



Intertwine Oak and Prairie Working Group
2022 Strategic Action Plan
Appendices

Prepared by the Intertwine Oak and Prairie Working Group
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Photo by Mike Houck

Appendices

The following appendixes supplement the Oak and Prairie Working Group's 2022 strategic action plan and are grouped together in this separate document.

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B. Related Plans and Strategies

C. Current Regulations and Conservation Programs for Native Oak within the Intertwine Region

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F. Background on Original 2018 OPWG SAP

A. Contributing Individuals

The following individuals contributed to the development of the 2022 Oak and Prairie Working Group strategic action plan, the original 2018 OPWG strategy, and/or the regional oak mapping effort over the period 2014-2019.

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 Peter Hayes, forestland owner
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 Marissa Eckman and Bethany Lamb, WDFW interns
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 Michael Schindel, The Nature Conservancy of Oregon

B. Related Plans and Strategies

Altman, B., S. Evans-Peters, E. Hilton Kim, N. Maness, J. Stephens, and B. Taylor. 2017. [Prairie, Oaks, and People: A Conservation Business Plan to Revitalize the Prairie-Oak Habitats of the Pacific Northwest](#). American Bird Conservancy, Portland, OR. 41 pages.

City of Portland. 2011. [Terrestrial Ecology Enhancement Strategy](#). Portland, Oregon. 72 pages+appendices.

ODFW. 2016. [Oregon Conservation Strategy](#). Oregon Department of Fish and Wildlife, Salem OR. Interactive website.

WDFW. 2015. [Washington State Wildlife Action Plan](#). Washington Department of Fish and Wildlife, Olympia WA. 1095 pages.

The Intertwine Alliance. 2012. [Regional Conservation Strategy for the Greater Portland-Vancouver Region](#). A. Sihler, editor. The Intertwine Alliance, Portland, OR. 144 pages.

The Intertwine Alliance. 2012. [Biodiversity Guide for the Greater Portland-Vancouver Region](#). A. Sihler, editor. The Intertwine Alliance, Portland, OR. 314 pages.

ECOP. 2020. [East Cascades Oak Partnership Strategic Action Plan](#). Columbia Land Trust, Hood River OR. Authors: L. Cornelius and M. Bushman. 147 pages.

KSON. 2020. [Klamath Siskiyou Oak Network Strategic Conservation Action Plan](#). Authors: J. D. Alexander, C. Gillespie, S. Evans-Peters, and B. Brown. 109 pages.

WVOPC. 2020. [Willamette Valley Oak and Prairie Cooperative Strategic Action Plan](#). J. Krueger, editor. The Willamette Valley Oak and Prairie Cooperative, Corvallis, OR. 70 pages.

UPOP. 2013. [Umpqua Prairie and Oak Partnership Conservation Strategy](#). The Nature Conservancy, Portland OR. J. Krueger, editor. 13 pages.

U.S. Fish and Wildlife Service. 2017. [Willamette Valley Conservation Study](#). Pacific Region, Portland, Oregon. 148 pages.

Willamette Partnership. 2017. [Oak Accord](#). Portland, Oregon.

C. Current Regulations and Conservation Programs for Native Oak within the Intertwine Region

Currently there are relatively few regulations and conservation programs governing oak and prairie habitat within the geography of the Intertwine region. By comparison, streams, wetlands, and riparian areas are afforded greater protections and programs to facilitate their conservation.

Federal Regulations and Conservation Programs

At the federal level, the U.S. Fish and Wildlife Service (USFWS) has a [2010 recovery plan for prairie species of western Oregon and southwest Washington](#). The recovery plan covers 13 species, including two butterflies and 11 plants. Six of the species are listed under the federal Endangered Species Act: Fender's blue butterfly, Willamette daisy, Bradshaw's lomatium, Kincaid's lupine, Nelson's checkermallow, and golden paintbrush. The other species are listed as endangered, threatened, or critically imperiled by the states of Oregon or Washington: Taylor's checkerspot butterfly, pale (or white rock) larkspur, Willamette Valley larkspur, peacock larkspur, shaggy horkelia, white-topped aster, and Hitchcock's blue-eyed grass.

The USFWS has designated critical habitat for these Willamette Valley prairie species that covers 3,720 acres. Although the geographic extent of the recovery plan encompasses the Intertwine region, no critical habitat has been designated within it. Most existing populations of imperiled plants and butterflies are found to the south and north of the Intertwine region. Safe harbor agreements or habitat conservation plans have been developed for certain landowners and public authorities with habitat for these at-risk prairie species, but all of these agreements cover areas beyond the Intertwine region.

One or a few populations each of Fender's blue butterfly, Bradshaw's lomatium, Willamette daisy, Kincaid's lupine, golden paintbrush, shaggy horkelia, and white-topped aster may be found within the Intertwine. Only pale/white rock larkspur and Nelson's checkermallow have more than a few populations within the region. Although it is only one population of Kincaid's lupine and Fender's blue butterfly that persists at Hagg Lake, [these populations are among the largest known](#). Most of these extant populations that remain within the Intertwine region are protected in park and natural areas, especially those maintained by Metro and the U.S. Fish and Wildlife Service.

