Draft Environmental Assessment for the Weyerhaeuser Safe Harbor Agreement

The U.S. Fish and Wildlife Service (USFWS) is conducting a barred owl removal experiment to test benefits to the threatened northern spotted owl (spotted owl). This action partially implements Recovery Action 29 of the 2011 Revised Recovery Plan for the Northern Spotted Owl (USFWS 2011). The Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls (Barred Owl Removal Experiment or Experiment) (USFWS 2013a) is being implemented on four study areas, including the Oregon Coast Ranges Study Area (Study Area) west of Eugene, Oregon. While the Experiment is focused on Federal lands, the landscapes involved in the Study Area include significant interspersed private lands, including lands owned by Weyerhaeuser Company ("Weyerhaeuser"). Access to nonfederal lands is important to efficient completion of the Experiment.

The USFWS and Weyerhaeuser have prepared a Safe Harbor Agreement (Agreement), whereby Weyerhaeuser will contribute to the conservation of the spotted owl by allowing the researchers access to survey for barred owls on Weyerhaeuser lands throughout the Study Area, and to remove barred owls from Weyerhaeuser lands within the removal portion of the Experiment. This access and the resulting information collected by the researchers is crucial to efficient and effective implementation of this Experiment. Information from this Experiment is critical to the development of a long-term management strategy to address the barred owl threat to the spotted owl.

In return for access to Weyerhaeuser's lands and the resulting data collected by the researchers, the USFWS has proposed to issue an Enhancement of Survival Permit (Permit) under Section 10(a)(1)(A) of the Endangered Species Act (ESA) (16 U.S.C. 1553 et seq.). The proposed issuance of a Permit by the USFWS is a Federal action that may affect the human environment and therefore is subject to review under the National Environmental Policy Act (NEPA). This Environmental Assessment (EA) provides the compliance with NEPA.

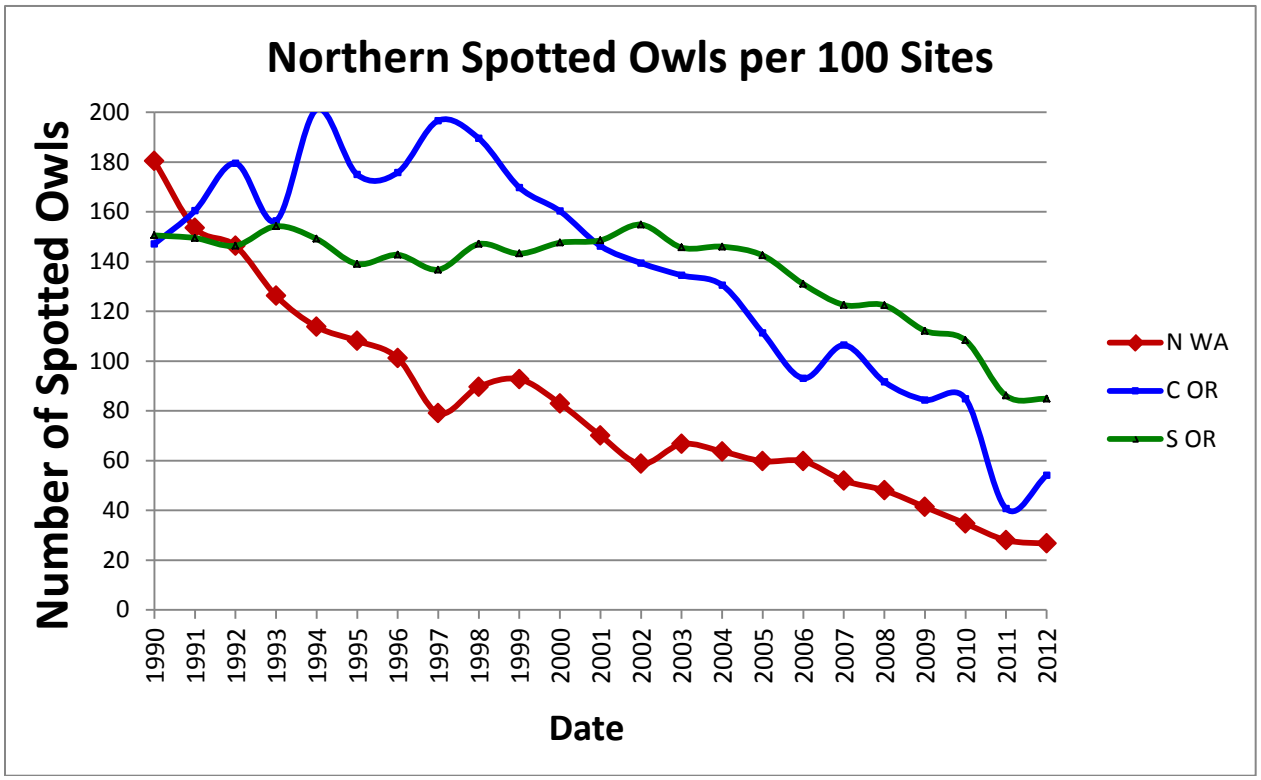
1.1 Background on the Barred Owl Effect on Spotted Owls

