

Agenda Item Summary

BACKGROUND

In June 2016, Cascadia Wildlands, the Center for Biological Diversity, Coast Range Forest Watch, Oregon Wild, the Audubon Society of Portland, and the Oregon Chapter of the Sierra Club (Petitioners) petitioned the Oregon Fish and Wildlife Commission (Commission) to reclassify, or “uplist”, the Marbled Murrelet (*Brachyramphus marmoratus*) from threatened to endangered under the Oregon Endangered Species Act (OESA).

In September 2016, the Commission found that the petition contained sufficient scientific information to justify proceeding with the requested action and accepted the petition for further evaluation. This decision initiated the rulemaking process, which includes (1) consultation with affected agencies, tribes, local governments, other states, various organizations, and the public; (2) a review of the biological status of the Marbled Murrelet in Oregon to determine if circumstances meet legal criteria for reclassification; and (3) peer review of the Oregon Department of Fish and Wildlife’s (Department) biological status report. Pursuant to OAR 635-100-0111(1) and OAR 635-100-0110(8), the Commission is required to make a final determination on whether Marbled Murrelet reclassification is warranted by June 21, 2018.

In September 2017, the Department released its draft “Status Review of the Marbled Murrelet (*Brachyramphus marmoratus*) in Oregon and Evaluation of Criteria to Reclassify the Species from Threatened to Endangered under the Oregon Endangered Species Act” for invited peer review and for comment by interested and affected parties and the general public. Following the close of the 42-day comment period, staff revised the draft and prepared a final status review report (Attachments 2 and 3). Invited peer reviewer and public comments, and the Department’s responses, are summarized in Attachments 4 and 5. All comments received were considered in the development of the final report and are provided in Attachments 6 and 7.

At the February 2018 meeting, staff will present the Department’s final Marbled Murrelet status review report to the Commission, and the Commission will be asked to decide whether to accept the Petitioners’ recommendation to reclassify the species as endangered under the OESA. If the Commission decides that uplisting is warranted, rulemaking to reclassify the species and adopt survival guidelines would occur at a future Commission meeting in June 2018.

PUBLIC INVOLVEMENT

- Notification of availability of draft Marbled Murrelet status review sent to interested and affected parties in fall 2017; news release published announcing opportunity for public comment on draft
- Addressed questions of interested persons, including the news media
- Meetings, calls, and correspondence conducted with interested persons

- Maintained/updated Department’s Marbled Murrelet webpage to help keep the public informed of the rulemaking process and to facilitate public involvement

ISSUE 1

Decision Criteria and Key Considerations

ANALYSIS

The OESA defines threatened and endangered species as follows:

Threatened Species: Any native wildlife species the Commission determines is likely to become an endangered species within the foreseeable future throughout any significant portion of its range within this state (ORS 496.004(17)(a)).

Endangered Species: Any native wildlife species determined by the Commission to be in danger of extinction throughout any significant portion of its range within this state (ORS 496.004(6)(a)).

The OESA requires the Commission to base any reclassification decision on documented and verifiable scientific information (ORS 496.176(3), OAR 635-100-0105(1)). The Department’s peer-reviewed status review focuses on information relevant to the species’ biological and legal status in Oregon, and was designed to help inform the Commission’s decision.

In order to uplist the Marbled Murrelet, the Commission must determine that the likelihood of survival of the species has diminished such that the species is in danger of extinction throughout any significant portion of its range within Oregon (OAR 635-100-0111(1)). It must also find that one or more of the following three factors exist: 1) that most populations are undergoing imminent or active deterioration of their range or primary habitat; 2) that overutilization of the species or its habitat for commercial, recreational, scientific, or educational purposes is occurring or is likely to occur; or 3) that existing state or federal programs or regulations are inadequate to protect the species and its habitat (OAR 635-100-0105(6)). A full analysis of factors that must be considered as part of the Commission’s decision-making process, as well as reasons why the Commission may decide not to list or reclassify a species that would otherwise qualify to be so listed, is provided in Chapter 4 of the status review.