Separately, the [USFWS listed streaked horned lark as threatened in 2013](#) and designated critical habitat for the bird, which depends on prairie and open, bare ground environments. A [draft recovery plan for streaked horned lark](#) was developed in 2019.

State Regulations and Conservation Programs

The states of Oregon and Washington have both identified oak and prairie habitats—and species dependent on these habitats—as top priorities for conservation action. The [Oregon Conservation Strategy](#) and [Washington State Wildlife Action Plan](#) identify and describe the priority habitats and species, as well as each state’s approach to their conservation.

[Washington State has growth management regulations](#) that accommodate “[fully planning](#)” and “[partially planning](#)” jurisdictions. All counties and local governments are required to designate and protect natural resource lands and [critical areas](#), but only fully planning jurisdictions must do more. Local governments have ultimate authority over their local land use plans and regulations, but they may be challenged before special growth management hearings boards in limited circumstances. Washington State does not approve, but merely acknowledges, local jurisdiction compliance with land use rules. Within the Intertwine region, Clark County and its cities are all fully planning communities, whereas Cowlitz and Skamania counties are partially planning counties.

The Washington Department of Fish and Wildlife (WDFW) maintains the [Priority Habitats and Species Program \(PHS\)](#), which provides maps and management recommendations to cities and counties implementing land use plans and development regulations. PHS biologists may work with local governments and landowners to craft conservation plans, and PHS management recommendations are considered “best available science.” However, there are no PHS regulations that regulate oak and prairie habitats or species directly. The WDFW PHS program maintains [maps](#) and has management recommendations for [oak woodlands](#), [western gray squirrel](#), and [Mazama pocket gopher](#).

Native plant conservation in Washington is overseen by the Washington Department of Natural Resources (WDNR) [Natural Heritage Program](#), which maintains natural areas that safeguard imperiled plants/ecosystems, conducts monitoring, and maintains records of rare plants and ecosystem occurrences.

Compared to Washington, Oregon has more highly regulated land use regulations to slow urban expansion and preserve farm and forestlands under Oregon’s [landmark land use planning](#) program, which is overseen by the Department of Land Conservation and Development (DLCD). The DLCD must approve, not just acknowledge, local land use plans and regulations. The [State Land Use Goal 5](#) requires that local governments identify, map, and protect significant natural resources, which include fish and wildlife habitats.

However, compared to Washington, Oregon has fewer resources and less guidance to identify and protect at-risk habitats and species. These programs and resources are best described in the [planning and regulatory framework section of the Oregon Conservation Strategy](#). The Oregon Department of Fish and Wildlife’s [\(ODFW\) Habitat Resources Program](#) is roughly comparable to the WDFW PHS Program for wildlife but has fewer resources and less guidance available. ODFW maintains a small program for [Willamette Valley grassland birds](#), and native plant conservation is overseen by the Oregon Department of Agriculture (ODA) under the [ODA Native Plant Conservation Program](#). In Oregon, the state’s natural heritage inventory is maintained by the [Oregon Biodiversity and Information Center](#) at Portland State University.

One strength of the Washington system is that it [requires the use of best available science](#) when reviewing and revising critical areas policies and regulations. Also, critical areas ordinances (CAOs) and local habitat inventories must be periodically reviewed and updated to incorporate new data and science. Unfortunately, Oregon does not require periodic review of Goal 5 Significant Natural Resources (SNR) programs, which were first developed in the 1990s and early 2000s and have been updated only in certain jurisdictions in a limited capacity.

Local Regulations and Conservation Programs

In Washington State, cities and counties have the ultimate authority over local land use planning and regulations governing oak and prairie habitat. There is no state authority equivalent to the Oregon DLCD that must approve local land use plans. Several jurisdictions within the Intertwine region have adopted the WDFW PHS maps and management recommendations under local critical areas ordinances (CAOs), which are roughly equivalent to Oregon Goal 5 Significant Natural Resources (SNR) programs.

In Washington, several local CAOs identify and protect oak woodlands. These local measures do not guarantee the full protection of oak habitat in development situations, but there is a local policy acknowledgement of the ecological significance of oak habitat and the jurisdictions maintain maps identifying the locations of known oak habitats.

In Oregon, local cities and counties first developed their Goal 5 SNR inventories and protections with a primary focus on fish and wildlife habitats associated with streams, wetlands, and riparian areas. Few local Goal 5 SNR programs call out oak and prairie habitats, and those protection measures that do exist are less than what is required for streams, wetlands, and riparian areas.

In the 1990s, the Oregon DLCD granted authority to Metro to oversee and approve Portland metropolitan area Goal 5 inventories and programs under what later became the [Metro Title 13 program](#). Under Metro Title 13, waterways have certain minimum mandatory protections, but protections for upland wildlife habitats (such as oak and prairie) are voluntary and not required. As a result, few local cities and counties within the Oregon portion of the Intertwine region require habitat protection for Oregon white oak.

