

FINDING OF NO SIGNIFICANT IMPACT
regarding
The U.S Fish and Wildlife Service's Proposed Issuance of an Endangered Species Act Section
10(a)(1)(A) Enhancement of Survival Permit
for the
Oregon Department of Forestry Safe Harbor Agreement for the Northern Spotted Owl
in the
Oregon Coast Ranges Study Area of the Barred Owl Removal Experiment

Introduction

Pursuant to the National Environmental Policy Act of 1969, as amended (NEPA), the U.S. Fish and Wildlife Service (Service or USFWS) has completed an Environmental Assessment (EA) for the proposed issuance of an Enhancement of Survival Permit (Permit) to the Oregon Department of Forestry (ODF) to authorize the incidental take of the threatened northern spotted owl (*Strix occidentalis caurina*; spotted owl) in conjunction with ODF's implementation of a Safe Harbor Agreement (SHA) for the spotted owl within the Oregon Coast Ranges Study Area (Study Area) of the Barred Owl Removal Experiment (Experiment) in Lane County, Oregon. USFWS issuance of the Permit would be done under the authority of section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. 1531 et seq.), and would be conditioned upon full and complete compliance with, and implementation of, the SHA.

The proposed Permit would authorize incidental take of the spotted owl on up to 18 currently unoccupied sites (all of which have not had resident spotted owls respond to surveys in five or more years) over the 13-year term of the Permit in return for permission for USFWS or U.S. Geological Survey (USGS) biologists, or their contractors, to access ODF lands and use ODF roads for barred owl surveys throughout the Study Area and removal of barred owls in the treatment portion of the Study Area. If the Experiment needs to be extended to reach scientifically credible conclusions (for a maximum of an additional five years), the Permit may be extended by the same period, as analyzed in the EA.

In the EA, the Service evaluated the potential environmental effects associated with the proposed action described above and a No Action Alternative. Under the No Action Alternative, the Service would not enter into the SHA and would not issue the Permit. Under that alternative, Service and USGS researchers would not have access to ODF lands and roads in the Study Area for barred owl removal, and as a result, could not remove a significant number of barred owls in the treatment area. In the absence of barred owl removal, spotted owls may not have the opportunity to re-occupy historic sites throughout the treatment area. This would undermine the objective of the Experiment, and may require an extension of the Experiment which in turn could delay work on a long-term barred owl management plan. Barred owls are one of the primary threats to the spotted owl's survival, and failure to manage barred owl populations could lead to extirpation of the spotted owl over large portions of its range, and the eventual extinction of the subspecies.

Decision and Rationale

Based on our review of the SHA, the analyses in the EA, and consideration of public comments, we selected the Proposed Action because it:

- Supports the efficient and effective implementation of Recovery Action 29 under the final recovery plan for the spotted owl through implementation of the Experiment.
- Supports collection of information the Service has identified as crucial for the future development of a barred owl management strategy that is essential for the survival and recovery of the spotted owl.
- Provides benefits to spotted owls that outweigh the potential adverse effects of the incidental take of the spotted owl authorized by the proposed Permit.

Council on Environmental Quality Analysis of Significance

The primary purpose of preparing an environmental assessment under NEPA is to determine whether an action would have significant impacts on the human environment. If significant impacts may result from an action, then an environmental impact statement is required (40 CFR §1502.3). Whether an action exceeds a threshold of significance is determined by analyzing the context and the intensity of the action (40 CFR §1508.27). Context refers to the setting of the action and potential impacts of that action. The context of a significance determination may be society as a whole (human, national), the affected region, the affected interests, or the locality. Intensity refers to the severity of the impacts.

We considered the direct, indirect and cumulative effects of the proposed action alternative addressing issuance of the Permit to ODF. Activities covered under the Agreement include forest operations and management activities. We also considered public comments received during the comment period, none of which provided additional information that either changed the outcome of our analysis or required a finding that our action would have significant impact.

Context

The issuance of the Permit to ODF would allow ODF to continue to manage their forest lands as currently allowed under State and Federal law in the same manner as would occur if we do not issue the Permit. The Study Area contains private lands, including commercial timberland, State forest lands, and Federal lands, with Federal lands representing the majority of the area (and containing 76 percent of the remaining nesting/roosting habitat for the spotted owl).

Under this Permit, ODF would be able to continue normal forest management operations, potentially resulting in the removal of up to 3,345 acres of spotted owl nesting/roosting habitat. Without the permit, these actions could come under regulation should spotted owls re-occupy non-baseline sites on ODF lands. This removal represents less than 7 percent of the 52,000 acres of spotted owl nesting/roosting habitat available in the treatment portion of the Study Area and 0.55 percent of spotted owl nesting/roosting habitat in the Oregon Coast modeling region, one of 11 modeling regions in the range of the spotted owl. The Permit would apply to 18, non-baseline spotted owl sites and areas where no spotted owls have been detected despite over 20 years of

surveys. Spotted owls have been located at 20 sites in the last 5 years. These sites are baseline sites, and no take is authorized for these sites under the Permit.

The types of actions covered by the SHA and Permit for incidental take of spotted owls may potentially indirectly affect resources such as water quality and other species. However, due to the particular circumstances described below, this SHA and Permit would only change the timing of such impacts, not influence whether they occur or not.

All covered activities under this SHA could be carried out at any time under current State laws and regulations. In the absence of the Permit, barred owls would not be removed from ODF lands, thus the non-baseline sites and areas on ODF lands are likely to remain occupied by barred owls and unavailable to spotted owls. With the absence of spotted owls, there is no prohibition against take and the covered activities would remain unrestricted.

The removal of barred owls in the treatment area may lead to re-occupancy of some of the non-baseline sites by spotted owls, which would invoke the ESA prohibitions on take of these spotted owls that could impact some of the covered actions in the absence of a Permit. However, the Experiment is a short-term action, with a maximum of 10 years of barred owl removal. Activities would only be potentially restricted for as long as spotted owls remain on these sites. Once removal ceases, we fully expect barred owls from the surrounding areas to reinvade the treatment area, barred owl populations to regain their current levels, and spotted owls to be again displaced within three to five years (USFWS 2013, p 173). At that time there will no longer be restrictions on any covered activities based on the ESA take prohibition.

If the USFWS does not issue the Permit, barred owls will not be removed from ODF lands within the treatment area for the remaining duration of the study. Without the removal of barred owls, spotted owls are highly unlikely to reoccupy many of these sites, there would be no take prohibitions, and activities would proceed at a normal rate. If spotted owls did manage to reoccupy some sites due to removal of barred owls on other adjacent ownerships, in the absence of a Permit ODF might have to delay implementation of some activities until the Experiment ends and barred owls reclaim the areas. However, ODF would still be able to conduct these activities at the end of the Experiment, a potential for a maximum 10 to 15 year delay. If USFWS issues the Permit, the covered activities would proceed at normal pace. Therefore, the primary effect of the issuance of the Permit would be to allow covered activities to continue that might otherwise be temporarily delayed for up to 15 years. For these reasons, the SHA and Permit would not significantly affect these other resources and we have focused our analysis on the potential effects to spotted owls. As discussed above, the effects to barred owls from the Experiment were fully considered in the Final Environmental Impact Statement for the Barred Owl Removal Experiment (FEIS) (USFWS 2013).

Intensity

Intensity, as defined by the Council on Environmental Quality (CEQ), refers to the severity of impact. The following 10 points identified by CEQ were considered in evaluating intensity: impacts that may be both beneficial and adverse; public health and safety; unique characteristics of the geographic area; highly controversial impacts, uncertain, unique, or unknown risks;

precedent-setting aspects; cumulative effects; effects on eligibility for listing in the national register of historic places; endangered species effects; and violation of environmental protection laws.

1. Impacts that may be both beneficial and adverse. The SHA will facilitate the ability of USFWS and USGS to remove a larger proportion of the barred owls on the treatment portion of the Study Area, likely resulting in a stronger response by spotted owls (more site occupancy) and stronger results, which in turn will support the development of a long-term barred owl management strategy and contribute to the survival and recovery of the spotted owl. The removal will also temporarily protect the remaining territorial spotted owls within the treatment area. The permitting of covered activities that may impact currently unoccupied sites may have some minor negative effect on the occupancy and reproduction of those sites. However, in the absence of the Permit, USFWS and USGS would not have access to ODF lands to remove barred owls from these areas.

The primary effect of the Permit on other resources is to allow actions and effects to proceed as they would in the absence of the Permit. Without the Permit, even if we were able to conduct the Experiment without access to ODF lands and some of these sites are re-occupied by spotted owls, some of the spotted owl nesting/roosting habitat might not be available for some forest management activities for the duration of the Experiment and an estimated five years following the Experiment. This is the time period in which we expect barred owls to reinvade the area, re-establish their current population levels, and again displace the spotted owls. Thus, the primary effect on other resources is a short-term difference in the timing of activities.

