Oregon
Tina Kotek, Governor

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June 30, 2023

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Office of Governor Tina Kotek
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RE: Report on the Development of a 20-Year Landscape Resiliency Strategy

Mr. Grafe and Mr. Bennett,

I have attached a report detailing the progress in implementing Shared Stewardship and the development of a 20-Year Landscape Resiliency Strategy, as outlined in Section 18 of SB 762 (2021) and the 2019 Shared Stewardship Memorandum of Understanding between the State of Oregon, USDA Forest Service, and USDA Natural Resources Conservation Service.

SB 762 provided direction and capacity for the department to develop a 20-Year Landscape Resiliency Strategy that prioritizes restoration actions and geographies for wildfire risk reduction. To achieve this objective, which requires broad support and coordination with other state and federal agency partners and local collective action groups, it was first necessary to fully operationalize Shared Stewardship. To that end, the department has worked with the Governor's Office to build a governance structure around Shared Stewardship – bringing the relevant agency partners to the table to develop a shared vision and strategy around landscape resiliency in Oregon.

The attached report documents a collective investment in Shared Stewardship and the foundation for finalizing Oregon's 20-Year Landscape Resiliency Strategy. In addition to a shared vision and goals, the report highlights priority geographies, estimated treatment costs, and near-term investments to finalize and fully implement the strategy. These investments include:

- A Shared Stewardship Partner Summit: Bringing together all the partners involved in Shared Stewardship to kick off the implementation of the 20-Year Landscape Resiliency Strategy.
- Accomplishment Tracking & Dashboard: The tracking system and dashboard will communicate progress on investments, actions, and outcomes across all ownerships based on the goals and metrics established in the 20-Year Strategy. It will share progress and help inform shared investments in priority landscapes.
- Coordinated Communications: An interagency communications plan would build a single identity for Shared Stewardship so that Oregonians receive clear and consistent information about opportunities and work happening on the ground, regardless of ownership or agency.
- Governance, Engagement, and Local Capacity: Develop a governance structure around Shared Stewardship that clearly articulates the participating agencies' and organizations' roles and responsibilities. Additionally, more investment is needed to engage Tribal Nations and underserved communities that are often under-represented in landscape resilience decision-making yet are disproportionately affected by wildfire, smoke, and other impacts. Finally, local collaborative efforts need more support from agency partners to conduct resource assessments and build capacity around restoration needs.

We look forward to sharing more details of these efforts – and the final strategy – with you and our partners later this fall. If you have questions or would like a briefing on this body of work, please get in touch with Ryan Gordon at Ryan.P.Gordon@odf.oregon.gov.

The work represented here is a collective effort of many – I hope you'll review the listing of individuals and organizations within the report and join me in thanking them for their ongoing contributions. I want to thank Nathan Beckman and Megan Frizzell – both on staff here at the Oregon Department of Forestry – for their effort over the past biennium.

Sincerely,

Cal Mukumoto
Oregon State Forester

Oregon's Landscape Resiliency Strategy

Progress Report: June 30, 2023

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Introduction

During the past two decades, Oregonians experienced a rapid escalation of catastrophic wildfire, home and property losses, higher suppression costs, and worsening ecological conditions on the land. These trends call for a bold, coordinated, and cohesive response to better address the state's mounting wildfire, social and ecological challenges. Oregon's Legislature, federal and state land management agencies, Tribes, community organizations and the public recognize the need for a new approach to establishing resilient landscapes and managing wildfire risk.

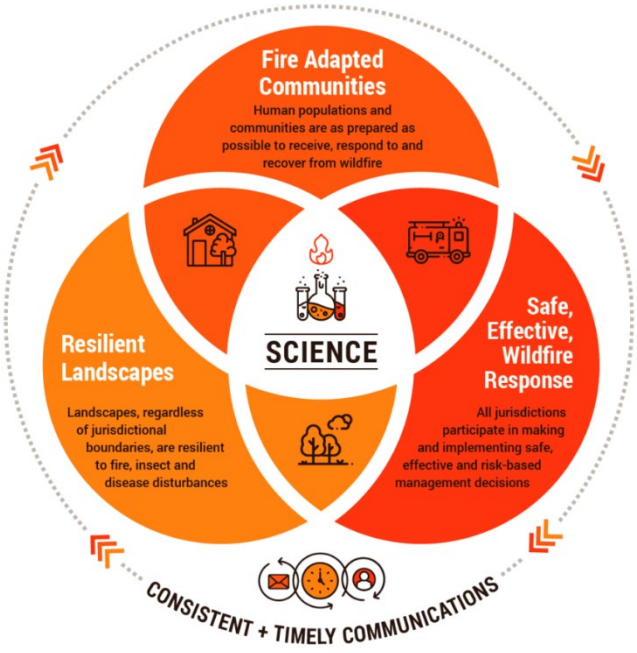
This *20-Year Landscape Resiliency Strategy* responds to the Oregon Legislature's bipartisan directive in Senate Bill 762, signed into law on July 19, 2021 which directs the Oregon Department of Forestry (ODF) to develop a strategic plan that prioritizes restoration actions and geographies for wildfire risk reduction. SB 762 draws directly from the 2019 Shared Stewardship Memorandum of Understanding (MOU), signed by Oregon's Governor, USDA Forest Service and other state and federal officials, which also calls for development of a 20-year strategic plan.

The landscape resiliency strategy also advances recommendations made by the Oregon Governor's Council on Wildfire Response. Established in 2019 in response to increasing wildfire impacts, the Governor's council reviewed Oregon's existing model for wildfire prevention, preparedness, and response and offered 37 recommendations to advance fire protection in Oregon, structured around the National Cohesive Wildland Fire Management Strategy. Many of these recommendations were integrated into Senate Bill 762 and are incorporated in this landscape resiliency strategy.

Governor's Council on Wildfire Response

Resilient Landscapes Recommendations

1. Leadership & Governance
2. Near-Term Capital Infusion
3. Prioritization
4. Near-Term Restoration Treatments
5. Building Project Pipeline
6. Capacity Building
7. Program Expansion
8. Long-Term Barriers



The National Cohesive Wildland Fire Management Strategy, which established a national vision for wildland fire management, establishes three goals to address the growing threat of wildland fire: resilient landscapes, fire-adapted communities, and safe and effective wildfire response. Each of these goals is essential to reduce wildfire risk and operate in concert with each other. *Oregon's 20-Year Landscape Resiliency Strategy* directly addresses the first goal (resilient landscapes) and contributes to the remaining goals of fire-adapted communities and safe and effective wildfire response.

Although ODF is responsible for coordinating development of the strategy, the agency followed the shared stewardship approach emphasizing partnership among federal, state, Tribal and other entities to improve landscape

resilience and reduce wildfire risk across land ownerships and jurisdictions. Ultimately, seven federal and state agencies and the Governor's Office actively engaged in developing the strategy making the *20-Year Landscape Resiliency Strategy* a shared commitment among the following partner agencies:

- Oregon Department of Forestry
- Oregon Watershed Enhancement Board
- Oregon Department of Fish and Wildlife
- Governor's Office
- USDA Forest Service
- Natural Resource Conservation Service
- Bureau of Land Management
- Bureau of Indian Affairs

Together, these partners worked with community and interest groups, scientists and local partnerships and collaboratives (see Appendix B for full list) to develop a strategy that focuses on increased collaboration and information sharing to collectively accomplish the work necessary to make Oregon's landscapes, communities, and economies thrive into the future (see Appendix C for more detail about the development of the strategy).

Vision, Strategic Elements, Principles

Vision Statement

The landscape resiliency strategy vision statement is intended to inspire people to work toward a common goal. The Shared Stewardship MOU articulates a shared vision "of healthy and resilient forested ecosystems, vibrant local economies, healthy watersheds with functional aquatic habitat, and quality outdoor opportunities for all Oregonians." While developing the 20-year Landscape Resiliency Strategy the partner agencies adapted this vision to better capture the common parts of each agency's mission and to provide a vision that Oregonians can relate to:

Healthy and resilient landscapes supporting Oregon's social, economic, and ecological needs for future generations.

Strategic Elements

The Shared Stewardship MOU and SB 762 also articulate a range of activities and investments the landscape resiliency strategy is intended to support related to social, economic, and ecological needs referenced in the vision statement. Based on that guidance, the partner agencies assembled the following set of strategic elements:

- ***Reduce wildfire risk to communities***
- ***Adapt ecological systems to persist in a changing climate***
- ***Create functional aquatic and terrestrial ecosystems***
- ***Support vibrant local economies***
- ***Protect healthy watersheds and water resources***
- ***Provide quality outdoor opportunities for all Oregonians***
- ***Promote equity through the stewardship of landscapes***

During development of the strategy, the strategic elements contributed to identification of priority actions and initial priority geographies, goals, and current and future funding sources. Going forward, the strategic elements will be used to support coordination, planning, investments, and future updates across the spectrum of interests in a strategic and coordinated fashion.

Agency Principles for Accomplishing the Strategy

To accomplish the vision outlined in the strategy, the partner agencies have established the following four principles to implement their approach to shared stewardship. This principled approach allows for a collaborative environment in which the partner agencies can support one another and the communities they serve, while advancing statewide coordination and a strategic approach to investments in landscape resiliency.

Principle 1: Fund and support the development of locally led and collaboratively developed landscape assessments and plans that identify priority geographies and actions for landscape resiliency and wildfire risk reduction.

For the shared vision of this strategy to be successful, important work must be accomplished at the local scale. Local knowledge, resources, and needs must be part of the planning and development of work. The development of integrated all-lands work plans for locally important geographies are critical to

achieving the strategic elements of this strategy. Bringing the agencies, Tribes, and partners to the table during the development of these all-lands work plans identifies the key priority geographies and actions needed to reduce wildfire risk and when maintained and updated periodically, creates a documented pathway to accomplishing substantial work on the ground in a shared stewardship fashion.

Principle 2: Commit to long-term participation and membership in the shared stewardship governance structure.

Providing forums and processes for coordination and decision making across federal and state agencies, and for engagement and partnership with Tribes, community and interest groups, scientists and local partnerships and collaboratives are key to the successful implementation of this strategy. The Shared Stewardship Governance Structure (see Appendix D) supports efficiencies and alignment across boundaries and ensures fairness in distribution of benefits, costs, and risks which are critical to collectively addressing natural resource issues. This principle also ensures that the member agencies agree that the shared stewardship governance structure is the method by which they can extend capacity as a collective, not just as individual agencies.

Principle 3: Commit to supporting a science, information, and assessment network by providing information, expertise, and resources.

The Shared Stewardship Governance Structure has explicitly designated a network to address science, information, technical assistance, monitoring, and adaptive management. This network, the Science and Resource Assessment (SARA) group, provides science support to the strategy and associated partnerships, collaboratives, and projects. Support of SARA is an important step to using scientifically sound methods to inform local and statewide discussions and decisions. Support for SARA must include sharing of information and data. Long-term support of the SARA group will need to include financial resources that may come from a variety of sources.

Principle 4: Commit to identifying and supporting capacity across Oregon by collectively working together to monitor and adapt to make this strategy successful.

The identification of capacity and limitations requires significant coordination within and between the agencies as well as an understanding of needs at local levels. Working together as partners and with the workplans and interactions of local collaborative efforts, the agencies can identify opportunities to increase or facilitate more capacity, as well as identify areas needing capacity support. The opportunities to increase capacity are not just fiscal resources but can include staffing and prioritization. Identifying creative solutions to increase capacity for local project implementation is a role that statewide coordination can help alleviate.

Goals

The partner agencies established goals to define what needs to be accomplished to achieve the shared vision of healthy and resilient landscapes for future generations. These goals are intentionally high-level and address the range of components necessary to achieve shared priorities, coordinated investments, and the quality, pace and scale of resilience treatments. The goals address the following topics:

- Landscape condition
- Governance and engagement
- Communication and awareness
- Capacity and readiness
- Funding
- Tracking, reporting and updating

As the landscape resiliency strategy is implemented, partner agencies will engage with Tribes, local partnerships and collaboratives, and others to refine these goals and develop measurable objectives, strategies, and tactics to help achieve them. Once the full range of goals, objectives, strategies, and tactics are established, they will be used to inform funding and human resource needs and help partner agencies and others track progress, adjust investments and resource allocation, and support accountability and transparency.

Goal 1: Shift the incidence, frequency, and severity of wildfires toward a desired condition by maintaining and restoring landscapes in Oregon that are resilient to extreme fire, drought, insects, and diseases.

Goal 2: Maintain a high functioning collaborative governance structure that allows for shared decision making; ensures fairness in distribution of benefits, costs, and risks; supports efficiencies and alignment across boundaries; engages Tribes, community and interest groups, scientists, and local partnerships and collaboratives; and is adaptable to changing conditions.

Goal 3: Increase public awareness of the inevitability of wildfire, the importance of understanding how to live safely with wildfire, and current progress towards landscape resilience and wildfire risk reduction.

Goal 4: Make collaborative planning and implementation capacity of agencies, Tribes, local partnerships, and workforce commensurate with the scale of wildfire risk reduction and landscape resiliency treatments needed across Oregon.

Goal 5: Establish a diverse and stable funding portfolio of federal, state, and private sources commensurate with needs to achieve intended quality, pace and scale of resilience treatments and support the capacity and readiness of partner entities.

Goal 6: Track progress and provide real time reporting that displays relevant information based on progress towards landscape resiliency goals and metrics, including investments, actions, and outcomes that can be displayed publicly. Update the strategy as new information becomes available and is deemed necessary.

Prioritizing Investments in Landscape Resilience

The intent of the landscape resiliency strategy is to coordinate and leverage investment opportunities within priority geographies to achieve landscape resilience and wildfire risk reduction. To meet this intent, the landscape resiliency strategy establishes initial statewide priority geographies where the first phase of investments will be concentrated and current estimates of resilience treatment costs, a list of relevant actions that agencies could invest in to achieve healthy and resilient landscapes, areas of investments needed to provide the necessary capacity and readiness to increase the pace and scale of work on the ground, and the near-term components that are needed to create the forums, processes and structures that will advance the work of shared stewardship. The landscape resiliency strategy also

identifies the funding sources and programs that can be guided toward priority actions in priority geographies over the next 20 years.

Initial Statewide Priority Geographies

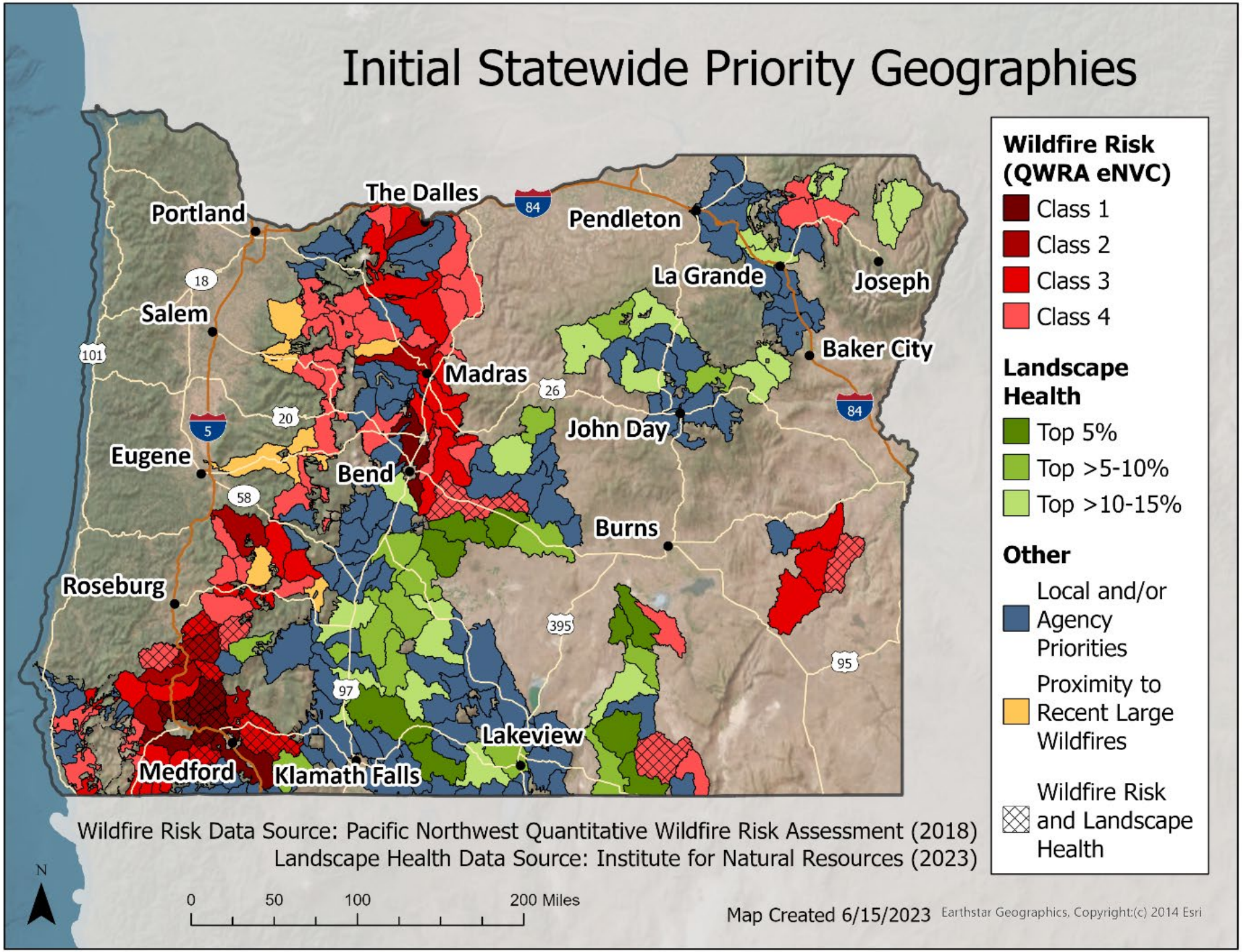
The Shared Stewardship MOU and SB 762 call for prioritized geographies to address restoration and wildfire risk reduction. Figure 1 (below) displays the initial statewide priority geographies where the first phase of federal, state, and private investments will be concentrated to improve landscape resilience and reduce wildfire risk.