As summarized in the status review, we identified the following key considerations for the Commission’s reclassification decision:

1. Marbled Murrelets have narrow habitat requirements and limited geographic distribution. Occupied landscapes tend to have large amounts of cohesive (unfragmented) older forest nesting habitat. Once nesting habitat is lost, high breeding site fidelity and limited flight range from the coast to inland forests may further restrict distribution. Contemporary events that remove old-growth or mature forests may be difficult or impossible for the species to compensate for in the short-term since suitable habitat takes many

decades or centuries to develop.

2. Changes in late-successional forests in Oregon since European settlement, due to timber harvest, fire, wind, and other factors, have substantially reduced Marbled Murrelet nesting habitat from historical levels. Loss and degradation of older forest nesting habitat were the primary reasons for initial state and federal listings. In the Oregon Coast Range, Wimberly and Ohmann (2004) estimated that large-conifer forests declined by 58% between 1936 and 1996, with corresponding increases in small-conifer forests during that period. Since the 1990s, further habitat losses have occurred, mainly due to timber harvest on nonfederal lands and wildfire on federal lands. Based on Northwest Forest Plan estimates, higher-suitability nesting habitat (from maximum entropy models by Raphael et al. 2016a) declined in Oregon from approximately 853,400 acres in 1993 to 774,800 acres in 2012, a net loss of 78,600 acres (-9.2% change). Losses were greatest on nonfederal lands during this period; 59,200 acres (21.1%) of higher-suitability habitat were lost on nonfederal lands compared to 19,400 acres (3.4%) on federal lands.
3. Remaining nesting habitat persists mostly on public lands, including the Siuslaw and Rogue River-Siskiyou National Forests, forests owned by the Bureau of Land Management, and the state-owned and managed Tillamook, Clatsop, and Elliott State Forests. Older forest remnants are highly fragmented and contain a high proportion (>70-90%) of edge. Forest fragmentation and “edge effects” can increase predation rates and may result in other adverse effects to remaining patches (e.g., greater windthrow damage, microclimates less suitable to epiphyte growth).
4. While natural disturbances have always shaped Oregon forests, climate change is expected to increase potential for habitat loss from catastrophic wildfires, insect infestations, disease outbreaks, and severe storms, and to exacerbate conditions unfavorable to murrelets in the marine environment.
5. There are no available surveys that provide a continuous assessment of Marbled Murrelet population trends in Oregon from 1995 to the present. A significant decline (>50%) on Oregon’s central coast was first detected in 1996 through at-sea surveys conducted from 1992-1999. The Northwest Forest Plan’s Marbled Murrelet Effectiveness Monitoring Program monitored murrelets at sea in Oregon nearly annually from 2000-2015, and did not find evidence of a population decline during that period for Oregon. It appears that the Oregon population may now be fluctuating around a new, lower baseline. Based on this monitoring program, the Oregon population was estimated at 10,975 birds in 2015 and was likely somewhere between a range of 8,188 and 13,762 birds. The fairly wide confidence limits for these population estimates reflect

the challenges of monitoring a highly mobile seabird that is sparsely and patchily distributed, as well as constraints on survey effort.

6. Marbled Murrelets have low fecundity. Low nest success has been reported wherever data are available across the federally-listed range, and in Oregon, nest success has been estimated at roughly 36%. Ratios of juveniles to adult birds counted at sea provide recent productivity indices of 0.025-0.060 for Oregon; while these juvenile:adult ratios have known limitations, they are an order of magnitude lower than what population models indicate is necessary to maintain stable populations (0.18-0.28).
7. The Marbled Murrelet's life history strategy (e.g., long-lived, low annual reproductive potential, delayed reproductive maturity) requires high survivorship of adults, subadults, and young in order for breeding birds to successfully "replace" themselves over the course of their lifetimes and yield a stable or increasing population. Marbled Murrelet generation time has been estimated at about 10 years, and this life history strategy allows some flexibility for poor or no breeding success during adverse conditions, but only for relatively short periods of time (years as opposed to decades). Adult or subadult mortality due to anthropogenic factors or catastrophic events, or cumulative or synergistic impacts that affect recruitment over long periods, could also lead to severe population declines or even extirpations. Based on predictions of demographic models by McShane et al. (2004), using what may be optimistic population parameters (e.g., survival = 83-92%, breeding propensity = 90% in most years, nest success = 23-46%), extinction probability is high in Oregon (over 80% by 2060 for Conservation Zone 4: Siskiyou Coast Range, over 80% by 2100 for Conservation Zone 3: Oregon Coast Range).
8. Predation, particularly by corvids (jays, crows, ravens), is a leading cause of Marbled Murrelet nest failure. Higher predator numbers and predation rates are generally associated with human activities and anthropogenic food sources. Predation pressure is expected to remain high or increase in the future and is of particular concern where parks, trails, or campgrounds overlap with murrelet habitat.
9. Marbled Murrelets require sufficient prey resources in the marine environment for survival and successful reproduction. Oceanic conditions influence the abundance, distribution, and timing of prey available to murrelets, and prey quality and availability in turn affect breeding propensity and success. A centennial shift in murrelet diet to lower (poorer quality) trophic levels has been documented in parts of the murrelet range. As with many other seabirds, low reproductive success has also been linked, in part, to El Niño years and other warm water events.