Separate from local Washington CAO and Oregon SNR programs, tree codes are another avenue for local jurisdictions to protect individual Oregon white oak trees. There are a few notable examples of local Intertwine jurisdictions using tree codes to protect Oregon white oak trees. For example, the City of Forest Grove tree code calls out Oregon white oak for special consideration and protects trees down to 3 inches in diameter (versus 6 inches for all other trees). Similarly, the cities of Hillsboro, Portland, West Linn, and Wilsonville give special consideration to Oregon white oak during certain development reviews. However, the level of protection afforded through tree codes is highly variable across the region, with some jurisdictions lacking tree codes or providing little protection outside street right-of-ways and public parks.

Soil and Water Conservation District Regulations and Conservation Programs

Soil and Water Conservation Districts (SWCDs) are [special-purpose districts](#) focused on private lands conservation education, technical assistance, and support. A number of different SWCDs operate within the Intertwine region, including:

- Clackamas SWCD
- Clark Conservation District
- Columbia SWCD
- West Multnomah SWCD
- East Multnomah SWCD
- Tualatin SWCD
- Yamhill SWCD

Several local SWCDs have special programs or partnerships with rural landowners to restore oak habitat. At present, the local SWCDs with the most active oak habitat restoration work are Clackamas, West Multnomah, Tualatin, and Yamhill.

All of these local SWCDs, except for Clark Conservation District, have a local levy or special assessment to fund their private lands conservation programs, which they match with state or federal funding (such as that from the Natural Resources Conservation Service). A number of Oregon SWCDs are working with ODFW and the state legislature to restore funding for the state wildlife habitat tax deferral program to offer incentives for private landowners seeking to voluntarily protect Oregon white oak habitats.

D. Development of Results Chains

This appendix provides supplemental information on the Open Standards process that the OPWG used to develop the 2022 strategic action plan for oak and prairie habitats within the Intertwine region. [This guide](#) and [introductory video](#) provide background on the Open Standards process.

The initial threat ranking process is described in Chapter 4 of the strategic action plan. The following describes in detail more how the OPWG developed its theory of change, as represented by four “results chains” for each of the four principal threats.

The results chains below include strategies, actions, and outputs. A strategy is a group of related actions that are focused to reduce, eliminate, or mitigate limiting factors to restore critical ecological processes or functions. Actions are specific tasks that support implementation of strategies. Outputs are the immediate, measurable results that are anticipated based on successful implementation of a strategy or series of related actions. Collectively, outputs reduce threats and lead to achievement of long-term ecological goals, thus improving the status of oak and prairie ecosystems.

OPWG partners and additional outside subject matter experts (see Appendix A) met in small groups for two-hour results chain development workshops during February through March 2021. OPWG consultants Sara Evans-Peters and Mary Bushman prepared materials in advance of the meetings and facilitated group discussions. Draft results chains constructed and adjusted during the meeting were re-circulated to participants and a wider array of stakeholders for further discussion and refinement.

[Note that the fine print in the following four results chain figures is not readable in this draft version of the appendixes. For now, high-resolution jpeg versions of each results chain are available for download at the following links: [Fire exclusion](#), [Invasive species/woody encroachment](#), [Agriculture](#), [Development/transportation](#). In the final version of this strategic action plan we will have high-resolution versions of these results chains within the document, rather than via external links.]

Fire Exclusion

Color Key

- Strategy (Yellow)
- Result of actions (Blue)
- Decreased threat (Pink)
- Biophysical factor (Green)
- Target (Light Green)

