OREGON IS WORTH PROTECTING

2026 State Wildlife Action Plan

CONSERVATION OPPORTUNITY AREAS

OREGON DEPARTMENT OF FISH & WILDLIFE

Contents

CONSERVATION OPPORTUNITY AREAS

Conservation Opportunity Areas (COAs) are places where broad fish and wildlife conservation goals would best be met. Focusing investments in these prioritized areas can increase the likelihood of long-term success, maximize effectiveness over larger landscapes, improve funding efficiency, and promote cooperative efforts across ownership boundaries.

COAs were developed to guide where to implement voluntary conservation actions in Oregon. Land use or other activities within these areas will not be subject to any new regulations. The Oregon Department of Fish and Wildlife (ODFW) COA map, dataset, and other information should only be used in ways consistent with these intentions.

For more information on what COAs are and how they were developed, see the **COA Methodology**.

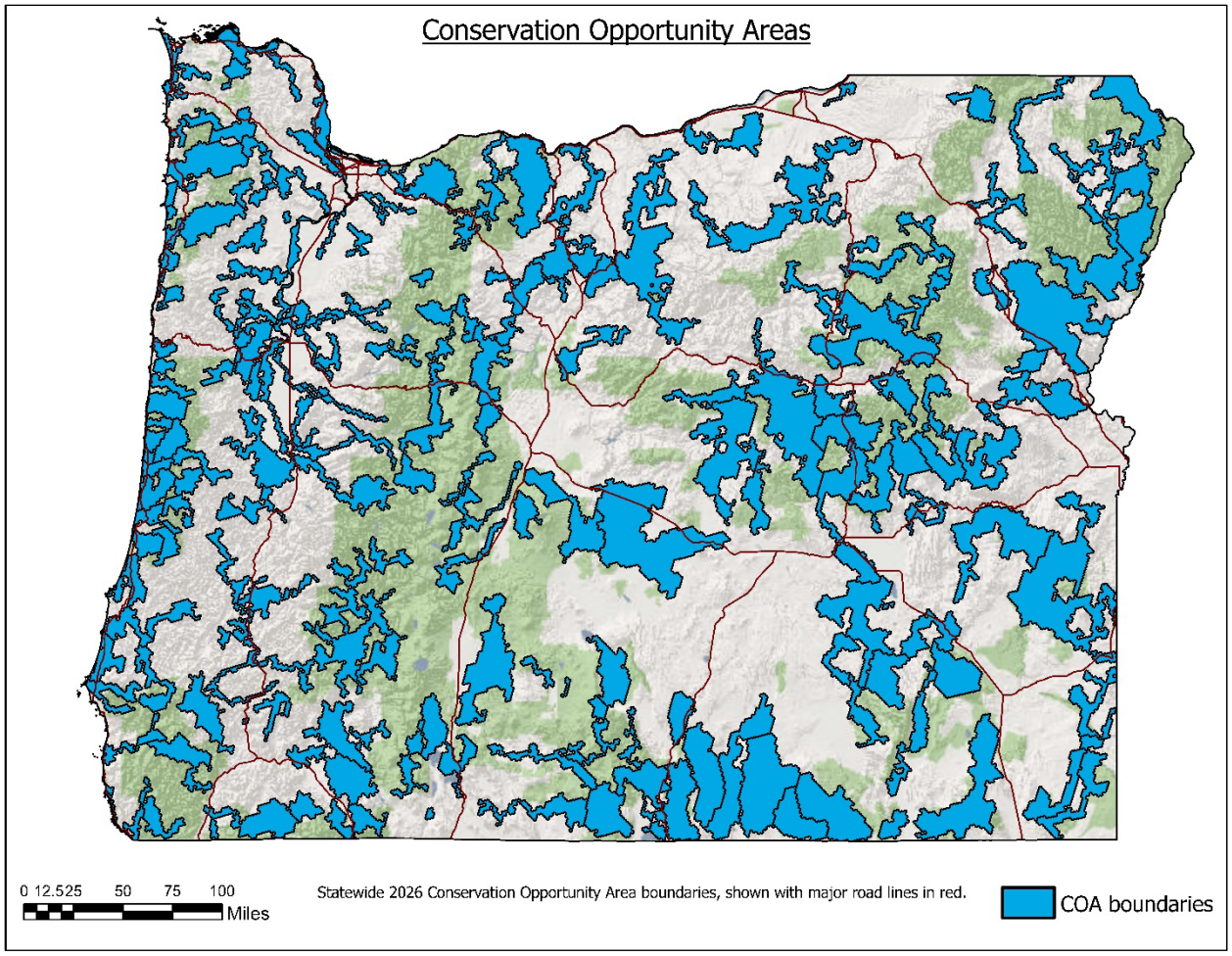

Figure 1: Map of statewide Conservation Opportunity Areas (blue).

CONSERVATION OPPORTUNITY AREAS

COA Overview

COA OVERVIEW

BACKGROUND

Landowners and land managers throughout Oregon can contribute to conserving fish and wildlife by maintaining, restoring, and improving habitats. These conservation actions benefit Species of Greatest Conservation Need (SGCN) and Key Habitats and are important regardless of location. However, focusing investments in prioritized areas like COAs can increase the likelihood of long-term success, maximize effectiveness over larger landscapes, improve funding efficiency, and promote cooperative efforts across ownership boundaries.

COAs are places where broad fish and wildlife conservation goals would best be met, and they have been designated for all ecoregions within Oregon's SWAP except the Nearshore ecoregion. COAs were delineated through a spatial modeling analysis and expert biologist review (**COA Methodology**). Continuing the voluntary approach to SWAP implementation, conservation actions will likely be implemented within COAs by a variety of partners (e.g., landowners, land managers, agencies, watershed councils, local land trusts, Soil and Water Conservation Districts, etc.) and will encompass all types of land ownership and management approaches. COAs were developed to guide voluntary conservation actions in Oregon. Land use or other activities within these areas will not be subject to any new regulations. The COA map, dataset, and other underlying information should only be used in ways consistent with these intentions.

