

Oregon Department of State Lands Endangered Species Management Plan for the Marbled Murrelet



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Table of Contents

Executive Summary.....	3
Introduction	3
ODSL Land Classifications.....	4
Management Plans for each ODSL Land Classification.....	7
Elliott State Forest Management Plan	7
Introduction	7
Current Habitat Conditions	7
Habitat Conservation Plan	11
Certified Forestlands Management Plan (covered in ODF ESMP)	12
South Slough Reserve Management Plan.....	12
Introduction	12
Current Contributions to Conservation	13
Current Requirements, Rules and Policies.....	14
Social and Economic Impacts.....	15
Management for Conservation.....	15
Non-certified Forestlands Management Plan.....	15
Planning Process and Maintenance of Plan.....	16
Development, Review and Approval Process	16
Monitoring, Reporting and Review.....	16
Relation to Other Plans	16
Other State Endangered Species Management Plans	16
Federal Recovery Plans	17
Conclusion.....	17
Literature Cited	18

Executive Summary

The Oregon Department of State Lands (ODSL) owns approximately 108,171 acres within the marbled murrelet nesting habitat zone. The ownership has four classes of terrestrial land which vary in their management goals and responsibilities. ODSL in collaboration with Oregon Department of Fish and Wildlife (ODFW) defined the conservation roles for their four land classes, in accordance with OAR 635-100-0140, as follows: 1) Elliott State Forest (ESF; 83,311 acres in habitat range) contributes to conservation, 2) Certified forestlands (17,846 acres) , contributes to conservation, 3) South Slough National Estuarine Research Reserve (South Slough Reserve; 6,972 acres) has a conservation role, and 4) Non-certified forestlands (42 acres) follows take-avoidance rules.

The ESF contains approximately 83,311 acres in the murrelet habitat range. There has been no timber harvest in the ESF since 2017 and none is expected until a Habitat Conservation Plan (HCP) and Incidental Take Permits are completed. The HCP and Incidental Take Permit are scheduled to be completed by July 1, 2023. If unforeseen circumstances arise and ODSL decides to harvest timber prior to the issuance of an Incidental Take Permit, ODSL will employ a take-avoidance strategy as specified in the murrelet survival guidelines described in OAR 635-100-137.

Approximately 17,846 acres of the certified forestland base is in the murrelet habitat zone. ODF is currently developing an HCP that also includes ODSL's certified forestlands. Prior to completion of the HCP, forest management strategies for ODSL's certified forestlands will be consistent with ODF's Endangered Species Management Plan (ESMP) for Marbled Murrelets.

South Slough Reserve protects lands for conservation, research, education, and stewardship. South Slough Reserve includes both estuarine and upland habitat, contributing to murrelet conservation through improving both forage fish health and increasing potential nesting sites.

Given size and location, ODSL's 42 acres of non-certified lands will not contribute towards murrelet conservation. There is no planned timber harvest on non-certified lands within the habitat range. If timber harvest were to take place, the murrelet management approach will be to follow survival guidelines as specified in OAR 635-100-0137.

Although all these land classes differ in management goals and responsibilities, together they provide important habitat strongholds for the conservation of the murrelet currently and into the future. This plan was compiled by South Slough Reserve and ODSL staff under consultation with ODFW staff and reviewed by the Reserve Manager and the Director of ODSL.

Introduction

In July 2021, the Oregon Fish and Wildlife Commission (Commission) voted to reclassify the marbled murrelet (*Brachyramphus marmoratus*) from threatened to endangered under the Oregon Endangered Species Act (ORS 496.171 to 496.192 and 498.026). The reclassification decision requires state agencies that own, manage, or lease property, and whose lands could play a role in murrelet conservation, follow the survival guidelines until they develop an endangered species management plan specific to their lands. In November 2021, the Commission identified ODSL as an agency that owns land with murrelet habitat in Oregon and has a role in the conservation of this species (Wahl letter, November 12, 2021).

Marbled murrelet life history stages require both terrestrial and marine habitat types. ODSL has no influence on marine habitat threats such as oil spills, gillnet entanglement, ocean acidity, etc. that can

affect adult murrelet survival and breeding success as well as the global drivers of climate change on either habitat type. Actions on ODSL lands can protect and improve estuarine habitat, where estuarine production benefits nearshore forage fish availability, and terrestrial habitat conditions that contribute to the conservation of the species (ODFW, 2021).

This document combines Endangered Species Management Plans (ESMP) for four classes of terrestrial lands currently owned by ODSL. While each management plan varies in content, each provides a brief description of the following where applicable:

- location of the state lands
- purpose of the state lands
- current conditions and current management plans
- role the state lands will play in conservation of the species and how the agency defined the role
- current requirements, rules and policies applicable to the agency's program
- how the agency will manage the state land to achieve its defined role
- how the agency will monitor implementation of the plan if any

In addition to the specific management plans for each land class, this document outlines: the planning and approval process; monitoring, reporting and adaptive management of the ODSL plan; and how the ODSL plan relates to other state agency endangered species management plans, federal recovery plans and other recovery efforts.