Information Gaps

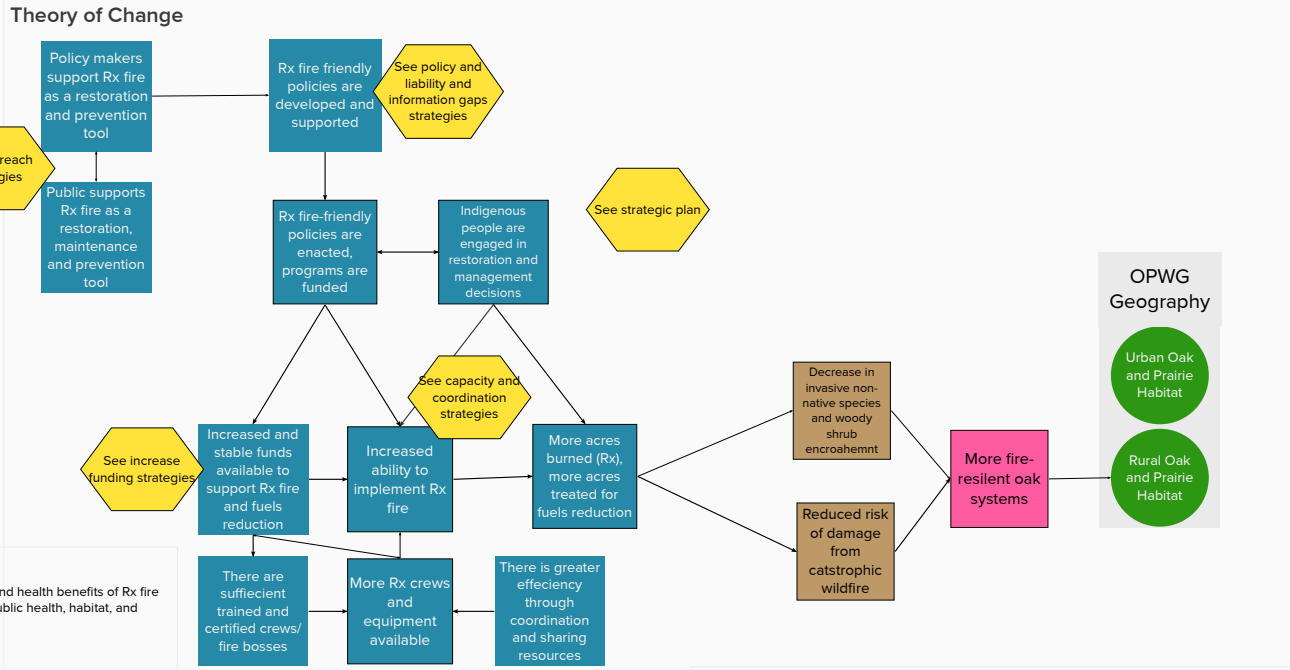
Information Gaps: To increase public and policy maker support, there needs to be strong data and information available.

- Update and refreshing of economic analysis, cost share rates (outdated)
- Develop a case statement or business case that highlights the pros and cons of fire and its alternatives including a risk vs reward analysis and a funds mitigation and wildland urban risk reduction

Policy and liability

Policy and liability: There is less liability for private landowners and more flexible regulations around smoke management including increasing window for ecological burning

- Engage with current groups working to advance liability challenges (ex. prescribed fire council)
- Explore partnership with Oregon Underwriters and similar organizations
- Work with liability and certification working group Oregon
- Engage with WA DNR to assist and disseminate information new program for state lands (self-insured)



Outreach

Outreach: Public and policy makers understand the economic, safety, and health benefits of Rx fire and the historical importance of fire. AND equate prescribed fire with public health, habitat, and safety

Raise broad public awareness of and appreciation for values: NW oak and prairie ecosystems, their conservation, and specific stewardship options.

Develop accessible, inclusive, and effective mechanisms/materials to disseminate information to multiple audiences: Create business case and outreach website that research, fuels mitigation and wildland urban risk reduction.

Align messaging and outreach efforts with the Prescribed Fire Council, OUI and other similar organizations and efforts.

Raise awareness: Highlight ecological diversity and habitat to build appreciation - creation of outreach subcommittee. Develop key messages that serve as an essential statement of urgency and provide context on the cultural legacy of oak and prairie habitat. Develop talking points for interpretive tours, identify and train guides. Develop a larger public communications strategy or campaign. Integrate messaging and branding for existing programs.

Develop materials to disseminate: Train SWCD staff and other interested parties on fire messaging and provide outreach tools. Develop outreach resources and education materials for SWCD, firebrands and extension, crop services, and other partners. Develop and promote private land practices through tours and special events, other incentive program information. Develop outreach materials for restoration and landscape professionals to promote value oak and prairie naturescaping practices. Partner with the Oregon Zoo Education Center.

Outreach Streams

- SWCD to serve as messengers to farm/forest landowners
- Press releases on burns
- Local newspaper articles
- Interpretive signs on properties
- Agency blogging and feedback

Key Messages

- Conservation and restoration of oak and prairie habitat increase fire resiliency to wildfire and climate change
- Fire resiliency increase public safety
- Pros and cons of fire and fire alternatives
- Lead with ecological significance of fire
- Strong focus on tribes and historical context
- Benefits to endangered species
- Differences between air quality and smoke in field burning
- Highlight tribe wildfire programs, investment, and dedication

Increase Funding

Increase funding: There is consistent and stable funding to support Rx fire as well as fuels reduction

- Advocate to local federal and state agencies and officers for increase fire capacity. Utilize current programs that provide training opportunities (Federal and state employees)
- Organize information on prescribed fire funding resources. Private/Public including BLM Interface Community Assistance Funding, use of WA State RCO WWP Restoration grants.
- Coordinate with insurance companies to fund/invest in fuels reductions/maintenance

Capacity and Coordination

Capacity and Coordination: There are more trained contract crews and organizations have more internal capacity