Because the Agreement is specific to the implementation of the Experiment, understanding the approach to and value of the Experiment is important to understanding the effects of the Agreement.

The USFWS noted in the Final Environmental Impact Statement for the Experimental Removal of Barred Owls to Benefit Threatened Spotted Owls (FEIS) (USFWS 2013b) that spotted owl populations have been declining for many years, particularly in the northern part of their range. The Federal agencies track spotted owl populations through several demographic studies spread across the range of the spotted owl. Populations on the Cle Elum Spotted Owl Demography Study Area in the Washington Cascades declined 85 percent between 1990 and 2012 (Figure 1). In the Oregon Coast Ranges Demography Study Area, populations fell by 73 percent between 1997 and 2012. Even in southern Oregon, on the Klamath Demography Study Area, spotted owl

populations have declined 45 percent from 2002 to 2012. Some of this decline is undoubtedly driven by habitat loss and habitat remains important to the conservation of spotted owls, but not all of these areas experienced significant declines in habitat during these timeframes (USFWS 2013b).

Figure 1. Plot of the number of spotted owls located per 100 sites surveyed on ongoing spotted owl demography studies.



Many of these observed declines appear to correlate with the invasion by, and increase in, barred owls. Barred owls are not native to the Pacific Northwest, arriving from Canada sometime after the 1950s. Recent spotted owl population demography analysis shows that presence of barred owls has a strong negative effect on spotted owl annual survival and on the colonization of new sites on some study areas. (For more information on the background, see FEIS, USFWS 2013b).

The maintenance and development of spotted owl habitat is important to the long-term conservation of the spotted owl, but habitat management alone will not recover the spotted owl. In the short term, the effects of barred owl competition will likely overwhelm habitat management efforts, and may result in the extirpation of the spotted owl from large portions of the range. Thus, management of barred owl populations in the Pacific Northwest is crucial to the conservation of the spotted owl.

As early as 2005, scientist, biologists, and managers began exploring options for managing barred owl competition with spotted owls (Buchanan et al. 2007, Johnson et al. 2008). After

several workshops and publications, it was determined the most feasible option for addressing the effect of barred owls on spotted owls is the removal of barred owls in selected areas to potentially increase spotted owl populations (Gutiérrez et al. 2007, Johnson et al. 2008). While we continue to explore all options for spotted owl conservation, the USFWS identified the need to conduct an experiment to test the removal of barred owls, as described in Recovery Action 29 of the 2011 Revised Recovery Plan for the Northern Spotted Owl (USFWS 2011).

In September 2013, the USFWS signed the Record of Decision to conduct experimental removal of barred owls to benefit threatened northern spotted owls (USFWS 2013a). The Experiment is being conducted on four study areas distributed across the range of the spotted owl, including the Oregon Coast Ranges Study Area where Weyerhaeuser own or manage land. The Experiment involves dividing the each study area into treatment and control areas. Barred owls will be removed from the treatment area and not from the control area. If spotted owls respond positively to the removal of barred owls, USFWS anticipates spotted owls will reoccupy historic sites that are currently unoccupied, and demographic parameters will improve (e.g. reproduction, adult survival), resulting in a spotted owl population increase in the treatment area. Spotted and barred owl populations in the control area are not anticipated to change as a result of the Experiment, though spotted owl populations may continue to decline as a result of increasing competition from barred owls.