2. Public health and safety. There are no risks to human health from the issuance of the Permit. In the EIS for the Experiment, we addressed human safety issues from the use of firearms to remove barred owls. We concluded that the risk to public health and safety is insignificant due to the use of shotguns by trained, authorized professionals only, and a tight removal protocol (USFWS 2013, pp. 193-4).

3. Unique characteristics of the geographic area (such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas). Under CEQ regulations, “unique characteristics” are generally limited to those that have been identified through the land use planning process or other legislative, regulatory, or planning process. There are no such lands associated with the covered activities under this Permit. The lands that would be covered by this Permit do not include historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

4. Highly controversial impacts. Controversy in this context means disagreement about the nature of the impacts to the environment, not expressions of opposition to the proposed action or preference among the alternatives. While the concept of removing, by use of a shotgun, a seemingly large number of an owl species is controversial, even if it is not native to the environment, there is little controversy about the nature of the impacts to the environment of this Experiment and this SHA. Issues raised in the comments have been addressed.

5. Uncertain, unique, or unknown risks. Barred owl removal has been conducted on Green Diamond lands in California as part of a separate experiment for many years, and in British Columbia as part of a management effort. The Hoopa Tribe has been removing barred owls on the Hoopa Reservation in California since 2013 as part of the experiment. The risks for this type of work are well known.

6. Precedent-setting aspects. The removal of non-native wildlife, and even native species, is a common practice in the United States. This has included removal of owls in other circumstances, and the removal of one species is often done to contribute to the recovery of another. We have issued three Enhancement of Survival Permits for incidental take of spotted owls on private ownerships in the Study Area. This action is not precedent setting.

7. Cumulative effects. As described by CEQ, significance may exist if it is reasonable to anticipate a cumulatively significant impact on the environment. We conducted a cumulative effects analysis in the EA and concluded that the effects of Permit issuance did not rise to the level of significance.

8. Effects on eligibility for listing in the National Register of Historic Places. As described by CEQ, this includes affects to districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or actions that may cause loss or destruction of significant scientific, cultural, or historical resources. There are no known significant cultural or historic resources, structures or areas eligible for listing under the National Register of Historic Places that would be affected by the covered actions on the lands that would be covered by the Permit.

9. Endangered species effects. This includes an evaluation of the degree to which the action of issuing the Permit may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the ESA. Impacts of the Experiment on other species were considered in the FEIS (USFWS 2013). Potential effects were identified only for the marbled murrelet (disturbance), spotted owl, and spotted owl critical habitat (Critical Habitat). The Experiment was determined to not adversely affect marbled murrelets. The Experiment was also determined not likely to jeopardize the continued existence of the spotted owl or to destroy or adversely modify spotted owl Critical Habitat because the potential impacts will be minimal and are not likely to appreciably reduce the likelihood of spotted owl recovery or appreciably reduce the conservation value of spotted owl Critical Habitat overall.

We analyzed the effects of issuance of the Permit on threatened and endangered species, and any designated critical habitat that may be adversely affected by the proposed action. The Permit and SHA do not authorize any change in the requirements to address other listed species or critical habitats. We evaluated the effect of the issuance of the Permit and SHA on all listed species that occur in the area. We have determined there will be no impact to threatened or endangered species or their critical habitats, with the exception of the northern spotted owl, and its Critical Habitat. We conducted an intra-Service section 7 consultation on the issuance of the Permit and SHA, and determined that the proposed action is not likely to jeopardize the continued existence of spotted owl, because the potential adverse impacts caused by the proposed action are likely to be minimal at a population and recovery unit scale, will not appreciably impair or preclude the

capability of the affected spotted owl recovery unit, and in turn the coterminous population, to provide for the intended survival and recovery function assigned it, and are likely to be more than offset by the potential for the large scale implementation of an effective barred owl management strategy should the Experiment, to which the proposed action will contribute, be successful. We evaluated the effect of the issuance of the permit to spotted owl Critical Habitat in the covered area, and determined that the proposed action is not likely to destroy or adversely modify critical habitat, because the potential for a very small level of degradation or loss of current forest condition would not appreciably reduce the conservation value/function of the Critical Habitat subunit, and in turn the affected critical habitat unit and the rangewide designation, for demography support of the overall spotted owl population because of the limited and scattered nature of ODF lands that may be affected, the fact that the vast majority critical habitat within the critical habitat unit affected occurs on Federal lands, and the distribution of ODF lands such that critical habitat loss on ODF lands would not appreciably affect the north-south or east-west connectivity with critical habitat.

Under the SHA and Permit, USFWS did not authorize and does not anticipate any take of any listed species other than spotted owls that may temporarily return to non-baseline sites as a result of the Experiment.

Marbled Murrelet: We evaluated the potential effect of the SHA and Permit on the marbled murrelet (*Brachyramphus marmoratus*), which nests in the general area. We determined that the issuance of the Permit represented no significant effect to the marbled murrelet. This SHA would not authorize any take of marbled murrelets and would not result in any changes to any requirements relative to Federal or State laws specific to marbled murrelets. All existing requirements and prohibitions remain in effect. ODF surveys all potential habitat for marbled murrelets prior to timber operations, and protects all occupied marbled murrelet sites. Currently, nearly 600 acres within the treatment area is protected as occupied marbled murrelet sites, and this will increase when new occupied habitat is found. Under the SHA, ODF would be able to continue to operate as they are currently, consistent with all other applicable State and Federal Laws. The SHA does not allow for any activity that is not currently allowed under State and Federal law. There is no marbled murrelet Critical Habitat on ODF lands covered by the SHA.

Spotted Owls: The SHA and Permit support Recovery Action 29 from the *Revised Recovery Plan for the Northern Spotted Owl* (USFWS 2011). As described in the **Context** section above, the Permit allows only the take of spotted owls that may temporarily reoccupy 18 currently-unoccupied spotted owl sites and some small unoccupied areas outside of spotted owl use areas as a result of the removal of barred owls during the Experiment.

The SHA and Permit do not authorize take of spotted owls that occupy 20 currently-occupied sites in the treatment portion of the Study Area. These territorial spotted owls are more likely to maintain their territories due to the removal of competing barred owls, and therefore breed and contribute to future spotted owl populations. Thus the Experiment and this Permit are not likely to reduce the current territorial population of spotted owls in the treatment area and may, in fact, protect these sites from incursions by expanding barred owl populations during the removal period.

The spotted owls that may be incidentally taken under this SHA would be re-occupying sites or areas where no resident spotted owls have been located for at least the last five years, despite extensive survey efforts. The most likely source of spotted owls that may reoccupy these sites are floaters (displaced or young non-territorial, non-breeding owls). We do not anticipate that any of the spotted owls currently occupying baseline sites would move onto non-baseline sites and therefore be incidentally taken under the authority of the Permit.

We have no evidence to suggest that floaters (non-territorial, non-breeding spotted owls) successfully breed unless they first become established on a territory. These individuals are unlikely to find and defend territory as long as barred owls remain in the area in their current densities. Thus, these non-territorial owls are not contributing to future generations and, in the absence of barred owl removal, will likely die without reproducing, providing no contribution to the future population of spotted owls. The removal of barred owls under the Experiment will likely allow some non-territorial spotted owls to temporarily establish territories and contribute to the regional spotted owl population. Of the 18 currently-unoccupied spotted owl sites that would be covered by the Permit, ODF manages less than 10 percent of spotted owl habitat within the Thiessen polygons on 7 sites, between 16 and 33 percent of spotted owl habitat on 6 sites, and greater than 33 percent of habitat on 5 sites. None of these sites are currently protected as they have not been occupied for at least five years. In the absence of the removal experiment, we anticipate all of the habitat within these sites would be harvested.

The total amount of habitat removal that would be covered by this Permit represents less than 7 percent of the spotted owl habitat available in the Physiographic Province. Populations of spotted owls are generally addressed at the Physiographic Province or Modeling Region (regional) level. The 3,345 acres of spotted owl habitat covered by the Permit represents less than 0.6% of the estimated 606,800 acres of suitable spotted owl habitat in the Oregon Coast Ranges Physiographic Province, which represents one of the 12 identified recovery units for the northern spotted owl.

In developing the Experiment and analyzing the effects of the Experiment and this SHA, we did not anticipate a long-term conservation contribution from the spotted owls that might re-occupy historic sites in the Study Area. The primary long-term conservation value of the Experiment, which this SHA and Permit supports, is the information the USFWS will gain about the feasibility and efficiency of removal as a tool for barred owl management. This information will be crucial for the development of long-term barred owl management strategies for this Study Area, as well as across the range of the spotted owl.

Spotted Owl Critical Habitat:

There are approximately 18,200 acres of spotted owl Critical Habitat on ODF lands in the treatment portion of the Study Area. Under the SHA, ODF may take spotted owls as a result of managing forest in spotted owl habitat on non-baseline sites and areas under the Permit. This includes up to approximately 3,345 acres of nesting/roosting habitat that may be Critical Habitat.