The initial priority geographies identify large-scale landscapes and were chosen due to high wildfire risk and high landscape resilience need. These geographies were then adapted to encompass key areas where agencies and local partnerships and collaboratives are already implementing or planning projects, and they also include areas that have recently been impacted by large, harmful wildfires (see Appendix E: Geographic Prioritization Process and Methodology).

The initial statewide priority geographies map is intended to highlight the range of priority within the identified geographies to inform resource allocation. Project-level decisions within these priority geographies (e.g., activities, location, and sequencing) must be made at the local level by agencies, Tribes, local governments, and local partnerships and collaboratives and the initial statewide priority geographies are intended to be used in concert with local assessments and plans, capacity and readiness information and available funding (and each funding source's purposes and limitations) to guide investments in landscape resilience and wildfire risk reduction.

These initial priority geographies reflect the first phase of investments, targeted at the most urgent and highest priority areas currently identified for wildfire risk reduction and landscape resilience need. However, these initial priority geographies are expected to change, incorporate additional areas, and shift in priority over time as treatments are implemented, wildfires occur, new information is developed, climatic and ecological conditions change, and Tribes and regional partners provide input. For example, the 2018 Quantitative Wildfire Risk Assessment (QWRA) will soon be updated with new information that may alter wildfire risk profiles and ecological and social priorities. Resilience treatments will alter local priorities and shift some areas toward a maintenance status. Climate change, wildfire and drought could dramatically shift priority areas. The first update to priority actions and geographies is expected by September, 2024, to coincide with preparation for the 2025 legislative session. The frequency of subsequent updates will be determined during implementation.

Figure 1: Initial Statewide Priority Geographies



Resilience Treatment Cost Estimates

The initial statewide priority geographies presented in Figure 1 covers a broad portion of the state. However, analysis of the contributing data indicates that the forest and range areas within these priority geographies needing resilience treatments totals approximately 13.1 million acres. This includes 7.9 million acres of rangeland, grassland, shrubland and sagebrush, and 5.2 million acres of forested lands.

Current estimates of resilience treatment costs are changing rapidly due to economy-wide inflation, increased demand for treatments, and limited workforce availability in some areas. Estimates are typically limited to direct on-the-ground costs and do not incorporate essential enabling costs such as planning, community engagement, project management, NEPA authorization on federal lands, and other components. Costs also vary considerably by location, vegetation composition, and treatment type. In addition, cost estimates reflect a one-time treatment, while multiple maintenance treatments may be necessary over the course of 20 years. Consequently, the following cost estimates for treatment reflect an initial approximation based on current information and additional resources will be required to create enabling conditions to implement on-the-ground resilience treatments.

Ecosystem	Acres	Avg Treatment Cost per Acre	Estimated Treatment Cost
Forest	5.2 million	$1,000.00	$5.2 billion
Rangeland	7.9 million	$311	$2.5 billion
Total	**13.1 million**		**$7.7 billion**

A detailed explanation of the Treatment Acreage and Costs Estimation and Methodology is provided in Appendix F.

Priority Actions

The Shared Stewardship MOU and SB 762 call for the landscape resiliency strategy to prioritize restoration actions in addition to geographies. To satisfy this directive, partner agencies drew from statements in the Shared Stewardship MOU and SB 762 to identify a list of relevant actions that agencies could invest in to achieve healthy and resilient landscapes. The list includes activities related to on-the-ground resilience treatments, as well as enabling activities such as planning, facilitation, capacity building, workforce development, and product utilization. The list creates a menu of investment options, but the choice of which actions to invest in will be informed by local assessments and planning. This follows the shared stewardship strategy of doing the right work in the right place at the right scale and using all available tools.

This list of actions is not exhaustive but is intended to illustrate the range of investments that partner agencies could make to advance shared stewardship goals. Priority actions include, but are not limited to:

- Building collaborative capacity and workforce necessary to plan, implement, and monitor on-the-ground resilience treatments through support of Tribes, federal, state, and local agencies, local partnerships and collaboratives, and the private sector.
- Engaging with Tribes, communities, and local partnerships and collaboratives to integrate local values, needs, and opportunities into resilience projects.
- Communications and public awareness.

- Planning, including local landscape assessments and plans, NEPA authorization, management plans, and others.
- On-the-ground treatments that reduce wildfire risk and enhance landscape resilience, including:
    - Hand and mechanical thinning and fuels reduction treatments.
    - Fine fuels reduction and removal of invasive species, especially in shrub steppe and rangeland ecosystems.
    - Prescribed fire.
    - Managed fire.
    - Maintenance of treatments.
- Product utilization & mill infrastructure, especially for small diameter resilience treatment residuals.
- Strategic post fire restoration and rehabilitation, emphasizing planting the right species, in the right place, under the right conditions, so forests and rangelands will remain healthy and resilient over time.
- Monitoring, data collection, research and adaptive management.
- Developing decision support tools and information.
- Developing new funding mechanisms.

Implementation of priority actions will vary by location and will be dependent on local conditions, needs and opportunities. The choice of actions will be informed by local assessments and planning and engagement with Tribes, communities, and local partnerships and collaboratives.

Where local priorities have been assessed and conditions are in place to support activities such as mechanical thinning or prescribed fire, on-the-ground landscape resilience treatments can be implemented. Where conditions are not in place to implement on-the-ground resilience treatments at the needed pace and scale, investments may be needed to enable conditions such as community awareness and engagement, planning, staff capacity or workforce development. In many areas, an early priority will be assessing local capacity and readiness to determine how to create or enhance the conditions for implementing on-the-ground landscape resilience treatments.

Capacity and Readiness

The quality, pace and scale of landscape resilience treatments is influenced by the capacity and readiness of those involved, including agencies, Tribes, contractors, local partnerships and collaboratives, and others. Capacity and readiness considerations involve a range of factors, including:

- Availability of funding from federal, state, local, and private sources.
- Agency capacity, including technical assistance, NEPA authorization, engagement with local partnerships and collaboratives and grant administration.
- Project-level assessment and planning.
- Local collaboration and community engagement.
- Contractor and crew capacity and expertise.
- Infrastructure and opportunities for biomass usage, including roads, trucks, machinery and mills.

Where conditions are in place to successfully implement on-the-ground resilience treatments in priority geographies, investments can be made in these activities. However, where conditions are not in place to

implement on-the-ground resilience treatments at the desired pace and scale in priority geographies, investments may first be needed to support enabling conditions such as planning, community engagement or workforce development. In some areas, calibrating investments with implementation capacity may also be needed.

To begin assessing capacity and readiness factors, partner agencies compiled information on existing funding, NEPA project areas, mill locations and other factors. In addition, OSU Forestry & Natural Resources Extension Fire Program conducted a Qualitative Capacity Assessment (QCA) with 28 local partnerships and collaboratives (see map of Local Partnership and Collaborative Operational Areas in Appendix G). The Summary Results of the Qualitative Capacity Assessment can be found in Appendix H. As the landscape resiliency strategy is implemented, additional information on capacity and readiness factors will be collected to support efficient and effective investments.

While further engagement with Tribes, communities and local partnerships and collaboratives is necessary to better assess capacity and readiness conditions and needs, the following observations based on information compiled thus far may help guide initial investments:

- **Local landscape assessments and plans**: Of the 28 local partnerships and collaboratives that responded to the QCA, only 11 (39%) appear to have some type of explicit landscape strategy. Further review of these documents, in partnership with each group, will be needed to assess the degree to which these clearly set out local priority actions and geographies to guide investments. Ultimately, up-to-date local landscape assessments and plans will be needed to drive investments throughout the priority geographies.
- **Workforce capacity at the local level:** In many priority geographies, QCA respondents stated that insufficient workforce capacity is hindering implementation of resilience treatments at the needed pace and scale. This includes skilled forestry and weed services, contractors, and others.
- **NEPA**: The National Environmental Policy Act (NEPA) requires an environmental review before resilience treatments can be implemented on federal lands. In some priority geographies, the lack of NEPA review on federal lands prevents implementation of resilience treatments. Federally managed lands within priority geographies that are currently lacking NEPA clearance are candidates for near-term investment in NEPA review. A map of current USFS NEPA Project Areas and BLM Plan Areas can be found in Appendix G.
- **Biomass utilization:** Investments in new and innovative uses of wood such as cross-laminated timber and small wood and biomass utilization facilities (biochar, energy, and others) could create a financial return for treatment residuals, which could accelerate resilience treatments and significantly reduce the public funds needed to achieve healthy and resilient landscapes. A map of Oregon's milling infrastructure relative to the priority geographies can be found in Appendix G. While a few mills are operating within the priority geographies, most priority geographies are unserved or underserved by mill infrastructure and would benefit from new and innovative wood product technologies. Without this infrastructure there is limited opportunity to use landscape resilience treatment residuals or gain economic benefits from their use.
- **Staff capacity at local partnerships and collaboratives**: On average, local partnerships and collaboratives have about one dedicated staff person. Several groups had none, while others had limited part-time capacity. Some groups share staff with other organizations and some employ contractors for specific purposes. Insufficient or inconsistent staff capacity, primarily due to constrained or short-term funding, was frequently cited by these groups as a limiting factor.

- **Staff capacity at federal and state agencies:** In recent years, partner agencies at both the federal and state levels report significant reductions in staffing and difficulties in hiring and retaining new staff. This staffing shortage has occurred just as agency workloads have risen due to greater attention to wildfire risk reduction and recent increases in funding programs [Bipartisan Infrastructure Law (BIL), Inflation Reduction Act (IRA), SB 762 and others]. Local partnerships and collaboratives cite insufficient agency staff capacity (shortages, turnover, expertise, engagement with groups, NEPA, cultural/heritage, planning and others) as factors limiting their progress on resilience treatments.

Near-term Components for Implementation

Near-term components for implementation are the key early investments that will contribute to increasing the quality, pace and scale of treatments and to effectively and efficiently achieving the goals of the landscape resiliency strategy. These components are the initial steps to create the forums, processes and structures that will advance the work of shared stewardship.

Governance & Engagement

- **Shared stewardship partner summit.** The purpose of the partner summit is to kick off implementation of the landscape resiliency strategy. The summit will be an opportunity to demonstrate agency commitment for the strategy, develop a shared understanding of how all the components fit together, address questions, and formulate next steps for implementing the components. A key outcome of the summit will be identification of resource needs and suggestions for policy improvements to support shared stewardship goals.
- **Regional engagement and partnership.** Partner agencies recognize the importance of working in partnership with Tribes, local communities, private landowners and industries, and local partnerships and collaboratives. Partner agencies will work with these entities to create mechanisms that strengthen these partnerships such as forums for local or regional discussions, agreements that support a shared stewardship approach towards planning and action, development of local assessments and plans, and the support for building capacity and readiness at the local level. Ultimately, these efforts should result in transparent and accessible multi-directional communication to inform resource prioritization and ongoing implementation of shared stewardship through collaborative dialogue, shared learning, and alignment of resources.

Science, Information and Assessment

- **Scientific and Resource Assessment (SARA) network.** The SARA network will provide science support to the strategy and associated partnerships, collaboratives, and projects. SARA is envisioned as an expert network and clearinghouse supported by a coordinating group consisting of one or more science liaisons from each of the participating agencies. SARA will maintain a list of science experts and provide mechanisms to engage them to answer questions such as:
    - How to define and measure resilient landscapes in various social and ecological contexts throughout Oregon?
    - How effective are existing approaches to landscape resilience treatments? How much treatment is enough? How should maintenance of treatments be addressed?
    - How to achieve equity and inclusion? How to know if equity goals are being met?

    - As climate conditions continue to change, what do climate-informed desired future conditions look like in different ecosystems and landscapes across Oregon?
    - How can carbon sequestration or stabilization goals be integrated with goals for landscape resilience and wildfire risk reduction in different ecosystems and landscapes across Oregon?
    - What are the next priority geographies? When is expansion to additional areas appropriate?
- **Decision support information hub.** The decision support hub will support shared stewardship planning at the state and local levels by serving as a clearinghouse for sharing information on available expertise, techniques, tools and data. The hub will both provide information to and gather information from regional planning efforts. It will draw data from the accomplishment tracking and dashboard to inform updates to geographic priorities, goals, and investment decisions.
- **Accomplishment tracking and dashboard.** The tracking system and dashboard will communicate progress on investments, actions, and outcomes and will be based on the goals established in the landscape resiliency strategy. The dashboard will be a central, user-friendly location that summarizes information on investments, actions, and outcomes. It will communicate shared stewardship progress to all interested parties and inform the allocation of state and federal resources.
- **Local landscape planning and assessments.** For areas that do not have adequate or up-to-date local landscape assessments, partner agencies will engage with Tribes and local partnerships and collaboratives to support their completion. Assessments might include evaluation of collaborative governance, wildfire risk and landscape health, treatment progress and needs, public health and smoke vulnerability, equity and social vulnerability, and business and economic development. These assessments will support planning efforts to determine local priority geographies and actions. They will help determine capacity gaps, policy barriers, and financial needs at the local level and collectively at the state level. This information will also feed into the proposed decision support information hub and help guide investments and updates statewide.

Communications and Awareness

- **Inter-agency communications capacity.** Coordinated interagency communications capacity is necessary to build and maintain support for the landscape resiliency strategy. Through implementation of a coordinated communications plan, agencies would provide clear and consistent information to Oregonians about the work happening on the ground and how it contributes to making Oregon's ecosystems and communities more resilient to wildfire. A key component of the communications plan would be public awareness of the inevitability of wildfire and the importance of understanding how to live safely with it.
- **Shared stewardship website.** This will be a central, multi-agency shared stewardship website that displays the landscape resiliency strategy, accomplishment tracking dashboard, and program and funding opportunities.

Capacity Building

- **Tribal staff support:** Many Tribes have limited capacity to engage on the wide range of topics requested by state and federal agencies, including shared stewardship efforts. The landscape resiliency strategy and the shared stewardship governance structure provide a platform for Tribes to participate. However, dedicated resources or other mechanisms may be needed to

create the conditions for consistent involvement. Partner agencies will seek appropriate mechanisms to support Tribal engagement and partnership in shared stewardship efforts.

- **Underserved communities support:** Underserved communities (i.e., groups that have limited or no access to resources or that are otherwise disenfranchised) are often under-represented in landscape resilience decision-making, yet are often disproportionately affected by wildfire, smoke, and other impacts. There are challenges and barriers to participation that are unique to these communities. Partner agencies are committed to greater engagement with underserved communities and equitably implementing this landscape resiliency strategy. This may involve dedicated resources to support engagement and adjustments to create greater access. Partner agencies will seek appropriate mechanisms to support engagement and partnership with underserved communities in shared stewardship efforts.
- **Local partnership and collaborative support:** Forest and rangeland partnerships and collaboratives are central to implementation of the landscape resiliency strategy. The Qualitative Capacity Assessment revealed that most of these groups had less than one FTE, and that inconsistent funding was a significant barrier to building and maintaining the capacity of these groups to be effective. Partner agencies will explore a range of options for supporting these groups, including development of local shared stewardship agreements, support for local landscape assessments and plans, technical and facilitation assistance, and stable and streamlined funding opportunities.

Funding Sources and Programs

Federal and state agencies are already investing significant resources into wildfire risk reduction and landscape resilience in Oregon. At the state level, SB 762 provided targeted funding for these purposes, while existing programs and funding sources managed by Oregon Department of Forestry, Oregon Watershed Enhancement Board, and Oregon Department of Fish and Wildlife contributed additional valuable resources. At the federal level, resources from the Farm Bill, Bipartisan Infrastructure Bill, and the Inflation Reduction Act are providing increased funding to support wildfire risk reduction and forest and range resilience treatments in Oregon. Many of these federal and state resources are already being directed toward priority geographies.

The Shared Stewardship MOU and SB 762 state that the landscape resiliency strategy is intended to guide federal, state and private investments. To support this directive, partner agencies identified more than 35 federal and state funding sources and programs across their agencies (see Appendix I for Agency Funding Programs and Authorities). As new federal and state programs are developed they will be incorporated into this work. In addition, consultations were initiated with experts in conservation finance and private sector funding. As the landscape resiliency strategy is implemented, partner agencies will continue to explore and develop approaches and mechanisms to receive and manage private investments and pool public and private resources to support implementation of the strategy.

The intent of the landscape resiliency strategy is to guide an increased proportion of federal, state and private resources toward priority actions and geographies over the next 20 years. This does not mean that resources will flow solely to priority geographies or that existing investments outside priority geographies will be stopped. Most federal and state funding programs have their own unique purposes, uses and restrictions. Previously allocated funding will not be canceled, and programs that support purposes beyond the priority actions can still support those purposes. However, where agencies have discretion to influence resource allocation, the intent is for agencies to coordinate efforts to concentrate future resources toward priority actions within priority geographies.

Taken together, the identified federal and state funding sources and programs can support a wide range of activities from on-the-ground landscape resilience treatments to planning, facilitation, habitat restoration and monitoring. As local landscape assessments and plans are developed within statewide priority geographies, federal, state and private resources will be applied to support local efforts. As partner agencies track progress toward goals, they will evaluate whether existing resources are sufficient to achieve the desired quality, pace and scale of work, or whether additional resources for specific purposes are needed.