- Identify interest and provide training/certification for potential partners that could, or are interested in strengthening regional fire capacity
- Use the OPWG to identify and outreach to potential partners to increase capacity, support tribes in taking lead
- Partner with tribes to increase capacity, support tribes in taking lead
- Explore whether partnerships can be formed with the Willamette Valley Ecological Fire Partnership to help navigate and overcome current barriers.
- Provide training through the OPWG for conservation planners to understand where fire might be helpful on a project - BMPs
- Develop coordinated effort/tool to connect crews and bosses with private and public lands managers

Increase partnerships to build capacity

- Explore using state wildland firefighters that need on-the-ground training
- Explore using red-carded volunteers that need on-the-ground training
- Find what agencies have staff that need additional experience
- Explore using local fire stations (engines) and want more local wildland and prescribed fire experience

Understory: non-native invasive species and woody shrub encroachment

Incentives + Funding

Expand stewardship economy: Develop and share the business case. Outreach on the value of oak and prairie. Enhance and optimize incentives for private lands conservation and stewardship. Increase the desirability for oak and prairie habitat. More demand = more supply = reduced cost. Develop and implement an advisory strategy to increase land use values and optimize incentives. Expand employment opportunities for restoration professionals and teams. Build a partnership with a local career development non-profit.

Expand opportunities to reduce cost of stewardship: Coordinate across oak and prairie stewardship programs. Shared equipment, time, resources, skill sets, people. Build partnerships with tribal conservation departments to expand native seed base. Develop coordination tool for multiple organizations to order plant materials. Develop partnerships to expand availability of seed for key species not available on the commercial market. Encourage wholesale and retail nurseries to carry more oak and prairie naturescaping materials. Create easy access to resources, plant lists, professional services, tools, grants, incentive programs, etc.

Promote oak focused naturescaping incentives: Expand Backyard Habitat Certification Program to include entire metro area. Pay rural landowners to use best stewardship practices through state and federal programs. Incentivize landscape professionals to include oak and prairie naturescaping in their offerings. Pay for and train contract crews on oak and prairie stewardship best practices.

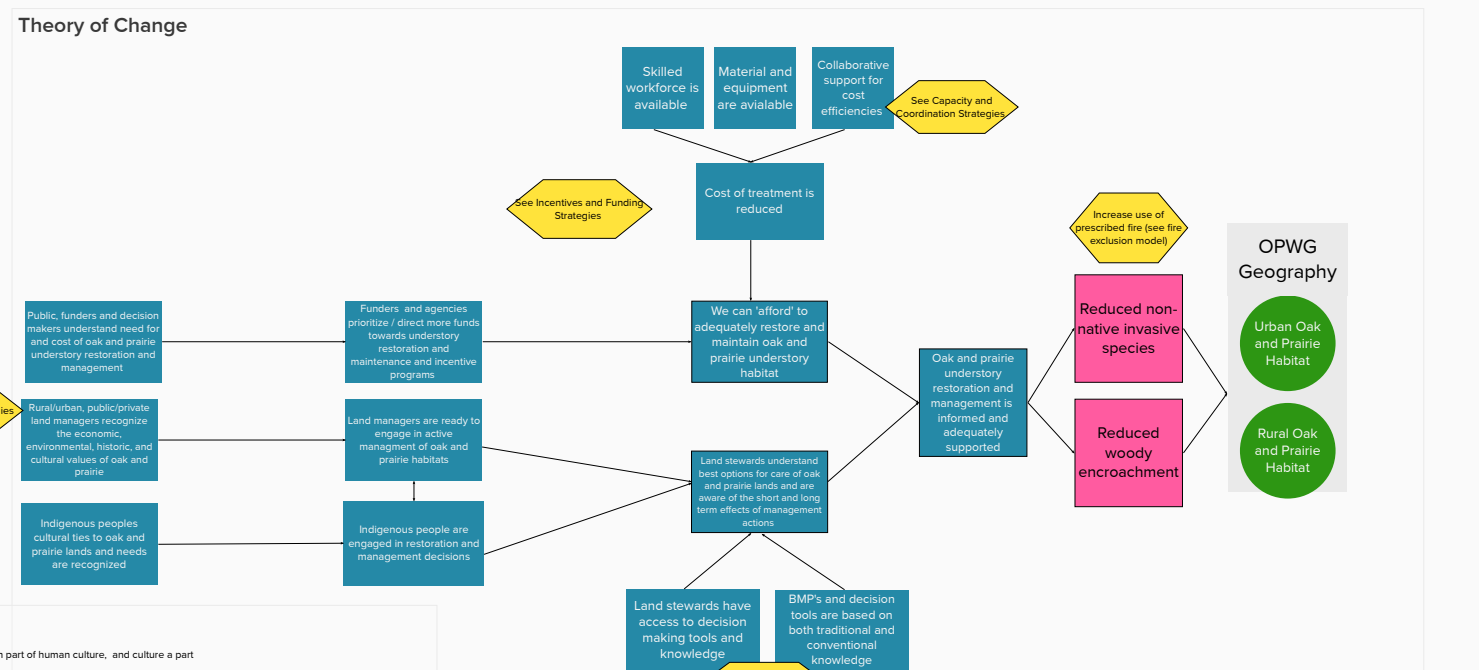
Create dedicated funds for oak conservation: Create dedicated funds for oak conservation. Work with Backyard Habitat Program to expand funding to create focused oak and prairie program. Support passage/allow use of public funding measures for restoration and invasive treatments. Encourage funding of Oregon Agricultural Heritage program. Support and encourage NRCS oak focused C&S and wildlife RCPs. Increase use of NRCS Agricultural Conservation Easement and Conservation Stewardship Programs. Take advantage of other funding sources (i.e. fire resilience funds and bill).