ODF lands in the treatment area include lands within the North Coast Ranges and Olympic Peninsula Recovery Zone, which contains 859,864 acres of spotted owl Critical Habitat (USFWS

2012), in Unit 2 of the above stated region (Oregon Coast Range (OCR)). This unit contains six subunits, Subunits 2 and 3 which overlap the covered area.

Critical Habitat Unit 2, Subunit 2 consists of approximately 261,400 acres, including lands managed by the State of Oregon, the BLM, and the USFS. If the entire 3,345 acres of spotted owl habitat covered by the Permit were removed from ODF lands within this Subunit, this would represent a loss of spotted owl nesting/roosting habitat on less than 1.3 percent of the Subunit. This limited level of habitat loss would not appreciably reduce the conservation value of the Critical Habitat subunit for demography support of the overall northern spotted owl population, and because of the scattered nature of ODF lands that may be affected as a result of issuance of the permit, any habitat loss would not appreciably affect the north-south connectivity between subunits, as described in the Recovery Plan (USFWS 2011).

Critical Habitat Unit 2, Subunit 3 consists of approximately 203,681 acres, including lands managed by the State of Oregon, the BLM, and the USFS. Within the treatment area of the Study Area (the only portion of Critical Habitat that would be affected by forest management activities covered under the SHA and the Permit), ODF manages 410 acres. If the entire 410 acres of spotted owl habitat on ODF lands within this Subunit were removed, this would represent a loss of spotted owl nesting/roosting habitat on less than 0.2 percent of the Subunit. This very limited level of habitat loss would not appreciably reduce the conservation value of the Critical Habitat Subunit for demography support of the overall northern spotted owl population, and because of the scattered nature of ODF lands that may be affected as a result of issuance of the permit, any habitat loss would not appreciably affect the north-south or east-west connectivity between subunits, as described in the spotted owl Recovery Plan (USFWS 2011).

At the regional scale, 3,345 acres of habitat loss in Critical Habitat Unit (2) would represent 0.4 percent of the Unit. At the scale of the full designation, the 3,345 acres represents less than 0.04 percent of spotted owl Critical Habitat. This potential for a very small level of degradation or loss of current forest condition would not appreciably reduce the conservation value/function of the Critical Habitat in the affected unit for demography support of the overall spotted owl population because of the limited and scattered nature of ODF lands that are covered by this permit, the fact that the vast majority critical habitat within the critical habitat unit affected occurs on Federal lands and is managed under the Northwest Forest Plan or Western Oregon BLM Resource Management Plan that include specific provisions to support spotted owls, and the distribution of ODF lands such that critical habitat loss on ODF lands would not appreciably affect the north-south or east-west connectivity with critical habitat.

Consequently, we determined that the issuance of the Permit is not likely to significantly affect spotted owl Critical Habitat at the local, regional, or range-wide scale. Furthermore, the SHA will help facilitate beneficial effects to the spotted owl associated with recovery plan goals through the Experiment.

10. Violation of environmental protection laws. The issuance of the Permit will not violate any Federal, State, or local laws or requirements imposed for the protection of the environment. The conditions of the Permit require ODF and USFWS to insure that their respective activities under the SHA are consistent with applicable Federal, State, and local laws and regulations.

Finding of No Significant Impact

Impacts to barred owls from the Experiment were addressed in the FEIS. For the following reasons, the USFWS concludes that issuance of a Permit allowing incidental take of non-baseline spotted owls resulting from implementation of the ODF SHA will not significantly impact the human environment.

Potential impacts on the human environment caused by the Experiment were analyzed in an FEIS (USFWS 2013). We tiered the EA for the SHA and Permit to the FEIS, including to the *Affected Environment and Environmental Consequences* section (USFWS 2013, Chapter 3). The SHA does not change the analysis of effects of the Preferred Alternative in the FEIS for the Experiment on barred owls, ongoing spotted owl demographic study areas, other species, the social environment, recreation and visitor use, costs of the Experiment, or the cultural environment. As noted in the FEIS *Effects to the Economy* section, “[a]ny safe harbor agreements would lessen the effects described in the economic analysis” (USFWS 2013, p 452). Thus, the EA effects analysis focused on the effects of this SHA on the spotted owl.

Based on the information presented in the EA and the SHA, and consideration of public comments, we find that the proposed issuance of an ESA section 10(a)(1)(A) Permit to ODF for incidental take of spotted owls that may re-occupy currently unoccupied (non-baseline) sites and areas as a result of the SHA is not likely to significantly affect the quality of the human environment for the following reasons:

1. The conservation value of the Experiment, and this SHA which supports the Experiment, is the information the Service will gain about the feasibility and efficiency of removal as a tool for barred owl management. This information will be crucial for the development of long-term barred owl management strategies to support the survival and recovery of the spotted owl.

Without the SHA, Service and USGS researchers would lack access to important locations within the treatment area, creating pockets of barred owls within the treatment area. This would provide a source of barred owls to re-occupy spotted owl sites that had been cleared of barred owls under the removal Experiment, allowing barred owls to continue to displace spotted owls from these sites and areas, thus reducing the power of the Experiment to measure the utility of barred owl removal for purposes of conserving the spotted owl. This, in turn, may potentially lengthen the duration of the Experiment in order to measure that utility.

Because spotted owls have been displaced from these sites and areas, likely by barred owls, all spotted owl habitat covered by the Permit is currently available for harvest by ODF without ESA restrictions. Issuance of the Permit reduces their incentive to remove this habitat quickly to avoid potential regulatory complications from removal of barred owls from neighboring lands.

2. No take of spotted owls on currently occupied sites would be authorized under the proposed Permit. By providing Service and USGS access to lands and roads for the survey and removal of barred owls as part of the larger Experiment, these spotted owl sites are more likely to remain occupied during the term of the Permit, that is, they are less likely to be overtaken by an increasing barred owl population. This provides at least short term protection for these sites, supporting survival and recovery of the spotted owl.

3. The Permit will authorize only the removal of spotted owls that may reoccupy non-baseline sites or areas where resident spotted owls have not been detected in the last five years despite extensive surveys. These sites and areas are unlikely to be re-occupied by spotted owls unless barred owls are removed from the area. Any non-baseline sites that become occupied by spotted owls during the Experiment would likely be lost as barred owls re-populate the area following the end of the removal Experiment. The spotted owls that may reoccupy these sites will come from the non-territorial floater population. These individuals are not reproductive and not contributing to the future spotted owl populations, and will remain so unless sites are open for recolonization by the removal of barred owls. The removal of barred owls provides an opportunity for some of these individuals to gain a territory and reproduce during the course of the Experiment, thus contributing to the future spotted owl population.

4. After conducting a review under section 7 of the ESA, the Service concluded that issuance of the Permit for the SHA would not be likely to cause an appreciable reduction in the likelihood of survival and recovery of the spotted owl (USFWS 2016c). The Service reached this conclusion because any adverse impacts caused by take of the spotted owl that is authorized under the proposed Permit will be tempered by the temporary beneficial effects of allowing spotted owls to re-occupy historic sites and by enhancing the credibility of the Experiment to inform the development of a large scale and long-term barred owl management strategy. The Service also concluded that the issuance of the Permit would not result in the destruction or adverse modification of critical habitat. As noted above, the proposed Permit action is consistent with the final recovery plan for the spotted owl.

5. The actual amount of spotted owl habitat that may be affected under this SHA and Permit represents a very small portion of the spotted owl nesting/roosting habitat regionally and an even smaller portion rangewide. This represents a very small impact on the regional forest environment.

6. The primary effect of the SHA and Permit is a minor change in the timing of the covered activities on covered lands and would not influence whether these activities occur or not. All covered activities under the SHA could be carried out, immediately or in the near future, under current State laws and regulations. In the absence of the Permit, the non-baseline sites and areas are highly likely to remain occupied by barred owls and unavailable to spotted owls. In the absence of spotted owls, the ESA take prohibitions do not apply and the covered activities would remain unrestricted. The removal of barred owls and any re-occupancy of non-baseline sites by spotted owls is temporary. Barred owl removal is estimated to continue for between 4 and 10 years under the Experiment.

Once the removal ceases, barred owls are likely to quickly reinvade the area and we anticipate spotted owls will again be displaced. At that time there will no longer be restrictions on any covered activities based on the ESA take prohibitions. Thus, the effect of the SHA and Permit would be to allow covered activities to occur during the Permit term even if the Experiment results in spotted owl occupancy of these sites. In the absence of the Permit, these activities might otherwise be delayed until barred owls re-occupy the non-baseline sites after the Experiment has ended.

7. The issuance of the Permit authorizes take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (50 CFR §17.3). Thus, issuance of the Permit applies to covered activities that comply with all applicable Federal and State laws.

