

To: Acting Assistant Regional Director, Ecological Services, Interior Regions  
9/12, Portland, Oregon

From: State Supervisor, Oregon Fish and Wildlife Office  
Portland, Oregon

Subject: Response to January 7, 2021, Memorandum, "Extinction Analysis for the  
Northern Spotted Owl," from Director Skipwith to Secretary Bernhardt

On January 14, 2021, I was provided a copy of the January 7, 2021, memorandum entitled "Extinction Analysis for the Northern Spotted Owl," from Director Skipwith to Secretary Bernhardt (Memo). The stated purpose of this Memo was for the Director to present to the Secretary her analysis of whether recommended exclusions of critical habitat (CH) would result in extinction of the northern spotted owl (NSO).

The purpose of this memorandum to you is to clarify and correct some potential misinterpretations of the scientific information and conclusions in the Director's memo. Information and communications provided by my staff and me to the Director were cited in the Memo, and I would like to use this opportunity to ensure that this information is correctly interpreted from a scientific perspective.

In a December 9, 2020, email to the Director and other Department leadership cited in the Memo, I provided my scientific recommendation concerning the potential critical habitat exclusions being considered at that time by the Department:

"Lastly, I feel a duty as the NSO recovery lead for the Service to reiterate here what I described in the three recent meetings with DOI leadership. If DOI excludes the large amount of critical habitat requested by the commenters, including the federal O&C reserve lands, and this exclusion leads to subsequent habitat management on these lands that is inconsistent with the current BLM and FS land management plans, it is my opinion it will preclude the recovery of the NSO. Most scientists (myself included) would conclude that such an outcome will, therefore, result in the eventual extinction of the listed subspecies. No one can give a precise timeframe for when this would occur, but it is a reasonable scientific conclusion."

The Director and the Department subsequently arrived at a decision to exclude 3,472,064 acres of critical habitat from the total of 9,577,342 acres designated as critical habitat for NSO in 2012, or 36% of the total. Most of this exclusion is concentrated in Oregon and, due to its geographic location and habitat quality, it represents a significant portion of the NSO's most important remaining habitat. The Director's memo provides seven separate justifications for why an exclusion of this magnitude will not result in the extinction of

the species, as required under section 4(b)(2) of the Endangered Species Act (Act). Below I provide clarification or additional scientific perspective on each of these points.

1. *Section 9 ESA protections will ensure the NSO is not jeopardized even if CH is removed.*

These section 9 protections only legally apply to habitat areas with extant spotted owls and/or where site-specific surveys show owls are currently present and proposed actions might take these individuals. As stated in the 2011 Recovery Plan, "It is not uncommon for an occupied spotted owl site to be unoccupied in subsequent years, only to be re-occupied by the same or different spotted owls two, three or even more years later (Dugger et al. 2009). While temporarily unoccupied, these sites provide conservation value to the species by providing habitat that can be used by spotted owls on nearby sites while also providing viable locations on which future pairs or territorial singles can establish territories." The CH includes multiple such areas. Thus, section 9 prohibitions will only protect a subset of the excluded CH areas where NSO have not been displaced.

2. *The plain language of the Act says the Secretary cannot exclude CH from a designation if such exclusion "will" result in extinction, and it is "speculative at best" to suggest these exclusions will result in extinction of the NSO.*

The best scientific information strongly suggests that the NSO population is in a precipitous decline, and the Service recently concluded that the NSO warranted uplisting to endangered status under the Act. The subspecies is essentially extinct in British Columbia, rapidly declining to near extirpation in Washington and parts of Oregon, and in the earlier stages of similar declines in the rest of its range. As the statutory definition of "endangered" states, the NSO is in very real "danger of extinction throughout all or a significant portion of its range." The Director's statement, "yet the NSO population continues to persist," seems to suggest the NSO population will *continue* to persist into the foreseeable future. The science simply does not support this suggestion (see below). Significant changes to habitat conservation will exacerbate this decline by working synergistically with the impacts from barred owl.

3. *The NSO population modeling from the 2011 Revised Recovery Plan suggests that NSO will not go extinct if a barred owl eradication program is put in place.*

Not surprisingly, models and the barred owl removal experiment do suggest that NSO recovery chances improve significantly if an effective barred owl management program is put in place and maintained. However, it is premature to conclude that such a program will be put in place and that it will be effective. There are tremendous economic, logistical, social, and legal obstacles that need to be overcome first. The Service is working hard toward this goal, but at this point in the process it is speculative at best that this outcome will be achieved. Also, it must be noted that the impact of barred owls on NSO has made the conservation of extant habitat even more pressing, at least in the near term until a barred owl management plan is in place and shown to be effective. The CH exclusions work

at cross-purposes with this need.

Also, the NSO Recovery Plan modeling scenarios all assumed that these CH areas in reserves would be protected from harvest; it did not model a scenario with these areas being harvested, with or without barred owl management occurring.