Capacity and Coordination

Work with partners to build relationships and develop cultural connections that will support the inclusion of traditional knowledge: Engage and build relationships with tribal conservation departments. Connect people to the stories and the values. Encourage and support the inclusion of traditional knowledge. Support the Willamette Valley Plant Nurseries Partnership by helping new growers prosper.

Improve availability of plant materials: Document and bank seed of plant species not on commercial market. Develop user guides and seed lists to expand market. Develop partnerships to expand the availability of seed for key species. Support the Willamette Valley Plant Nurseries Partnership by helping new growers prosper.

Promote naturescaping practices: Engage and educate landscape professionals on oak and prairie naturescaping. Coordinate with partners of regional design professionals on naturescaping with oak and prairie plant research. Develop accessible, inclusive and effective materials, toolkits, etc.



Outreach

Highlight: These lands have always been part of human culture, and culture a part of the ecology of oaks

Raise public awareness: Develop coordinated messaging and outreach to avoid duplication - creation of outreach subcommittee. Develop key messages that serve as an essential statement of urgency and provide context on the cultural legacy of oak and prairie habitat. Develop talking points for interpretive tours, identify and train guides. Develop a larger public communications strategy or campaign. Integrate messaging and branding for existing programs. Partner with the Oregon Zoo Education Center.

Develop materials to disseminate: Identify, validate and apply the stories of urban and rural landowners / developers who are safeguarding and restoring their oak habitat. Develop outreach materials to nurseries and landscape professionals to promote value oak and prairie naturescaping practices. Partner with the Oregon Zoo Education Center.

Outreach Streams

- Directly engage community members to advocate for oak and prairie habitats on site visits, farmsteads, French gardens, etc.
- Provide the parties to farmers healthy oak and prairie ecosystems and working lands.
- Develop and promote private land practices through tours and special events, other incentive program information.
- Develop outreach materials for restoration and landscape professionals to promote value oak and prairie naturescaping practices.
- Develop outreach materials for restoration and landscape professionals to promote value oak and prairie naturescaping practices.
- Partner with the Oregon Zoo Education Center.

BMPs + Technical Assistance

Provide technical assistance that integrates a full range of knowledge and data resources for stewardship practices: Provide technical assistance to private land owners. Develop and disseminate BMPs. Provide technical assistance to tribal conservation departments. Connect people to the stories and the values. Encourage and support the inclusion of traditional knowledge. Support the Willamette Valley Plant Nurseries Partnership by helping new growers prosper.

Create and disseminate broadly accepted best management practices: Develop and disseminate BMPs. Provide technical assistance to private land owners. Develop and disseminate BMPs. Provide technical assistance to tribal conservation departments. Connect people to the stories and the values. Encourage and support the inclusion of traditional knowledge. Support the Willamette Valley Plant Nurseries Partnership by helping new growers prosper.

Color Key

- Strategy (Yellow)
- Result of actions (Blue)
- Decreased threat (Pink)
- Target (Light Green)

Definitions of Conservation Standards threat ratings

Open Standards for the Practice of Conservation uses the following definitions and rankings of scope, severity, and irreversibility for threats to conservation targets.

Scope

Scope is the geographic scope of threat impacts on the conservation target within the planning area that can reasonably be expected within 10 years under current circumstances (i.e., given the continuation of the existing situation).

Very High: The threat is likely to be very widespread or pervasive in its scope and affect the target throughout the planning area (affecting 71-100% of existing oak habitat).

High: The threat is likely to be widespread in its scope and affect the target at many of its locations within the planning area (affecting 31-70% of existing oak habitat).

Medium: The threat is likely to be localized in its scope and affect the target at some of the target's locations within the planning area (affecting 11-30% of existing oak habitat).

Low: The threat is likely to be very localized in its scope and affect the target at a limited portion of the target's location within the planning area (affecting 1-10 of existing oak habitat).

Severity

Severity is the level of damage to the target within the planning area that can reasonably be expected within 10 years under current circumstances (i.e., given the continuation of the existing situation).

Very High: The threat is likely to destroy or eliminate the target over some portion of the target's occurrence within the planning area.

High: The threat is likely to seriously degrade the target over some portion of the target's occurrence within the planning area.

Medium: The threat is likely to moderately degrade the target over some portion of the target's occurrence within the planning area.

Low: The threat is likely to impair the target only slightly over some portion of the target's occurrence within the planning area.