Public Involvement and Comments Received

The Service conducted extensive scoping and outreach on the FEIS for the Experiment (USFWS 2013, pp. 7-8; 188-193; and 343-350). We established a Barred Owl Stakeholder Group including: a broad range of environmental, animal welfare, and industry groups; Federal, State, and local governments; and Native American Tribes to assist with early scoping. We conducted public comment periods for scoping on the draft EIS, including one public meeting, five public webinars, and meetings with affected Federal agencies. We mailed notices of the availability of the draft EIS to over 600 individuals and organizations.

On March 21, 2016, we issued a Notice of Availability in the Federal Register (81 FR 8739) for the draft SHA and draft EA for public review. A 30-day public review and comment period closed on April 20, 2016. The draft SHA and draft EA were available on the website of and in hard copy from the Oregon Fish and Wildlife Office in Portland, Oregon. We received three public comments from one individual and two non-governmental organizations. The individual's comment was not substantive. The remaining comments were concerned about the potential loss of spotted owl habitat under the SHA. For a detailed description of substantive comments and Service responses please see the attached Appendix A.

Changes Made Between the Draft and Final EA

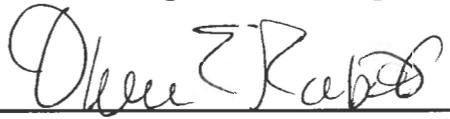
A few changes were made to the EA to address public comments and incorporate new information. We added some additional information on the potential effects of incidental take of the spotted owl, and added some clarification on the information already provided. We provided more information on the determination of effects to marbled murrelets and spotted owl critical habitat. We expanded on the Cumulative Effects analysis to discuss some potential future SHAs in the affected area, though these future SHA actions have not yet reached the level of being reasonably foreseeable.

Conclusion

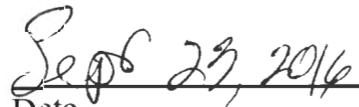
Based upon my review and evaluation of the information contained in the EA, SHA, and other supporting documents cited herein, I have determined that issuance of the Permit and

implementation of the SHA, as proposed, is not a major Federal action that will significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969. Accordingly, preparation of an Environmental Impact Statement on the Proposed Action is not required.

Documents used in preparation of this Finding of No Significant Impact include the EA (USFWS 2016a), SHA (USFWS 2016b), and Intra-Service Section 7 Biological Opinion (USFWS 2016c). All documents are incorporated herein by reference, as described in 40 CFR §1508.13. All supporting documents are on file and available for public inspection, by appointment, at: U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, 2600 SE 98th Ave, Suite 100, Portland, Oregon, 97266; telephone (503) 231-6179.



Deputy Regional Director, Region 1
U.S. Fish and Wildlife Service



Date

Supporting References

- U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Spotted Owl (*Strix occidentalis caurina*). Portland, Oregon.
- U.S. Fish and Wildlife Service. 2013. Final Environmental Impact Statement for the Experimental Removal of Barred Owls to Benefit Threatened Spotted Owls. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2016a. Final Environmental Assessment for the ODF Safe Harbor Agreement. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2016b. Final Safe Harbor Agreement for the Northern Spotted Owl between ODF and U.S. Fish and Wildlife Service in the Oregon Coast Ranges Study Area of the Barred Owl Removal Experiment. Portland, Oregon.
- U.S. Fish and Wildlife Service. 2016c. Biological Opinion regarding the Issuance of an Enhancement of Survival Permit in Conjunction with the Implementation of a Safe Harbor Agreement for the Northern Spotted Owl between ODF and the U.S. Fish and Wildlife Service. Portland, Oregon.

Appendix A- Public Comments and Responses

NEPA Compliance

Comment 1: Friends of Animals stated that the Barred Owl Removal Experiment and corresponding Safe Harbor Agreement (SHA) constitute a major Federal action, and as such USFWS must prepare an Environmental Impact Statement (EIS). They also stated that the USFWS should have evaluated the application and SHA concurrently with the Barred Owl Removal Experiment.

Service Response: Federal agencies are required to conduct an analysis under the National Environmental Policy Act (NEPA) for proposed Federal actions. If the significance of the environmental effects is uncertain, the agency may conduct an Environmental Assessment (EA) to determine if an EIS is required. We conducted such an analysis, provided for public comment, and have reached the conclusion that the action of issuing an Enhancement of Survival Permit for the Northern Spotted Owl to ODF will have no significant impact on the human environment and does not require the preparation of an EIS.

The Final EIS for the Barred Owl Removal Experiment (FEIS) was completed and a decision signed in September 2013. In that FEIS, we stated that “[i]n the removal areas, the Service will explore the potential for Safe Harbor Agreements with nonfederal landowners willing to cooperate with the experiment” (USFWS 2013, p. 218). We also responded to a comment on the FEIS noting that we had not analyzed the effects of safe harbor agreements in our economic analysis (USFWS 2013, p 452). As we noted in our response, SHAs are applicant driven, voluntary, and would be developed with individual landowners specific to their individual situation, therefore we could not reasonably anticipate the number, extent, or contents of such agreements at that time. Our earliest discussions with landowners concerning SHAs did not begin until February of 2015. We could not have reasonably included an analysis of these Safe Harbor Agreements in the FEIS for the Barred Owl Removal Experiment. Thus, this analysis evaluates effects not reasonably foreseeable at the time of the FEIS.

Comment 2: Friends of Animals did not consider the EA to contain a reasonable range of alternatives that would avoid or minimize adverse impacts or enhance the human environment. Specifically, they stated that USFWS omitted several reasonable alternatives from its analysis including: 1) studying the interaction between barred owls and spotted owls without removal; and 2) preserving additional habitat for northern spotted owls as part of the SHA.

Service Response: The option of studying the interaction between barred owls and spotted owls without removal was considered in the FEIS on the Barred Owl Removal Experiment and is described in Section 2.3 -- Alternatives Considered and Dismissed from Detailed Analysis, in particular Section 2.3.5 -- Studies of Species Interaction without Removal (USFWS 2013, p 48.)

SHAs are applicant driven and include discussions and negotiations between the USFWS and the applicant. Early in the process, several minor modifications to the action alternative were discussed and rejected as not meeting the purpose and need of the action, the goals of ODF or the

goals of the Service (by not providing for a net conservation benefit). These include the following:

Longer permit duration: We discussed a permit duration that would run past 2025, or more than five years following the cessation of the Experiment. The USFWS anticipates that the barred owl populations on the Study Area will return to the pre-experiment levels at the end of the Permit in 2025. At that point, any spotted owls remaining on the landscape are not present due to the diminished barred owl population resulting from the removal Experiment, and we do not believe it would be appropriate to authorize take under this SHA. Because we do not yet have hard data to test our assumption on return to pre-removal conditions within five years, we will consider extending the Permit if barred owls have not returned to pre-experiment levels by 2025.

Shorter permit duration: We considered a permit duration of five years, ending with the end of barred owl removal. This would not meet ODF's goal of retaining the current level of regulatory restriction on the management of their lands. The effects of the barred owl removal do not evaporate at the end of the barred owl removal. It will take time, an estimated three to five years, before barred owl populations will recover to pre-removal levels. The presence of spotted owls on non-baseline sites immediately following the removal portion of the Experiment would reflect the effects of the Experiment. Under this approach, ODF would be burdened with additional restrictions on their lands as a result of their participation in the SHA. This did not meet the goals of ODF and would provide an incentive to ODF to harvest these lands quickly, before the end of the Permit. This approach could lead to smaller amounts of habitat on the landscape over a shorter time.

Maintain habitat in the site center or nesting stand for duration of the Experiment: This approach would result in increased restrictions on ODF's lands if spotted owls occupied a site center or nest stand on ODF's land. This did not meet the goals of ODF. Based on the results from the Green Diamond barred owl removal study (Diller et al. 2014), spotted owls generally reoccupy historic site centers. If spotted owls do nest on ODF lands, ODF is willing to protect these nest stands while spotted owls were actively nesting or raising young.

Comment 3: Friends of Animals stated that USFWS should consider and disclose the ethical impacts of its proposed actions. They stated that “[t]he EA or EIS should include a serious discussion of the ethical implications of the proposed action, killing barred owls and destroying the habitat of and harassing spotted owls.” They also stated that “[i]n order to make an informed decision and include the public in the decision making process, FWS must include a detailed discussion of the impacts of its proposed action on owls as well as other wildlife affected by its activities.”

Service Response: In the FEIS for the Barred Owl Removal Experiment, the USFWS detailed our extensive efforts to examine social issues, including ethical issues (Section 3.6, USFWS 2013. pp 188-194). We incorporated this information by reference in the EA. The ethical issues of the SHA are functionally the same as the issues addressed in the EIS.

Comment 4: Cascadia Wildlands stated that USFWS must consider all impacts to listed and candidate species under the ESA, and all species under NEPA prior to a final decision, implying that this was not done.