The Nearshore ecoregion does not include any COAs, as all land masses within the Nearshore ecoregion are protected lands. The Oregon Islands National Wildlife Refuge Wilderness Area spans the entire length of the Oregon coast, and all rocks and islands within the refuge are designated National Wilderness Areas. These areas provide critically important habitat for many of Oregon's SGCN. In this ecoregion, conservation actions and investments can be focused in areas established under the **Rocky Habitat Management Strategy**, such as Marine Research Areas, Marine Gardens (Marine Education Areas), and Marine Conservation Areas, as well as other designated areas like Marine Reserves and Marine Protected Areas.

COAs were first developed in 2006 with the intention for them to be updated and revised with each iteration of the SWAP. The first revision of the COA process was completed in 2016 and in 2026, ODFW completed the second re-analysis of COAs, using new and updated science, data, and resources.

COA SUMMARY

Conservation Opportunity Areas cover a total of 29,341 square miles, which is roughly 30 percent of the state of Oregon.

COA Profiles

All 204 COAs have an associated COA profile that provides information on local SWAP priorities. This information includes a list of observed SGCN, Key Habitats, special features, recommended conservation actions, local conservation plans, and potential conservation partners. Web links are provided, when possible, to assist users in locating more detailed information and guidance on local conservation priorities. These profiles are supporting materials for SWAP implementation and are maintained outside of the formal review process of the SWAP. Information presented in these profiles is updated as needed to ensure that profiles maintain their utility for users over time, serving as a tool to assist practitioners in how to best meet SWAP goals locally.

Protected Areas

During the SWAP revision process, efforts were made to improve how COAs work alongside Oregon's existing protected areas. For example, restoration or enhancement projects may be restricted in federally designated wilderness areas, but these areas often provide protection of areas for SGCNs and Key Habitats. USGS **GAP Status 1** lands, including designated wilderness areas and National Park properties, are locations with "permanent protection from conversion of natural land cover" and are managed to allow natural disturbance events to proceed without interference.

During the SWAP revision process, all GAP Status 1 lands were removed from ODFW COAs, with a focus instead placed on identifying COAs in locations directly adjacent to protected areas. The intention was to ensure that COAs remain areas where practitioners can take conservation action, while also building upon the existing permanent protections provided in GAP Status 1 lands in an effort to enhance connectivity of Key Habitats and SGCN.

Public Lands

Sixty-two percent of the lands within COAs are owned and managed by government agencies. The majority are federal lands (93 percent), with state lands accounting for 6 percent and the remaining 1 percent split among local government agencies. COA profiles

include a Special Features section which highlights protected areas within each COA and links users to local conservation plans.

Urban Areas

Landscape features that increase livability for people also play an important role in sustaining native wildlife populations. Cities are often built in close proximity to features important to fish and wildlife habitats, such as the confluence of rivers. While urban development can fragment larger habitat areas, urban areas can contain key natural habitats and features that offer significant benefits to fish and wildlife.

The initial COA modeling process, undertaken in 2006, incorporated raw landscape development data, such as roads, census population areas, and Urban Growth Boundaries (UGBs) to avoid areas highly impacted by development. During the first COA revision in 2016, a focal area of the process was to improve how urban, or developed, areas were incorporated into the analysis. One improvement of the 2016 revised COA modeling process was the availability of species movement models developed by The Nature Conservancy (TNC). These models were generated using UGBs as well as transportation, transmission lines, and other development-related datasets, and they predicted the impact of developed areas on the ability of a species to move across the landscape. This allowed the 2016 COA re-analysis to focus on the impact of development to SGCN, rather than simply avoiding populated or developed lands.

The 2026 revision of COAs continued to emphasize the importance of including urban landscapes to help target conservation actions in developed areas and leveraged updated wildlife connectivity models developed by ODFW during the **Oregon Connectivity Assessment and Mapping Project**. More than 40% of the revised COAs (88 out of 204) include at least some land within a UGB, totaling over 330 square miles of urban areas included in COAs statewide. These urban COAs help to maintain fish and wildlife habitat and connectivity even within Oregon's developed landscapes.

CONSERVATION OPPORTUNITY AREAS

COA Methodology

COA METHODOLOGY

BACKGROUND

COAs were originally developed for the 2006 State Wildlife Action Plan (SWAP), using the best available information at the time and with the intention to reassess boundaries with each revision of the SWAP to incorporate updated information. ODFW re-analyzed COA boundaries for the 2016 SWAP and again for the 2026 SWAP, using new and updated science, data, and resources.

MARXAN ANALYSIS

Marxan is a planning tool that identifies conservation areas using a cost-benefit analysis, optimizing for conservation goals (targets) while minimizing detrimental environmental factors (costs). The output from Marxan is a selection of individual conservation area units based on their cost value relative to the overall targets for the whole region. The analysis runs on a grid scale (planning units), and Marxan allows for individual planning units to be manually seeded at the beginning of the analysis or locked in/out of the final output. The 2026 revision used the same one square mile hexagon units that were used for the previous re-analysis in 2016.

Main Elements of Marxan Analysis

Costs

Costs were chosen for inclusion in the analysis based on potential or realized negative impacts to fish and wildlife species or their habitats. Other considerations for inclusion of information as cost factors included availability of spatial data to represent a specific cost, quality of available data, publication date (favoring newer data), and relevance to present-day conditions.

Cost factors used in the 2026 analysis included:

- Agricultural land presence
- Aquatic pollution
- Burn probability (annual)
- Burn severity of past fires
- Existing landscape protections (**USGS GAP Status**)

- Impervious surfaces (development)
- Observed presence of invasive species
- Mining operations (geographic footprint)
- Modeled data for detrimental climate change impacts
- Solar field presence
- Terrestrial pollution
- Wetland drying trends

Cost factor source data were translated to fit the hexagon grid by calculating the proportion of coverage of each factor within each one square mile hexagon unit. For each cost factor, a numerical weighting value was assigned to represent that factor's impact on the landscape. Weight values were based on feedback from ODFW staff. All cost factors were compiled into a single cost value for each hexagon by multiplying each factor's proportion of coverage by its weight and then taking the sum of all the weighted factors:

$$Final\ Cost = \sum_{n=1}^{12} W_n(P_n)$$

Where P_n is the proportion of coverage for the *n*th cost factor and W_n is the respective weight for that cost factor

Targets

Marxan targets were chosen for inclusion in the analysis based on potential or realized presence of Species of Greatest Conservation Need (SGCN) and Key Habitats. Targets were selected based on discussions with regional and local experts and included consideration of the targets used in 2016 analysis. Other considerations for inclusion of information as target factors included availability of data to represent a specific target, quality of available data, publication date (favoring newer data), and relevance to present-day conditions.