10. A large oil spill remains a serious threat and could kill hundreds or thousands of Marbled Murrelets in Oregon. For example, the New Carissa oil spill in 1999 released over 70,000 gallons of fuel into the marine environment near Coos Bay, Oregon, killing an estimated 262 Marbled Murrelets.
11. Other emerging natural or anthropogenic threats to the species include, but are not limited to, energy development projects; harmful algal blooms that produce biotoxins, feather-fouling surfactants, or low-oxygen “dead zones” in the ocean; and contaminants in prey that can biomagnify through the food chain.
12. The threat posed by inadequate state and federal programs and regulations has decreased since state listing of the Marbled Murrelet in 1995 and federal listing in 1992. For example, implementation of the Northwest Forest Plan greatly reduced the rate of habitat loss due to timber harvest on federal lands. Nonetheless, existing state and federal programs and regulations have failed to prevent continued high rates of habitat loss on nonfederal lands in Oregon. Fisheries management is another example of state and federal programs and regulations that have been strengthened since the listing of the Marbled Murrelet, with greater protections for its prey resources in Oregon.

The status review does not provide a specific staff recommendation on state legal status of the Marbled Murrelet. This position is consistent with that taken by the Department at the time that the species was initially petitioned for listing as threatened or endangered under the OESA in the 1990s, and ultimately listed as state-threatened in 1995. The Petitioners have recommended uplisting to endangered status, and staff have provided relevant information and conclusions associated with each of the legal OESA reclassification criteria in the status review.

In the 1990s, and now, many aspects of this secretive, forest-nesting seabird’s biology, life history, and demographics remain poorly understood. One example is the apparent contradiction between predictions of demographic models by McShane et al. (2004), which indicate a high probability of extinction for Marbled Murrelets in Oregon Conservation Zones in this century, whereas the most recent (2000-2015) at-sea survey results from the Northwest Forest Plan’s Effectiveness Monitoring Program (Lynch et al. 2017) show a variable but non-declining population in Oregon over the last 15 years. Given the difficulties of monitoring this species, there are merits to both approaches, and we include both in our report to provide a holistic review of best available information relevant to the status of the species in Oregon. As summarized by Raphael et al. (2016c), major sources of uncertainty include uncertainty in estimating survivorship and fecundity (reproductive output) in the demographic models and uncertainty about whether the murrelet populations being monitored are closed or open to immigration. Extensive bird movement during the breeding season, which was documented for Oregon murrelets moving into California waters in the first year of telemetry work by Oregon State University in 2017, suggests

that temporary shifts in bird distribution could complicate interpretation of at-sea counts, particularly at the state-scale. Other new or ongoing efforts that could have bearing on our analysis as presented in this status review include:

- A new, 5-year status review of the Marbled Murrelet in Washington, Oregon, and California underway by the U.S. Fish and Wildlife Service but not yet completed
- The Elliott State Forest Public Ownership Project currently in-progress
- The Oregon Department of Forestry’s rulemaking process pertaining to Marbled Murrelet resource sites, the outcome of which could have implications for forestry operations regulated by the Oregon Forest Practices Act
- Planning for development of federal Habitat Conservation Plans in support of incidental take permit applications for Marbled Murrelets and selected other listed species by the Oregon Department of Forestry and Department of State Lands for northwest Oregon state forests and the Elliott State Forest, respectively
- A project initiated in 2017 by the Board of Forestry and Oregon Department of Forestry’s State Forests Division to evaluate potential changes to the Northwest Oregon State Forests Management Plan