ODSL Land Classifications

ODSL owns four classes of terrestrial land within the murrelet habitat range with varying management goals and responsibilities: 1) Elliott State Forest, 2) Certified forestlands, 3) South Slough Reserve, and 4) Non-certified forestlands (Figure 1, Table 1). ODSL in collaboration with ODFW defined their conservation role in accordance with OAR 635-100-0140 for their four land classes (Table 1). The Elliott State Forest is the largest land class under ODSL ownership (83,311 acres), however, ODSL is currently in the process of developing a habitat conservation plan and transferring ownership to a new state authority as a research forest. Certified forestlands also contribute to a large area within the habitat range (17,846 acres). These are managed by the Oregon Department of Forestry (ODF) and are included in the ODF murrelet management plan. Non-certified forestlands mostly fall outside the habitat range, with only 42 acres within the range. South Slough Reserve is therefore ODSL's largest long-term contribution to murrelet conservation under this plan (6,972 acres; Table 1).

Table 1. ODSL terrestrial land classification summary, including role in conservation of murrelet, current management use, total acres owned by ODSL and acres within habitat range (within 35 miles of Pacific coast; OAR 635-100-0137).

<i>ODSL Land Class</i>	<i>Conservation Role</i>	<i>Management Use (purpose)</i>	<i>Total Acres</i>	<i>Acres within 35 miles of coast</i>
Elliott State Forest	Contribute towards conservation	Research, timber, conservation	83,311	83,311
Certified Forest Lands	See ODF's MAMU ESMP	Timber	33,005	17,846
South Slough Reserve	Conservation	Research, education, stewardship, recreation	6,972	6,972
Non-Certified Forest Lands	Take-avoidance	Timber	8,013	42

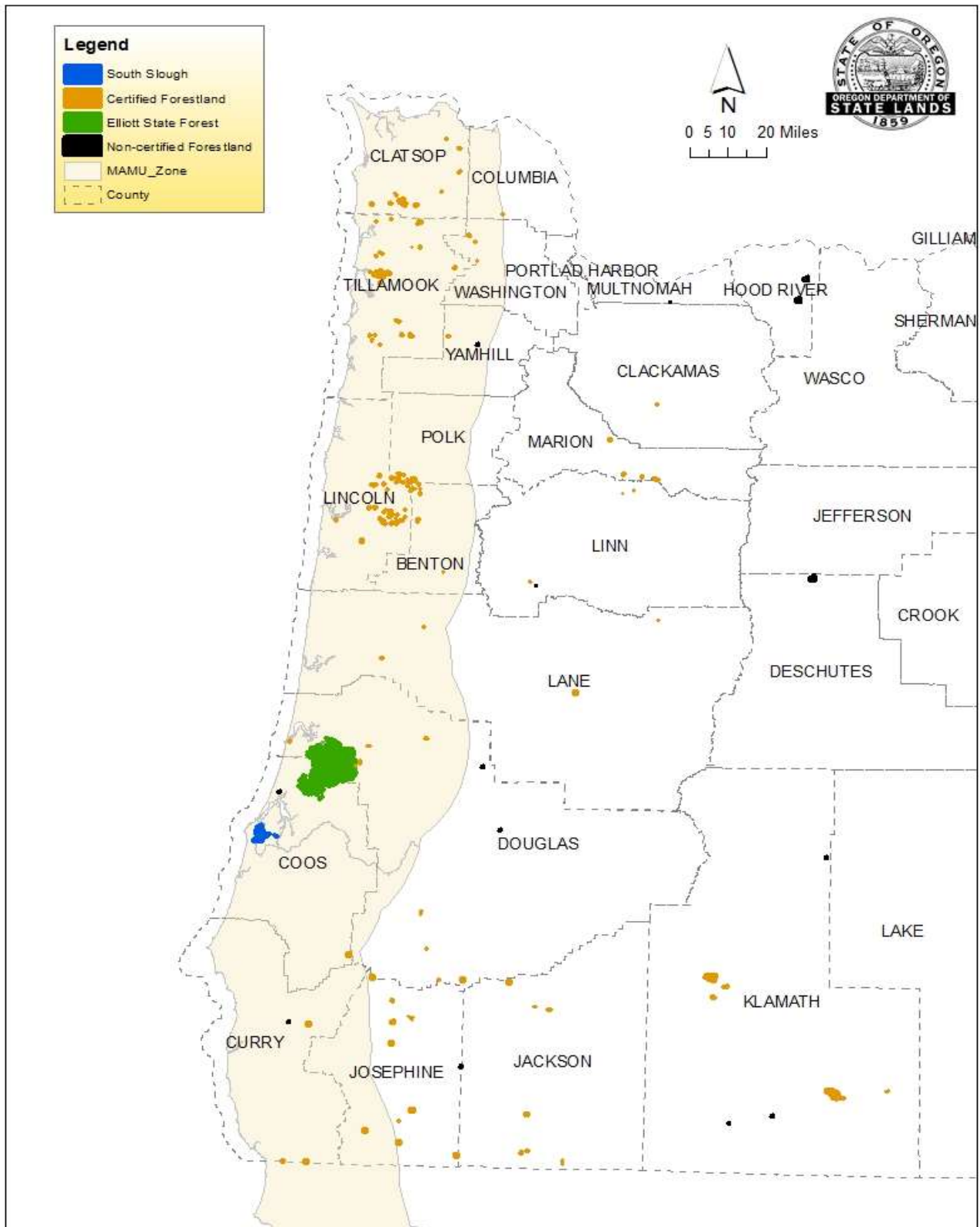


Figure 1. ODSL ownership within murrelet habitat range (35 miles of Pacific coast; yellow shading) for the four land classes: South Slough Reserve (blue), Elliott State Forest (green), Certified forestlands (orange) and Non-certified forestlands (black).