To conduct the Experiment, researchers survey the entire study area for barred owls. Barred owls will be removed from the treatment areas during the non-breeding season (approximately September to March). Ongoing spotted owl surveys conducted under the Northwest Forest Plan Monitoring program, Bureau of Land Management (BLM) monitoring, and Weyerhaeuser surveys will continue. USFWS will use the data from these ongoing efforts to determine the effect that the removal of barred owls has on spotted owls.

Weyerhaeuser lands are intermingled with Federal and other lands in the Oregon Coast Ranges Study Area (Map 1). While the Experiment can be conducted by surveying from public roads and removing barred owls on Federal lands, the resulting scientific data will be stronger and efficiency will be greatly enhanced by access to nonfederal lands. In the Oregon Coast Ranges Study Area, the Experiment will be greatly enhanced by access to Weyerhaeuser lands for surveys, and permission to remove barred owls from Weyerhaeuser lands.

1.2 Purpose and Need for Action

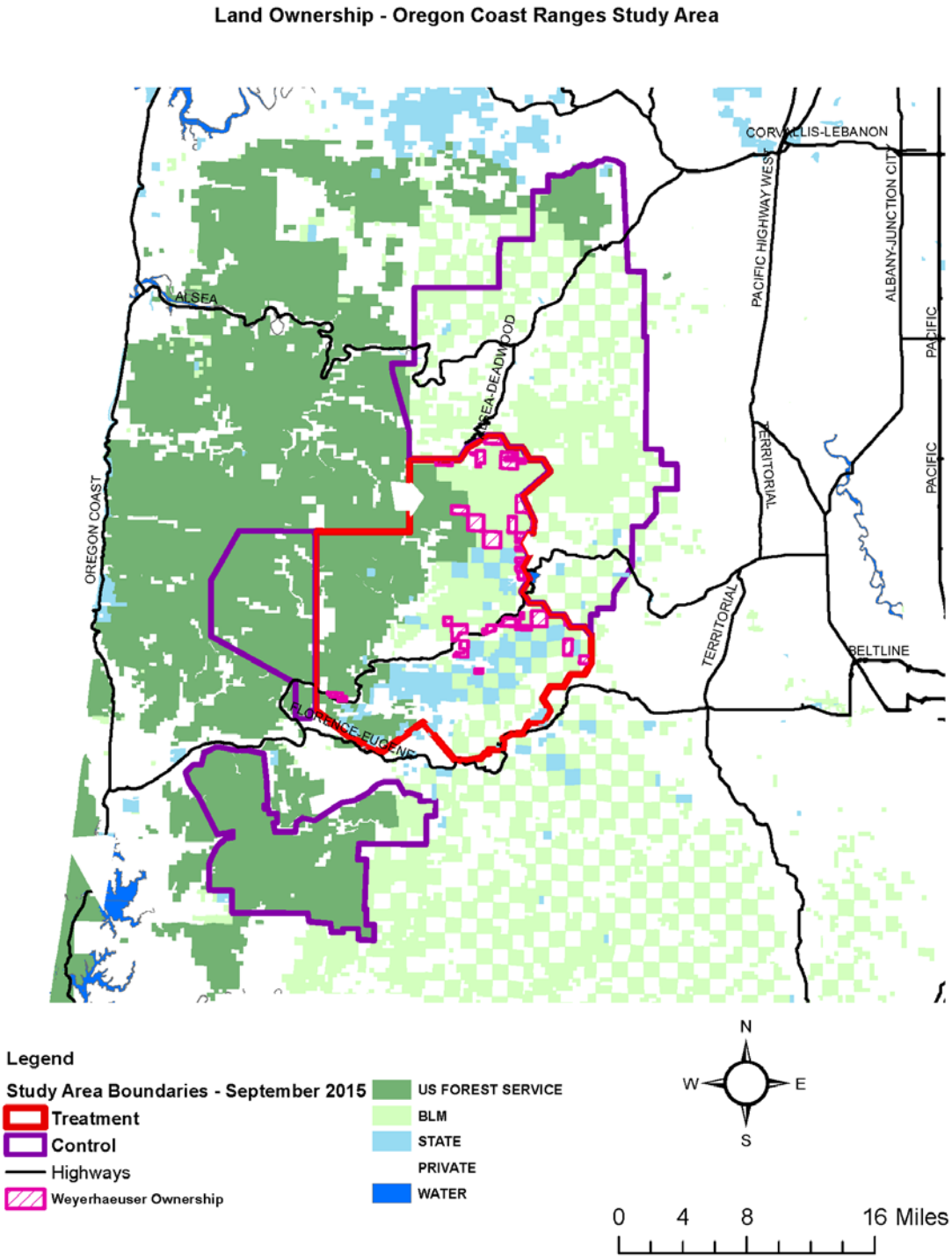
The USFWS' purpose for the proposed action of entering into the Agreement and issuing an ESA section 10(a)(1)(A) Enhancement of Survival Permit to Weyerhaeuser is to gain access to important areas within the Oregon Coast Ranges Study Area for barred owl surveys and barred owl removal.