As project needs and opportunities are identified within statewide priority geographies, a primary role of the partner agencies will be to connect and combine appropriate funding sources and programs across agencies, ownerships, and purposes. The Agency Coordination and Implementation Group (ACIG) is expected to be a primary forum for coordinating funding across agencies and ownership, in concert with Tribes, local partnerships and collaboratives, or others involved in proposing and implementing the work. For example, there may be opportunities to coordinate funding for forest health treatments with funding for habitat or recreation improvements. There may also be opportunities to connect a project on federal lands with treatments on private or state lands. Through coordination, the partner agencies aim to increase resources, create efficiencies, and benefit multiple values simultaneously. By coordinating across agencies, support for the range of needs and opportunities such as planning, facilitation, on-the-ground treatments, or monitoring is more likely to be found.

Tracking, Reporting and Updating

Tracking and reporting will be based on progress towards the established goals including investments, actions and outcomes. Data will be collected from agencies to track progress on goals and the information will be displayed on a publicly accessible web-based dashboard. As work progresses, goals may need to be modified to reflect funding, capacity and other considerations. A ramp-up period is expected during the initial years of implementation to reach the quality, pace and scale of work that is needed to achieve the 20-year goals.

Over the 20-year period of this landscape resiliency strategy, modifications and updates are expected as treatments are implemented, wildfires occur, ecological, social and climatic conditions change, and new information and analysis tools become available. The decision support hub will provide a platform for tracking these changes, while the SARA network will provide agencies, Tribes and local partnerships and collaboratives with access to scientific expertise to help interpret the data and inform future decisions.

With the anticipated update of the QWRA, the establishment of SARA and the decision support hub, and greater engagement with Tribes and local and regional entities, the first update to the strategy is expected by September 2024. This update will be managed through the shared stewardship governance structure and is intended to coincide with preparation for Oregon's 2025 legislative session. The frequency of updates thereafter will also be determined through consideration within the governance structure.

Appendices

Appendix A: Abbreviations

ACIG	Agency Coordination and Implementation Group
BIA	Bureau of Indian Affairs
BIL	Bipartisan Infrastructure Bill
BLM	Bureau of Land Management
eNVC	Expected Net Value Change
GNA	Good Neighbor Authority
HB	House Bill
IGA	Intergovernmental Agreement
IIJA	Infrastructure Investment and Jobs Act
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OSU	Oregon State University
OWEB	Oregon Watershed Enhancement Board
QWRA	Quantitative Wildfire Risk Assessment
SARA	Scientific and Resource Assessment
SB 762	Senate Bill 762
SLG	Strategic Leadership Group
USFS	United States Forest Service
WDNR	Washington Department of Natural Resources
WUI	Wildland-Urban Interface

Appendix B: Acknowledgements

The development of Oregon's *20-Year Landscape Resiliency Strategy* would not have been possible without the support of numerous individuals, agencies, and partner organizations.

Support and Development

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Local Partnerships and Collaboratives

Applegate Fire and Fuels Working Group
Ashland Forest Resiliency
Blue Mountains Forest Partners
Central Oregon Shared Stewardship
Clackamas Stewardship Partners
Deschutes Collaborative Forest Project
East Cascades Oak Partnership
Grant County Southern Blues Restoration Partnership
Harney County Forest Restoration Collaborative
Harney County Wildfire Collaborative
Hood River Forest Collaborative
Illinois Valley Forest Resiliency Oversight Group
Klamath Watershed Partnership
Klamath-Lake Forest Health Partnership
Klamath-Siskiyou Oak Network
My Southern Oregon Woodlands
Northern Blues Forest Collaborative
Northern Blues Restoration Partnership
Ochoco Forest Restoration Collaborative
Oregon Central Coast Forest Collaborative
Pure Water Partners
Rogue Forest Partners
Sage Local Implementation Team-Baker
Sage Local Implementation Team-Burns and Lakeview
Sage Local Implementation Team-Prineville and Vale
SageCon Partnership
Southern Oregon Forest Restoration Collaborative
Wasco County Forest Collaborative
Willamette Valley Oak Prairie Cooperative

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Association of Oregon Counties
Bureau of Indian Affairs
Bureau of Land Management
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Eugene Water & Electric Board
KS Wild
League of Oregon Cities
Lomakatsi Restoration
Natural Resource Conservation Service
Office of Oregon Governor
Oregon Consensus
Oregon Department of Fish and Wildlife
Oregon Department of Forestry
Oregon Forest Industries Council
Oregon Parks and Recreation Department
Oregon Small Woodland Association
Oregon State Fire Marshalls
OSU – College of Forestry
OSU – Forestry and Natural Resources Extension Prog.
OSU - Institute of Natural Resources
OSU - Oregon Climate Change Research Institute
Oregon Watershed Enhancement Board
Portland Water Bureau
Rocky Mountain Elk Foundation
Sustainable Northwest
The Nature Conservancy
United States Forest Service
Verde Northwest
Wallowa Resources
Western Environmental Law Center

Appendix C: Developing the Strategy

The *20-year Landscape Resiliency Strategy* responds to the Oregon Legislature's bipartisan directive in Senate Bill 762, signed into law on July 19, 2021. Known as the "Omnibus Wildfire Bill," SB 762 directed the Oregon Department of Forestry (ODF) to:

> ***Develop a 20-year strategic plan, as described in the Shared Stewardship Agreement signed on August 13, 2019, that prioritizes restoration actions and geographies for wildfire risk reduction. The plan must be able to be used to direct federal, state and private investments in a tangible way.***

Although ODF is responsible for coordination of completing the strategy, the agency honored the spirit of the Shared Stewardship MOU by coordinating with MOU signatories to develop a shared governance structure and conduct a broad engagement process for developing the strategy. Ultimately, seven federal and state agencies and the Governor's Office actively engaged in developing the strategy, and thus the *20-Year Landscape Resiliency Strategy* is a shared commitment among the following partner agencies:

- Oregon Department of Forestry
- Oregon Watershed Enhancement Board
- Oregon Department of Fish and Wildlife
- Governor's Office
- USDA Forest Service
- Natural Resource Conservation Service
- Bureau of Land Management
- Bureau of Indian Affairs

In November 2021, ODF established dedicated staff capacity provided through SB 762 to facilitate the strategy development process. The partner agencies formed a Strategic Leadership Group (SLG) to provide a decision-making forum for agency leaders, and they established the Agency Coordination and Implementation Group (ACIG) to provide a twice-monthly staff level forum for coordinating strategy development. ODF also worked with Oregon State University's (OSU) Institute for Natural Resources to provide mapping and science support, American Forests to provide process design support, and Portland State University's Oregon Consensus and OSU's Extension Fire Program to provide regional engagement support. As efforts shift to implementation, ODF will continue to facilitate coordinated implementation of the landscape resiliency strategy and shared stewardship in Oregon.

To gain input from a wide range of interests, more than 250 people were engaged in discussions, forums or webinars related to strategy development. These included:

- Tribal engagement through existing state-level forums including Agency Tribal Workgroups, Government-to-Government Cultural Resource Cluster and Natural Resources Workgroup, State Legislative Commission on Indian Services, and communications with state and federal agency Tribal liaisons.
- A Statewide Advisory Group consisting of 17 members representing diverse interests, including local communities, private industry, conservation interests and others. This group met on a monthly basis throughout development of the strategy.
- Multiple on-line information sessions with local and regional forest and rangeland partnerships and collaboratives to provide updates on strategy development.
- Seven regional focus groups involving forest and rangeland partnership and collaborative members, plus a Qualitative Capacity Assessment administered to these entities in Fall 2022 by the OSU Forestry & Natural Resources Extension Fire Program. The focus groups reviewed assessment results, provided input on proposed priority geographies, and explored opportunities for overcoming barriers to

increasing quality, pace and scale of resilience work (see Appendix H: Summary Results of the Qualitative Capacity Assessment).

- Nine topic group discussions related to goal setting and strategic elements, including equity, local economies, water resources, outdoor opportunities, climate change, habitat, governance, funding, and wildfire risk to communities.

In addition, ODF created a page on its website with information about the strategy, including recordings and materials from Statewide Advisory Group meetings. More than 1,100 people visited this page over nine months.

To develop the strategy, an early step involved publishing a *Framework for Developing Oregon's Landscape Resiliency Strategy that Prioritizes Restoration Actions and Geographies for Wildfire Risk Reduction*. The framework defined the components of the strategy based on the Shared Stewardship MOU and SB 762, described how partner agencies would develop the components and explained how Tribes and interested parties could provide input. The framework document was shared publicly on the website and guided development of the strategy.

To develop key components of the strategy, ACIG members identified existing plans, reports, data, maps and tools that the strategy could build on, including:

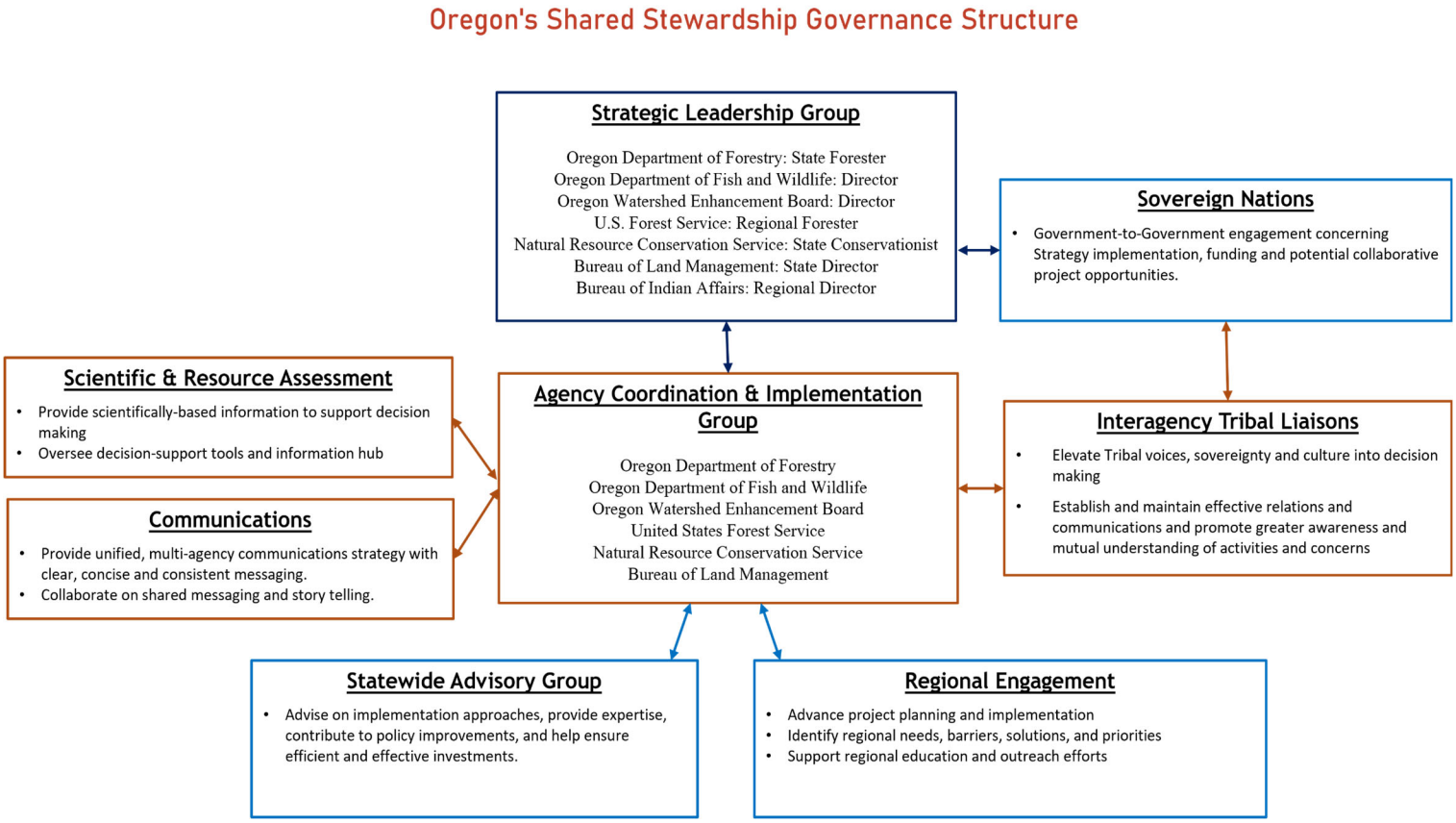
- work with OSU Forestry & Natural Resources Extension Fire Program to conduct a capacity and readiness assessment for regional forest and rangeland collaboratives and partnerships,
- identified priority geographies and actions and set goals to guide investments,
- identified existing funding sources, programs, and authorities that could support strategy implementation, and
- developed accountability mechanisms to track progress and guide future decision-making.

As each component was developed, draft versions were shared with the Statewide Advisory Group, regional groups, ACIG and the SLG, and valuable input was received. The resulting strategy is intended to start federal and state agencies, Tribes, local entities and others on a path to coordination and partnership. It points all those involved in a common direction and identifies the forums and systems to support its function. It is now up to all the shared stewardship partners to bring the strategy to life.

Appendix D: Governance, Coordination and Engagement

While the landscape resiliency strategy provides a pathway for achieving the vision of healthy and resilient landscapes, Oregon's Shared Stewardship Governance Structure (Figure 2) establishes the forums and processes for coordination and decision-making across federal and state agencies, and for engagement and partnership with Tribes, community and interest groups, scientists and local partnerships and collaboratives. The governance structure is intended to provide the mechanisms to facilitate shared stewardship information flow, resource flow, and decision-making at the appropriate level.

Figure 2: Shared Stewardship Governance Structure



Shared stewardship governance is led by the Strategic Leadership Group (SLG), consisting of leaders from each of the federal and state partner agencies. The SLG is informed by the Agency Coordination and Implementation Group (ACIG), consisting of staff from federal and state partner agencies. Sovereign Tribal Nations may interact with agency leaders via government-to-government mechanisms, and through staff level engagement via agency Tribal Liaisons and the ACIG. The ACIG's role is to coordinate efforts across agencies, gather and assess information from a range of sources, and identify decision points or resource needs for SLG members. ACIG is a central hub of information flow and analysis supporting shared stewardship. Information from Tribal staff, local partnerships and collaboratives, the Statewide Advisory Group, the Scientific and Resource Assessment network (SARA), the Communications Team and others will all flow through ACIG for consideration and decisions by SLG. Local-level priority-setting will be led by Tribes, local partnerships and collaboratives, and community officials, and these priorities will inform resource allocation at the agency level. ODF intends to

continue its convening and facilitation role to advance the landscape resiliency strategy and shared stewardship goals.

Strategic Leadership Group (SLG)

The Strategic Leadership Group (SLG) is the executive-level decision-making body providing direction and vision for shared stewardship in Oregon and implementation of the landscape resiliency strategy. The SLG is responsible for decision-making and coordinating resources to achieve the goals and vision of the strategy. The SLG and individual members will coordinate with Sovereign Tribal Nations, Governor's Office, Congressional Delegation, and state legislators. The SLG will support coordination across agencies and projects, secure and allocate resources to implement the landscape resiliency strategy and ensure accountability to the operating principles of the Shared Stewardship MOU and the outcomes identified in this strategy. While SLG members will work to further the goals of shared stewardship, each agency retains its individual decision authority for its respective lands and responsibilities.

Current SLG membership is:

- Oregon Department of Forestry: State Forester
- Oregon Department of Fish and Wildlife: Director
- Oregon Watershed Enhancement Board: Director
- U.S. Forest Service: Regional Forester
- Natural Resource Conservation Service: State Conservationist
- Bureau of Land Management: State Director
- Bureau of Indian Affairs: Regional Director

As shared stewardship implementation evolves, additional agencies may be invited to join the SLG.

Agency Coordination & Implementation Group (ACIG)

The Agency Coordination & Implementation Group (ACIG) serves as the staff-level hub for implementing shared stewardship and the landscape resiliency strategy. ACIG is responsible for implementing, monitoring, and maintaining the intentions of the Shared Stewardship MOU while ensuring that the goals of the strategy are being met and adjusted as necessary. ACIG members are responsible for supporting integration of the goals of shared stewardship and this strategy into agency culture and operations.

The ACIG is responsible for coordinating across state and federal agencies and for facilitating engagement and collaboration with Tribes, community and interest groups, regional groups, and others. ACIG works with the SARA network on data aggregation and management and with the Communications Team to coordinate communications. ACIG is composed of staff from each of the partner agencies represented in the SLG. If additional agencies join the SLG, staff from those agencies will be invited to join the ACIG as well.

Tribal Engagement

As shared stewardship is implemented, the nine Federally Recognized Tribes of Oregon are critical partners in responding and adapting to rapid and widespread landscape challenges. The partner agencies will continue to engage with the nine Federally Recognized Tribes of Oregon as sovereign nations and engage at an appropriate government-to-government level concerning the strategy's implementation, including funding and potential collaborative project opportunities. During initial discussions, Tribal staff indicated a preference for using existing forums rather than establishing additional and potentially redundant forums to address shared stewardship topics. The pre-existing forums include the state-level Government-to-Government Cultural

Resource Cluster, Natural Resource Working Group, Economic Development and Community Services Cluster, staff-to-staff communications, and where applicable, requests for Tribal Councils and/or Legislative Commission on Indian Services guidance or consultations. Thus, the current Tribal communication approach reflects the desires of the nine Federally Recognized Tribes of Oregon. As shared stewardship implementation progresses, partner agencies may explore Intergovernmental Agreements (IGAs) with Tribes to facilitate investments in project development and implementation.

Tribal Liaisons

Each partner agency has a designated Tribal liaison to help facilitate communication between agencies and Tribes. To advance the goals of the landscape resiliency strategy with Tribes, these federal and state agency staff members are collaborating across agencies to support coordinated and streamlined engagement opportunities on shared stewardship topics. As implementation of the strategy proceeds, Tribal liaisons will continue to be a valuable point of contact to support Tribal engagement.