Management Plans for each ODSL Land Classification

Elliott State Forest Management Plan

Introduction

The Elliott State Forest (ESF) was established in 1930 as the first state forest. The Oregon Constitution (Article VIII, Section 5) authorizes the State Land Board to manage the ESF “with the objective of obtaining the greatest benefit for the people of this state, consistent with conservation of this resource under sound techniques of land management.”

At the State Land Board’s direction, ODSL and Oregon State University (OSU) have worked together since 2019 to explore transforming the ESF into a publicly owned state research forest. The Oregon Legislature in 2022 passed Senate Bill 1546, which establishes an independent public agency to oversee the forest, sets expectations for public accountability and transparency, and locks in the Elliott’s ongoing contributions to conservation, economic growth, recreation, education, and forest research. ODSL and OSU are continuing collaborative work to establish the Elliott State Research Forest.

The ESF is comprised of approximately 83,311 acres located in the Oregon Coast Range near the communities of Reedsport, Lakeside, North Bend and Coos Bay. Topography of the forest is generally rugged and highly dissected with steep, narrow canyons, although the southeast part of the forest is less steep. Across the forest, slopes face in all directions, with no predominant aspect. Elevations range from near sea level to 2,100 feet above sea level. The predominant conifer tree species throughout the forest is Douglas-fir, with minor amounts of western hemlock, western red cedar, and Sitka spruce. Approximately half of the forest is comprised of managed plantations, while the other half is primarily mature forest originating from the Coos Bay Fire of 1868.

The entire ESF is in the murrelet habitat zone and contains a considerable amount of suitable habitat according to the 2017 USFS habitat probability model (Lorenz et al. 2021).

There has been no timber harvest in the ESF since 2017 and none is expected until a Habitat Conservation Plan (HCP) is completed and approved by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). This plan is scheduled to be completed and an incidental take permit (ITP) issued July 1, 2023. The term of the permit is 80 years. If unforeseen circumstances arise and ODSL decides to harvest timber prior to the issuance of the ITP, ODSL will employ a take-avoidance strategy as specified in the MAMU survival guidelines described in OAR 635-100-137.

There are no trailheads or designated campgrounds in the ESF. However, there is dispersed camping and general recreational use of the forest which leads to trash being left in various locations. Therefore, to help deter the presence of Corvids, ODSL has and will continue to remove trash from the ESF.

Current Habitat Conditions

In the development of a habitat conservation plan, murrelet habitat and survey data were compiled from ODF and Oregon State University. Excerpts and Figure 2-11 from Chapter 2 of the October 2022 Elliott State Forest Public Draft HCP, summarize current habitat and occupancy data below,

“The Elliott State Forest has a relatively large population of nesting marbled murrelets, and the area is considered important to the distribution of marbled murrelet on the Oregon Coast (U.S. Fish and Wildlife Service 1997).

ODF has conducted surveys within potentially suitable marbled murrelet habitat since at least 1992. Surveys were conducted primarily as part of operational planning for thinning and harvest units, following the standard USFWS-approved survey protocol (Evans Mack et al. 2003). The survey data does not represent a complete inventory of the Elliott State Forest. In addition, very few nest sites have been monitored over time. Surveys typically were stopped within a marbled murrelet management area once sites were determined to be occupied. However, collectively, the data show that the Elliott State Forest contains a relatively high concentration of marbled murrelets, with 120 survey sites with “significant observations” (313 total observations, with multiple observations on some sites) indicating marbled murrelet likely nesting based on behavior (Figure 2-11).

Survey sites consist of a single fixed survey point from which observers seek to detect marbled murrelets either visually or audibly (Evans Mack et al. 2003). Survey sites are selected to cover all potentially suitable habitat within 0.25 mile of proposed activities (Evans Mack et al. 2003). Multiple surveys are conducted. Based on the defined station effective area, each survey station can cover approximately a 200-meter (656 feet) radius circle (approximately 13 acres) under ideal circumstances. In practice, stations typically cover less area due to topography and other limitations. Of the 6,965 survey sites completed on the Elliott State Forest since 1992, no murrelets were detected in 79 percent of the survey sites (5,479), presence was detected in 17 percent of the sites (1,172), and “significant observations” indicating nesting were detected in 4 percent (313) of the survey sites.

The data include multiple surveys of the same stations, and multiple birds may be observed in a single visit. Therefore, the survey data does not represent a count of murrelets nesting on the Elliott State Forest, but rather a cumulative count of activity. In addition, it is possible that some locations, where occupancy was assumed in the past based on survey data, have since been harvested and no longer provide suitable habitat. Because murrelet surveys have not been systematically conducted across the plan area, all modeled habitat is considered for this HCP to be potentially occupied by nesting marbled murrelets.

In addition, Kim Nelson, Senior Faculty Research Assistant at Oregon State University (OSU), has conducted surveys in the Elliott State Forest using similar protocols (Oregon State University 2021). Based on those surveys, 15,151 acres met the definition of occupied marbled murrelet habitat. There was overlap between the areas determined to be occupied by Kim Nelson and those determined to be occupied by ODF.

Dr. Matt Betts and others at OSU combined Kim Nelson’s data with ODF data in a process described in Appendix 11 of the OSU 2021 study. The combined areas where marbled murrelet significant (below-canopy) behaviors were observed were combined into an “occupied” data layer shown in Figure 2-11.