The need for access and information is to complete the Barred Owl Removal Experiment in the most efficient and effective manner for the conservation of the northern spotted owl consistent with Recovery Action 29 of the Recovery Plan (USFWS 2011, p. III-65). More specifically, the Experiment will allow the USFWS to: (1) obtain information regarding the effects of barred owls

on spotted owl vital rates of occupancy, survival, reproduction, and population trend through experimental removal of barred owls; (2) determine the feasibility of removing barred owls from an area and the level of effort required to maintain reduced barred owl population levels for the duration of the Experiment; (3) estimate the cost of barred owl removal in different forested landscapes; and (4) develop information necessary to contribute to developing future options for potential management of barred owls as expeditiously as possible.

Weyerhaeuser's purpose for the Agreement is to demonstrate good faith cooperation with USFWS regarding this recovery action while maintaining a reasonable level of certainty regarding the anticipated biological response and subsequent regulatory requirements impacting both forest operations and management during and soon after the Experiment period. Weyerhaeuser lands are managed as timberlands primarily for timber production providing economic, community and stewardship values on a long term sustained yield basis while meeting State and Federal regulatory requirements. The Weyerhaeuser lands within the Oregon Coast Ranges Study Area are an important part of Weyerhaeuser's overall operating plans from both a short term and long term perspective. Therefore, in return for cooperation on the Experiment, Weyerhaeuser acquires relative certainty for their continued forest operations and management on their lands as would occur in the absence of the Barred Owl Removal Experiment.

Map 1. General land ownership for Oregon Coast Ranges Study Area including treatment and control areas.



1.3 Regulatory and Planning Environment

Several Federal and State regulations and/or laws govern the activities proposed under the Agreement. A brief summary of relevant regulations is provided below.

1.3.1 Endangered Species Act

The ESA is intended to protect and conserve species listed as endangered or threatened, and to conserve the habitats on which they depend. The ESA also mandates that all Federal agencies seek to conserve endangered and threatened species and use their resources and authorities to further such purposes.

Section 9 of the ESA prohibits the "take" of Federally-listed endangered and threatened species unless authorized under the provisions of Section 7, 10(a), or 4(d) of the ESA. Section 3 of the ESA defines take as "to harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Section 10 of the ESA allows USFWS to enter into an agreement to enhance the propagation and survival of affected species. Section 2 of the ESA states that encouraging interested parties to develop and maintain conservation programs through Federal financial assistance and a system of incentives is a key to safeguarding the Nation's heritage in fish, wildlife, and plants. Section 7 of the ESA requires USFWS to review programs that they administer and to use such programs to further the purposes of the ESA.