Regional Engagement

The Shared Stewardship MOU and SB 762 emphasize the "Oregon Model" of bringing together diverse interests, finding common ground, and building greater support for large-scale landscape resilience projects. At the local and regional level, this includes counties, cities and other units of local government, regional forest and rangeland collaboratives and partnerships, relevant community organizations, under-served or socially vulnerable communities, forest and rangeland owners, local economic interests, and others. Each of these entities plays a significant role in the implementation of the landscape resiliency strategy.

To develop the landscape resiliency strategy with regional input, partner agencies conducted informational webinars, sought organizational and capacity information from forest and rangeland collaboratives and partnerships, and held seven region-specific focus groups with collaboratives and partnerships. These initial interactions identified a range of opportunities to strengthen the capacity of these groups and build genuine partnerships to achieve mutual goals (See Appendix H: Summary Results of the Qualitative Capacity Assessment). As the implementation of the strategy begins, the partner agencies will seek to develop productive and supportive engagement with local and regional interests. Although the forums and mechanisms for this engagement have not yet been fully defined, the aim is to develop them together in ways that support mutual interests and advance the vision and goals of the strategy. The partner agencies recognize that strategy implementation must be guided by local input and that in many cases a key role of the agencies is to support the work of local partnerships and collaboratives as project implementers.

Statewide Advisory Group

The Statewide Advisory Group was formed in the early stages of strategy development to provide a forum for engagement with diverse state-wide and policy-oriented groups. Invitees were drawn from forest industries, environmental groups, relevant community and interest-based organizations, representatives of public and private forestland and rangeland owners, and representatives of forest and rangeland partnerships and collaboratives. They were identified through consultation with the Governor's Office, ODF leadership and ACIG based on representation of the strategic elements and previous participation in the Governor's Wildfire Council, Wildfire Programs Advisory Council, and the Landscape Resiliency Program. This group provided valuable input on development of the landscape resiliency strategy, including identifying needs, challenges, solutions, and priorities; helping with education and outreach efforts; and providing advice, experience, and lessons learned. As efforts shift to implementing the strategy, this group is likely to continue in a similar role of advising on implementation approaches, providing expertise, contributing to policy improvements, and helping to ensure efficient and effective investments.

Scientific & Resource Assessment (SARA) Network

The Scientific and Resource Assessment network supports science synthesis, data sharing, and decision support for the ACIG and SLG. Its purpose is to fulfill key components articulated in the Shared Stewardship MOU and SB7 62, including adaptive management, incorporating of best-available science, supporting learning and experimentation, and developing a tractable monitoring and accountability approach to measure outcomes, track progress and inform improvements. SARA is envisioned as a network of experts, a coordinating facility and a clearinghouse. The SARA network is intended to bring together existing information and expertise to improve efficiency and effectiveness from strategic planning through project implementation.

SARA will be directed by a coordinating group for each of the primary functional needs: data sharing, decision support, and science synthesis. Each group will include one or more liaisons from each of the partner agencies, and ACIG may choose to add experts from universities and other organizations. Initially, SARA staff support and management will be provided by the OSU Institute for Natural Resources; however, this may evolve depending on resources and needs. Regional OSU Fire Extension staff and university and other scientists could help extend science support to regional planning groups as they develop.

Communications Team

The Communications Team is composed of communications specialists from state and federal partner agencies and supported by external consultants. The Communications Team supports Oregon's shared stewardship efforts by providing a unified, multi-agency communications strategy, clear, concise and consistent messaging, and a collaborative approach to shared messaging and storytelling. Communications and messaging may involve reporting on progress toward goals, opportunities for funding and project coordination, and information on living safely with inevitable wildfire. There is a commitment to making the communication products accessible, inclusive, and equitable. A primary goal of the Communications Team is to be proactive rather than reactive.

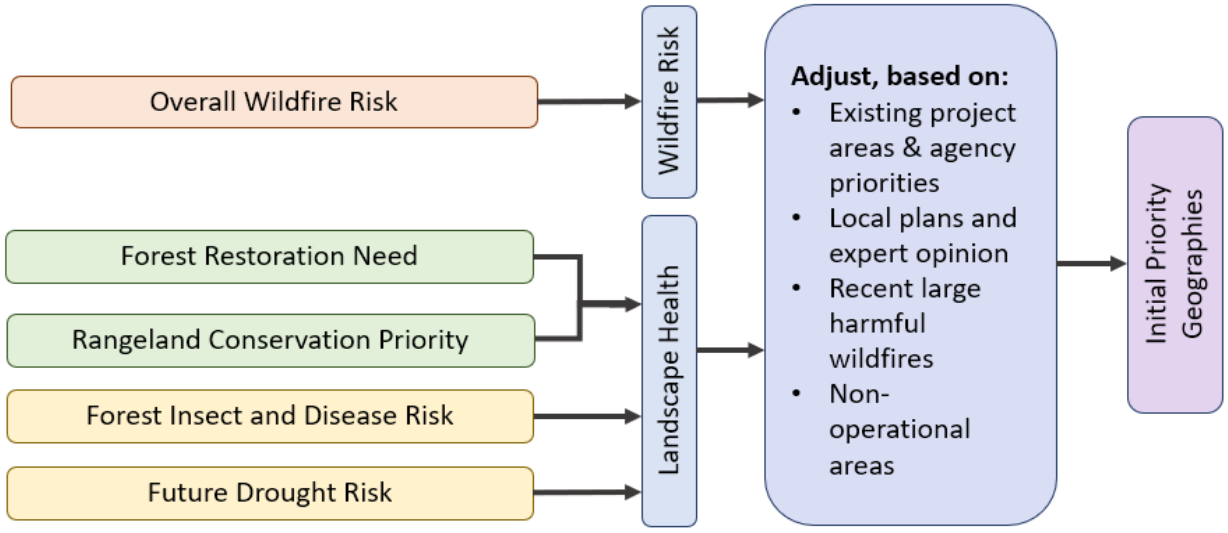
Appendix E: Geographic Prioritization Process and Methodology

Process for Identifying Initial Priority Geographies

Partner agencies worked with the Institute for Natural Resources (INR) at Oregon State University to establish initial priority geographies for landscape level fuels management activities to proactively increase resilience to wildfire and related stressors. The process involved the following steps and datasets:

1. Map overall wildfire risk to highly valued resources based on:
    a. PNW quantitative wildfire risk assessment (QWRA)
2. Map landscape health priorities based on:
    a. Forest disturbance restoration need
    b. Rangeland conservation priority
    c. Forest insect and disease risk
    d. Future drought risk
3. Refine results based on:
    a. Existing project areas and agency priorities
    b. Local priorities and expert opinion
    c. Recent large harmful wildfires
    d. Non-operational areas

Figure 3: Flow chart of steps used to produce the initial priority geographies



The prioritization was conducted at the watershed level (HUC10, average 100,000 acres) because the intent was to identify broad priority areas at the statewide level. Two aspects of priorities were mapped: wildfire risk and landscape health (Figure 3 and data set list below), and results from each were incorporated into a base map, which was then further adjusted based on feedback from agency and local plans. The four following sections describe the prioritization process in detail: 1) Model Indicators and Integration, 2) Data Layers Reference, 3) GIS Processing Steps, and 4) Additional Maps.

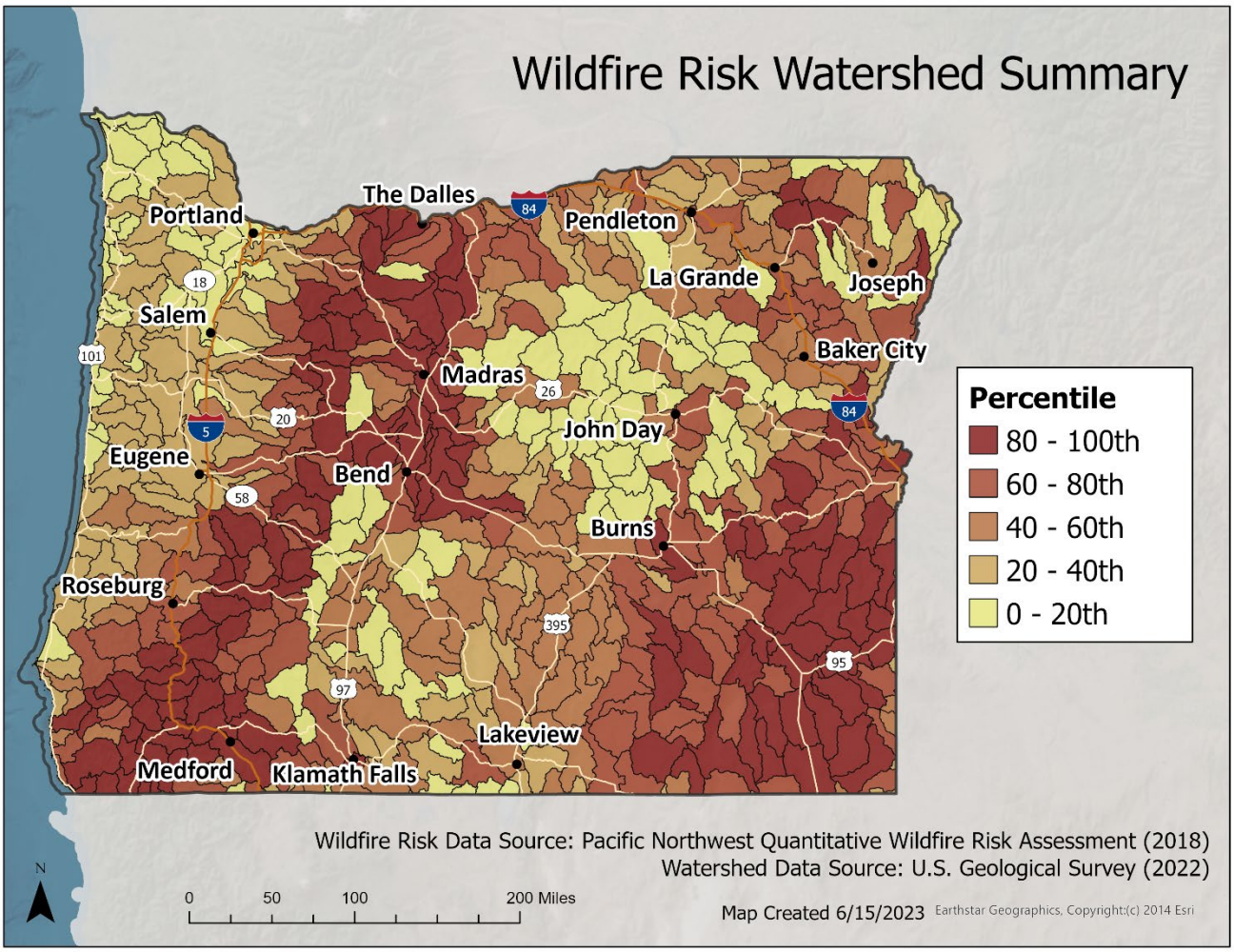
Model Indicators and Integration

Wildfire Risk

One view of priorities was provided by the Pacific Northwest Quantitative Wildfire Risk Assessment (QWRA) (Gilbertson-Day et al. 2018). This comprehensive, all-lands risk assessment combined the susceptibility and

exposure of values at risk (for example, critical infrastructure) with wildfire probability from simulation models to produce an overall map of wildfire risk, or expected net-value change (eNVC), for the state. To summarize wildfire risk at the watershed level, eNVC values were summed within each watershed and binned into percentile ranges for display, with higher percentiles indicating higher wildfire risk (Figure 4).

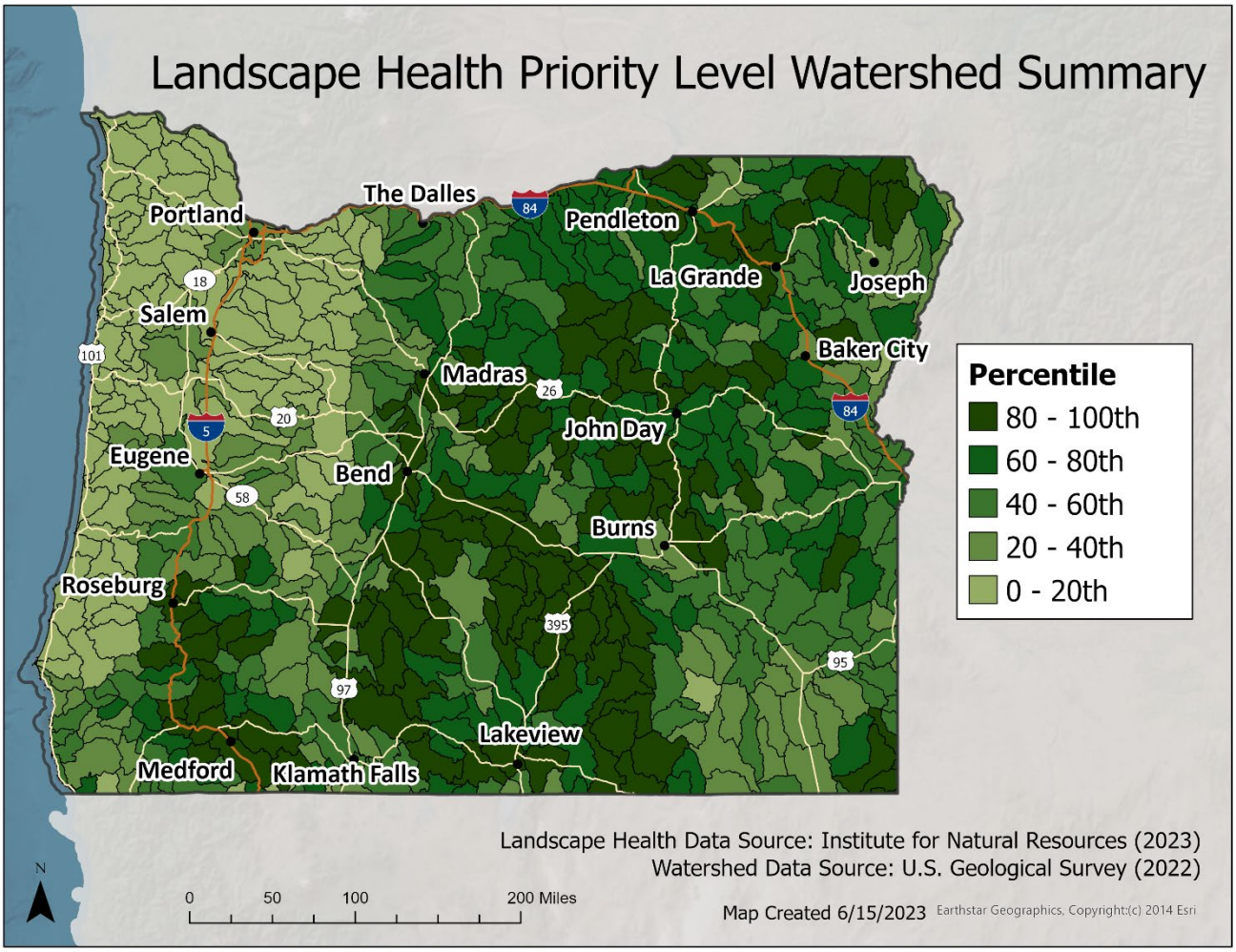
Figure 4: Watershed (10-digit hydrologic unit) summary of Overall Wildfire Risk (eNVC) from Gilbertson-Day et al. (2018). Higher percentiles indicate higher wildfire risk.



Landscape Health

The QWRA includes some landscape health-related factors, but it places the most emphasis on human structures and populations. Given the 20-year strategy's focus on landscape resiliency, a second view of priorities was constructed to focus on landscape health risks. To capture landscape health, the model summed restoration needs scores for forest and rangelands and then averaged this combined score with metrics of insect and disease risk (for forested lands only) and future drought risk. A multicriteria overlay process was used, where the data values in each layer were normalized to common scale (0-1) and then averaged to provide overall landscape health priority scores by watershed (Figure 5). Higher amounts of each of these factors within a watershed translated into higher landscape health priority scores. Each of these layers is further described in the following sections.

Figure 5: Landscape health priority level at the watershed scale (10-digit hydrologic unit). Higher percentiles indicate higher priority areas and have higher forest insect and disease risk, future drought impact risk, and higher forest restoration need, and/or higher rangeland conservation priority.



Forest Disturbance Restoration Need

In Oregon's southwestern and eastern fire-prone forests, decades of fire suppression have led to increased densities, which raise the vulnerability of forests to insects, disease, drought and higher intensity fires (Haugo et al. 2019; Laughlin et al. 2023). A recent series of studies has identified forest restoration needs by comparing current to historical forest structural conditions (Haugo et al. 2015; Demeo et al. 2018; Laughlin et al. 2023). These studies further estimated what types of transitions (disturbance, disturbance then succession, succession only) would be needed to move structural conditions towards the historical norm. The metric used by this prioritization model was the percent of forestland in the watershed identified as needing a disturbance or disturbance/succession transition.

Rangeland Conservation Priority

In Oregon's rangelands, wildfire, invasion by annual grass, and encroachment by juniper have transformed large swaths of the landscape. The scale of this degradation has made it impractical to treat in many areas, therefore, an approach based on "defending and growing the core" of good condition sagebrush rangelands

has been proposed to focus landscape-scale prevention and restoration efforts. A sagebrush ecological integrity (SEI; Doherty et al. 2022) data layer has been developed to support this proactive framework by scoring both amount of native vegetation and the primary threats. The metric used by this prioritization model was the average SEI score by watershed, with higher scores representing higher priorities.