4. *NSO use logged habitat.*

This statement is accurate, but it must be put in context. Logged areas (depending on the treatment) are usually much lower quality for NSO than are older, more complex forests, and NSO survival and reproduction rates are likewise lower in such lower quality areas. It is inaccurate to suggest that NSO populations are sustainable in such areas without proximal access to higher quality habitat areas, or that such areas provide some sort of fundamental component of a NSO conservation strategy.

5. *“To the extent the Field office director is suggesting that exclusion from critical habitat will lead to immediate and drastic change in management across the excluded portion, history shows that result is very unlikely.”*

This statement is not an accurate characterization of my email; I did not suggest there would be an immediate and drastic change in management. The Director’s memo suggests as a consequence of this CH exclusion that “any increased logging will be incremental and will take place over time,” and therefore extinction of NSO will be avoided because some owls can persist as these areas are slowly harvested in the future. Historic harvest rates of these areas under the Northwest Forest Plan are cited to justify this conclusion of a relatively slow harvest timeframe. It is important to note that these historic harvest rates were themselves influenced by critical habitat designations of these lands as well as other policies, and future harvest rates would not, in all likelihood, reflect past harvest rates if this CH exclusion leads to changes in land management goals. In fact, in previous meetings with Service staff, DOI leadership has suggested that harvest rates on the Oregon Bureau of Land Management CH lands should increase 4-5 fold from these historic rates (i.e., from @200mmbf to 1 billion mmbf). Likewise, such increases are a specific goal of the timber industry commenters and plaintiffs to whom these CH exclusions are responsive. It is important to note that such elevated harvest rates, which did occur on BLM lands during the period after World War II until the 1980’s, created the very conditions that led to the listing of the NSO. Therefore, my concern about the potential impacts of future harvest on NSO populations cited in the Director’s memo is not misplaced and is probably the more likely outcome of the exclusions.

6. *“There is a significant amount of protected habitat located in National Parks and wilderness that will never be logged and is used by the NSO...Absent invasions by the barred owl or wildfire, this habitat and the owls living therein will be maintained in their current state regardless of any critical habitat exclusions.”*

It is accurate to state that there are NSO existing in Congressional-reserved areas outside of critical habitat, such as National Parks and some lower elevation and

forested wilderness. However, it is mistaken to suggest NSO are not at risk in these areas “absent invasions by barred owl or wildfire,” as if these areas are either immune to or are not already experiencing such invasions. NSO populations have been declining in such Congressionally-reserved areas for years due to the impacts associated with barred owls and wildfire. Although these areas do provide some refugia for NSO from direct human impacts (i.e., timber harvest), they cannot be relied upon to provide sustainable populations of NSO into the future unless they are part of and connected to a wider reserve network.

7. *The demographic population monitoring and modeling process (Dugger et al. 2016) for the NSO “leads to results that are too conservative and may undercount the species... Although this appears to be the ‘best commercial and scientific data available’ for making population estimates, it is imprecise at best in determining if the habitat exclusions proposed ‘will result’ in extinction of the species.”* As of this writing I do not have all the information that the Director used to question the accuracy of the federal agencies’ NSO demographic modeling process, but it is worth noting that the results of this ongoing program have been regularly published every five years in prestigious peer-reviewed scientific journals. Regardless, the Director’s memo seems to misunderstand how the Service uses the demographic data to inform decisions regarding NSO. Most importantly, this data gives accurate (if not precise) insight into the status and trend of the NSO population. This in turn informs land management decisions that might affect NSO at various scales, including that of the rangewide critical habitat designation. The model results are relevant and useful in assessing the potential adverse impacts of a massive CH exclusion to the NSO population.

Put simply, the justification for the conclusion made in my December 9, 2020, email to the Director is: (1) NSO populations are declining precipitously due to a combination of historic habitat loss and more recent competition with the barred owl; and (2) the only way to arrest this decline and have a high probability of preventing extinction (in any timeframe) is to manage the barred owl threat and conserve adequate amounts of high quality habitat distributed across the range in a pattern that provides acceptable levels of connectivity as well as protection from stochastic events. The 2012 critical habitat designation met the habitat conservation portion of this goal. The proposed CH exclusion, given its disproportionate concentration in high quality habitat in Oregon, thwarts this goal.

Assuming the excluded CH areas are harvested to the levels desired by the commenters for whom this exclusion is being made (see above), it is reasonable to conclude that it will result in the extinction of the NSO. The Director’s memo suggests that the plain language of the Act – “will result in extinction” -- means this outcome must not be speculative or occur some (unspecified) distance out into the future. I generally defer to DOI solicitors’ interpretation of the legal meaning of statutory language, but from a scientific perspective I will suggest that such a narrow interpretation renders this aspect of the Act irrelevant for most listed species. Such a high standard of certitude and immediacy would only apply to the rarest, most narrowly distributed, and most critically

endangered of species. For the NSO and most other species, a more appropriate biological definition of the 4(b)(2) language (“will result”) would be “more likely than not” or “has a high likelihood” to result in the extinction of the species. The NSO CH exclusions clearly meet this threshold.