A Safe Harbor Agreement under Section 10(a)(1)(A) of the ESA is a voluntary agreement between the USFWS and a nonfederal landowner whose land management actions provide a net conservation benefit to species listed under the ESA. In exchange for complying with the Agreement and permit conditions that are reasonably expected to provide a net conservation benefit to listed species, the landowner is assured that the USFWS will not require additional management activities without their consent. In addition, under the Agreement, landowners may return their lands to mutually agreed baseline conditions, as described in the Agreement.

The Section 10 Permit associated with the Agreement authorizes incidental take of the spotted owl that may occur while the permit holders and their agents conduct forest management activities under current State regulations.

1.3.2 Migratory Bird Treaty Act

The spotted owl is protected under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703-711) (MBTA). It is USFWS policy that an ESA Section 10 Permit for listed migratory birds is sufficient to relieve the permittee from liability under the MBTA. For the MBTA, this is accomplished by having the Permit double as a Special Purpose Permit authorized under 50 Code of Federal Regulations (CFR) 21.27. For the Experiment itself, the direct take of barred owls is covered by a MBTA Scientific Take Permit issued to the USFWS.

1.3.3 National Environmental Policy Act

Issuance of an ESA Section 10 Permit is a Federal action as defined under NEPA, 42 U.S.C. 4331 *et seq*. and its implementing regulations (40 CFR 1500 *et seq*.). With respect to Safe Harbor Agreements in general, compliance with NEPA is not a direct obligation or requirement of the applicant for the Section 10 Permit. However, the USFWS must comply with NEPA when making their decisions on the application and implementing the Federal action of issuing a Section 10 Permit. Consequently, the appropriate environmental analyses must be conducted and documented before a Section 10 Permit can be issued. The USFWS has determined that an EA is initially appropriate for this action to determine if there will be significant impacts to the environment. If the USFWS determines that the environmental consequences of the proposed action evaluated in this EA are not significant, the USFWS would issue a Finding of No Significant Impact (FONSI). This EA analyses the potential effects of implementing the Agreement and issuing a section 10(a)(1)(A) permit under the ESA for the incidental take of the spotted owl that may occur during implementation of the Agreement.

1.3.4 Oregon Forest Practices Rules

In Oregon, the Forest Practices Act (ORS 527.610) identifies forest practices as any operation conducted on or pertaining to forestland, including but not limited to: (a) reforestation of forestland; (b) road construction and maintenance; (c) harvesting of forest tree species; (d) application of chemicals; (e) disposal of slash; and (f) removal of woody biomass. The rules specifically state that compliance with the forest practices rules does not substitute for or ensure compliance with the ESA and nothing in the rules imposes any state requirement to comply with the ESA. Landowners and operators are advised by the State that Federal law prohibits a person from taking threatened or endangered species, which are protected under the ESA.

Forest management operators must submit to the State Forester a written plan as required by ORS 527.670(3) before conducting any operations requiring notification under OAR 629-605-0140, including those operations within (1) 300 feet of a specific site involving threatened or endangered wildlife species, or sensitive bird nesting, roosting, or watering sites; or (2) 300 feet of any resource site identified in OAR 629-665-0100 (Sensitive Bird Nesting, Roosting and Watering Resource Sites on Forestlands), 629-665-0200 (Threatened and Endangered Species that use Resource Sites on Forestlands), or 629-645-0000 (Significant Wetlands), or (3) 300 feet of any nesting or roosting site of threatened or endangered species listed by the U.S. Fish and Wildlife Service or by the Oregon Fish and Wildlife Commission by administrative rule.

Written plans required under OAR 629-605-0170 must contain a description of how the operation is planned to be conducted in sufficient detail to allow the State Forester to evaluate and comment on the likelihood that the operation will comply with the Forest Practices Act or administrative rules.

2 Alternatives

Two alternatives were developed as part of this EA: the No Action Alternative and the Proposed Action Alternative.