The most recent designation of marbled murrelet critical habitat by USFWS only included a few acres (<5) within the HCP plan area (U.S. Fish and Wildlife Service 2016). However, at the site-specific level of planning, such as this HCP, site-specific habitat conditions and survey results are the most important consideration when evaluating habitat values.

In 2020, Betts et al. (2020a) created an updated marbled murrelet habitat model, using a Maxent modeling package that relies on positive occurrence data to train the model to find other similar habitat types within the modeled area, thereby more accurately representing habitat

based on actual use within the plan area. The amount of modeled habitat within the permit and plan areas is presented in Table 2-6. Figure 2-11 illustrates the spatial distribution of modeled habitat. The modeling data, as with all models, carry some uncertainty and are best considered collectively with survey and site-level forest inventory data to determine habitat suitability and overall conservation value. “(October 2022 HCP draft, page 2-33)

Table 2-6 Modeled Marbled Murrelet Habitat in the Plan and Permit Area

Modeled Value	Permit Area (Acres)¹	%	Plan Area Outside of Permit Area (Acres)¹	%	Total Plan Area (Acres)¹	%
Designated Occupied	21,475	26%	0	0%	21,475	23%
Modeled Occupied	16,354	20%	2,651	27%	19,005	21%
Non-Habitat	44,713	54%	7,161	73%	51,874	56%
TOTAL	82,542	100%	9,812	100%	92,354	100%

Source: based on Oregon State University 2021

¹Acres do not match exactly with permit/plan area acres due to differences in how models were calculated. All numbers are approximate.

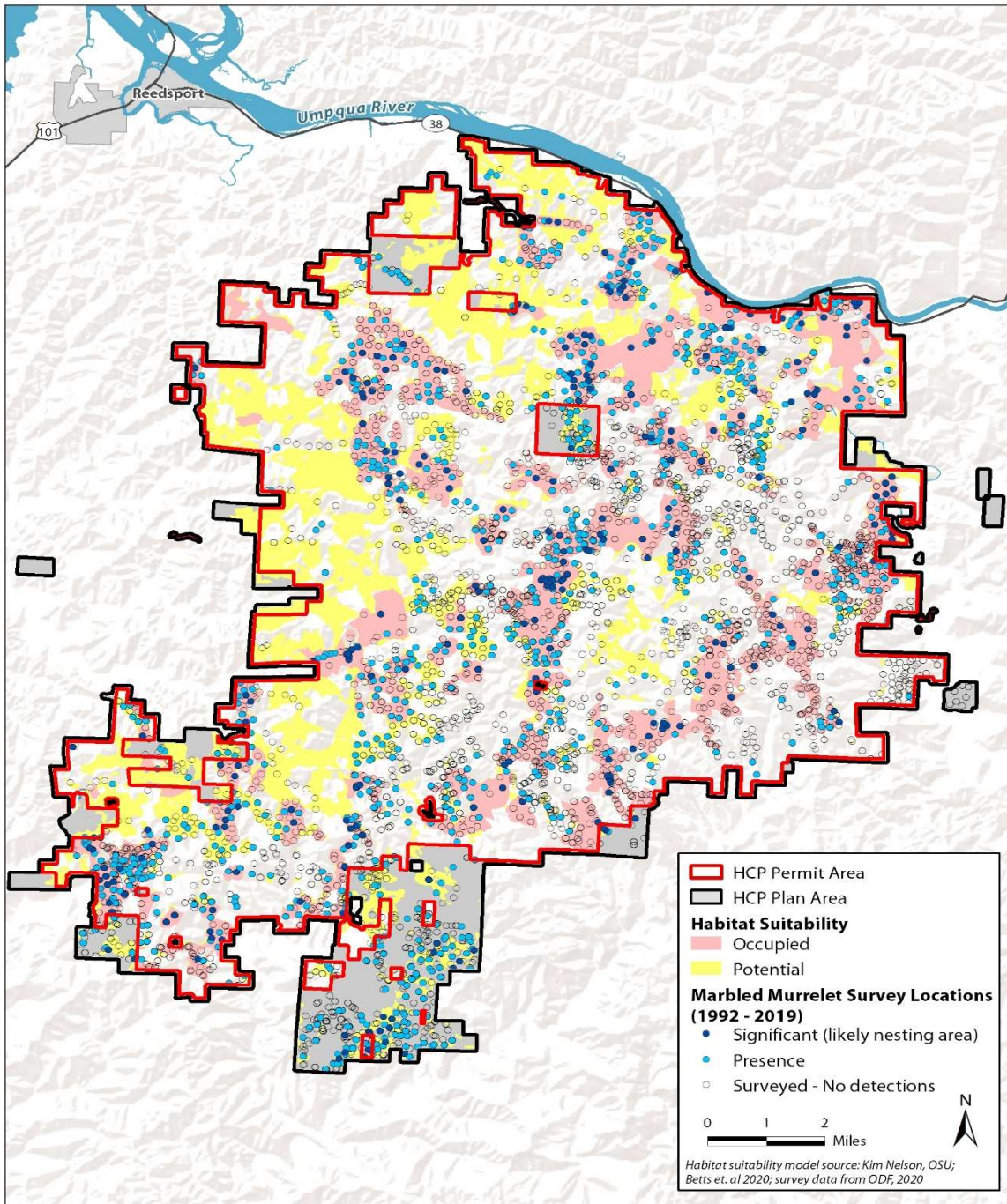


Figure 2-11. Marbled Murrelet Survey Results from 1994 – 2019 and Modeled Habitat*

*As described in OSU’s Research Proposal (2021, Appendix 11), historically occupied stands were determined based on marbled murrelet occupancy surveys conducted by S.K. Nelson and ODF.

