHCWG communication materials are adaptive to cultural shifts and changing communication needs.
- A strong network of partnerships across sectors in housing, transportation, and access to nature, supporting the co-benefits of habitat connectivity and environmental justice.
- Create a positive perception of habitat connectivity to generate public support and encourage project implementation.

Element C: Planning and Policy

⇒ **Near term (within 2-3 years)**:

- Regional policies and investment gaps in habitat connectivity and environmental justice are identified and prioritized.
- Key landscape level planning processes align with the principles and science of ecosystem connectivity.
- Eco-social connectivity standards are used across the Region by multiple agencies for land use, road, utility, and other decision-making.
- RHCWG broadens priority advocacy areas into transportation, housing, and equitable access to nature to promote co-benefits of habitat connectivity and environmental justice.

⇒ **Long term (within 3-10 years):**

- RHCWG's best management practices and 'model codes' are adaptive to community, partner and practitioner feedback. The improved standards are integrated into local and regional plans, administrative rules, and municipal codes.
- As comprehensive plans, transportation spending, and development codes are revised, measures for eco-social connectivity and environmental justice are strengthened, and agency spending supports integration.

Element D: Conservation, Restoration, Management, and Stewardship

⇒ **Near term (within 2-3 years)**:

- Project priority areas and opportunities are identified using layered, participatory eco-social mapping and engagement processes.
- Agency-led and grant-funded conservation and restoration initiatives are implemented with connectivity criteria and that support diverse green workforce development programs.
- Good working relationships are established with key land managers that share a mutual understanding of the eco-social benefits of connectivity and protecting core habitats and HCZs.

⇒ **Long term (within 3-10 years):**

- Restoration projects are planned and implemented with key partnerships with Indigenous and involved communities.
- Strategies are adaptive with monitoring efforts to meet changing or unanticipated conditions.
- A functional and linked network of conserved core wildlife habitat and HCZ in public and private ownership is maintained through an efficient network of conservation and stewardship.

Potential Partners

Developing and implementing the SAP will require the support of a broad group of partners. The following is a list of categories of groups that should be engaged with the efforts identified in this SAP. This list provides a starting point to build coalitions and collaborations. While some people and

organizations may choose to donate their time, it is critical to provide resources to support opportunities for all partners to be able to participate.

Academic Institutions: Faculty and students with expertise in habitat connectivity, ecological conservation, equitable urban planning, participatory policy development, and data justice for research, tools, and consultation.

Affordable Housing Authorities, advocates and developers: Capacity to incorporate habitat connectivity, environmental justice, and anti-displacement goals into affordable housing planning processes and projects.

Civic organizations and community members at large: Can provide expertise and connection with specific natural areas, urban greening efforts, and community science tasks most important to their localized community. Community members dedicate substantial person time and resources to support work that is important to them.

Consultants and businesses: Provide a range of expertise to support work in areas of planning, wildlife management, mapping, environmental justice, community engagement, and much more.

County and City Governments: Local agencies with capacity to propose funding measures, negotiate land deals, own and manage lands and easements, and incorporate habitat connectivity and environmental justice goals into land use, transportation, and other infrastructure plans and ordinances. Parks, planning, transportation, and stormwater/green infrastructure agencies are all critical for engagement.

Culturally specific Community Based Organizations and groups: Trusted resources and points of connection for the communities they serve.

Green Workforce Development programs, organizations, initiatives: Capacity to support intersectional co-benefits of economics, environmental justice, and habitat connectivity through supporting training and career development opportunities for BIPOC participants.

Land Trusts: Provide capital and expertise in acquiring (fee simple, easements, etc.) and aggregating parcels; outreach, science, and stewardship capacity.

Natural resource professionals with expertise in habitat connectivity science and best management practices: Capacity and Expertise in landscape level design, plant materials, conservation planning and management. Incorporate eco-social connectivity mapping/priorities into regional conservation planning efforts. Serve as conduits for the distribution of educational materials to the public.

Networks: Professional and collaborative networks for learning and sharing across disciplines and sectors including natural resources, planning, land management, landscape ecology, agriculture, forestry, parks, and environmental justice, and community resilience.

Non-Governmental Organizations: Non-profit, advocacy, or charitable organizations that represent different conservation and community interests provide avenues for disseminating information and mobilizing key constituencies.

Regional Governments and Park Districts: Includes organizations like Metro and regional park districts with the capacity and expertise to propose funding measures, negotiate land deals, own and manage

land and easements, support habitat enhancement programs, and organize community engagement efforts. In addition, Metro Council has the authority to develop and implement regional land use protection ordinances (e.g. Goal 5) in urban/urbanizing/urban reserve areas that incorporate habitat connectivity goals into planning/development activities.

Regional Water Providers: Capacity to incorporate wildlife habitat connectivity and environmental justice goals into water supply system and Source Water Protection plans that could lead to funding for restoration activities that support upstream improvements in environmental justice, and upland and riparian habitat connectivity.

Soil and Water Conservation Districts**:** Capacity to build relationships with land managers (private landowners, institutions, renters, operators, and community based organizations that have a role in managing areas) and assist with implementing voluntary conservation measures that could incorporate wildlife habitat connectivity and environmental justice goals.

State and Federal Agencies**:** Federal and state agencies can help provide funding, manage incentive programs, manage areas of core habitats, restore large natural areas, and support projects. This also includes agencies working on transportation planning and regional planning.

Tribes and organizations serving Indigenous peoples: Federally recognized Tribes, and members of Native American community-based organizations in the Willamette Valley and Columbia River basins will be consulted in the development of regional land use strategies and protection of culturally significant resources. These groups may also be willing to offer expertise pertaining to wildlife behavior, natural resource management, and Indigenous Traditional Ecological Knowledge (ITEK).

Utilities, Investor-Owned and Municipal**:** Capacity/Expertise to incorporate energy justice and habitat connectivity into utility corridor planning activities and restoration planning including power, gas, stormwater and sewer.

Watershed Councils: Relationship building with land managers; implementation of voluntary conservation actions to restore or enhance native habitats; channeling resources into private land restoration; capacity and expertise to incorporate environmental justice and wildlife connectivity goals into watershed-wide planning and restoration activities.

Next Steps

The next steps in advancing the SAP will commence with implementation planning. This phase will identify early action items and assess needed resources, timelines, and partners' capacity needs. Ongoing alignment between implementation plans and the SAP will require engagement with communities and partners so it remains responsive to changing community priorities, emerging research, and evolving environmental conditions. Continued dialogue, feedback mechanisms, and participatory decision-making processes will be integral to shaping the future direction of conservation initiatives. By monitoring progress, evaluating outcomes, and incorporating lessons learned, the SAP will continuously refine its strategies to achieve meaningful and enduring impact.