Service Response: The USFWS considered the effects of the Experiment on all species, including candidate and listed species, in the EIS (USFWS 2013), incorporated by reference in the EA. USFWS also considered the effect of the issuance of the Permit on all threatened and endangered species through the intra-Service section 7 consultation on the proposed issuance of the Permit under the SHA and evaluated effects to all listed species in the EA.

Comment 5: Cascadia Wildlands stated that the USFWS considered the fact that barred owls will eventually repopulate the treatment area and displace any spotted owls that have reoccupied the non-baseline sites as **mitigation** [emphasis added].

Service Response: Cascadia Wildlands misread the sentence in the draft SHA, assuming that the word mitigate was referring to mitigation as described in NEPA and Safe Harbor regulations in terms of actions carried out by the applicant as mitigation to any impacts. We used the word in this sentence in its English meaning -- to lessen. We have replaced this word with a synonym so as to not be confused with meanings, such as providing some type of off-setting compensation.

Baseline Determination

Comment 6: Cascadia Wildlands stated that the approach to determination of the baseline used in this SHA conflicts with the policy, based on their combined reading of the Safe Harbor Agreement Policy and Habitat Conservation Plan Handbook. They contend that according to these documents, habitat degradation must include commitments to preserve habitat on site or nearby. They also point out that the Safe Harbor Agreement Policy requires the document detail where and when benefits would accrue, and that the policy referenced benefits occurring on the enrolled property.

Service Response: Cascadia Wildlands used policy and direction from the Habitat Conservation Plan Handbook and applied it to SHAs. Their contention that the conservation benefit for any habitat degradation must be offset by the preservation of habitat on site or in close proximity is specific to Habitat Conservation Plans, which unlike SHAs, allow for the take of currently existing individuals of a listed species. There is no comparable requirement or recommendation for SHAs. Baseline for a SHA can be set in a number of ways. While this may include the condition of habitat, it can alternately be based on the existing level of use of the area by the species. In our case, we had the information to determine the level of use and chose to use this information to define the baseline, consistent with the policy. In the ODF SHA all recently occupied sites are identified as part of the baseline and no take of spotted owls on these sites is authorized.

Additionally, Cascadia Wildlands claims that the Safe Harbor Policy references benefits occurring on the enrolled property is not based in the language of the policy. For example, the policy requires that the agreement will “[i]dentify management actions that would be undertaken to accomplish the expected net conservation benefits to the species, where and when the benefits

would be achieved, and the agreed upon time frames these management actions will remain in effect to achieve the anticipated net conservation benefits....” There is nothing that prevents benefits from occurring beyond the enrolled property boundaries.

Under the Safe Harbor Policy, net benefits can take many forms, including but not limited to “reduction of habitat fragmentation rates; maintenance restoration or enhancement of habitats; maintenance or increase of population numbers or distribution; reduction of the effects of catastrophic events; establishment of buffers for protected areas; **and establishment of areas to test and develop new and innovative conservation strategies.**” [emphasis added]. The Experiment will provide for short-term population stability or increases, and definitely falls under the “. . . test and develop new and innovative conservation strategies.” Conducting the Experiment in as timely and effective manner possible represents a significant benefit that will contribute to the spotted owl’s recovery over time.

In addition, benefits will also occur on the enrolled property. Issuance of the Permit to ODF will allow the removal of barred owls on ODF lands, which may actually protect the remaining territorial spotted owls from incursions by expanding barred owl populations during the removal period. The removal of barred owls and the potential reoccupancy by spotted owls of sites in the vicinity of the enrolled properties may result in reproduction, resulting in additional spotted owls being produced that would not occur in the absence of the Experiment. Finally, information gathered from this Experiment may be useful in managing spotted owl populations in the vicinity of the enrolled properties.

Comment 7: Cascadia Wildlands noted that all of the non-baseline sites have historic responses from spotted owls. They requested that all spotted owl sites be included in the baseline, assuming that they either continue to be used by spotted owls for nesting, roosting, or foraging or provide valuable areas for recolonization.

Service Response: The USFWS defined the spotted owl sites based on the presence of spotted owls at some time in the past. Thus, the commenters are correct that all site centers, baseline or non-baseline, have some history of spotted owl response. Spotted owl surveys in this area are conducted to very high standards, and have been for over two decades. The lack of response from a site over multiple years is indicative of a site that is not being used by a territorial spotted owl. If barred owls are using the site, it is highly unlikely that spotted owls are also maintaining a territorial presence. It is possible that non-territorial spotted owls (floaters) may use the area at times, though there is no sure method to detect them and no way to determine the importance of a stand for these birds as they move around frequently. For the definition of baseline sites the USFWS used any response from any resident spotted owl in the past three years to define occupancy. On this SHA, we established an agreed-upon elevated baseline of sites with resident spotted owls four and five years previous. Therefore, all sites with any response from any resident spotted owl in the past five year is baseline for the ODF SHA. The non-baseline areas may be useful for recolonization, but only if the barred owls that displaced the original spotted owls are removed.

Comment 8: Cascadia Wildlands recommended the USFWS use a longer period of survey data to define current use of the sites. They suggest we assume the highest level of historical

occupancy, rather than use the most recent three years of data to define the current occupancy of each site. They point to statements in past publications noting that sites may go unoccupied for more than three years and be subsequently reoccupied by spotted owls and state that surveys can be inaccurate over short time periods. They state that we are treating site centers that are surveyed and unoccupied for three years as lacking in conservation value for spotted owls.

Service Response: SHAs are designed to allow landowners who voluntarily contribute to recovery of the covered species to “incidentally take” individuals that represent an increase in the population as a result of the actions under a SHA, as long as this does not result in a drop below the baseline condition at the time of the SHA. After consideration and evaluation of the current conditions on the removal portion of the Oregon Coast Ranges Study Area, we believe that using the data from the past five years of extensive spotted owl surveys best describes the current condition of spotted owls in the area for the reasons explained below.

Cascadia Wildlands point to Dugger et al. (2009) report which noted that, based on survey data collected between 1990 and 2002; some spotted owl sites were unoccupied for more than three years before spotted owls returned. However, these survey data were collected at a time when barred owl populations were still at relatively low levels in the Study Area and the effects of competition from barred owls was not yet realized. In more recent work in the area by Dr. J. David Wiens following radio-marked spotted and barred owls, no spotted owls were observed residing in territories once barred owls had established on the site (J. Wiens 2016, Pers. Comm.). Barred owl populations are now very high in the Oregon Coast Ranges Study Area. Preliminary results from the initial surveys of barred owls for the Barred Owl Removal Experiment indicate there was an average of 1.9 pairs of barred owls per historic spotted owl site, and over 88 percent of the areas surveyed were inhabited by barred owls. (J. Wiens et al. February 2016 presentation). Thus, it is highly unlikely that spotted owls would be able to recolonize these areas without the removal of barred owls, greatly reducing their potential to provide any short or long term conservation value for spotted owls.

Because even under the best of circumstances, spotted owls may not always respond to call surveys, all protocol surveys to date include at least two years of survey data to make a firm determination of current spotted owl presence. The spotted owl’s response to the presence of barred owls may have reduced their propensity to respond to call surveys further. We used the results of the last five years of spotted owl protocol surveys to establish the baseline for this SHA as sites where spotted owls have responded in the past three years, and elevated baseline sites where spotted owls have responded four or five years previous. For the purposes of this SHA, spotted owl sites on which annual surveys detected the presence of at least one resident spotted owl over the last three years (2013-2015) were considered to currently support spotted owls.

Safe Harbor Agreement Policy

Comment 9: Friends of Animals stated that “[i]f northern spotted owl habitat is destroyed as part of the Experiment, as proposed in the Safe Harbor Agreement, then no benefit can come from conducting the Barred Owl Removal Experiment.” They note that the loss of habitat would have long term effects while the Experiment is short term.

Service Response: The Barred Owl Removal Experiment will end when we acquire the information needed to answer the questions posed in the FEIS, specifically when we have sufficient information to determine the efficacy and efficiency of barred owl removal as a management tool for spotted owl conservation. The information from this Experiment is one of the critical missing pieces of information the USFWS identified as needed as part of an effort to determine what we can, and should, do to manage barred owl populations to allow the survival of the threatened Northern Spotted Owl. While the Experiment may be short-term (maximum of 10 years), the information gained will have long-term effects on the survival and recovery of the spotted owl.

Comment 10: Cascadia Wildlands stated that the logging of 18 or more site centers would guarantee the decline of the local population and not provide a net conservation benefit.

Service Response: The permit does not allow for the logging of 18 site centers. Ten of the 48 known site centers in the treatment area lie on ODF lands, 7 of which are on non-baseline sites. If some of these seven site centers are re-occupied as a result of the Experiment, ODF could log them, with the exception of logging during the nesting season if the pair is nesting. These 7 site centers are already currently unoccupied, have been for at least 5 years, and are not contributing to the local breeding population at this time. Logging of these currently unoccupied site centers may slow the rate of population growth if barred owl removal does increase the number of resident spotted owls and if the spotted owls do not find another suitable core area within the territory, but will not cause any decline in the local population.