Habitat Conservation Plan

The intent of the murrelet conservation strategy in the HCP is to increase the amount of nesting habitat. It is assumed that the number of murrelets using the permit area is correlated with the amount of available nesting habitat and therefore expected to increase over the 80-year permit term of the HCP. This strategy is summarized in the biological goals and objectives stated below. The goals and objectives related to the conservation of murrelets in the HCP include:

Goal: Increase occupied and potential marbled murrelet nesting habitat in the Elliott State Forest.

Objective 1: Retain and enhance 18,000 acres of occupied and 14,000 acres of potential marbled murrelet nesting habitat in the permit area.

Conserving occupied habitat is the most effective method to avoid further declines in murrelet populations (U.S. Fish and Wildlife Service 1997). Past disturbance in the permit area has limited murrelet nesting habitat and distribution. Conserving and maintaining murrelet nesting habitat in the permit area will help support or increase populations. Some enhancement of potential murrelet habitat with ecological forestry treatments may improve habitat conditions over the long term, and more large-diameter trees are expected on the landscape in response to management practices over time.

This objective will be achieved primarily through the avoidance and minimization measures incorporated into the Oregon State University's research design (Oregon State University 2021). There are currently 18,000 acres of habitat that are designated as occupied and 14,000 acres modeled as potential murrelet habitat in the forest. Collectively these 32,000 acres of designated occupied and potential habitat will be retained for the duration of the permit term.

Objective 2: Increase suitable marbled murrelet nesting habitat in the permit area by 21,000 acres by the end of the permit term.

The intention is to expand murrelet habitat over time through silvicultural actions that accelerate development of late-seral forest characteristics including nest platforms and associated canopy cover. This objective will be achieved primarily through the research design (Oregon State University 2021), including designated reserves and operation standards for extensive and reserve research treatments, which include several standards intended to increase old forest structure and associated habitat values. Within the permit area, there are currently about 44,713 acres that are not designated occupied or modeled as providing habitat potential for murrelets. It is anticipated that those acres will grow into habitat suitable for occupancy by the end of the permit term, although site-specific conditions and research treatments, disturbance, or other factors may result in some of these stands not achieving habitat objectives.

Management will be strategically focused in stands that currently do not support habitat for murrelet (i.e., generally those stands less than 65 years old). Stand management will be aimed at developing nesting habitat faster by reducing stand density and removing competition, which will encourage growth of larger trees with more complex structure preferred by murrelets. The general method used will be stand thinning with potential additional thinning around selected potential nest trees to increase height and stimulate tree branch growth to increase nesting platforms. Treatments may vary with research objectives, as this work will be conducted as part of research treatments. Selective tree harvests and thinning will not reduce current tree relative density by more than 20%.

As stated, if ODSL decides to harvest prior to the issuance of the ITP, ODSL will employ a take avoidance strategy as specified in the murrelet survival guidelines described in OAR 635-100-137 and compliant with the federal ESA. Due to no forest management activity in the ESF, there will be no monitoring surveys of murrelets associated with this plan.

Certified Forestlands Management Plan (covered in ODF ESMP)

Currently, ODSL has 33,005 acres of certified forestland scattered across western Oregon and the Klamath Basin managed on behalf of ODSL by the Oregon Department of Forestry (ODF). Forestlands designated as certified lands are highly productive forests that are primarily suited for the growing of timber and other forest products (ORS 530.460). The Oregon Constitution (Article VIII, Section 5) authorizes the State Land Board to manage certified forestlands. The State Land Board has executed its authority through a contract with ODF to manage those forests on its behalf (ORS 530.490).

Approximately 17,846 acres of the certified forestland base is in the murrelet habitat zone. ODF is currently developing a habitat conservation plan (HCP) that also includes ODSL's certified forestlands.

Prior to completion of the HCP, forest management strategies for ODSL's certified forestlands will be consistent with ODF's Endangered Species Management Plan (ESMP) for Marbled Murrelets. Below is an excerpt from their plan describing the agency's approach to murrelet conservation:

"ODF determined the role lands managed by the agency play in conservation of murrelets as a "contribution to conservation." This decision is supported by the agency's protection of occupied habitat to ensure there are no direct impacts to known occupied marbled murrelet habitat. ODF's operational policies for take avoidance (i.e., compliance with Section 9 of the federal ESA) under the agency's current FMP are largely aligned with ODFW's mandatory survival guidelines, and ODF is taking measures to implement any requirements therein that are additive to existing policy (e.g., project-specific consultation with ODFW, trash management at public use areas). Taken together, the policies and survival guidelines represent actions that surpass measures for meeting compliance requirements with the state and federal ESAs."