Forest Insect and Disease Risk

While insect and disease damage does not necessarily exacerbate wildfire risk, it is another major driver of forest losses in the western US. The USDA Forest Service produces a National Insect and Disease Risk Map which quantifies the hazard or probability of tree mortality from different insects and diseases based on current forest conditions, climate, proximity to known insect and disease disturbances, soils, topography, and other factors (Krist et al. 2014). The metric used by this prioritization model was the combined risk of all insect and disease agents based on 2012 vegetation conditions but updated with disturbances through 2018. Risk values were summed by watershed, with higher values representing higher priorities.

Future Drought Risk

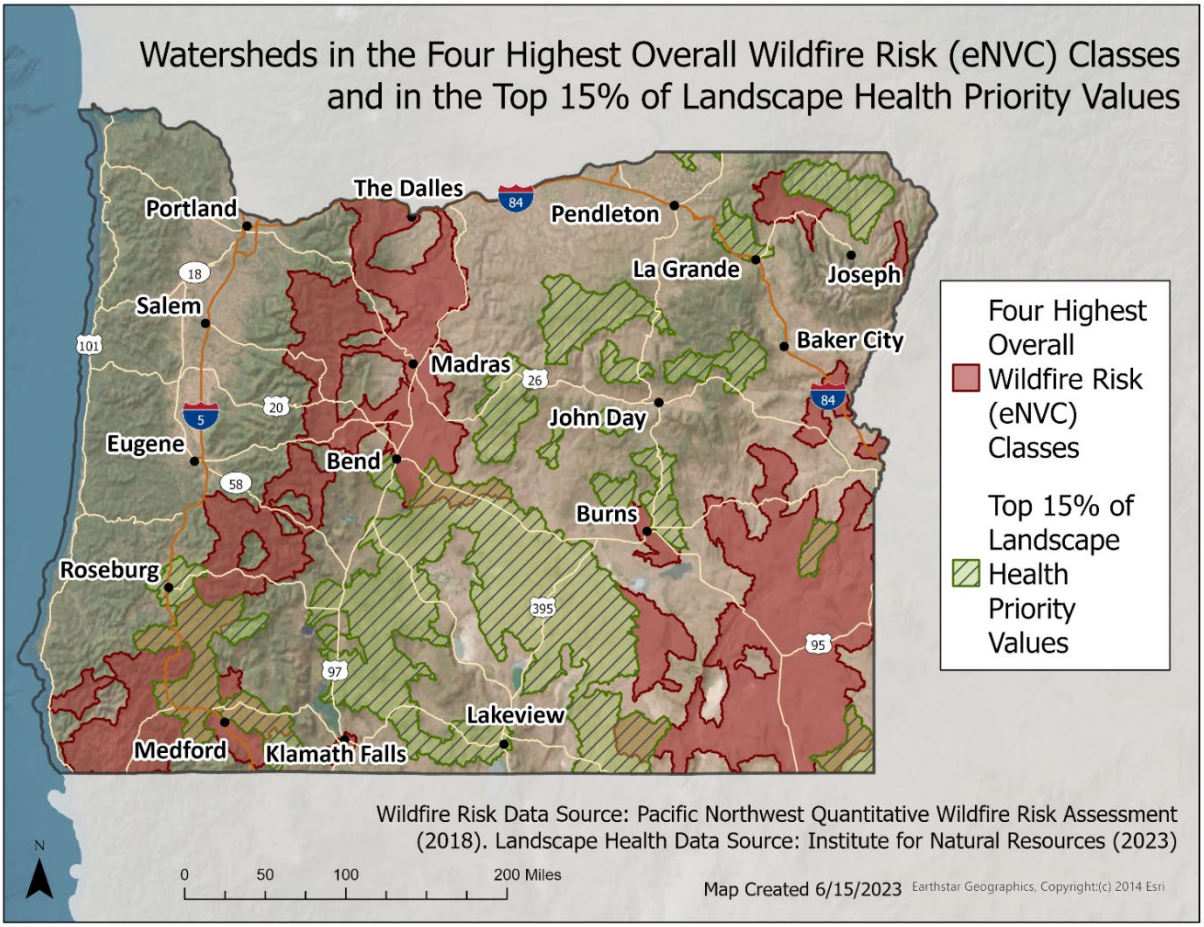
This indicator was adopted from the Washington Forest Health Strategy (WADNR 2018) and calculated the same as described in their text, except the latest available datasets were used [as indicated in brackets]:

> The projected increase in water balance deficit was included to capture the projected changes in climate that will exacerbate forest health issues. Water balance deficit, or deficit, is a measure of moisture stress that plants face and thus constraints were different plant species can grow (Stephenson 1998). Increases in deficit elevate fire behavior and make forests more susceptible to insect and disease outbreaks (Littell et al. 2010). Downscaled climate projections from the AdaptWest Project (AdaptWest [2022]) were used, which is based on climate data from Climate North America (Wang et al. 2016). Future projections are based on an Ensemble of 15 Global Circulation Models under the R8.5 emissions scenario. The difference between the [1991-2020] and 2041–2070 time periods was calculated for 1km pixels and then averaged across each watershed to get a single score for each HUC 5. Absolute change in deficit was used instead of proportional change. The Hargreave's method of calculating water balance deficit was used as it is readily available on the AdaptWest site.

Combining Wildfire Risk and Landscape Health

The initial draft map of priority geographies began with a combination of the watersheds in the four highest QWRA eNVC classes (as specified in Section 18 of Senate Bill 762) and the top 15% of watersheds from the landscape health priorities map (an area roughly equivalent to QWRA classes used; Figure 6). The two views were not quantitatively combined because the QWRA is itself a complex combination of multiple data layers, which would be difficult to weight versus the simpler landscape health model. Additionally, a QWRA update is expected in the near future and the updated map can be more easily integrated into the process as a distinct layer.

Figure 6: Map of watersheds (10-digit hydrologic units) in the four highest Overall Wildfire Risk (eNVC) classes and watersheds in the top 15% of landscape health priority level value.



Agency activities, local priorities, and operational considerations

The priority areas were further refined based on information from agencies, local groups, and land uses (Figure 7).

Existing project areas and agency priorities

The draft priority geographies were adjusted based on existing project areas and agency priorities (see Appendix G for State Projects, Federal Priorities, and NRCS Conservation Implementation Strategy Areas). Both federal and state agencies have recently developed short-term priorities and made significant investments in critical watersheds and communities through a series of programs and funding sources. Adjustments to the priority maps were completed to ensure alignment with these current agency priorities and investments.

Local priorities and expert opinion

To further refine, an engagement process was completed throughout seven regions of the state to solicit input from local partnerships and collaboratives and to collect priority information from local strategies, assessments, and plans. After this engagement process was completed, adjustments were made to the priority geographies to better reflect local knowledge and expert opinion that are captured in these local planning efforts.

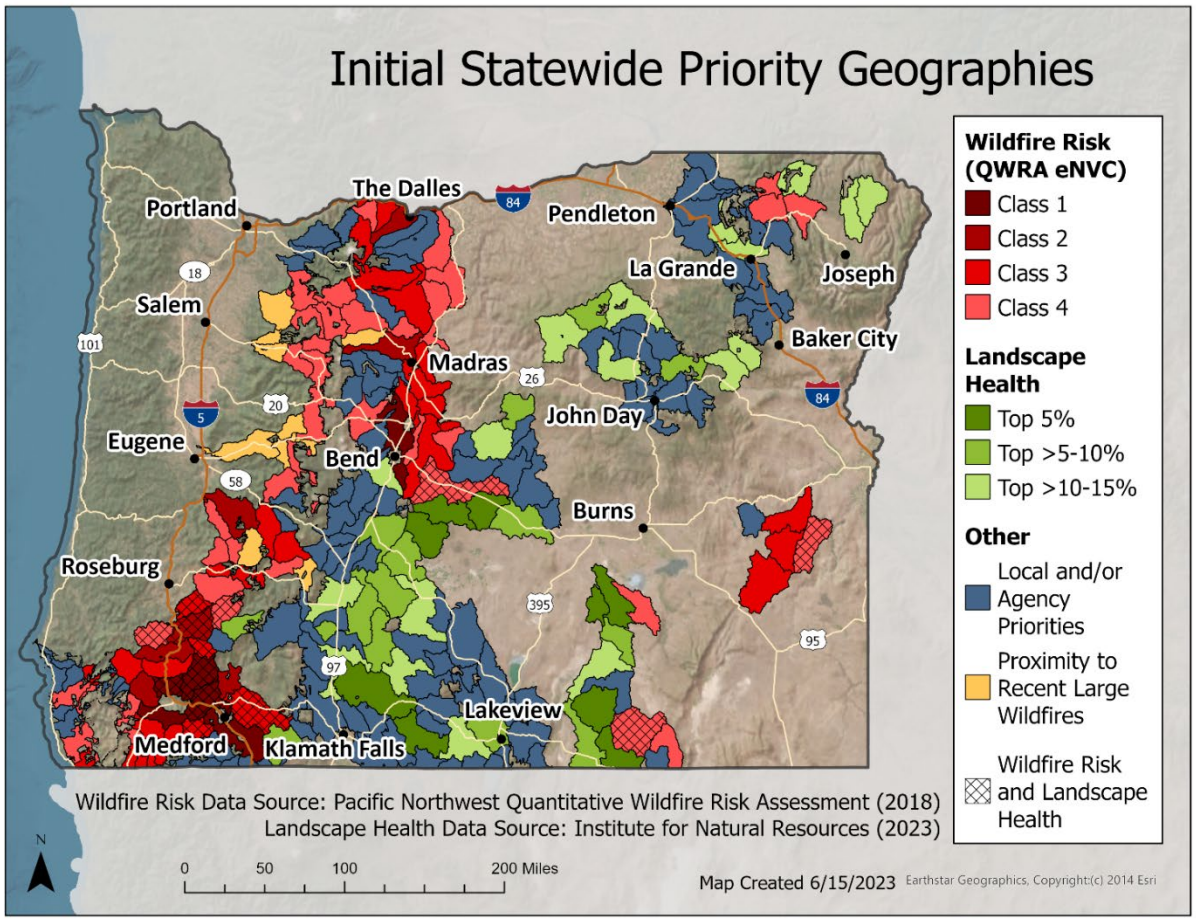
Recent large harmful wildfires

During the local engagement process, many of the local groups expressed the importance of adjusting local priorities towards recent large harmful wildfires to ensure proper wildfire recovery, capture social license to reduce wildfire risk that comes at the heels of these wildfires, and to build upon these wildfire areas for future landscape resilience and wildfire risk reduction projects. The priority map was adjusted to reflect these areas that are in proximity to recent large wildfires (see Appendix G for map with Fire Perimeters 2012 – 2021).

Non-operational areas

National wilderness areas and inventoried roadless areas were removed from the priority geographies because prescribed fire and mechanical treatments are generally excluded from these land uses and urban growth boundaries were excluded because fire adapted communities activities are the primary focus in these areas.

Figure 7: Short-Term Priority Geographies, combining wildfire risk, landscape health, and other local and statewide considerations.



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GIS Processing Steps

High Level Steps to Identify Initial Priority Geographies

1. Identify the four highest eNVC (Expected Net Value Change, aka Overall Wildfire Risk) classes.
2. Calculate the landscape health priority value for each watershed and select watersheds in the top 15%.
3. Combine the four highest eNVC classes with the top 15% landscape health priority values at the watershed level.
4. Adjust which watersheds are considered priority using the locations of existing project areas and agency priorities, proximity to high-risk wildland urban interface, recent large harmful wildfires, and local plans and expert opinion.
5. Remove national wilderness areas, inventoried roadless areas, and areas within urban growth boundaries.

Processing Steps

Watershed Summary of Overall Wildfire Risk

Goal: Summarize Overall Wildfire Risk (eNVC) values within each 10-digit watershed

- Select 10-digit watersheds that intersect the state of Oregon boundary.
- Remove watersheds that are in the ocean (where the toHUC field is null).
- Convert 10-digit watershed polygons to a raster using the eNVC raster as the snap raster and to set the projection and cell size.
- Extract by mask where the input raster is the 10-digit watershed raster and the mask is the eNVC raster (so that the coverage of the watershed raster matches the eNVC raster).

- Use the zonal statistics as table tool to sum the eNVC values within each 10-digit watershed in the raster watershed layer.
- Apply an eight class natural breaks/jenks classification to identify the top four eNVC classes from the summed values. (note: eNVC values are reversed such that very low values correspond to high risk and high values correspond to low risk. So, the "top four" eNVC classes from a risk perspective are the lowest four classes in terms of the raster values. The natural breaks/jenks classification was used to be consistent with the eNVC map created by Oregon State University College of Forestry to identify priority areas for the 2021-2023 Landscape Resiliency Program funding as directed under SB762.)
  Field name = eNVC_Sum

Watershed Summary of Landscape Health Priority Level
Goal: Summarize the landscape health priority level for each 10-digit watershed using information on the possible impacts of climate change on moisture balance and drought, insect and disease risk, and vegetation structure and composition.

Forest Disturbance Restoration Need
Goal: identify the percent of each 10-digit watershed that requires disturbance-based restoration to be restored to the more resilient natural range of variation.

- Join the DeMeo et al. table (RestorationNeedByHUC5_Update20161107) to the 10-digit watershed data on the HUC10 field
- Where ForestedAcres>10000 use the field calculator to copy the AllDisturbance values (percent of forested lands in need) to the 10-digit watershed summary layer. The cutoff of 10,000 forested acres was used to be consistent with the maps produced by DeMeo et al. (2018).
  Field name = Forest_Disturb_Pct
- Normalize the percent of forest lands in need of disturbance-based restoration to a 0 to 1 range by subtracting the minimum value from the watershed value and dividing the result by the difference between the maximum and minimum value.
  Field name = Forest_Rest_Resc

Rangeland Conservation Priority
Goal: identify the average sagebrush ecological integrity value for each watershed, while accounting for the coverage of the raster within the watersheds by setting NoData values to zero and using those values in the mean calculation.

- Create a constant raster with a value of 0 that uses the sagebrush ecological integrity (SEI) raster to as the snap raster and to set the cell size and projection so that the constant raster will align exactly with the SEI raster.
- Sum the constant raster and the SEI raster so that areas with NoData = 0 and all other areas have the value of the SEI raster.
- Run the zonal statistics as table tool to calculate the mean value within each 10-digit watershed.
  Field name = Sage_Ecol_Intg_Mean
- Normalize the SEI mean value to a 0 to 1 range by subtracting the minimum value from the watershed value and dividing the result by the difference between the maximum and minimum value.
  Field name = Sage_Ecol_Intg_Mean_Resc

Forest Insect and Disease Risk
Goal: calculate the number of acres within each watershed that classified as "Remaining Risk" in the National Insect and Disease Risk Map

- Pull out areas that are identified as "Remaining Risk" in the National Insect and Disease Risk Map (where Value is equal to 2)
- Reclassify the risk areas so that their value = 1 (all other areas have a value of NoData)
- Run the zonal statistics as table tool to sum the risk values within each watershed (effectively counting the number of cells within the watershed that were identified as at risk)
- Convert the summed value to acres using the call size (acres = = !SUM! * 0.2223948)
  Field name = Insect_Disease_Risk_Acres
- Normalize the acreage to a 0 to 1 range by subtracting the minimum value from the watershed value and dividing the result by the difference between the maximum and minimum value.
  Field name = Insect_Disease_Resc

Future Drought Risk
Goal: calculate the absolute difference in Hargreave's Climatic Moisture Deficit Index from the 1991-2020 climate normal to the ensemble mean of 13 Global Climate Models (GCMs) for the 2041-2070 time period.

- Subtract the 1991-2020 Hargreave's Climatic Moisture Deficit (CMD) Index values from the ensemble mean of 13 GCMs for 2041-2070
- Use extract by mask to clip the resulting raster to the state of Oregon boundary
- Run the zonal statistics as table tool to calculate the mean difference in CMD for each 10-digit watershed
  Field name = Moisture_Deficit_Change_Mean
- Normalize the change in CMD index values to a 0 to 1 range by subtracting the minimum value from the watershed value and dividing the result by the difference between the maximum and minimum value
  Field name = Moisture_Deficit_Resc

Combining Forest and Rangeland Restoration Needs

- Sum normalized values representing the percent of forest lands in need of disturbance-based restoration and the mean sagebrush ecological integrity score
  Field name: Restoration_Sum
- Normalize the resulting sum to a 0 to 1 range by subtracting the minimum value from the watershed value and dividing the result by the difference between the maximum and minimum value.
  Field name = Restoration_Resc

Calculating Landscape Health Priority Level

- Calculate the mean of the normalized values representing insect and disease risk, climate change impacts, and restoration need. Because insect and disease risk only applies to forested areas, where insect and disease risk values are null exclude that column from the mean calculation so the average isn't lowered by the missing data.
  Field name = Landscape_Health_Rescaled_Avg
- Sort the landscape health rescaled average from highest to lowest, and rank (1 = highest landscape health rescaled average)
  Field name = Landscape_Health_Rank

Appendix F: Treatment Acreage and Costs Estimation Methodology

This appendix describes the data and methods used to estimate the acreage that needs treatment and the treatment costs within the short-term priority geographies identified for Oregon's Landscape Resiliency Strategy.

Calculation of Treatment Acreage Needs

Forestlands

Laughlin et al. (2023) used the methodology outlined in the Haugo et al. (2015) publication *A new approach to evaluate forest structure restoration needs across Oregon and Washington, USA*, to provide updated estimates at the 10 digit HUC watershed level of the number of acres that would require disturbance (e.g. overstory thinning) or disturbance followed by succession (e.g. thinning followed by growth) to return to a more resilient Natural Range of Variability. Because the information is already summarized to the watershed level, the only processing needed was to sum the total disturbance acres for each watershed contained in the short-term priority geographies. The University of Washington dataset was released in March of 2023 and is based on 2017 conditions on all lands and 2022 conditions on Forest Service lands based on wildfire and treatments from 2017-2021. It is important to note that areas with specific designations, such as National Wilderness Areas, are not suitable for treatment, but will be counted in the acreage estimate.