Comment 11: Cascadia Wildlands stated that trading spotted owls and their habitat for **intangible and uncertain benefits of an experiment** [emphasis added] is risky and sets a dangerous precedent.

Service Response: The USFWS has extensively explained the need for and value of the Experiment in the spotted owl Recovery Plan (USFWS 2011), FEIS for the Barred Owl Removal Experiment (USFWS 2013), and as summarized in the EA for the SHA and the SHA itself. This Experiment was designed by the USFWS to answer a specific management question, and provide information to assist in addressing the primary short-term threat to the survival of the spotted owl. Under these circumstances, the USFWS has documented the value of the Experiment.

Comment 12: Friends of Animals contend that “[b]ecause FWS has never analyzed how information from the Barred Owl Removal Experiment could lead to a long term strategy to conserve northern spotted owls, no reasonable person could conclude that the Experiment or the safe harbor agreement promote northern spotted owl conservation or recovery.” They contended that the USFWS did not show how the data gathered as a result of this SHA contributes to the conservation of spotted owls. The commenter also claims that failure of the USFWS to lay out a plan for future management based on the Experiment and analyze how the Experiment would lead to a long-term strategy to conserve spotted owls makes it such that no reasonable person could conclude that the Experiment or the SHA will promote spotted owl recovery.

Friends of Animals also claim that the USFWS did not define what constitutes a successful Experiment, the basis for the SHA’s contribution to the conservation of the species. They also

stated that the Experiment itself was not expected to provide long term conservation, based on the statement in the FEIS that the USFWS “did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites in the Study Area.” (USFWS 2013, p 11, 16).

Service Response: The 2011 *Revised Recovery Plan for the Northern Spotted Owl* clearly identified the need for the information that would be provided from the Barred Owl Removal Experiment (Recovery Action (RA) 29), in part to implement RA 30 - Manage to reduce the negative effects of barred owls on spotted owls so that Recovery Criterion 1 can be met. RA 30 describes the potential for management that could include “. . . local or large-scale control of barred owl population, and/or other activities at present unforeseen but informed by research results.” (USFWS 2011, p. III-65).

The FEIS for the Barred Owl Removal Experiment describes the purpose and need for the information that the Experiment will provide and the importance of this Experiment. Friends of Animals erroneously assumed that because we stated that we did not anticipate long-term conservation value from the individual spotted owls that may temporarily re-occupy the historic sites where spotted owls had not been detected for at least five years, this meant that the study itself had no long-term conservation value. In fact, the long-term conservation value of the Experiment lies in the information on the effectiveness of removal as a tool for improving spotted owl population dynamics.

This SHA contributes to our ability to remove the majority of barred owls from the treatment area. In the absence of this SHA, USFWS would lack access to important areas within the treatment area. The lack of access for barred owl surveys and removal on ODF lands and roads could create pockets of barred owls within the treatment area, providing a source of barred owls to re-occupy spotted owl sites following removal, continue displacing spotted owls from these sites, reducing the power of the Experiment to detect the effect, and thereby lengthen the duration of the study.

The importance of this Experiment to the recovery of the spotted owl is described in the *Revised Recovery Plan for the Northern Spotted Owl* (USFWS 2011) and in the FEIS for the Barred Owl Removal Experiment (USFWS 2013), as well as in the EA for this SHA (Section 1.1 to 1.2) and the SHA (Section 4.3). The importance of permission to access using ODF roads and lands, and remove barred owls from ODF lands is described in the EA (Section 3).

Comment 13: Cascadia Wildlands expressed concern over what they view as a species-wide scope of the analysis of net conservation benefit, believing this dilutes consideration of local effects and recommended we not consider the value of the Experiment as a whole in the analysis of net conservation benefit. They opined that the acquisition of scientific information does not meet the net conservation benefit requirement.

Service Response: The USFWS, in determining the effects of the proposed SHA and in evaluating the potential net conservation benefits, evaluated the contribution of the SHA to the spotted owl at multiple levels, including the covered lands, the treatment portion of the Study Area, the province in which the barred owl removal is occurring, and range-wide. The definition of net conservation benefit in our policy includes the statement that “[n]et conservation benefits

must be sufficient to contribute, either directly or indirectly, to the recovery of the covered species.” 64 FR 32722. Recovery is a regional or species range-wide concept and to analyze the effect on recovery, a larger scope of analysis is required. Specific to this SHA, the SHA is directly contributing to the implementation of RA 29, identified as a high priority in the 2011 *Recovery Plan for the Northern Spotted Owl* (USFWS 2011). Thus, the level of analysis of net conservation benefit that we applied is completely appropriate. And the fact that this SHA is contributing to recovery of the species argues for the net conservation benefit. We have provided some additional clarification on the conservation benefits of the SHA at the local level.

Comment 14: Cascadia Wildlands suggested that the USFWS is directly equating the value of the Experiment to acres of habitat. They also asked if there was a conservation benefit if the Experiment was unsuccessful.

Service Response: The USFWS, in the EA, analyzes the effects of the harvest of spotted owl habitat in the non-baseline sites and areas. Cascadia Wildlands erroneously assumes the USFWS was using a mitigation formula based on habitat. In fact, the contribution to the recovery of the species is based on the value of the Experimental results.

Yes, there is a conservation benefit if the Experiment is not successful in increasing spotted owl populations or improving spotted owl population trends. With conclusive negative results, we would not be pursuing the use of this tool on barred owl management in the future

Comment 15: Cascadia Wildlands stated that they believe the USFWS’s statutory and regulatory authority, guiding policy, and pattern of practice demonstrate that the baseline should consist of all suitable northern spotted owl habitat, regardless of whether that habitat is currently occupied. The commenter notes that the regulatory definition of baseline condition reads “population estimates and distribution and/or habitat characteristics and determined area of the enrolled property that sustain seasonal or permanent use by the covered species at the time the Safe Harbor Agreement is executed between the Services and the property owner.” They interpret this as requiring USFWS to include all habitat of the species and point to some past SHAs to support this contention. They note that two other SHAs for the spotted owl in Washington and Oregon used habitat as a measure of baseline. They state that “In referencing seasonal use, the definition makes clear that the habitat at issue need not be permanently occupied, but rather simply of conservation value to the listed species.”

Service Response: Cascadia Wildlands misrepresented the requirements of the USFWS regulatory authority and policy when they stated that “[t]he Service’s statutory and regulatory authority, guiding policy, and pattern of practice demonstrate that the baseline should consist of all suitable northern spotted owl habitat, regardless of whether that habitat is currently occupied.” As stated in the final Safe Harbor Agreement Policy, “[t]he Services intend to provide flexibility during implementation of the policy by providing that baseline conditions will be mutually agreed upon by the participating landowner and the Services, and will be determined by using either population numbers of listed species or occupied habitat acreage, or both. (64 FR 32719). In fact, the policy goes on to describe population numbers as a preferred approach. “The Services, or appropriate cooperators, with the concurrence of the participating property owner, will describe the baseline conditions for the enrolled property in terms appropriate for the covered species such as number and location of individual animals, if determinable, . . . To the

extent determinable, the parties to the Agreement must identify and agree on the degree to which the enrolled property is inhabited, permanently or seasonally, by the covered species. . . . For species that are extremely difficult to survey and quantify, an estimate and an indirect measure (e.g., number of suitable acres of habitat of the species) is acceptable and should be based on the best available techniques and information (64 FR 32723-4).”

Spotted owls are relatively easy to survey and survey methods have a high probability of locating resident or territorial individuals, even in the presence of barred owls. The area covered by the SHA has been extensively surveyed for over two decades, providing high quality information on past and current population levels. Thus, we chose to use information from these surveys to define baseline in terms of currently-occupied spotted owl sites. Cascadia Wildlands noted that most SHAs focus on habitat as a measure of baseline, including two in Washington and Oregon specific to spotted owls. The use of habitat as a surrogate for populations is certainly an acceptable approach for determining the baseline condition, particularly where population data is limited, and may be appropriate in the cited cases. They also pointed to the description of baseline as including “. . . existing habitat areas or characteristics that support the species covered at the time of the Agreement, and other appropriate attributes.” This is an option, but is not required as the initial part of the sentence refers to the population measure (64 FR 32723).

The Safe Harbor Agreement Policy does refer to baseline as including area with permanent or seasonal use. Spotted owls are strongly territorial, staying on their territories year-round and not making seasonal movements to other locations or habitat. Thus, the concept of seasonal use is not consistent with the life history of the spotted owl. While dispersing and floater (non-territorial, non-breeding) spotted owls may make intermittent use of forest stands of various conditions as they move through and survive in the forest, the likelihood that they use a particular stand, or rely on that stand for their survival is very low. Studies of dispersing spotted owls show that they move around fairly regularly and over large areas. In the determination of baseline for this SHA, we considered any site with even one resident spotted owl response in five years of surveys to be occupied. Thus, if a floater or dispersing spotted owl chooses settle and respond to surveys, the site is considered occupied even if it later moves on.