Target factors used in the 2026 analysis included:

- Modeled data for climate stability
- Environmental Justice Index (EJI)
- Key Habitat presence (based on the draft 2026 Key Habitat map)
- Intact connected habitats expected to support diffuse wildlife movement
- Observed presence for each SGCN

- Modeled range for each SGCN (**USGS GAP Species Data**)

Target source data were translated into the hexagon grid such that each target was considered separately (i.e., a single hexagon could have coverage for multiple, overlapping targets). Coverage was calculated based on the data type: for polygon and raster data the proportion of coverage was calculated, while for point data (SGCN presence) a binary presence/absence value was used to represent whether the species was observed anywhere within a given hexagon. The SGCN observation and range datasets and the Key Habitat datasets used for each ecoregion included only SGCN/Key Habitats designated for that ecoregion.

In total, the 2026 Marxan analysis included over 300 separate data layers statewide.

Calibrations

Ecoregion-specific targets and target goal values

For each target, a goal value was set representing the desired proportion of the target's total presence in each ecoregion. These goals were based on the amount and distribution of each target across the landscape, factoring in target rarity and degree of endangerment to ensure that each target was treated equally. Targets should be represented in multiple COAs (where possible) as a hedge against stochastic events (e.g., disease, fire) and to buffer against the anticipated impacts of climate change, with an overarching intention to provide for long-term viability of SGCN and Key Habitats across the state.

Conservation target data sets were tailored to each ecoregion such that the SGCN observation datasets, SGCN range datasets, and the Key Habitat datasets used for an ecoregion included only those species or habitats designated as SGCN or Key Habitats for that ecoregion. Goal values were determined for each SGCN based on each species' conservation status and distribution in Oregon, with more imperiled species and species with smaller distributions receiving higher goal values. These goal values help drive the selection of COAs. For example, if a species in a given ecoregion had a goal value of 20%, the Marxan output (the full set of chosen hexagon units) would be required to include at least 20% of that species' range within the chosen hexagons for that ecoregion. Goals for Key Habitats were generated using an overall range of 30 percent (the recommended minimum amount of habitat needed to sustain imperiled populations) to 60 percent (the recommended maximum amount of habitat to be included while still prioritizing distinct areas).

Boundary Length Modifier and Number of Iterations

The Boundary Length Modifier is used to determine the relationship of the size of conservation areas versus the number of distinct conservation areas (e.g., few large areas vs. many smaller areas). The Number of Iterations value represents the number of randomly selected comparisons that Marxan will make during each modeling run. Each ecoregion was calibrated separately for each of these values to optimize the results without compromising the total cost or data processing efficiency.

Refining Results

The Marxan analysis was run for each ecoregion independently. The raw results were refined using an iterative process that considered several sources of additional information:

- Initial results were filtered to exclude GAP Status 1 areas. GAP Status 1 lands are areas managed for biodiversity where natural disturbances are allowed to proceed. In Oregon, GAP 1 lands include designated wilderness areas and Crater Lake National Park. These areas have permanent protection from conversion of natural land cover and on-the-ground habitat and restoration work is typically prohibited, so opportunities for the development of conservation projects is limited compared to other areas in the state.
- The 2026 initial Marxan results were overlaid with the 2016 initial Marxan results and overlapping hexagons were flagged for automatic inclusion in the draft 2026 COA boundaries for reviewer feedback. Hexagons selected in two separate analyses undertaken ten years apart are likely indicative of areas with consistently high conservation value.
- The final 2016 COA boundaries were overlaid with the initial Marxan results from 2016 and 2026. Hexagons from the 2016 COA boundaries that did NOT overlap with the initial Marxan output from either the 2016 or the 2026 analyses were flagged for automatic exclusion from the draft 2026 COA boundaries for reviewer feedback. Hexagons selected in neither of two separate analyses undertaken ten years apart are likely indicative of areas with consistently low conservation value.
- The results of modeling and refinement process were compiled into draft boundaries for internal and external review. Draft 2026 COA boundaries were adjusted using feedback from two separate review periods in April and again in May/June of 2025 to produce final COA boundaries for the 2026 SWAP. All feedback that was relevant to COA boundaries was evaluated and specific hexagons that

were highlighted were considered for edits to COA boundaries. In cases where reviewers provided detailed, local knowledge of landscape suitability for SGCN or other factors that ran counter to the results of the modeling and refinement process, the reviewer feedback took precedence.

After selecting hexagons to include in the final product, boundary lines were then drawn to delineate distinct COAs. All 2026 COA boundaries were clipped to the Oregon state boundary.