2.1 No Action Alternative

Under the No Action Alternative, the proposed Agreement would not be signed and the USFWS would not issue a Permit to the Applicants. Under this alternative, Weyerhaeuser would continue to manage their lands under current Federal and State regulations. USFWS would not have access to Weyerhaeuser lands and roads within the Study Area. Barred owl surveys that require access to Weyerhaeuser lands and roads or the ability to walk across Weyerhaeuser lands to access other ownerships would not occur, resulting in gaps in the data for the Study Area. No barred owls would be removed from Weyerhaeuser lands within the treatment area, unless they can be called to adjacent lands. Weyerhaeuser forest management activities would not be covered for effects resulting in incidental take of spotted owls.

2.2 Proposed Action Alternative

Under the Proposed Action Alternative, the Agreement will be implemented in the Oregon Coast Ranges Study Area and the USFWS will issue a permit to Weyerhaeuser for a period of 10 years, based on the estimation that USFWS will complete the Experiment after 4 years of removal activities. In the FEIS and ROD for the Experiment, (USFWS 2013a and b) the USFWS notes that if the spotted owl response to removal of barred owls is not as strong as anticipated the Experiment could include up to 10 years of removal. Therefore, the USFWS has analyzed the expected Permit length (10 year Permit) and a Permit for 15 years in the event there is a need to extend the Experiment, and therefore the Permit. For USFWS to issue the Permit, the Agreement must contain voluntary conservation measures that are reasonably expected to provide a net conservation benefit to spotted owls. The Agreement must identify the baseline that will be maintained over the term of the agreement. The USFWS's Safe Harbor policy is available at: http://www.fws.gov/endangered/policy/SAFE_HAR.HTM and http://www.fws.gov/endangered/pdfs/FR/FRnoticeCCAA_SHAreg_revision.pdf. The following section briefly describes conservation measures outlined in the Agreement. For more information, see the Weyerhaeuser Safe Harbor Agreement (Weyerhaeuser 2015) (incorporated by reference).

Under the Safe Harbor Agreement, Weyerhaeuser will:

- Provide access and permission for USFWS and U.S. Geological Survey (USGS) biologists to use roads owned or managed by Weyerhaeuser, and to access Weyerhaeuser lands to survey barred owls throughout the Oregon Coast Ranges Study Area.

- Provide access to Weyerhaeuser lands and permission for USGS and USFWS biologists to remove barred owls located on Weyerhaeuser lands within the treatment portion of the areas.

- Provide permission for USFWS and USGS biologists to use roads owned or managed by Weyerhaeuser to access sites for the removal of barred owls located on Federal

lands, and any other lands for which USFWS has landowner permission to remove barred owls within the treatment portion of the Experiment.

- Maintain habitat for nesting spotted owls that may reoccupy non-baseline sites during the nesting and rearing season (March 1 to September 30 of the year). During the nesting and rearing season (March 1 to September 30 of the year), refrain from removal or alteration of habitat within a 70-acre core, designated based on the "nearest, best most contiguous habitat", which in all cases will include the nest trees or activity center. The intent is to allow spotted owls that initiate nesting to complete nesting and fledge young. At any time that biologists determine the pair is no longer nesting, this seasonal restriction would no longer be in effect. Actual habitat to be maintained will be determined by mutual agreement of the USFWS and Weyerhaeuser.

These contributions will allow the USFWS to complete the Experiment in an efficient and effective manner and minimize effects to nesting spotted owls that may re-occupy the non-baseline sites during the study. The information from this Experiment is crucial to the development of a long-term barred owl management strategy, which is itself essential to the conservation of the northern spotted owl.

Under the Agreement, the USFWS established the baseline condition, for which no incidental take would be authorized. In the treatment portion of the Study Area, 9 occupied spotted owl sites (represented by their Thiessen polygons) overlap Weyerhaeuser lands or lands where Weyerhaeuser holds easements and agreements that allow access to the covered lands for timber haul and management (Table 1). Therefore, take will not be authorized on 9 sites identified in Table 1.