South Slough Reserve Management Plan

Introduction

The South Slough National Estuarine Research Reserve (South Slough Reserve) manages 6,960 acres of ODSL lands in the Coos Watershed and 11.62 acres in the Lower Umpqua River Watershed (total lands managed by South Slough Reserve 6,971.62 acres). South Slough Reserve is managed through a partnership between the National Oceanic and Atmosphere Administration (NOAA) and the Oregon Department of State Lands (ODSL) and is governed by statutes that differ from other ODSL land classes. The purpose of South Slough Reserve is to conduct long-term research, education, stewardship (including restoration of endangered species habitat), and opportunities for public recreation. South Slough Reserve plays a conservation role in the recovery of murrelet.

South Slough Reserve managed lands include around 4,400 acres of riparian and upland forest habitats that experienced timber harvesting prior to the Reserve's establishment in 1974 or more recently for lands acquired after 1974. Due to this history of harvesting, forest stands vary in age, structure and species composition (Figure 3). The Partnership for Coastal Watersheds (Cornu, 2012) described South Slough Reserve forests in four classes and recent assessments have updated the map (Figure 3) and acreage estimates as follows: stand establishment (open canopy with dense shrub component),

competitive exclusion (even-aged stands with closed canopy and poor branch development), mature conifer (stands >80 years old with multi-storied canopy) and hardwood (dominated by red alder)(Figure 3).

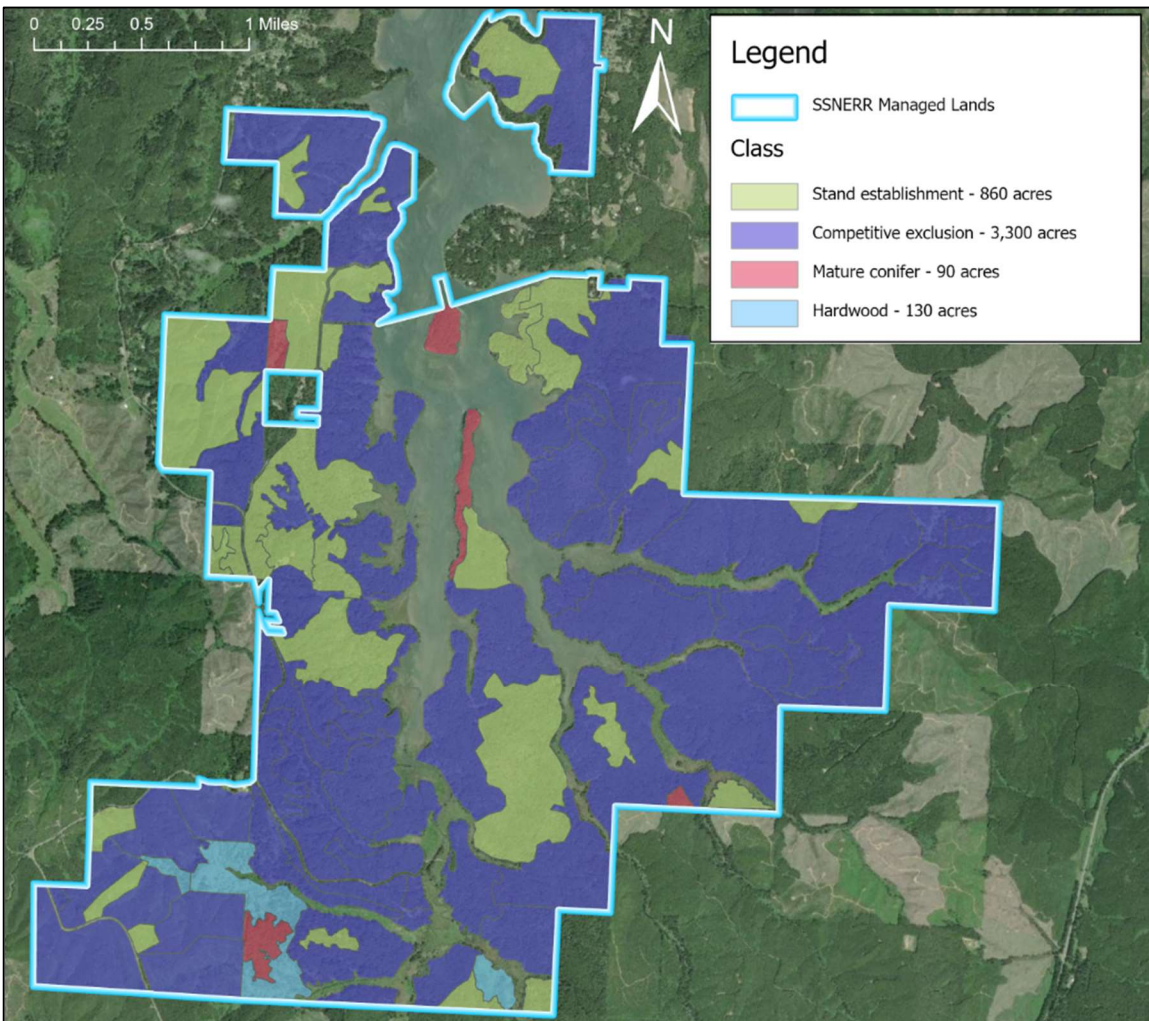


Figure 3: South Slough Reserve forest stands showing class type as determined by Partnership for Coastal Watershed (2012), various forest surveys and aerial imagery between 2008-2022. Class type includes stand establishment (lime green), competitive exclusion (purple), mature conifer (red) and hardwood (blue). Acres are calculated from stand information and due to different mapping sources will not match values listed for total riparian and upland acreage.