CONSERVATION OPPORTUNITY AREAS

COA Boundaries

COA BOUNDARIES

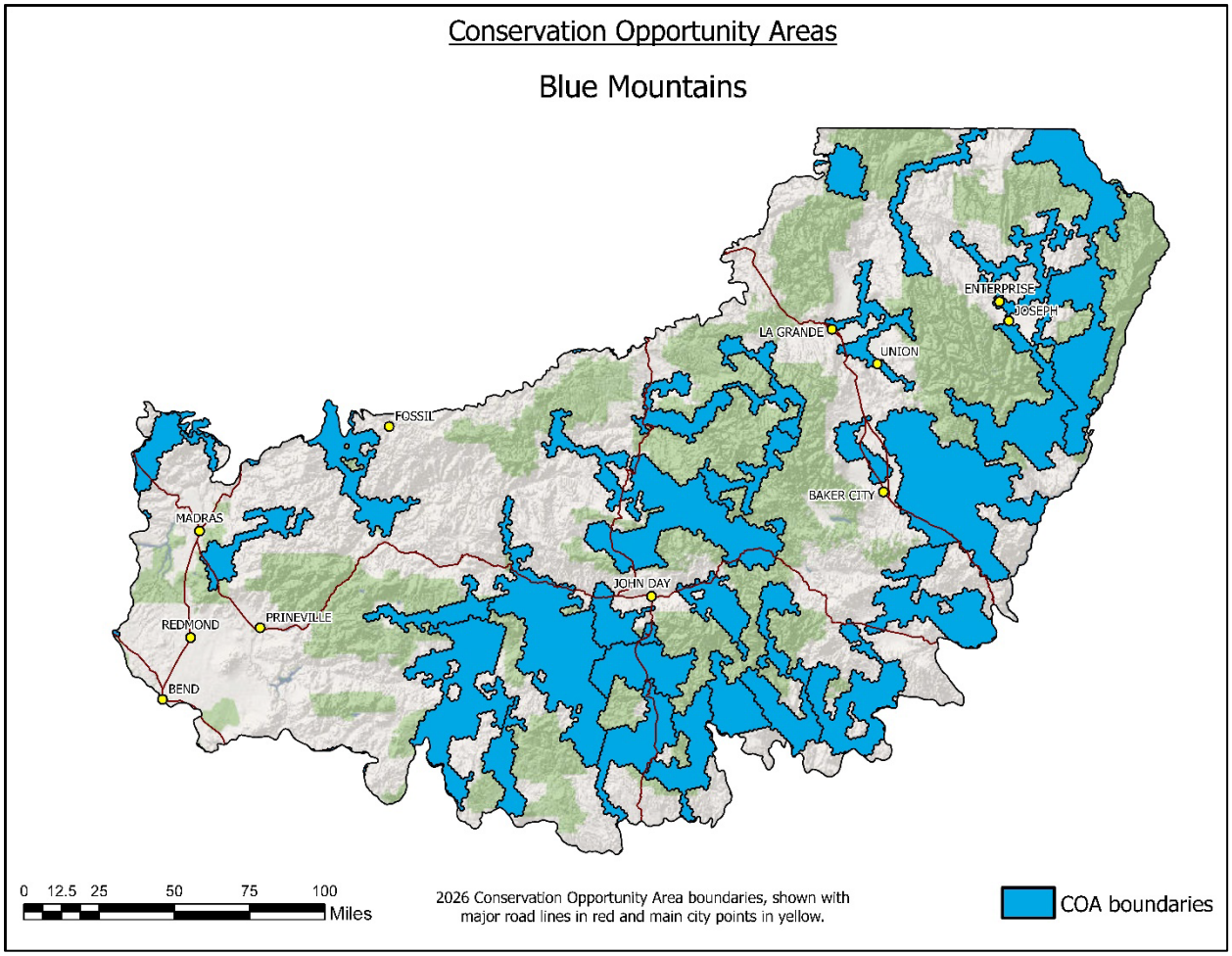

Figure 1: Conservation Opportunity Area boundaries (blue) in the Blue Mountains ecoregion.

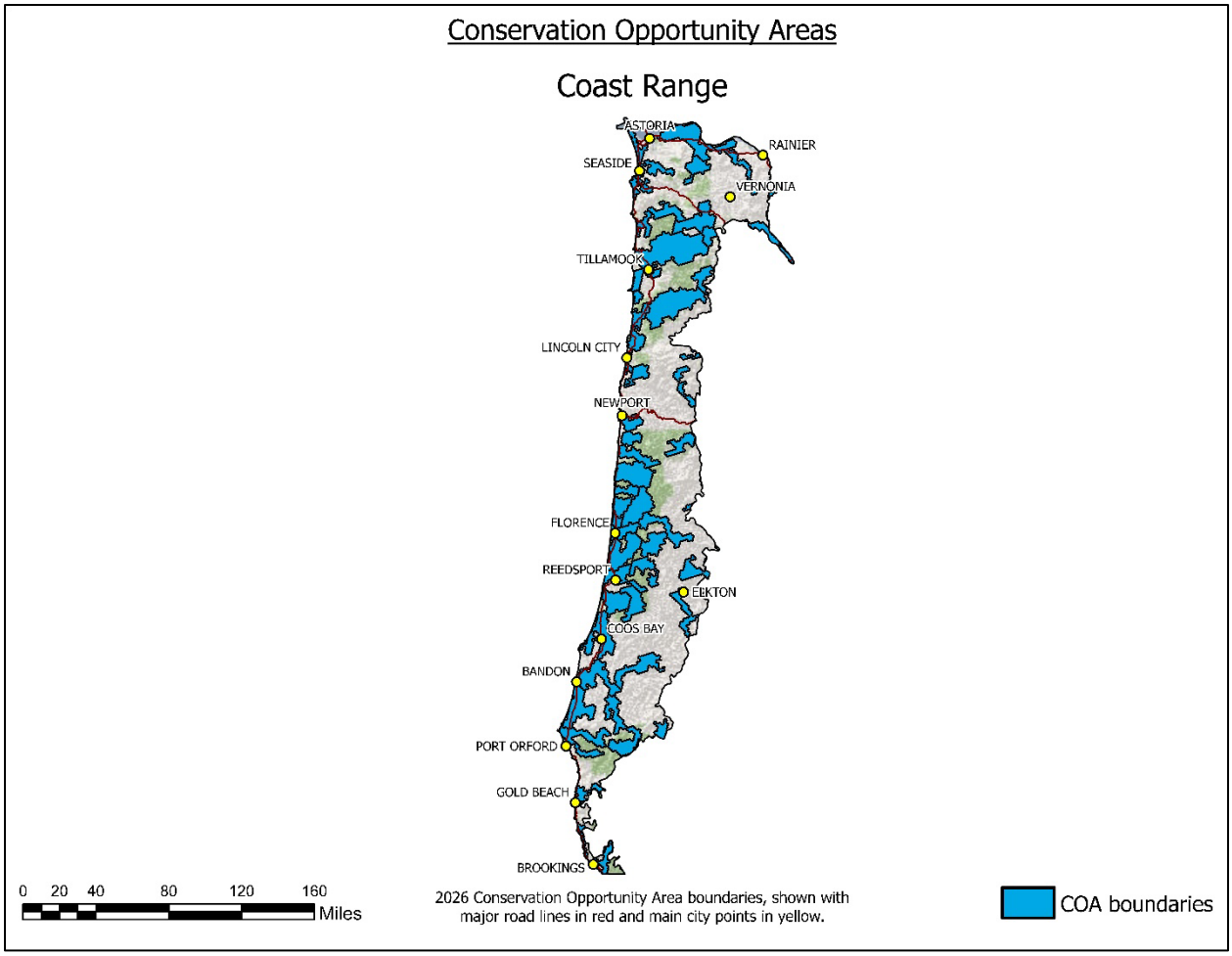

Figure 2: Conservation Opportunity Area boundaries (blue) in the Coast Range ecoregion.