Analysis of Effects to Spotted Owls and the Experimental Results

Comment 16: Cascadia Wildlands and Friends of Animals questioned whether the loss of habitat resulting from this SHA will bias the experimental results and whether changes in habitat in the treatment or control area may confound the results. Friends of Animals pointed out that the purpose of the Experiment is to allow spotted owls greater access to suitable habitat so that they can live and reproduce in habitat that would otherwise remain unavailable due to barred owl occupancy. They questioned how the USFWS would be able to detect if barred owl control was working in light of the loss of habitat during the Experiment.

Service Response: Cascadia Wildlands and Friends of Animals provided no evidence that the level of habitat loss under this Permit would negate any benefit of the Experiment. The models used to generate spotted owl population trends, which are the basis for determining the impact of barred owl removal on spotted owl populations, include habitat as a covariate. This allows us to estimate the impact habitat loss (or gain) has on the observed rates of population change. The

analyses in Dugger et al. (2016) demonstrate that within the modeling framework, we can detect whether barred owl removal is affecting the spotted owl population trend even with the loss of some habitat during the study. This is particularly true given the relatively small amount of habitat that may be removed under the conditions of the SHA.

Comment 17: Cascadia Wildlands stated that the USFWS assumes a minor impact from the loss of habitat because of remaining habitat on other private and surrounding Federal lands to support the site. They are concerned that these lands may also be harvested. They believe that landowners may log areas down to the take “thresholds” and then ODF would be able to log further below this. They believe that the Service erroneously relies on neighboring lands to provide the net conservation benefit. Cascadia Wildlands stated that the USFWS should consider the cumulative impacts of likely surrounding logging over time. They recommended that the USFWS should not allow any habitat loss that puts the site center below take thresholds. Finally, they recommended any take authorization be delayed until the final year of the Permit.

Service Response: Contrary to Cascadia Wildlands impression, the USFWS has not set specific habitat thresholds for below which any habitat removal is considered take. All evaluation of take is conducted case by case, taking into account the specific situation, location, amount, and effect of habitat removal.

The USFWS did not base its analysis of net conservation benefit on the condition of the lands outside of ODF’s land base, nor did we assume that neighboring landowners would not harvest some spotted owl habitat. However, under current land use plans, very little high-quality spotted owl habitat on Federal lands will be harvested. In fact, since 2010, the USFWS has consulted on the removal of only 1,115 acres of spotted owl habitat on Federal lands in the entire Oregon Coast Ranges, of which this treatment area is a small part. In the EA, we did note that in many cases, ODF has very small amounts of the habitat within the historic use area of specific spotted owl sites. However, in all cases, we assume that the harvest of these acres could result in incidental take and would affect, to some degree, spotted owls on the 18 non-baseline (i.e., currently unoccupied) sites if they become re-occupied by spotted owls.

The USFWS analyzed cumulative effects in the draft EA, as described in the NEPA regulations “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or nonfederal) or person undertakes such other actions” (40 CFR § 1508.7). Cascadia Wildlands’ recommendation to not allow any harvest that drops any site center below take threshold levels of habitat amounts to the USFWS not authorizing any take. The same applies to only allowing take in the final year of the Permit. Without the incidental take authorization associated with a return to the baseline conditions as defined in the SHA, ODF has little incentive to enter into the SHA.

Comment 18: Cascadia Wildlands stated that the removal of barred owls will serve to attract viable spotted owls to the area from surrounding areas, and the approved harvest of habitat will then harm these individuals, creating a sink population.

Service Response: The most likely source of spotted owls that may re-occupy historic sites once barred owls are removed are the spotted owls that were displaced from these sites and remain in the area as floaters (i.e., non-territorial, non-breeding birds). A few replacement birds may be younger spotted owls produced on one of the few remaining occupied (i.e., baseline) spotted owl sites that are seeking to establish a territory, and are currently part of the floater population. Barred owl removal is unlikely to entice the remaining territorial spotted owls to abandon their current sites and move onto non-baseline sites from which barred owls are removed. Data show that once spotted owls establish a territory, they have a high tendency to remain on that familiar territory (Forsman et al. 2002, p. 29). Therefore, we do not anticipate that any of the spotted owls currently occupying baseline sites would move onto non-baseline sites where they could be subject to incidental take authorized under the SHA Permit.

We have no evidence that floaters (young and displaced territorial spotted owls) successfully breed unless they first establish a territory. These individuals are unlikely to find and defend a territory as long as barred owls remain in the area at their current densities. For those reasons, these non-territorial spotted owls are not contributing to future generations and, in the absence of barred owl removal, will likely die without reproducing. If barred owls are removed, these spotted owls may be able to establish territories and reproduce, thus contributing to future generations during the removal period.

Recommendations for Changes to the Safe Harbor Agreement

Comment 19: Cascadia Wildlands recommended that the USFWS carry out the Experiment without ODF's cooperation, stating that since most spotted owl territories are located on Federal land and the EA analysis notes the Experiment could be carried out without access to ODF lands, this is a reasonable approach. Later in their comments, they stated that they did not believe that providing for a "slightly more convenient and thorough experiment" provides a net conservation benefit.

Service Response: Cascadia Wildlands recommendation fails to acknowledge that, although the EA states the Experiment could be carried out without access to ODF lands, we also noted that the quality of the experimental results would be negatively affected by the lack of such access for purposes of barred owl removal. Without access to ODF lands and ODF roads for barred owl removal could reduce the power of the Experiment to detect any changes in spotted owl population dynamics resulting from the removal of barred owls and potentially extend the duration of the Experiment. The USFWS has repeatedly indicated the need to gather this information in a timely manner. Failure to access non-Federal lands for purposes of barred owl removal could delay completion of the Experiment and mask the full effects of barred owl removal on the spotted owl.

In areas of checkerboard land ownership, such as occurs in the treatment portion of the Study Area, not all forest roads are open for public use and access to Federal lands requires using roads that cross private lands. Under some historic right-of-way agreements, even Federal use of the roads may be limited to specific uses, or not allowed at all. Thus, the lack of access to ODF-controlled roads could have a greater effect on the Experiment than simply failing to access their lands. The mere presence of Federal lands does not insure we have access to that land for

carrying out the Experiment. The need to access ODF lands is more than a matter of convenience or just a slight difference in the thoroughness of the Experiment.

Comment 20: Cascadia Wildlands stated there is significant uncertainty as to whether spotted owls may re-occupy non-baseline sites or whether and when barred owls may return to these areas. They suggest that USFWS prohibit logging of non-baseline site centers during the Experiment, so if spotted owls remain at these sites after the Experiment ends, new spotted owl reproductive opportunities will occur. They note that if USFWS predictions are true, spotted owls will not be present at these sites and harvest can proceed.

Service Response: The primary purpose of the Experiment is to determine if spotted owls will re-occupy sites after barred owls are removed. Based on results from the Green Diamond barred owl removal study in California, the USFWS believes that re-occupancy of at least some of such sites is likely, and that the rapidly declining population trend for spotted owls in this area may improve. However, there is uncertainty about whether this re-occupancy is likely to occur in Oregon. If there were no uncertainty, there would be no reason for the Experiment.

SHAs are voluntary agreements. In this case, under the SHA, ODF will allow USFWS and USGS researchers, and their contractors, to remove barred owls from ODF-managed lands in return for not encumbering those lands that are currently not encumbered, including sites with potential spotted owl nesting habitat that may be re-occupied by spotted owls following the removal of barred owls. Protecting all known spotted owl site centers, even those that have not been occupied by spotted owls within the last five or more years, would encumber lands that are not currently so. If the USFWS and ODF do not enter into the SHA, and, therefore, do not remove barred owls on ODF-managed lands, it is highly unlikely that spotted owl site centers will be established or reoccupied on ODF lands due to the presence of barred owls. The USFWS is not aware of any records of a spotted owl reclaiming a site once barred owls have become well established at the site. For that reason, these site centers are likely to remain unoccupied by spotted owls and not subject to protections under the ESA. The USFWS believes that the conservation benefits to the spotted owl associated with the value of the scientific information derived from this short-term Experiment, and any spotted owl reproduction that may occur during the course of the Experiment at re-occupied, non-baseline sites exceeds the potential adverse effects caused by habitat loss or degradation at up to 18 historic and currently unoccupied spotted owl site centers on ODF-managed lands.