GIS Steps:

Data Source: Laughlin, Madison M, S.S. Kruszka, S.M. Greenler, M. Gregory, C. Ringo, T. DeMeo, J. Bakker, and B. Harvey. 2023. 2023 iteration of the terrestrial ecological departure map for the Pacific Northwest. USDA Forest Service, Pacific Northwest Region, and University of Washington, School of Environmental and Forest Sciences. Available upon request from lead author.

- Identify 10-digit watersheds contained by the short-term priority geography extent by joining the short-term priority geographies to the restoration needs on the HUC identifier TNMID
- Sum the TotalDisturbance_acres field across the priority 10-digit watersheds.

Rangelands

The 2020–2022 Threat-Based Ecostate Map is a 30m pixel coverage representing current rangeland vegetation composition and condition relative to primary threats to rangeland ecosystem integrity (invasive annual grasses, wildfire, and juniper encroachment). Each pixel was assigned one of eight ecostates (e.g., Poor Condition Grassland) that can be associated with potential management actions to prevent or mitigate threats. We calculated the total rangeland acreage in each ecostate across the priority geographies and identified the most common types of treatments that may be applied.

GIS Steps:

Data Source: Institute for Natural Resources at Oregon State University (2023). SageCon Ecostate Time Series Map [Data Set]. https://tools.oregonexplorer.info/OE_HtmlViewer/Index.html?viewer=sagegrouse

- Clip the Threat-Based Ecostate 2020-2022 raster to the priority geography extent using the extract by mask tool
- Convert cell count to acres (acres = square meters * 0.000247105)

Calculation of Costs Associated with Treatment Needs

Forestlands

An average treatment cost of $1000/acre was derived from discussions with ODF and ODFW staff. ODF reviewed costs associated with projects from the recent SB 762 Landscape Resiliency Program. These costs ranged from $71 to $3275 per acre. Historically, ODF has paid around $1,000 per acre for defensible space/WUI (treatments that include a structure), and around $600 per acre for treatments in the wildland setting. NRCS

payments in NE Oregon have been around $1200/acre. Treatment costs will vary widely by the type(s) of treatments involved (thinning, prescribed burning), access to infrastructure (roads, mills), and forest and environmental conditions (forest density, slope). However, at this time information was not available to calculate all these factors, so a single average treatment cost was used.

Rangelands

The SageCon Partnership has worked to gather costs associated with ecosystem restoration on public and private rangelands. Cost estimates come from NRCS Oregon practice codes for private lands and from the Lakeview BLM District for public lands. For each ecostate, management actions were identified that ranged from $10/acre (weed surveying) to $1,174/acre (cutting late phase juniper, spraying and seeding). Estimated costs per acre for treatments were multiplied by the acreage in each ecostate to generate a high estimate for treatment costs (Table 1).

Table 1. Rangeland treatments and costs

Threat-based Ecostate	Cost/Acre	Potential management needs and actions	Comments
A: Good condition shrubland	$ 10	Weed surveys and spot treatments	Based on estimated $10/acre weed inventory for NRCS
A-C: Intermediate condition shrubland	$ 75	Surveys, spot treatments	Based on NRCS herbicide cost (assume Rejuvra herbicide used where not seeding)
B: Good condition grassland	$ 10	Weed surveys and spot treatments	Based on estimated $10/acre weed inventory for NRCS
B-D: Intermediate condition grassland	$ 75	Rescue spray where perennials can recover	Based on NRCS herbicide cost (assume Rejuvra herbicide used where not seeding)
C: Poor condition shrubland	$ 524	Spray & seed	Based on BLM costs for herbicide and aerial native seeding
D: Poor condition grassland	$ 524	Spray & seed; vector control	Based on BLM costs for herbicide and aerial native seeding
Juniper: low-mid cover	$ 200	Remove phase 1 and early phase 2 juniper	Based on BLM costs for cut, lop and scatter
Juniper: high cover	$ 1,174	Remove late phase 2 and early phase 3 juniper where possible, spray and seed	Based on BLM costs for juniper cut and hand pile, herbicide, and aerial native seeding

Summary of Treatment Acres and Costs

Table 2. Summary of treatment acres and costs*

Rangeland (Ecostates)	Acres	Cost/Acre	Approximate Total Cost
A: Good condition shrubland	1,115,641	$ 10	$ 11,156,406
A-C: Intermediate condition shrubland	2,265,836	$ 75	$ 169,937,671
B: Good condition grassland	140,490	$ 10	$ 1,404,901
B-D: Intermediate condition grassland	695,123	$ 75	$ 52,134,206
C: Poor condition shrubland	697,190	$ 524	$ 365,327,744
D: Poor condition grassland	1,039,475	$ 524	$ 544,685,055
Juniper: low-mid cover	1,904,821	$ 200	$ 380,964,161
Juniper: high cover	779,179	$ 1,174	$ 914,756,507
Rangeland Total	**7,858,576**	**$ 311**	**$ 2,440,366,652**
Forest Disturbance Restoration Need	**5,158,244**	**$ 1,000**	**$5,158,243,600**
		TOTAL	**$ 7,580,668,652**

* Note that these analyses count treatment needs on every acre with disturbance restoration need in forests and all acres in all classes in rangelands, so acreage and costs would be lower for strategic and capacity constrained implementation.

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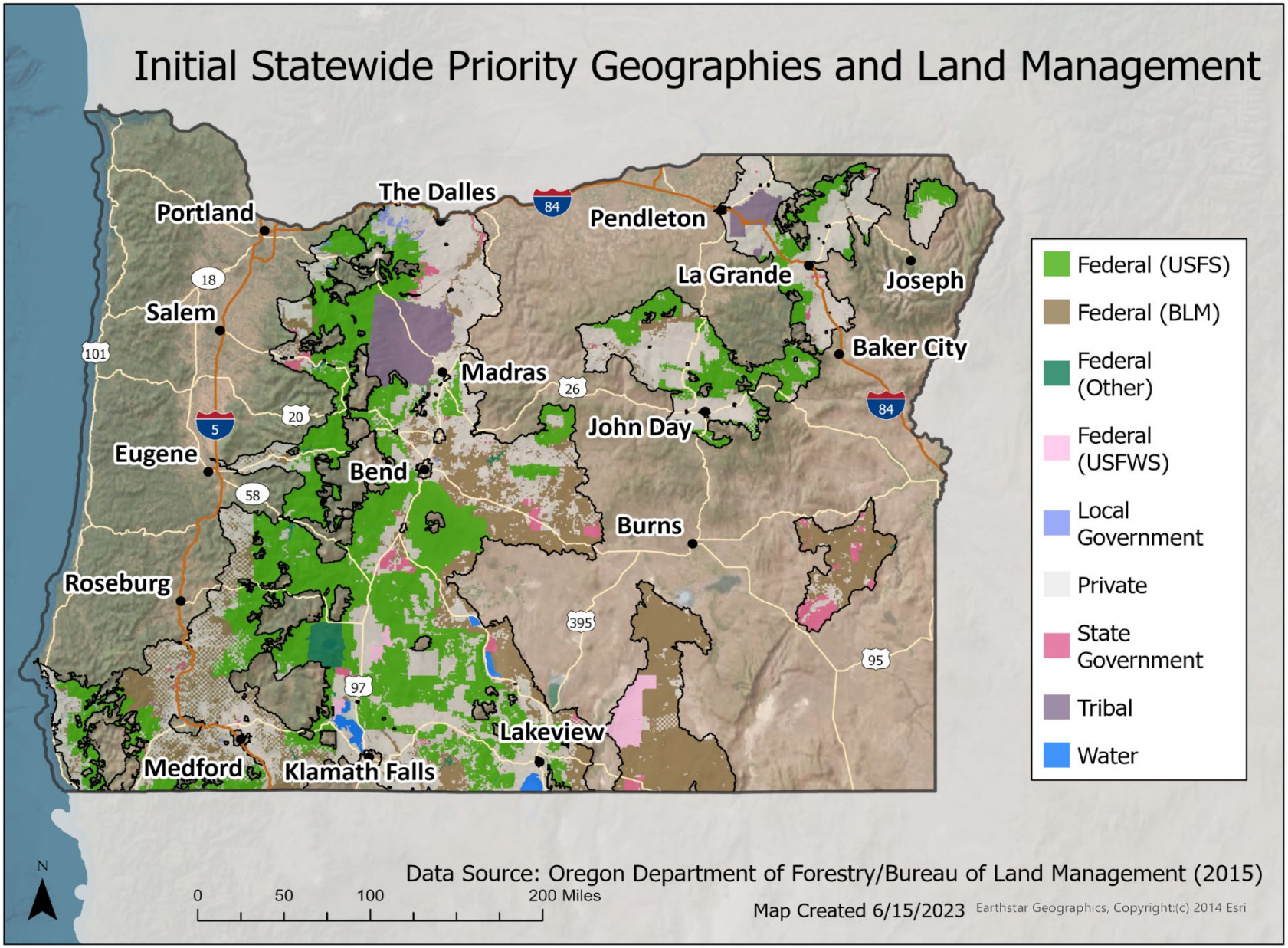
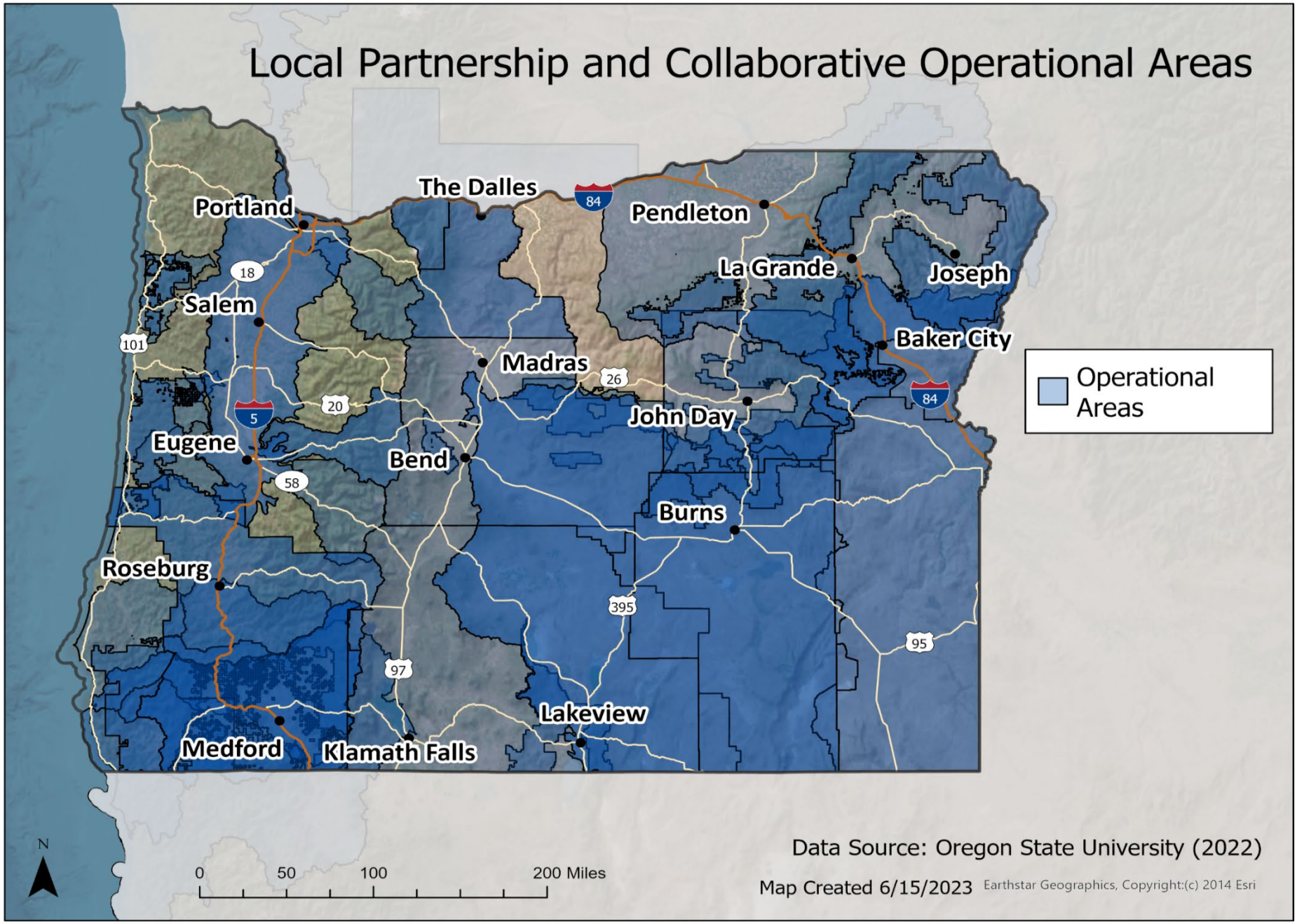
Institute for Natural Resources at Oregon State University (2023). SageCon Ecostate Time Series Map [Data Set]. https://tools.oregonexplorer.info/OE_HtmlViewer/Index.html?viewer=sagegrouse

Laughlin, Madison M, S.S. Kruszka, S.M. Greenler, M. Gregory, C. Ringo, T. DeMeo, J. Bakker, and B. Harvey. 2023. 2023 iteration of the terrestrial ecological departure map for the Pacific Northwest. USDA Forest Service, Pacific Northwest Region, and University of Washington, School of Environmental and Forest Sciences. Available upon request.

Appendix G: Additional Maps




Local Partnership and Collaborative Operational Areas
Portland
The Dalles
84
Pendleton
La Grande
Joseph
18
Salem
101
Madras
26
Baker City
84
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John Day
Eugene
Bend
58
Burns
Roseburg
395
95
97
Lakeview
Medford
Klamath Falls
Operational Areas
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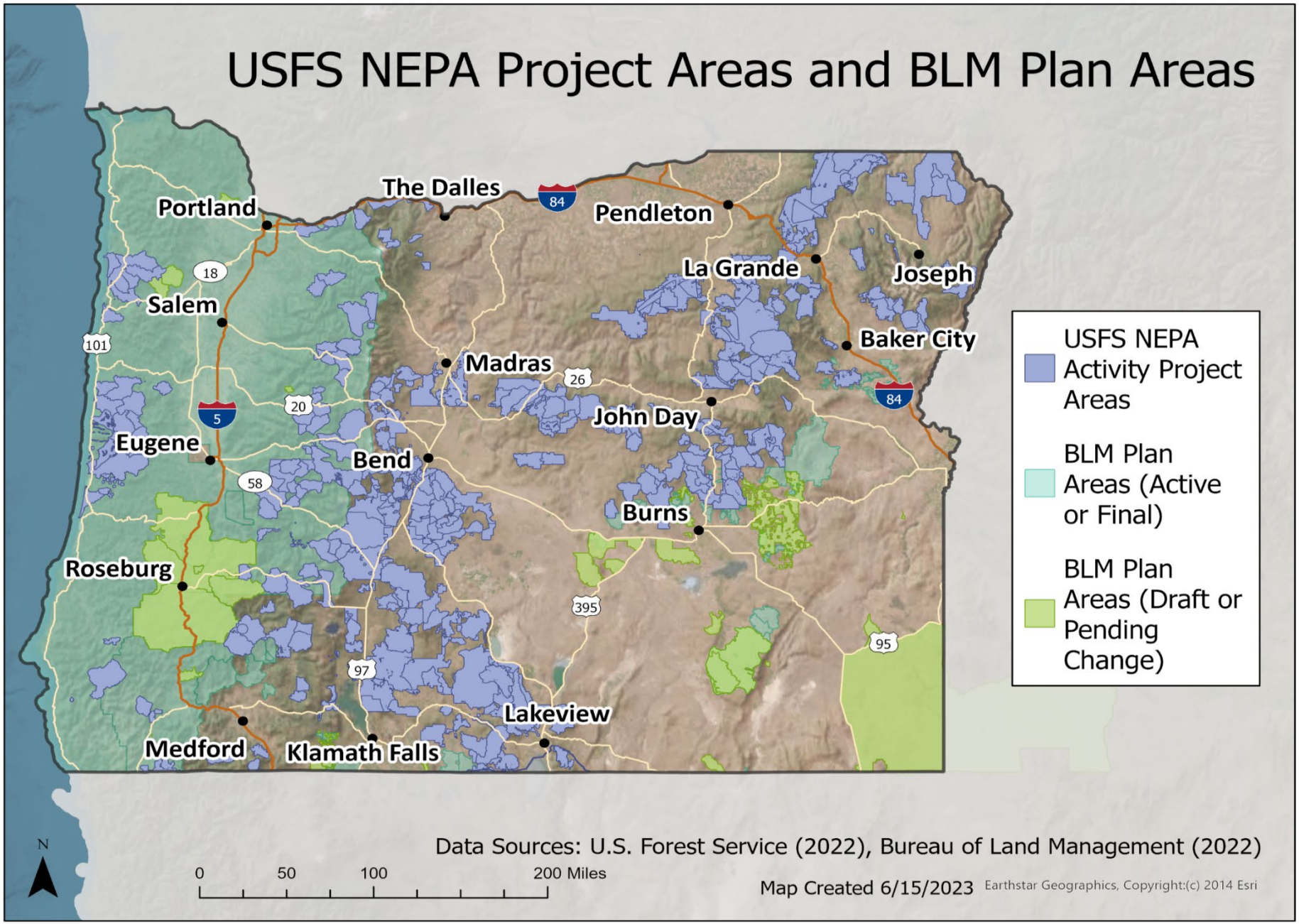
0
50
100
200 Miles
Data Source: Oregon State University (2022)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri


USFS NEPA Project Areas and BLM Plan Areas
Portland
The Dalles
Pendleton
La Grande
Joseph
Baker City
Salem
Madras
John Day
Eugene
Bend
Burns
Roseburg
Lakeview
Medford
Klamath Falls
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USFS NEPA Activity Project Areas
BLM Plan Areas (Active or Final)
BLM Plan Areas (Draft or Pending Change)
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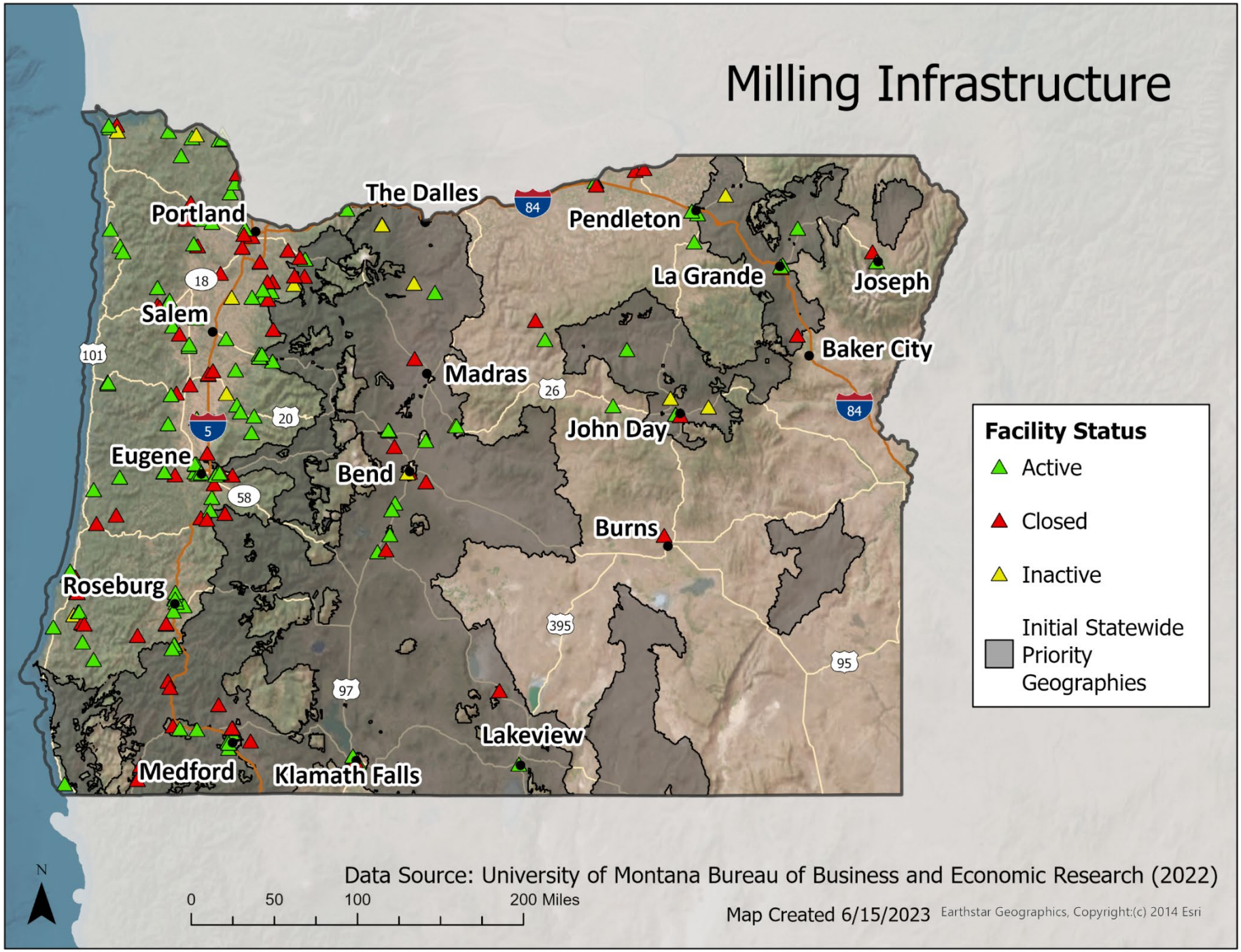
200 Miles
Data Sources: U.S. Forest Service (2022), Bureau of Land Management (2022)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri


Milling Infrastructure
The Dalles
Portland
Pendleton
La Grande
Joseph
Salem
Baker City
Madras
John Day
Eugene
Bend
Burns
Roseburg
Lakeview
Medford
Klamath Falls
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395
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Facility Status
Active
Closed
Inactive
Initial Statewide Priority Geographies
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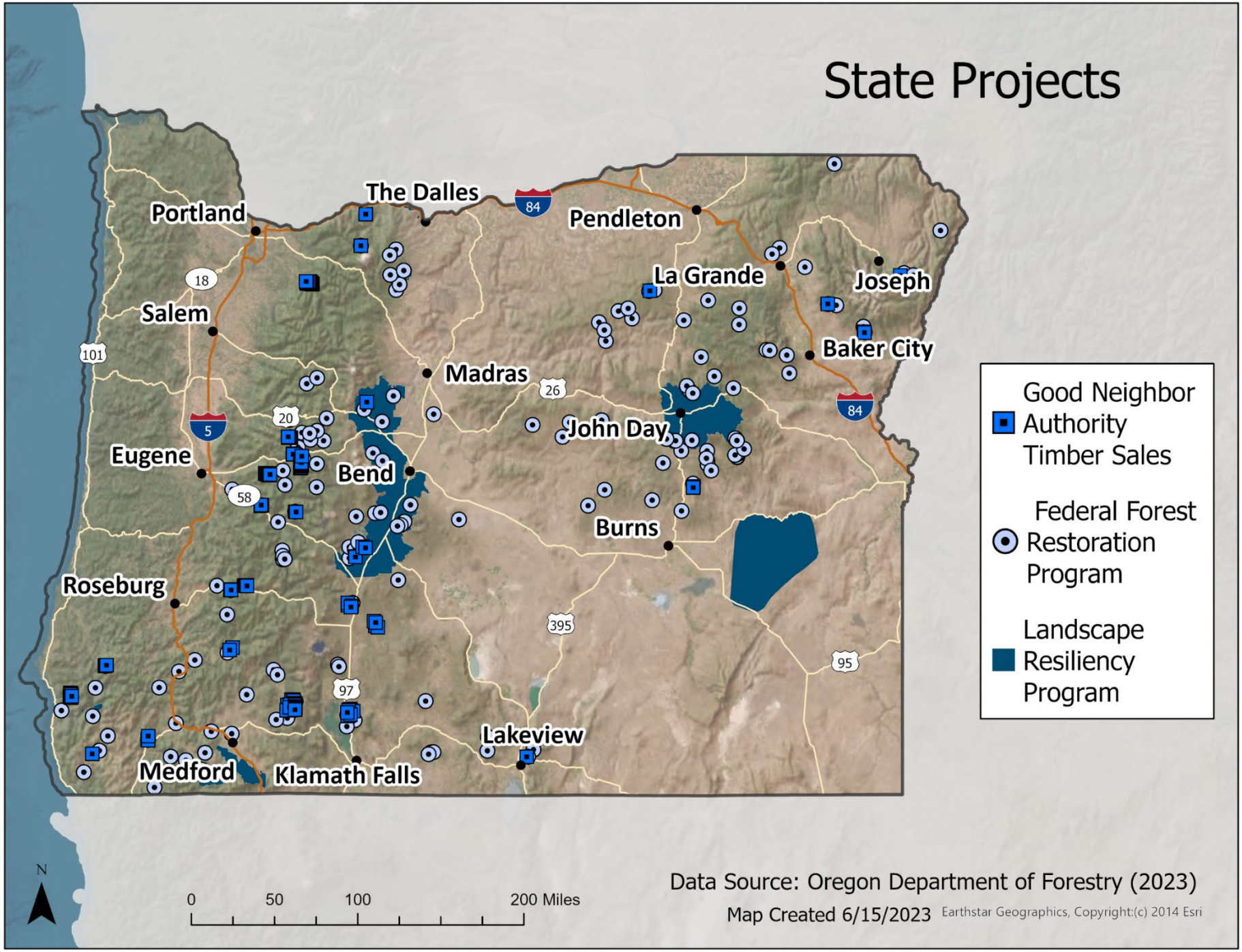
200 Miles
Data Source: University of Montana Bureau of Business and Economic Research (2022)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri


State Projects
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John Day
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Bend
Burns
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Lakeview
Medford
Klamath Falls
18
101
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20
26
84
58
395
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97
Good Neighbor Authority Timber Sales
Federal Forest Restoration Program
Landscape Resiliency Program
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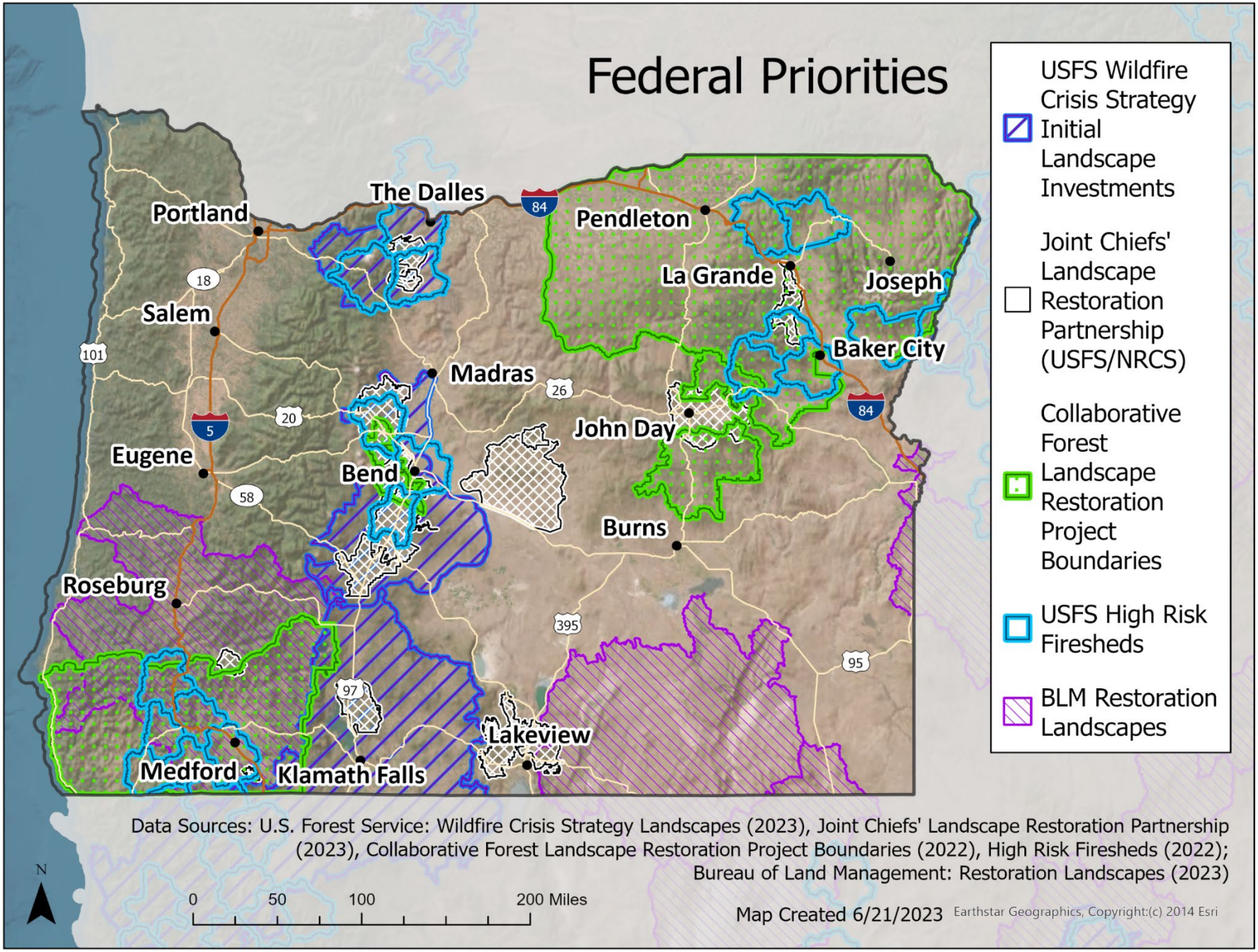
200 Miles
Data Source: Oregon Department of Forestry (2023)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri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USFS Wildfire Crisis Strategy Initial Landscape Investments
Joint Chiefs' Landscape Restoration Partnership (USFS/NRCS)
Collaborative Forest Landscape Restoration Project Boundaries
USFS High Risk Firesheds
BLM Restoration Landscapes
Portland
The Dalles
Pendleton
La Grande
Joseph
Baker City
Salem
Madras
John Day
Eugene
Bend
Burns
Roseburg
Lakeview
Medford
Klamath Falls
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Data Sources: U.S. Forest Service: Wildfire Crisis Strategy Landscapes (2023), Joint Chiefs' Landscape Restoration Partnership (2023), Collaborative Forest Landscape Restoration Project Boundaries (2022), High Risk Firesheds (2022); Bureau of Land Management: Restoration Landscapes (2023)
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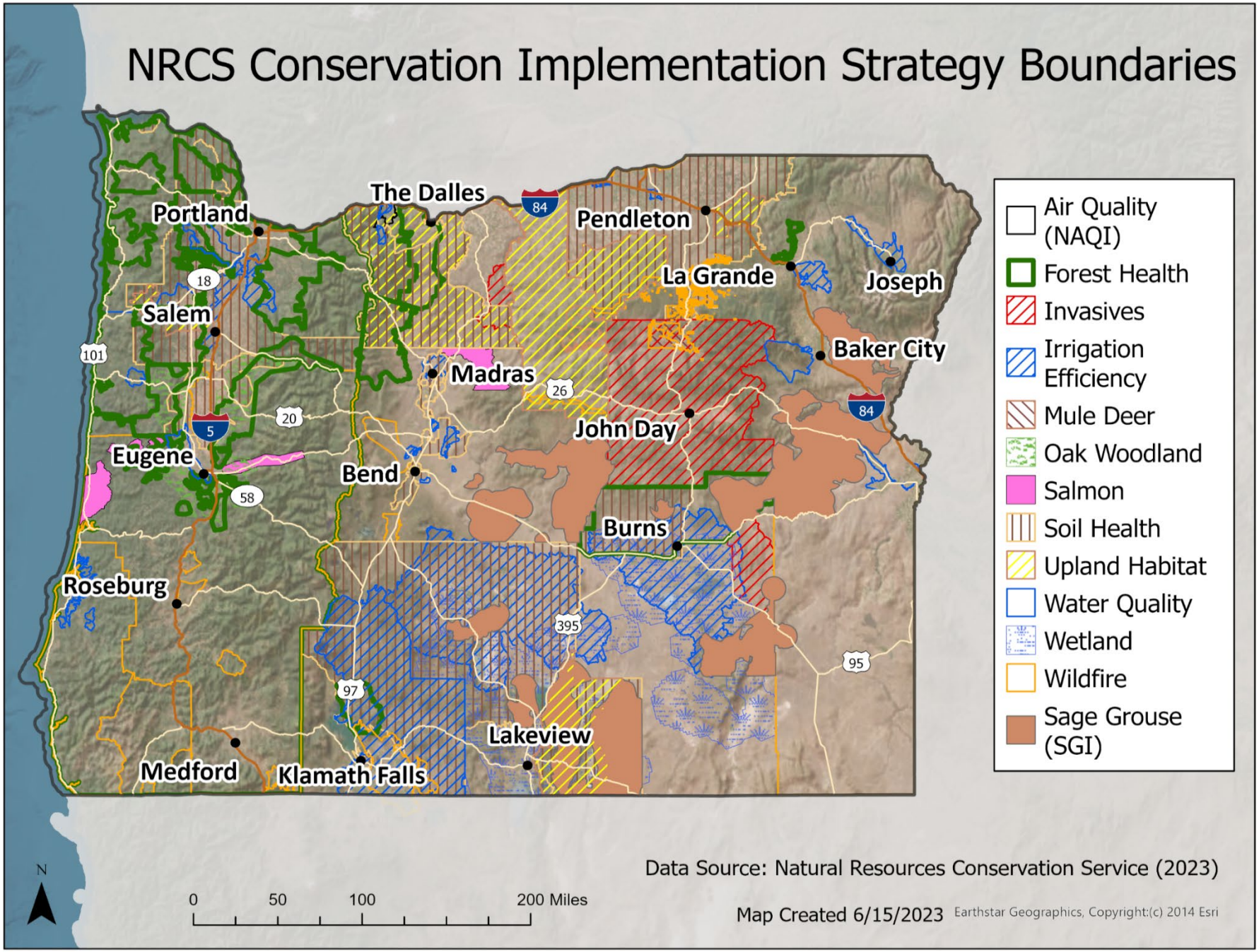
NRCS Conservation Implementation Strategy Boundaries
Portland
The Dalles
Pendleton
La Grande
Joseph
Salem
Baker City
Madras
John Day
Eugene
Bend
Burns
Roseburg
Lakeview
Medford
Klamath Falls
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101
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84
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395
97
95
Air Quality (NAQI)
Forest Health
Invasives
Irrigation Efficiency
Mule Deer
Oak Woodland
Salmon
Soil Health
Upland Habitat
Water Quality
Wetland
Wildfire
Sage Grouse (SGI)
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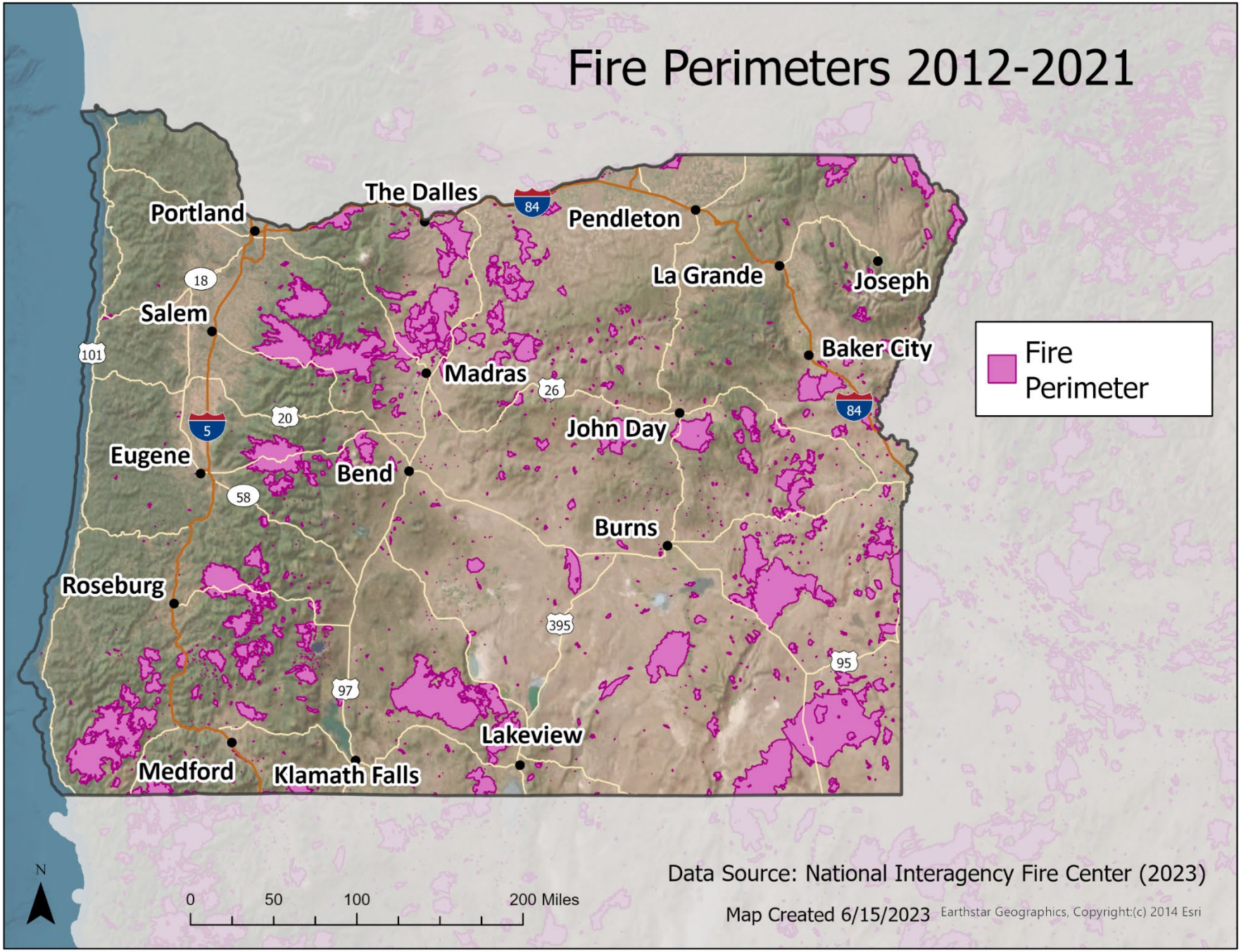
200 Miles
Data Source: Natural Resources Conservation Service (2023)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri


Fire Perimeters 2012-2021
Portland
The Dalles
Pendleton
La Grande
Joseph
Salem
Baker City
Madras
John Day
Eugene
Bend
Burns
Roseburg
Lakeview
Medford
Klamath Falls
18
101
5
20
26
84
58
395
97
95
Fire Perimeter
N
0
50
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200 Miles
Data Source: National Interagency Fire Center (2023)
Map Created 6/15/2023
Earthstar Geographics, Copyright:(c) 2014 Esri

Appendix H: Summary Results of the Qualitative Capacity Assessment

During development of the 20-Year Landscape Resiliency Strategy, 33 forest and rangeland collaboratives and partnerships were asked to participate in a Qualitative Capacity Assessment administered by OSU Forestry & Natural Resources Extension Fire Program; 28 groups responded. The assessment was administered November 2022-January 2023 and sought information on group operations, areas of focus, capacities and barriers, plans and priorities, and needs.

What is the Qualitative Capacity Assessment?

- Supports the landscape resiliency strategy by helping understand "*communities with capacity and/or a track record for success and innovation, while supporting communities to build capacity*."
- Examines existing all-lands partnerships and collaborative groups
- Provides a first cut assessing geographies covered, capacities, barriers, and needs

Statewide Results

General:

- 33 groups contacted, 28 responses received. Important to recognize differences between groups focused on collaborative dialogue versus all-lands coordination and execution.
- On average, groups have one staff person, but many have part time or none.

Most common capacities:

- Convening, knowledge sharing, and capacity building among partners.
- Identifying shared values and addressing social conflict; developing zones of agreement.
- Developing cross-boundary partnerships.
- Seeking and managing grant funds for planning; planning projects.
- Helping agency partners obtain implementation funding, often from multiple sources.
- Developing plans or strategies for landscape resiliency in their areas.

Top barriers reported:

Implementation

- Weather/seasonal windows for implementing treatments (64%).
- Federal policies or regulations (57%).
- Active fire seasons that disrupt our and our partners' planned work (61%).
- Insufficient personnel capacity to write and manage grants and funding for implementation (50%).
- Insufficient personnel capacity to coordinate and oversee project implementation (50%).
- Lack of contractor capacity (50%).

Planning

- Lack of or turnover of skilled planners or key planning team members within partner organizations or agencies (50%).

Organizational

- No or insufficient funding for basic operating capacity (50%).
- Turnover or lack of state or federal agency partners participating regularly (50%).

Top needs from agencies:

- Staff (NEPA, cultural/heritage) that don't rotate out so often.
- Willingness to work with partners and address local values, to not be top down.
- Use of more efficient approaches to NEPA (smaller, faster, 3rd party) and contracting.
- Completion of new forest plans.
- Funding for collaborative/partnership capacity.
- Longer term and more flexible funding for planning and implementation.
- Increased use of prescribed and managed fire.
- Investment in monitoring.
- Investment in capacity to engage private landowners.

Appendix I: Agency Funding Programs and Authorities

Oregon Department of Forestry

Landscape Resiliency Program (LRP)
Small Forestland Grant Program (SFG)
Federal Forest Restoration Program (FFR)
Western States Fire Managers
Community Assistance
Landscape Scale Restoration (LSR)
Community Wildfire Defense Grant
Emergency Forest Restoration Program
Forest Legacy Program
Forest Stewardship Program
NRCS Statewide Agreement
Statewide Bark Beetle Mitigation
Sudden Oak Death

Oregon Watershed Enhancement Board

Open Solicitation grant programs:
Restoration grants
Technical Assistance grants
Stakeholder Engagement grants
Monitoring grants
Focused Investment Partnership Program (FIP)
Small Grant Program
Land Acquisition Grant Program
Partnership Technical Assistance Grant Program
Forest Collaborative Grant Program

U.S Forest Service

Collaborative Forest Landscape Restoration Program (CFLRP)
Joint Chiefs Landscape Restoration Partnership
Tribal Forest Protection Act
Great American Outdoor Act

Natural Resource Conservation Service

Joint Chiefs Landscape Restoration Partnership
Regional Conservation Partnership Program (RCPP)
Environmental Quality Incentives Program (EQIP)

Oregon Department of Fish and Wildlife

Access and Habitat Program
Restoration and Enhancement Program
Oregon Conservation and Recreation Fund
State Wildlife Grants
Private Forest Accord Mitigation Fund Grant Program
Good Neighbor Authority

Bureau of Land Management

Forests and Woodlands Resource Management
OR/WA IIJA Fuels Management and Community Fire Assistance

Appendix J: Shared Stewardship MOU

MEMORANDUM OF UNDERSTANDING
On
SHARED STEWARDSHIP

Between the

STATE OF OREGON
OREGON DEPARTMENT OF FORESTRY

And the

U.S. DEPARTMENT OF AGRICULTURE
USDA FOREST SERVICE, PACIFIC NORTHWEST REGION

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the State of Oregon through its Department of Forestry, hereinafter referred to as the "State," and the U.S. Department of Agriculture through its Forest Service, Pacific Northwest Region, hereinafter referred to as the "Forest Service."

Background:

The purpose of this MOU is to document the commitment of the State, represented by the Governor's Office and Oregon Department of Forestry, and the Forest Service to work collaboratively to create a shared stewardship approach for implementing land management activities in the state of Oregon.

The Forest Service and the State have a long history of collaboration. The Forest Service is a critical partner in Oregon's complete and coordinated fire protection system. The State and Forest Service use grant programs to cooperatively manage forest health issues across all forested lands in Oregon, provide technical and financial assistance to nonindustrial landowners, and support urban and community forest protection and management. The State and Forest Service collaborate on multiple monitoring and research projects. The State and Forest Service collaboration extends to the National Forest System with Oregon's Federal Forest Restoration Program; we jointly implement Joint Chief's Landscape Restoration Partnership projects, Landscape Scale Restoration projects, and Good Neighbor Authority (GNA) projects. Shared Stewardship is a logical evolution of this relationship.

Oregon is home to 26 forest collaborative groups that work to bring together diverse interests, find common ground, and build greater support for large-scale forest restoration projects. This local work is the foundation of what is known as the "Oregon Model." Financial support of local collaborative groups by both the State and the Forest Service is critical to achieving an increase in the pace, scale, and quality of restoration efforts. Needed restoration work spans forest types and ownership boundaries, and the current level of available funding requires prioritization.

The State and the Forest Service agree that a Shared Stewardship approach that includes federal, state, and local governments; Tribes; forest industries; environmental groups; other non-governmental organizations; and collaboratives can play a significant role in creating healthy and resilient forested ecosystems, vibrant local economies, healthy watersheds with functional aquatic habitat, and quality outdoor experiences for all Oregonians.

PURPOSE: The purpose of this MOU is to formalize and document our intention to work together across Oregon's forests to achieve desired outcomes at the most appropriate scale. We will employ a strategy with three core elements:

1. Jointly determine management needs at the statewide scale;
2. Do the right work in the right place at the right scale; and
3. Use all available tools.

I. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

The State and Forest Service have a mutual interest in developing a long-term Shared Stewardship agreement that defines the principles by which the State and Forest Service will operate to achieve the following for Oregon's forests and communities:

- A shared vision of healthy and resilient forested ecosystems, vibrant local economies, healthy watersheds with functional aquatic habitat, and quality outdoor opportunities for all Oregonians;
- A governance process that respects and builds on Oregon's grassroots collaborative approach;
- A 20-year strategic plan that prioritizes restoration actions and geographies for wildfire risk reduction that can be used to direct federal, state, and private investments in a tangible way;
- A revised Oregon Forest Action Plan that identifies opportunities for all-lands restoration and details priorities to guide delivery of programs specific to National Forests, state, and private lands; and
- A science-based and tractable monitoring and accountability approach to measure outcomes by which we can gauge progress and adjust the approach accordingly.

II. OPERATING PRINCIPLES:

The State and Forest Service agree to operate under the following principles:

- Open, transparent, inclusive, and accountable processes that will allow other interested parties (e.g., federal agencies, Tribes, state agencies, non-governmental organizations, and collaboratives) to join in this shared stewardship agreement.
- Frequent communication that builds and sustains durable relationships among agencies, partners, and stakeholders;

- Support and build on Oregon's collaborative approach for developing local solutions and providing input to statewide priorities, desired outcomes, and metrics;
- Use adaptive management approaches that include: experimenting, learning, and implementing work to achieve outcomes at scales that are meaningful;
- Maintain our all-lands, all-hands approach of cross boundary partnerships for landscape-scale restoration; and
- Focus on outcomes with metrics, in addition to outputs.

III. THEMES FOR DEVELOPING A LONG-TERM STRATEGY:

Themes to guide development of a long-term strategy and prioritize investments include:

- Initial focus on fire-prone forests and ecosystems of eastern and southwestern Oregon;
- Emphasize restoration around communities at highest risks of wildfire;
- Emphasize communities at high risk of losing wood processing infrastructure and/or workforce, especially underserved communities in rural Oregon;
- Set statewide priorities at the appropriate scale and provide analytical science to empower collaborative groups and communities to develop locally-based solutions;
- Identify strategies and needs on both public and private lands;
- Recognize communities with capacity and/or a track record for success and innovation, while supporting communities to build capacity where needed; and
- Incorporate evolving best-available science in adaptation and mitigation responses to climate change and other major ecological and social drivers.

In consideration of the above premises, the parties agree as follows:

IV. THE STATE SHALL:

A. Convene a diverse group of stakeholders to help develop a statewide 20-year strategic plan focused on fire-prone forests and ecosystems of eastern and southwestern Oregon. Help set priority treatment areas using values at risk and scenario planning to focus investments on areas that will yield the greatest return. Develop a financial implementation plan that incorporates public-private partnership, including conservation finance to increase scale, by investing in appropriately-scaled infrastructure in rural communities.

B. Help develop a set of metrics that measure progress on creating the outcomes of healthy, resilient forests; vibrant local communities; healthy watersheds with functional aquatic habitat; and quality outdoor opportunities for all Oregonians.

C. Collaborate with the Forest Service and stakeholders to revise the Oregon Forest Action Plan by June 2020. Include statewide outcomes and priorities in the action plan.

D. Work collaboratively with the Forest Service and collaborative groups at the local level to design and implement treatments that meet the priorities and outcomes of the 20-year strategic plan and Oregon Forest Action Plan.

E. Collaborate with the Forest Service and stakeholders to develop a science-based and tractable monitoring and accountability approach to measure outcomes by which we can gauge progress and adjust the approach accordingly.

F. Work collaboratively with the Forest Service at the local level to design and implement treatments that establish anchor points and control lines to aid in wildfire suppression.

G. Help implement restoration using the Good Neighbor Authority.

H. Inform investments in the Federal Forest Restoration Program using the priorities identified in the 20-year strategic plan and Oregon Forest Action Plan.

I. Support Forest Service decisions developed collaboratively under this MOU and Oregon's collaborative approach for developing local solutions.

V. THE FOREST SERVICE SHALL:

A. Participate with the State and a diverse group of stakeholders to help develop a statewide 20-year strategic plan focused on fire-prone forests and ecosystems of eastern and southwestern Oregon. Help set priority treatment areas using values at risk and scenario planning to focus investments on areas that will yield the greatest return.

B. Help develop a set of metrics that measure progress on creating the outcomes of healthy, resilient forests; vibrant local communities; healthy watersheds with functional aquatic habitat; and quality outdoor opportunities.

C. Work collaboratively with the State and collaborative groups at the local level to design and implement treatments that meet the priorities and outcomes of the 20-year strategic plan and Oregon Forest Action Plan.

D. Collaborate with the State and stakeholders to develop a science-based and tractable monitoring and accountability approach to measure outcomes by which we can gauge progress and adjust the approach accordingly.

E. Work collaboratively with the State at the local level to design and implement treatments that establish anchor points and control lines to aid in suppression of wildfire.

F. Use every available authority and tool to do more work on the ground, including timber sales, mechanical treatments, and carefully managed fire. Work with the State, partners, and stakeholders to choose the right tools.

G. Inform the annual Forest Service Pacific Northwest Region budget priorities considering the priorities identified in the 20-year strategic plan and Oregon Forest Action Plan.

Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate agreements and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides nor meets these criteria. If the parties elect to enter into an obligation agreement that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective agreement, each party operates under its own laws, regulations, and/or policies, and any Forest Service obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective agreements must comply with all applicable authorities.

Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authorities.

H. PUBLIC NOTICES. It is the Forest Service's policy to inform the public as fully as possible of its programs and activities. The State is encouraged to give public notice of the receipt of this MOU and, from time to time, to announce progress and accomplishments. Press releases or other public notices about this MOU should acknowledge "the U.S. Forest Service, Department of Agriculture."

The State is requested to coordinate and provide copies of notices or announcements to the U.S. Forest Service's Office of Communications and Community Engagement as far in advance of release as possible.

I. TERMINATION. This MOU may be terminated, in whole or part, as follows: When the Forest Service and the State agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated, by 30 days written notification by either party, setting forth the reasons for termination, effective date and, in the case of partial termination, the portion to be terminated. If either party decides the remaining portion of MOU will not accomplish the purpose of the MOU, the party may terminate the MOU upon 30 days written notice in its entirety.

J. COMMENCEMENT. This MOU is executed as of the date of the last signature and is effective until it is terminated.

K. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the parties have executed the MOU as of the last date written below.

Kate Brown — August 13th 2019

KATE BROWN, Governor
State of Oregon — Date

August 13th 2019

PETER DAUGHERTY, State Forester
Oregon Department of Forestry — Date

for Jim Hubbard — Aug 13, 2019

SONNY PERDUE, Secretary
U.S. Department of Agriculture — Date

8-13-19

GLENN CASAMASSA, Regional Forester
USDA Forest Service, Region 6 — Date

NRCS agreement Number - N4120MOU0011066

This is Oregon NRCS's acknowledgment to the Attached Memorandum of Understanding on Shared Stewardship between the State of Oregon, Oregon Department of Forestry, the U.S. Department of Agriculture, and USDA Forest Service, Pacific Northwest Region.

Name of Oregon NRCS Signatory official.	Title
Ronald Alvarado	State Conservationist

Signature	Date
RONALD ALVARADO Digitally signed by RONALD ALVARADO Date: 2020.09.08 15:49:51 -04'00'	