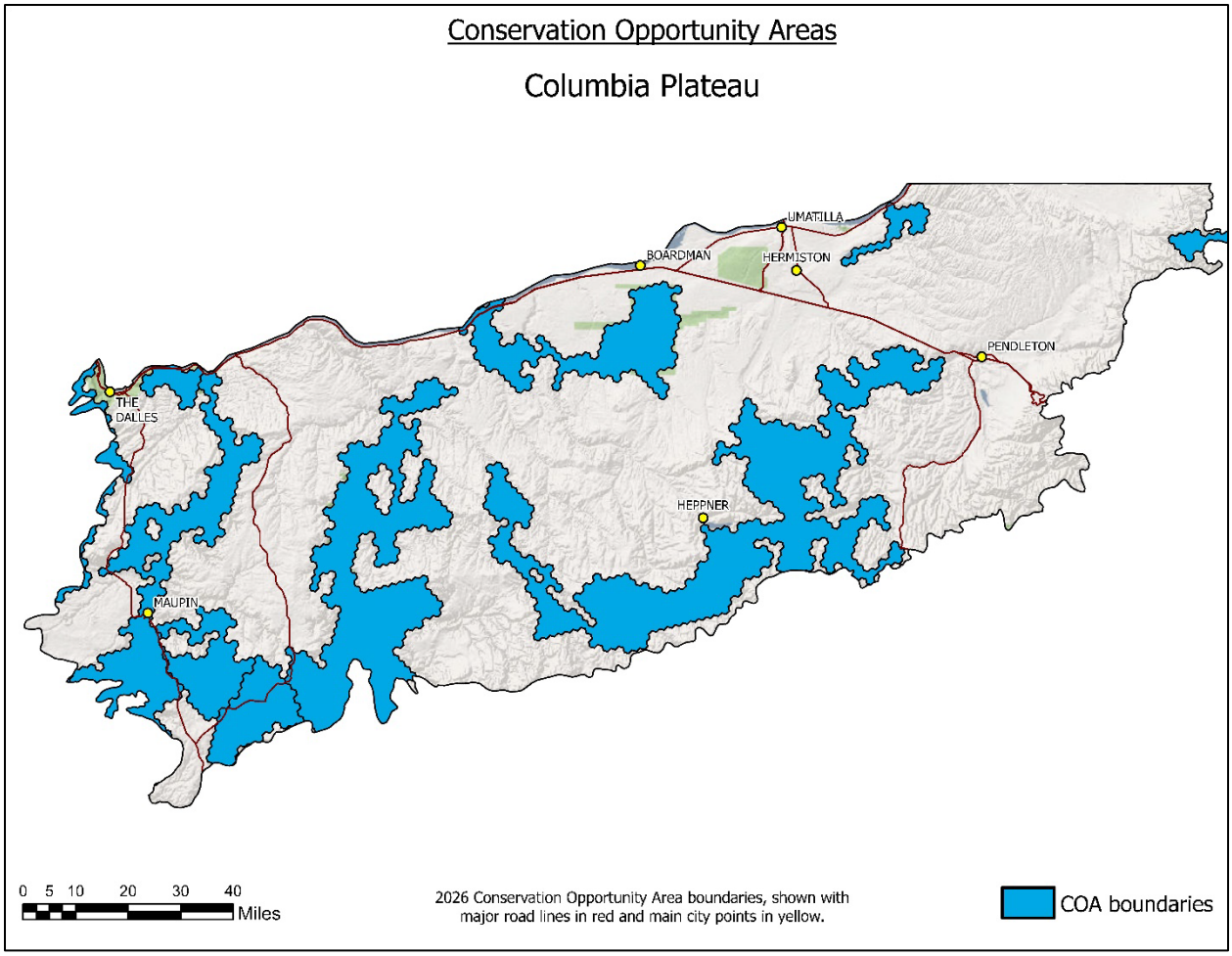

Figure 3: Conservation Opportunity Area boundaries (blue) in the Columbia Plateau ecoregion.