Irreversibility

Irreversibility is the degree to which the effects of a threat can be undone.

Very High: The effects of the threat are not reversible and/or would take more than 100 years to be reversed.

High: The effects of the threat are technically reversible but not practically affordable and/or would take 21 to 100 years to be reversed.

Medium: The effects of the threat are reversible with a reasonable commitment of resources and/or would take 6 to 21 years to be reversed.

Low: The effects of the threat are easily reversible at relatively low cost and/or would take 0 to 5 years to be reversed.

The threats rating responses were tabulated and scored using Miradi adaptive management software (see Figure 4 and Box 3 for rank descriptions). For each threat, the scope, severity, and irreversibility threat rankings were combined into a summary threat rating. We then regrouped and combined threats with a summary threat rating of High or Medium into four principal threats to Intertwine region oak and prairie habitats, as follows:

- **Fire exclusion and woody encroachment**
- **Limited stewardship for Indigenous Traditional Ecological Knowledge-informed plant tending and access**
- **Agricultural conversion and intensification**
- **Urban development, transportation, and utilities**

For these four principal threat groups, we identified contributing factors that indirectly mediate or modify each threat. Many of these contributing factors represent intervention opportunities to mitigate or alleviate the prioritized threats to oak and prairie habitats in the Intertwine region. See Appendix D for more information on development of these “results chains.”

Finally, we re-sorted our existing 2018 strategies and actions under the four broad threat groups, arriving at one set of actions related to fire exclusion, eight for limited stewardship, three for agricultural conversion and intensification, and six for development, transportation, and utilities. For more details of our process to identify and reorganize our actions, see Appendix E.

E. Regrouped 2018 OPWG Strategy Actions

The four results chains in Appendix D regroup strategies and actions from the original 2018 OPWG strategic action plan (SAP). For more detail on each of these actions, see the [original 2018 SAP Appendix A table](#), which details subactions, outcomes, measures, lead organizations, and key partners. Note that in the 4 years since publication of the 2018 strategy, some of these actions (such as mapping oak, core habitat patches, and connectivity) have been completed.

Below is a list of actions from the 2018 OPWG strategic action plan, regrouped under the four principal threat groups described in the Appendix D results chains.

FIRE EXCLUSION Strategy: Increase ability to employ fire as a management tool.

Actions:

1. Identify current local barriers to using prescribed fire and strategies for overcoming them.
2. Explore whether partnerships can be formed with USFWS and the Willamette Valley Ecological Fire Partnership to help navigate and overcome current barriers.

STEWARDSHIP Strategy: Create and enhance habitat in priority locations with early emphasis on protecting legacy trees.

Actions:

1. Create and manage oak and prairie habitats in priority locations on public and private protected lands.
2. Release existing oak from competition.
3. Maintain the full range of habitat types across the landscape by integrating details of oak and prairie habitat diversity concepts into restoration planning, practices, and best management practices (BMPs) to increase under-represented habitat types across the region.

STEWARDSHIP Strategy: Create and enhance habitat on unprotected lands.

Actions:

1. Encourage the use and protection of oaks as components, including large-lot rural areas, small-lot urban and rural residential areas (e.g., backyard habitat), agricultural field trees and buffers, industrial lands, and developed parks, schools, and office landscaping.
2. Work with local jurisdictions to protect legacy street trees and increase the planting of native oaks as street trees.

3. Work with soil and water conservation districts and private landowners of priority sites to support voluntary efforts to improve management for oak habitat.

STEWARDSHIP Strategy: Improve the availability of plant materials for habitat creation and enhancement.

Actions:

1. Improve the availability of plant materials for habitat creation and enhancement.
2. Develop partnership to expand the availability of seed for key species not available on the commercial market.

STEWARDSHIP Strategy: Agree on measures of habitat quality and prioritize areas for restoration and enhancement.

Actions:

1. Use existing habitat quality assessment tools (key ecological attributes, ecological integrity indices, oak habitat metrics, etc.) as a basis for developing restoration prescriptions and a habitat quality assessment.
2. Work with SWCDs to identify and implement priority opportunities for creating and enhancing oak and prairie habitats on private lands.

STEWARDSHIP Strategy: Work with partners to build relationships and develop cultural connections that will support the inclusion of traditional knowledge.

Actions:

1. Build intentional and authentic relationships for better understanding and incorporation of a continuum of perspectives.
2. Broaden knowledge of habitat types and guide prioritization of regional conservation and stewardship activities.
3. Coordinate this action with the Regional Connectivity Working Group.

STEWARDSHIP Strategy: Integrate a full range of knowledge and data resources to provide guidance for stewardship and conservation practices.

Actions:

1. Standardize and centralize knowledge, information, and data to support conservation and stewardship of oak and prairie habitats across the Regional Conservation Strategy (RCS) planning area.
2. Develop new or use existing habitat quality assessment tools as a basis for developing restoration prescriptions.