Current Contributions to Conservation

South Slough Reserve contributes to conservation through protecting murrelet potential nesting and forage fish habitat, active restoration, research, monitoring, and through education and outreach. The murrelet is listed as a key species in the 2023-2027 South Slough Reserve Management Plan (in progress), ranking it high in the prioritization process for conducting research and restoration and pursuing land acquisitions. The Reserve research team works with partners to identify and fill data gaps, and identify restoration needs. Where applicable the Reserve will prioritize land acquisitions with known endangered species, including murrelet, and suitable habitat. South Slough Reserve has a robust education and outreach team and interpretive displays in its visitor center. Education and outreach

materials will include murrelet information, where applicable, and discourage activities which promote Corvid populations (e.g., leaving food scraps around picnic areas). Where available, the Reserve will use existing outreach materials; any original materials created by the Reserve will be shared with other natural resource agencies (e.g., ODFW, OPRD, ODF, and ODOT).

South Slough Reserve encompasses a mixture of open water channels, mud flats and eelgrass meadows, tidal and freshwater wetlands, riparian areas, forested tidal swamp, and forested uplands. Estuaries support many fish species that move to near-shore marine waters and make up the diets of murrelet. Around 55 fish species have been recorded in the South Slough estuary, including the primary forage species for murrelet (e.g., Pacific anchovy, Pacific herring, Pacific sand lance, candlefish). Reserve staff conduct research to better understand changes in fish population, the importance of estuarine habitats on marine forage species, and changes in estuarine habitat and water quality through long-term monitoring programs. An active restoration program at South Slough Reserve has restored around 55 acres of tidal and nontidal wetlands and is currently researching and piloting eelgrass restoration techniques.

Riparian and upland forests in South Slough Reserve have the potential to provide habitat for nesting murrelets, and existing programs at the Reserve are well-equipped to protect, restore, research and monitor change in its upland forests. All forests within the Reserve have been previously harvested resulting in reduced structural and tree species diversity. Consequently, Reserve forests currently provide limited optimal nesting habitat; however, as they are protected for long-term development of old growth forests and the Reserve is actively pursuing forest restoration efforts, nesting sites are likely to increase over time. For example, restoration prescriptions in the Reserve's Wasson Creek Watershed Restoration Project plan are designed to accelerate development of murrelet habitat and old growth conditions through variable density thinning on 284 acres of dense forest and protecting 219 acres of older forest (>50 years old).

Current Requirements, Rules and Policies

South Slough Reserve adheres to applicable state and federal requirements, rules and policies which provide various levels of oversight for activities within the Reserve. Oregon Administrative Rules for South Slough Reserve restrict commercial activities, including timber harvesting (OAR 142-010-0020). Tree removal may only occur with approval of the South Slough Reserve Management Commission (ORS 273.554) and only for the following reasons: salvage of windthrow, dead, and dying trees; high risk to invasion of forest insects and diseases; hazards to visiting public and scientists; maintain existing powerline corridors; and thinning to maintain a healthy forest. Additionally, the Reserve manager may authorize tree removal when an immediate hazard poses a serious safety risk.

Restoration project plans for South Slough Reserve are developed through consultation with the United States Fish and Wildlife Service (USFWS) and other federal, state, academic and tribal entities. When restoration projects are federally funded, they are subject to rigorous compliance and/or consultation review processes (e.g., Endangered Species Act, National Environmental Policy Act, National State Historic Preservation Acts). For example, forest restoration work completed in 2022 as part of the Wasson Creek Restoration Project, was funded by USFWS who completed compliance reviews. In addition to funding for specific projects, South Slough Reserve receives annual operation funds from NOAA and these federally funded operational activities have been approved in a letter of concurrence issued by the USFWS to NOAA on November 30, 2017 and updated on August 30, 2022. Proposed

activities include several projects including climate change and water quality monitoring, fish assemblage research projects, invasive species management, restoration forestry, the use of Unmanned Aerial Systems, and small-scale construction projects including, but not limited to, gate and post removal, replacement and repair; general upkeep of reserve facilities, access ways, and trails; and installation of wireless relays for internet connectivity through the estuary. Due to South Slough Reserve's current requirements, rules and policies, activities within the reserve are restricted or fall under a rigorous review process.

Social and Economic Impacts

There are no negative economic or social impacts anticipated through conservation of this species on South Slough Reserve land. The South Slough Reserve receives no financial benefit through timber harvesting. There is an anticipated positive impact on the Reserve as its role in conservation can be highlighted in research and education programs, demonstrated in coastal management trainings, and leveraged to gain funding for restoration and land acquisitions. Much of the funds acquired for restoration projects are used for contracting local services, which support the local economy and contribute to jobs.

Management for Conservation

The Wasson Creek Watershed Restoration plan includes an assessment of the health and habitat value of approximately 500 acres of forested uplands in the southern portion of South Slough Reserve. Approximately 375 acres of forest were identified as suppressed, overstocked and in need of restoration. One of the key restoration objectives is to enhance habitat for murrelet, and management prescriptions were designed to accelerate the development of old-growth forest characteristics including increased structural complexity and branch development into suitable nesting platforms. In early 2022, 45 acres of young forests in the stand establishment stage (approx. 15-20 years old) were thinned using a variable density thinning prescription. The remaining restoration work, as with other restoration projects, is dependent on future successful acquisition of grant funding. While restoration thinning is limited in scale, due to funding and capacity, the remaining forested area will be reserved to develop naturally into complex late seral old-growth forest. Where individual or small-scale tree removal is required, South Slough Reserve will minimize impacts to murrelet by following survival guidelines as specified in OAR 635-100-0137.