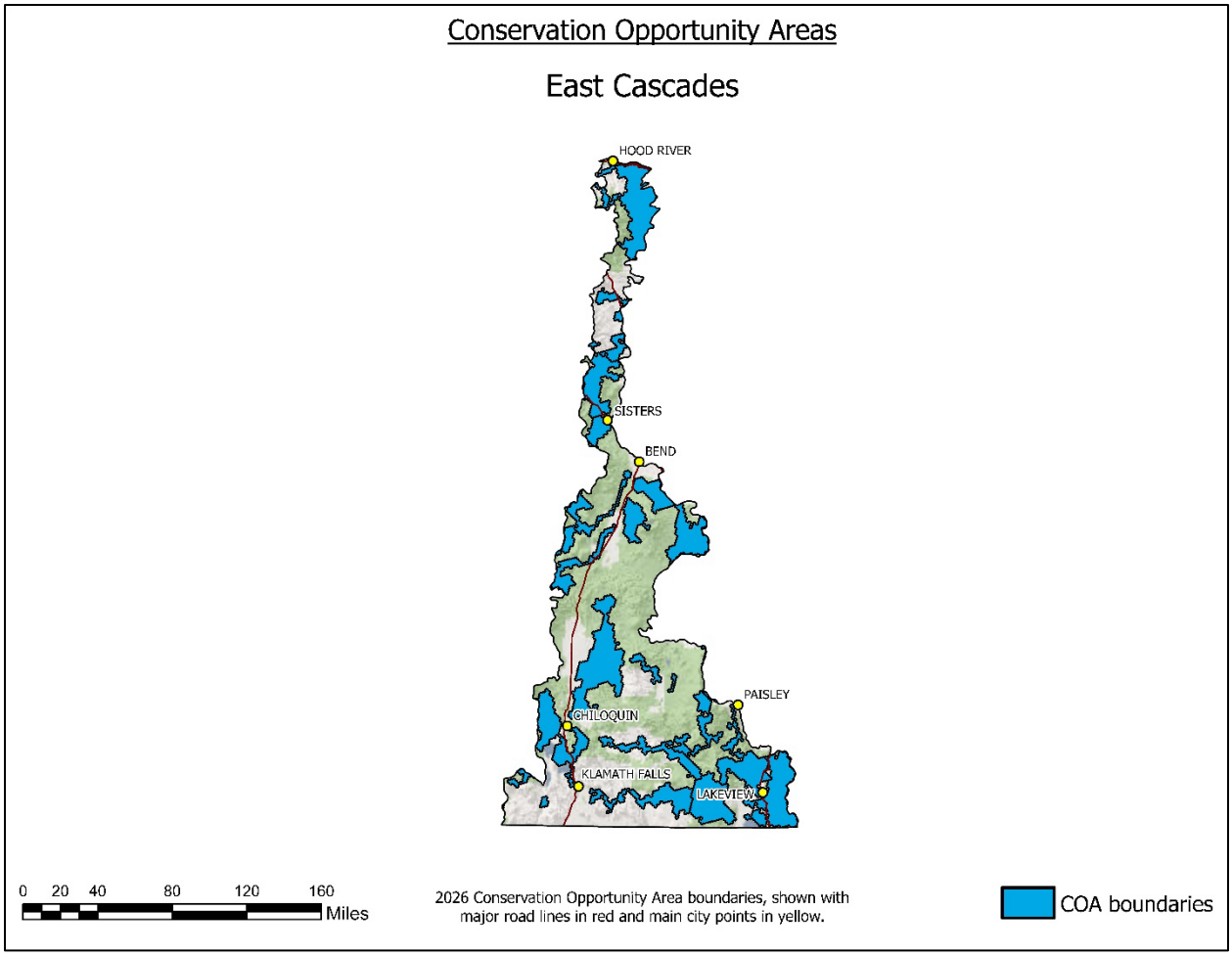

Figure 4: Conservation Opportunity Area boundaries (blue) in the East Cascades ecoregion.

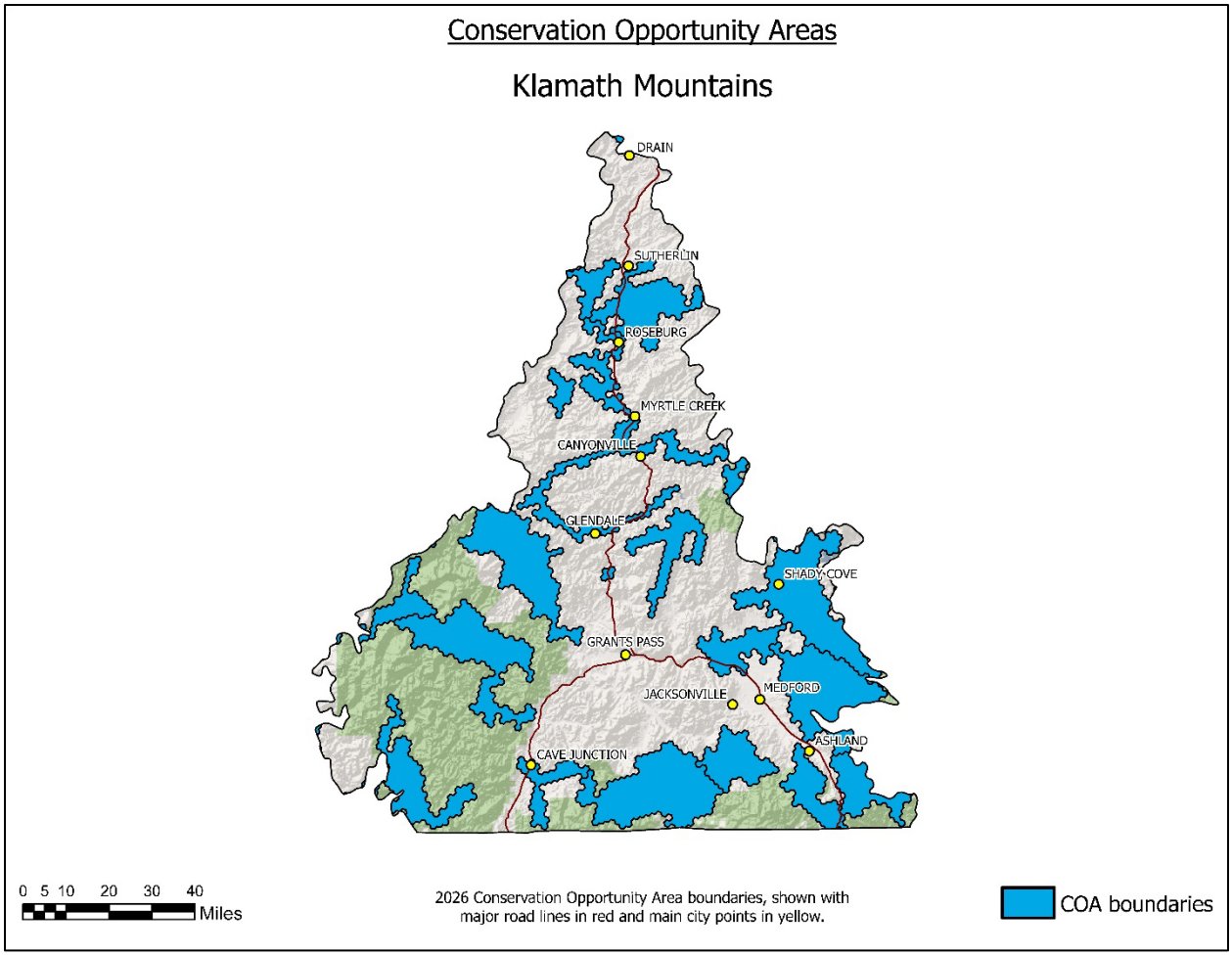

Figure 5: Conservation Opportunity Area boundaries (blue) in the Klamath Mountains ecoregion.