3. Be inclusive of the full range of potential audiences (e.g., public lands managers, large-scale private property owners/managers, owners of backyard habitats).
4. Provide definitions and assessments to support understanding of the life history, physical processes, and community interactions of oak and prairie communities.

STEWARDSHIP Strategy: Ensure that technical and social resources are made available to support long-term conservation and stewardship.

Actions:

1. Integrate approaches that support traditional, technical, and emerging knowledge.
2. Support adaptive management systems.
3. Incorporate climate change data into dynamic management approaches.

STEWARDSHIP Strategy: Develop accessible, inclusive, and effective mechanisms/materials to disseminate information to multiple audiences.

Actions:

1. Encourage and promote private land practices that enhance native oak/prairie habitats through tours, special events, incentives, and programs.
2. Present and share widely materials to help community members implement BMPs on private property.
3. Promote native oak and prairie naturescaping practices in appropriate settings across the urban-suburban and rural landscape continuum.
4. Encourage wholesale and retail nurseries to carry more oak and prairie naturescaping materials and develop more know-how on oak and prairie naturescaping.
5. Engage, educate, and incentivize landscape professionals on oak and prairie naturescaping.
6. Reach out to and engage public land managers in the region to promote oak habitat protection and restoration.

AGRICULTURAL CONVERSION/INTENSIFICATION Strategy: Identify priority parcels for oak conservation using tax lot data.

Action:

1. Use oak distribution and parcel maps to derive a map of priority parcels for native oak conservation.

AGRICULTURAL CONVERSION/INTENSIFICATION Strategy: Acquire conservation rights (fee title or limited property rights) to priority parcels.

Actions:

1. Work with stakeholders to increase awareness and identify focal areas for public investment.
2. Support passage of public funding measures for land acquisition, including conservation easements.

3. Support partner grant applications to public and private funding sources for land acquisition and easements.
4. Acquire land or interest in land from willing sellers.

AGRICULTURAL CONVERSION/INTENSIFICATION Strategy: Develop and implement an advocacy strategy to increase land use protections and enhance and optimize incentives for native oak and prairie habitats.

Actions:

1. Create habitat protection standards.
2. Strengthen local land use and planning regulations to protect oak and prairie habitat on private lands. Examples include city and county tree codes, land subdivision and conversion rules, and nuisance vegetation ordinances.
3. Enhance and optimize tax incentives, create dedicated funds for oak conservation, and develop other non-regulatory tools to encourage oak and prairie protection on private lands.
4. Strengthen and create effective processes and tools for oak advocates to respond to and influence development applications.

DEVELOPMENT AND TRANSPORTATION Strategy: Identify priority parcels for oak conservation using tax lot data.

Action:

1. Use oak distribution and parcel maps to derive a map of priority parcels for native oak conservation.

DEVELOPMENT AND TRANSPORTATION Strategy: Acquire conservation rights (fee title or limited property rights) to priority parcels.

Actions:

1. Work with stakeholders to increase awareness and identify focal areas for public investment.
2. Support passage of public funding measures for land acquisition, including conservation easements.
3. Support partner grant applications to public and private funding sources for land acquisition and easements.
4. Acquire land or interest in land from willing sellers.

DEVELOPMENT AND TRANSPORTATION Strategy: Improve communication among practitioners.

No actions in the 2018 SAP for this strategy

DEVELOPMENT AND TRANSPORTATION Strategy: Improve toolkit for non-fee acquisition habitat protection.

Actions:

1. Inventory and assess the role of non-fee approaches other than permanent conservation easements, such as leases, incentives, or other temporary tools.
2. Improve knowledge and use of conservation easements.

DEVELOPMENT AND TRANSPORTATION Strategy: Encourage maintenance of conservation values on priority habitats where landowners are not interested in formal land protection measures.

No actions identified in the 2018 SAP for this strategy

DEVELOPMENT AND TRANSPORTATION Strategy: Develop and implement an advocacy strategy to increase land use protections and enhance and optimize incentives for native oak and prairie habitats.

Actions:

1. Create habitat protection standards.
2. Strengthen local land use and planning regulations to protect oak and prairie habitat on private lands. Examples include city and county tree codes, land subdivision and conversion rules, and nuisance vegetation ordinances.
3. Enhance and optimize tax incentives, create dedicated funds for oak conservation, and develop other non-regulatory tools to encourage oak and prairie protection on private lands.
4. Strengthen and create effective processes and tools for oak advocates to respond to and influence development applications.

F. Background on Original 2018 OPWG SAP

This 2022 OPWG strategic action plan represents a streamlined and prioritized update to the original 2018 OPWG strategic action plan. However, for more detail on certain aspects of the work, it may be desirable to refer to the various Element Chapters of the original 2018 strategic action plan. For that purpose, we provide a [link](#) to the original 2018 strategic action plan. Within the 2018 strategic action plan are five Element Chapters with extended narrative on:

1. Spatial data
2. Land conservation
3. Active stewardship
4. Knowledge
5. Community education, engagement, and advocacy