Comment 21: Cascadia Wildlands stated that retaining all unoccupied spotted owl habitat in the treatment area would reduce fragmentation and the risk of barred owl invasion into that habitat, provide for spotted owl foraging and dispersal, and increase the chance that spotted owls will successfully reproduce and survive in an area. They further noted the spotted owl recovery plan recommends managing lands to conserve high value spotted owl habitat.

Service Response: Whether the retention of all unoccupied suitable spotted owl habitat under this SHA would lead to any of the results described by Cascadia Wildlands depends, in great part, on the specific situation. For example, the removal of isolated small patches of forest habitat would not increase fragmentation. Forest habitat patches provide for spotted owl foraging opportunities only if spotted owls can access the patch safely (i.e., no barred owls are

using the area). Unoccupied forest habitat patches provide for spotted owl dispersal only if there are young spotted owls available to use it. There is no evidence that fragmentation increases the risk that barred owls will invade or use an area; Cascadia Wildlands did not provide any information to support this contention. Given the current status of barred owls in areas of unoccupied spotted owl habitat in the treatment portion of the Study Area, these areas are not likely to support reproducing spotted owls.

The discussion of Recovery Action 10 in the spotted owl recovery plan, cited by Cascadia Wildlands in their comment, is focused on Federal lands. Under Recovery Action 13, the Recovery Plan does make the following statement: “Given the continued decline of the species, the apparent increase in severity of the threat from barred owls, and information indicating a recent loss of genetic diversity for the species, we recommend conserving occupied sites and unoccupied, high-value spotted owl habitat on State and private lands wherever possible. This recommendation is primarily driven by the concern associated with displacement of spotted owls by barred owls, the need to retain good quality habitat to allow for displaced or recruited spotted owls to reoccupy such habitat, and the need to retain a spotted owl distribution across the range where Federal lands are lacking. . . . Because spotted owls on established territories are likely to be more successful if they remain in those locations (Franklin et al. 2000), managing to retain spotted owls at existing sites should be the most effective approach to conserving spotted owls. Retention of long-term occupancy and reproduction at established spotted owl sites will require a coordinated and cooperative effort to craft management approaches tailored to regional, provincial or local conditions.” Note that while the Recovery Plan recommends retaining unoccupied, high-value spotted owl habitat wherever possible, the Recovery Plan goes on to stress the concern over the increasing barred owl threat and the importance of maintaining spotted owls at existing sites.

The Experiment will, at least for a short time, contribute to maintaining currently occupied spotted owl sites, delay the invasion of barred owls, and otherwise contribute to the conservation of the spotted owl through the experimental results, as described in the EIS for the Experiment. Also, because these sites are currently unoccupied by resident spotted owls, this habitat is, or will very soon be, unprotected from harvest by State or Federal law. Thus, the USFWS has determined that the value of the SHA and its contribution to the Experiment outweighs the value of retaining the scattered patches of spotted owl nesting-roosting habitat in the non-baseline sites and areas covered under the SHA.

Comment 22: Cascadia Wildlands recommended the “protected core” be expanded to encompass all spotted owl nesting and roosting habitat within the site and not allow for timber harvest in the non-nesting season. Their comment asserted that removing this habitat may preclude future spotted owl use of the site, and may harm fledglings that rely on the core area prior to dispersing and juvenile owls that often periodically linger in the nest site core area following dispersal.

Service Response: The purpose of the seasonal restriction in the SHA is to allow fledgling spotted owls to occupy the natal core area prior to dispersal. The timing of this protection allows for juvenile spotted owls to reach dispersal age. Data show that spotted owls generally disperse from their natal areas in Oregon in September. Juvenile spotted owls typically disperse out of

the area, even if they eventually return to the vicinity. Cascadia provided no specific information supporting the claim that juvenile spotted owls “often periodically linger on their natal territories as they mature.” The proposal from Cascadia amounts to treating the non-baseline sites that are re-occupied by spotted owls as if they were baseline sites. This provides no incentive to ODF to enter into this voluntary SHA.

Comment 23: Cascadia Wildlands asserts the USFWS’s analysis assumes ODF will wait until late in the Permit term to harvest spotted owl habitat.

Service Response: The USFWS made no such assumption and did not assume that any spotted owl habitat on covered lands within non-baseline sites and areas would remain in place for any specific period of time. The contribution to the recovery of the spotted owl provided under the SHA is the access it provides to USFWS and USGS researchers, and their contractors, to more comprehensively and efficiently remove barred owls within the treatment portion of the Study Area to facilitate the most robust basis for analyzing the effects of barred owl removal on the spotted owl, not retention of spotted owl habitat on non-baseline sites and areas.

Endangered Species Act

Comment 24: The Friends of Animals and Cascadia Wildlands stated that the proposed Permit and ODF’s proposed SHA are not in compliance with the Endangered Species Act because they would not provide a net conservation benefit to the northern spotted owl. They stated that the long-term loss of spotted owl habitat at non-baseline sites and areas covered by the SHA would negate the contributions to the survival of the species potentially provided by the Experiment. The Friends of Animals suggested that this finding is grounds for denying the Permit and noted that the Permit term exceeds the length of the actual Experiment. They contend that “If northern spotted owl habitat is destroyed as part of the Experiment, as proposed in the Safe Harbor Agreement, then no benefit can come from conducting the Barred Owl Removal Experiment, and it could actually reduce the likelihood of spotted owl survival and recovery.”

Service Response: In the proposed SHA, Section 4.3 b-- Net Conservation Benefit, we describe the value of the Experiment, and the value of access to the ODF-managed lands to efficient and effective implementation of the Experiment. The proposed SHA notes that lack of access to ODF-managed lands will likely reduce the power of the Experiment to determine the effects of barred owl removal on the spotted owl which, in turn, would lead to extending the term of the Experiment and delay the analysis of results. As the Friends of Animals notes, spotted owl populations are in decline. Any delay in acquiring information important to potentially addressing and managing for the threat from barred owl competition will only exacerbate the decline. See our response to Comment 1 for a discussion of the effects of habitat loss.

Both commenters fail to acknowledge that the habitat in question is either in areas where no spotted owls have been found in over 20 years of surveys (areas outside Thiessen polygons) or on sites where spotted owls have not been detected in over five years. These sites are currently unoccupied by resident (territorial) spotted owls, this condition is consistent with recent data on the effect of barred owls on spotted owl site occupancy (Dugger et al. 2016), and these sites are not likely to be re-occupied by spotted owls if barred owls are not removed. As such, this habitat

is, or will very soon be, not subject to protections from harvest provided by State or Federal laws.

The term of the Permit is based on the anticipated length of time for spotted and barred owl populations on the Study Area to return to the baseline conditions defined in the proposed SHA following completion of the Experiment. The effects of the Experiment do not end immediately following the last barred owl removal period. The USFWS anticipates that the barred owl population will take three to five years to recover following the removal Experiment.

Comment 25: Cascadia Wildlands requested the USFWS to document and quantify the amount of all past and ongoing incidental take of spotted owls. They are concerned the USFWS is routinely issuing incidental take statements and permits with little cumulative effects analysis, pointing to the recent SHA signed with Roseburg Resources Company and Oxbow I, LLC where incidental take of spotted owls associated with 19 non-baseline spotted owl sites was authorized should they become re-occupied by spotted owls following barred owl removal within the treat portion of the Study Area.

Service Response: The USFWS tracks all authorized incidental take of spotted owls, and considers this information in the status and environmental baseline sections of biological opinions addressing the effects of proposed Federal actions on the spotted owl, including the proposed issuance of a SHA permit. The status and baseline assessments for the spotted owl in the opinion are considered along with the analysis of the effects of the proposed action on the spotted owl, taken together with cumulative effects (as that term is defined in the implementing regulations for section 7 of the ESA at 50 CFR 402.02) to determine if the action is likely to avoid jeopardizing the continued existence of the species as mandated under section 7(a)(2) of the ESA.

In completing a biological opinion addressing the proposed ODF SHA and Permit, our analysis considers the incidental take of up to an estimated 46 spotted owls under the Programmatic SHA for the Northern Spotted Owl between U.S. Fish and Wildlife Service, Oregon Department of Forestry, and the USDA Natural Resources Conservation Service. We also included explicit consideration of the take authorized in the Permit for the Roseburg Resources Company and Oxbow I, LLC SHA in that opinion and in the draft EA for the ODF SHA.

In the period starting October 2010, the USFWS has authorized, under determinations of no-jeopardy, the incidental take of spotted owls at 32 sites on Federal lands throughout the entire North Coast Planning Province (similar to the Oregon Coast Ranges Physiographic Province) where the lands that would be covered by the ODF SHA and Permit occur, though not all of this incidental take authorization has been utilized, to date. Most of this take has been in the form of harass due to noise and/or smoke during one spotted owl breeding season. Harass take may affect spotted owl breeding for the year in which it occurs, but these effects are not likely to affect the survival of the affected territorial spotted owls. No incidental take has been authorized in any area on Federal lands in the North Coast Planning Province since October 2014.

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