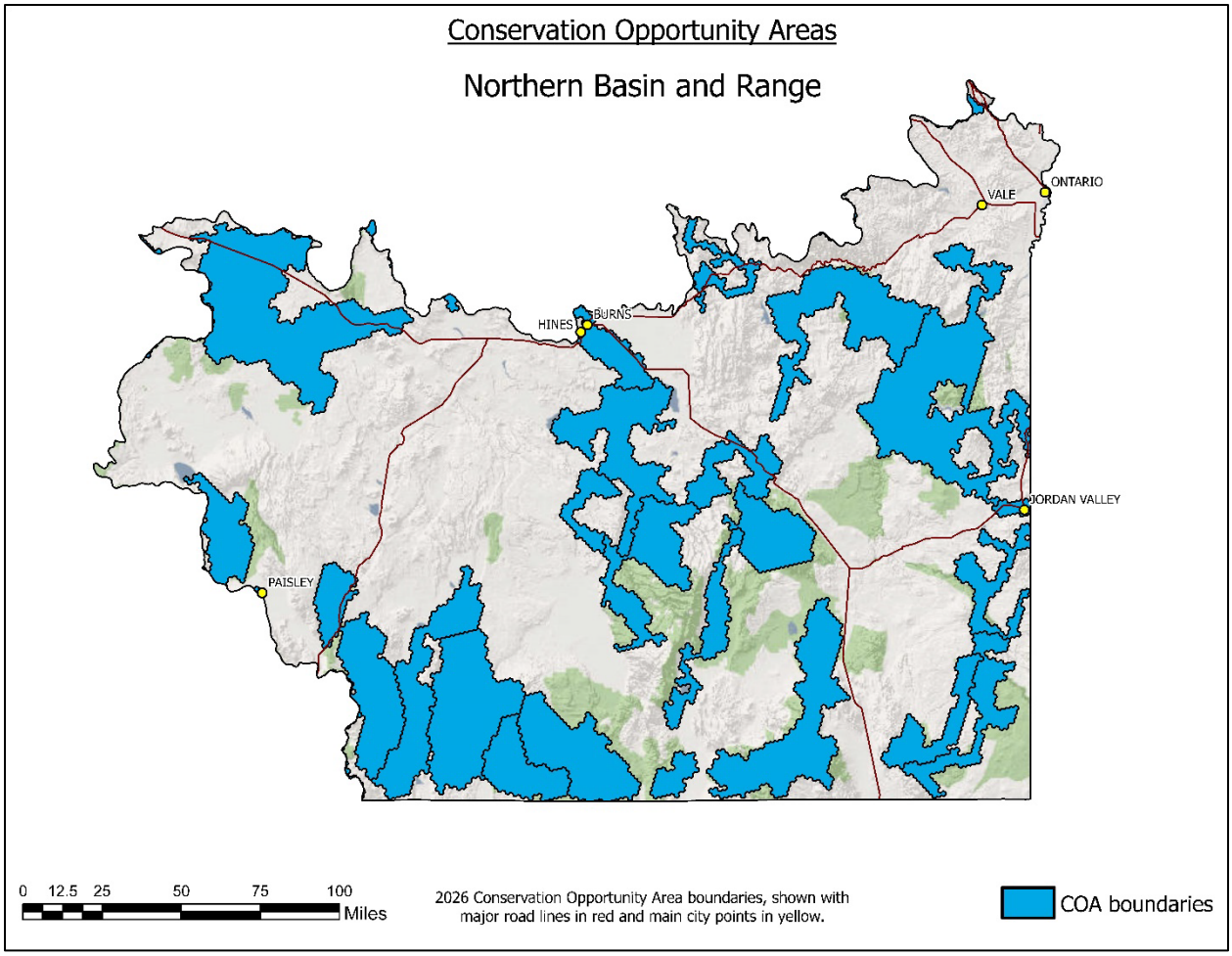

Figure 6: Conservation Opportunity Area boundaries (blue) in the Northern Basin and Range ecoregion.