South Slough Reserve manages around 5 miles of public trails for low impact to Reserve habitats. Wildlife proof trash bins were installed at trailheads and parking lots in 2021/2022 and both staff and volunteers regularly clean up trash on the Reserve. The Reserve regularly discourages trash dumping on the Reserve through signage and various outreach platforms (e.g., public events, social media) and ensures all food is removed from picnic areas following Reserve programs. The Reserve will soon be updating its Trails Plan and will include trash management priorities and guidelines for trail maintenance around murrelet presumed occupied and habitat trees.

Non-certified Forestlands Management Plan

ODSL owns and manages approximately 42 acres of non-certified forestlands in the murrelet habitat range; the remaining 7,971 acres are located in central and eastern Oregon. These are mostly low productivity timberlands, with management focused on fuels reduction and forest health improvement.

Only a single 11-acre parcel approximately 30 miles from the coastline in Yamhill County contains some suitable habitat according to the 2017 USFS habitat probability model (Lorenz et al. 2021).

Given its size and location, this parcel will not contribute towards murrelet conservation. There is no planned timber management for this parcel. If timber harvest were to take place, the murrelet management approach will be to follow survival guidelines as specified in OAR 635-100-0137. There will be no trash management associated with non-certified forestlands since there is no public access to this parcel and therefore trash management is not an issue.

Planning Process and Maintenance of Plan

Development, Review and Approval Process

ODSL has responded to the murrelet reclassification to endangered status and management plan requirement by forming an internal work group to host monthly meetings with ODFW for cross-agency collaboration. In addition, ODSL developed an internal plan for development, review, and approval for the new management plan.

The murrelet management plan was reviewed and approved by the South Slough Reserve Manager and the Director of ODSL. Approval of management plans is not required by the State Land Board for ODSL lands. The South Slough Reserve section of the murrelet management plan is in compliance with current Reserve management plans and state regulations. Relevant approved plans include the 2017-2022 South Slough Reserve Management Plan (2023-2027 plan in progress), the Wasson Creek Watershed Restoration Plan (2022) and the South Slough Reserve Upper Watershed Restoration Action Plan (Robinson 2009). All current plans can be found on the South Slough Reserve website.

Monitoring, Reporting and Review

South Slough Reserve will include updates on murrelet conservation (e.g., acres of habitat restored, observer surveys completed, outreach products etc.) as appropriate through existing reporting requirements, such as for grant-funded projects and reporting to the South Slough Reserve Management Commission (three times a year), the State Land Board (annually), and National Oceanic Atmospheric Association (biannually). Review of South Slough Reserve's portion of this plan will occur during updates of its NOAA-approved management plan. Revision of the plan may also be triggered by new biological information, catastrophic events, changes in the species' listing status, changes in land use practices, or any other factors that could trigger reassessment and review of the plan.

Relation to Other Plans

Other State Endangered Species Management Plans

ODSL acknowledges that different directives and goals for other state land management agencies will result in individual Endangered Species Management Plans (ESMPs) unique to each agency. ODSL owns and manages a small proportion of forested state lands within the extent of the inland breeding range of murrelets and nearly all submerged estuarine tidelands in Oregon, which support forage species. This affords ODSL a limited, but important role in murrelet conservation in Oregon.

ODSL's current policies align with ODFW's mandatory survival guidelines, and the Commission considers these guidelines necessary to ensure the survival of individual members of the species (ORS 496.182(2)(a)) in the absence of an ESMP, ODSL assumes and anticipates that this ESMP plan will align well with other state agency efforts in the conservation of the marbled murrelet.

Federal Recovery Plans

While some of ODSL-owned land is under ODF management or in the process of being transferred to another owner, South Slough Reserve provides opportunities for murrelet conservation and habitat enhancement. Through existing active or passive management, ODSL's practices prevent loss of occupied nesting habitat, minimize loss of unoccupied suitable habitat, and accelerate the development of new suitable habitat using silvicultural techniques such as variable density thinning. Thus, ODSL's policies support recovery actions described in the USFWS Recovery Plan for the Threatened Marbled Murrelet (1997) within the Oregon Coast Range (Zone 3) and Siskiyou Coast Range Zones (Zone 4; Table 3).

Conclusion

The Oregon Department of State Lands (ODSL) owns approximately 108,171 acres within the marbled murrelet nesting habitat zone across four classes of terrestrial land. In collaboration with Oregon Department of Fish and Wildlife, ODSL defined the conservation roles for their four land classes, in accordance with OAR 635-100-0140.

As described in this plan, South Slough Reserve will provide the largest long-term contribution to murrelet conservation under this plan. The Reserve contributes to conservation through protecting murrelet potential nesting and forage fish habitat, active restoration, research, monitoring, and through education and outreach.

The Elliott State Forest currently provides a large contiguous block of land which holds important habitat for the murrelet and has had no active timber harvest since 2017. Although smaller in size and geographically scattered across western Oregon, certified forestlands in conjunction with Oregon Department of Forestry lands will provide for conservation. These two land classes will continue to offer a substantial conservation base into the future under habitat conservation plans.

Although all these land classes vary in management goals and responsibilities, collectively they provide important habitat strongholds for the conservation of the murrelet currently and into the future.

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