ISSUE 2

Process and Next Steps if the Commission Decides to Uplist the Marbled Murrelet

ANALYSIS

The most direct effect of listing a species as threatened or endangered under the OESA is through management decisions on state-owned, managed, or leased lands. Private lands are not directly affected by the OESA (ORS 496.192) except that no person is allowed to “take” a listed species anywhere in the state, and through the Oregon Forest Practices Act (FPA) (ORS 527.610-.992, OAR Chapter 629 Divisions 600-680), which requires special protection for both federal and state-listed species. Under the OESA, “take” is defined as “to kill or obtain possession or control of any wildlife” (ORS 496.004(16)).

The OESA requires particular state agencies to develop plans for the management and protection of endangered species (ORS 496.182(8), OAR 635-100-0140(6)), and to comply with survival guidelines adopted by the Commission for threatened species (ORS 496.182(2), OAR 635-100-0130); survival guidelines are not already in place for the Marbled Murrelet since it was first state-listed in May 1995, and the survival guidelines requirement became effective in July 1995.

Survival guidelines are quantifiable and measurable guidelines necessary to ensure the survival of individual members of the species (OAR 635-100-0100(13)). They may include take avoidance and protecting resource sites such as nest sites or other sites critical to the survival of individual members of the species. Examples of survival guidelines developed for other wildlife species by the Department in the past include those for Washington ground squirrel (*Urocitellus washingtoni*; OAR 635-100-0136) and Western Snowy Plover (*Charadrius nivosus nivosus*; OAR 635-100-0180).

If the Marbled Murrelet were to be uplisted, the Commission would be required to establish survival guidelines for the species at the time of reclassification, and to work with state land-owning and managing agencies to determine if state lands can play a role in the conservation of the species (ORS 496.182(2)(a), (8)(a)). Survival guidelines would serve as interim protection until endangered species management plans were developed and approved by applicable state agencies (required within 18 months of uplisting) and reviewed and approved by the Commission (required within 24 months of uplisting) (ORS 496.182(8)(a)(C), (D)). A timeline of next steps under an uplisting scenario is outlined below.

Anticipated Timeline of Next Steps under an Uplisting Scenario:

2018

March: Staff draft survival guidelines

June: Final consideration of petition by Commission; rulemaking to uplist Marbled Murrelet and adopt survival guidelines

October (within 4 months of uplisting): Commission, in consultation and cooperation with state land-owning and managing agencies, determines whether state lands can play a role in the conservation of the species (see ORS 496.182(8)(a)(A))

2019

December (within 18 months of uplisting): If state lands can play a role in the conservation of the species, affected state land-owning and managing agencies develop and adopt endangered species management plans consistent with their identified role (see ORS 496.182(8)(a)(C))

2020

June (within 24 months of uplisting): Commission reviews and approves endangered species management plans developed by affected state land-owning and managing agencies (see ORS 496.182(8)(a)(D))

OPTIONS

Option 1 – Accept the Petitioners’ recommendation to reclassify the Marbled Murrelet as endangered under the OESA. Direct staff to develop survival guidelines for adoption at the time of reclassification in June 2018.

Option 2 – Deny the Petitioners’ recommendation to reclassify the Marbled Murrelet as endangered under the OESA; the Marbled Murrelet remains state-threatened.

STAFF RECOMMENDATION

No staff recommendation (see Issue 1 above). The Petitioners recommend that the species be reclassified from threatened to endangered under the OESA.

DRAFT MOTION

Option 1: I move to accept the Petitioners' recommendation to reclassify the Marbled Murrelet as endangered under the Oregon Endangered Species Act and direct staff to develop survival guidelines for adoption at the time of reclassification.

Option 2: I move to deny the Petitioners' recommendation to reclassify the Marbled Murrelet as endangered under the Oregon Endangered Species Act.

EFFECTIVE DATE