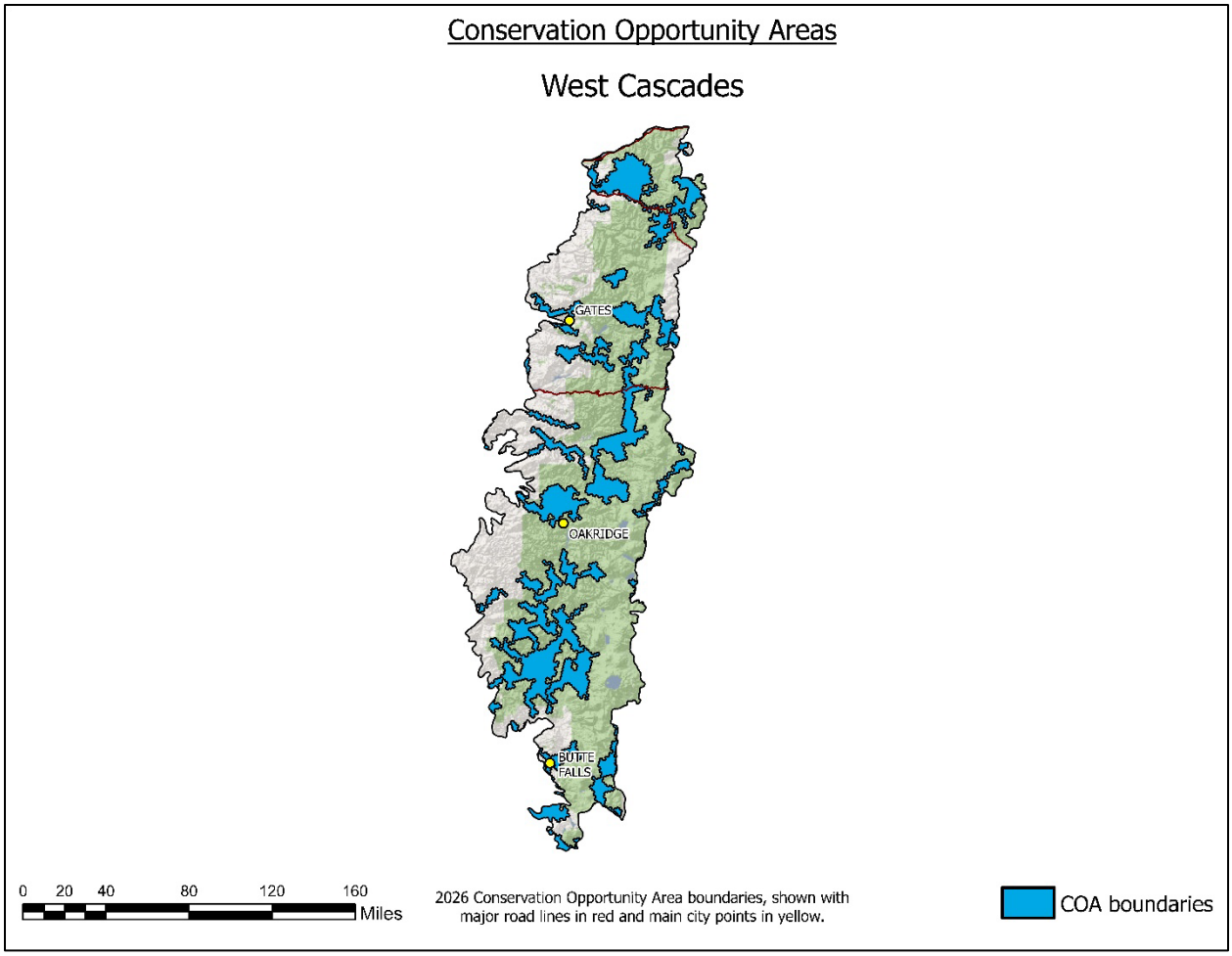

Figure 2: Conservation Opportunity Area boundaries (blue) in the West Cascades ecoregion.

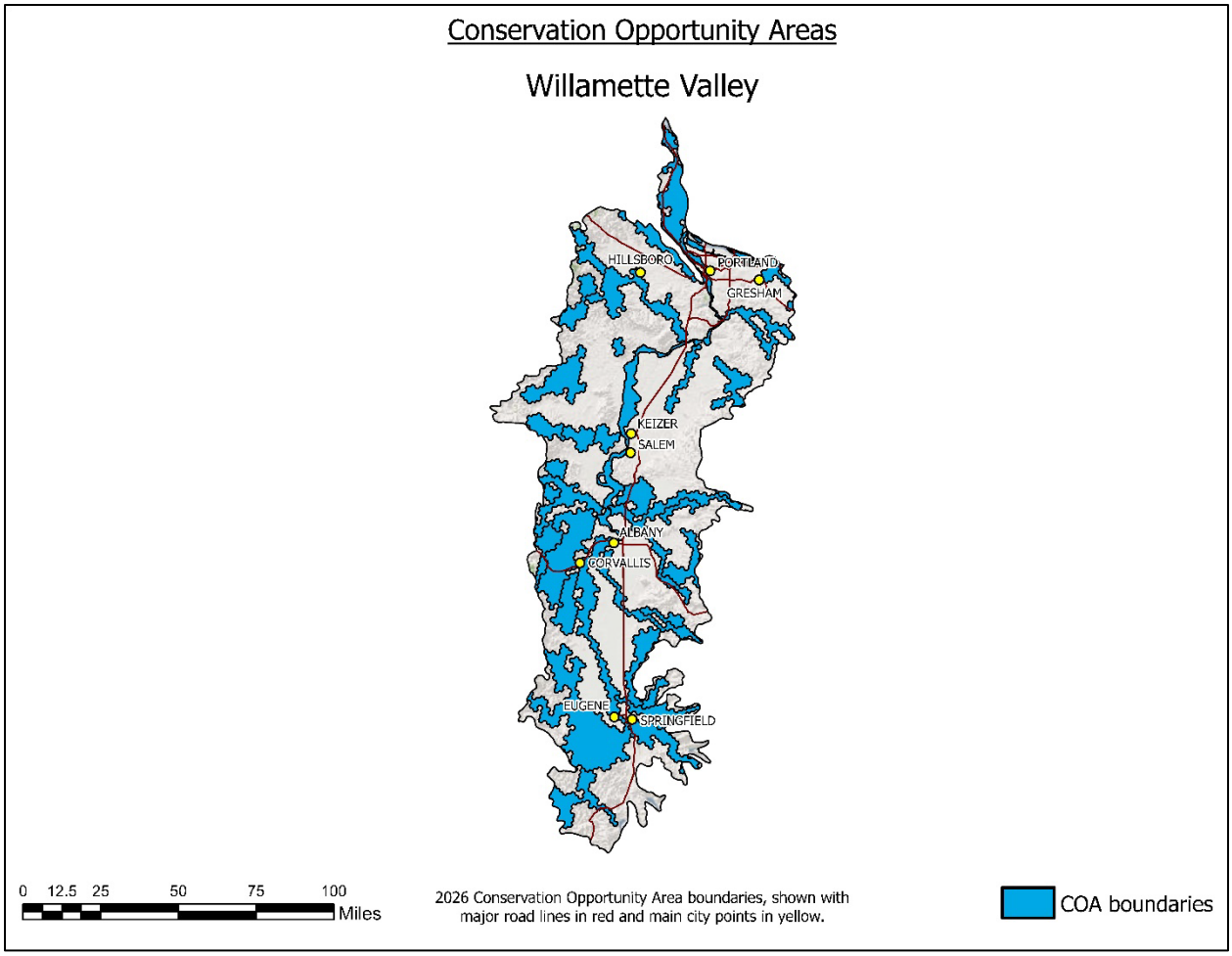

Figure 3: Conservation Opportunity Area boundaries (blue) in the Willamette Valley ecoregion.