USFWS identified another 16 sites where resident spotted owls have not been detected in the past three years. These are the non-baseline sites (Table 2) for the purposes of the Agreement. If spotted owls reoccupy the non-baseline sites during or soon after the Experiment is implemented (a total of 10 years), they may be incidentally taken under the Permit by the covered activities.

Table 1. Baseline spotted owl sites for Weyerhaeuser Safe Harbor Agreement, Oregon Coast Ranges Study Area.

BASELINE SPOTTED OWL SITES	
Master Site #	**Spotted Owl Site Name**
0765	Cleveland Indian
1761	East Fawn
0160	Miller Creek
1760	North Deadwood
3553	Raleigh Creek

2721	Rock Creek
3913	South Bear Creek
4680	Upper Greenleaf
4474	Upper McVey Creek

Table 2. Spotted owl sites that are not baseline sites.

NON-BASELINE SPOTTED OWL SITES		
Master Site #	**Spotted Owl Site Name**	**Last Year With Spotted Owl Response**
4491	Chicken Creek	2010
0087	Deadwood Trib	2010
2543	Druggs Creek	2008
0183	East Fork Lobster	2012
0524	Elk Mountain	2011
2549	January Creek	2012
2552	Little Lake Creek	2007
2313	Lower Greenleaf	2010
4492	Lower Nelson	2011
4651	Major Tieko	2008
4088	McVey Creek	2012
3554	Nelson Creek	2003
0814	Old Man Rock Canyon	2009
0188	Prairie Peak	2002
0086	Upper Elk	2010
2722	Wheeler Creek	2011

3. Affected Environment and Environmental Consequences

Potential impacts on the human environment from the Barred Owl Removal Experiment, including the No Action and Proposed Action Alternatives were analyzed in the FEIS for the Barred Owl Removal Experiment (USFWS 2013b). The Affected Environment analysis from the FEIS for the Barred Owl Removal Experiment is incorporated by reference. Impacts to resources on the covered lands from the activities analyzed in that environmental review are incorporated by reference. This includes Effects on Barred Owls, Ongoing Spotted Owl Demographic Study Areas, Other Species, the Social Environment, Recreation and Visitor Use, the Economy, Costs of the Experiment, and the Cultural Environment.

In the FEIS, the USFWS stated its intent to explore the development of Safe Harbor Agreements with interested nonfederal landowners.

> "In the removal areas, the Service will explore the potential for Safe Harbor Agreements with nonfederal landowners willing to cooperate with the experiment. Safe Harbor Agreements are voluntary agreements under which landowners manage for listed species and their habitats with an assurance that they may later return their lands to the baseline condition without regulatory ESA restrictions. This could reduce the impacts of this experiment on timber harvest to a very low or no effect by providing management flexibility. However, as these are voluntary on the part of the landowner, and each is developed relative to the specific conditions of the area, we did not attempt to assume any specific reduction in the maximum potential effect (USFWS 2013b, p 218)."

As noted, the components of each Safe Harbor Agreement are developed with the landowner and specific to the circumstances of each landowner. Therefore, we were not able to address the specific effects of Safe Harbor Agreements to all resources.

We also tiered this EA to the Final EIS Affected Environment and Environmental Consequences (USFWS 2013, Chapter 3). The effects of the Study anticipated under the Agreement are consistent with effects considered in the Preferred Alternative in the FEIS for the Barred Owl Removal Experiment on barred owls, spotted 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).

Effects to the northern spotted owl resulting from Weyerhaeuser forest management on lands covered under the Agreement were not considered in the FEIS and are the subject of the analysis below.

3.1 Effect on Northern Spotted Owl

For the Background and Affected Environment and Environmental Consequences of the Barred Owl Removal Experiment, see the FEIS (USFWS 2013b, pp 143-162).

In the FEIS, we anticipated that the overall effects of the preferred alternative on spotted owls across the subspecies' range would be minimal. We did acknowledge the small potential for accidental killing of a spotted owl during barred owl removal efforts, though we noted that this is unlikely given the rigorous protocol for removal of barred owls (USFWS 2013b, p 150). USFWS also concluded that noise disturbance from barred owl removal on the treatment area does not rise to the level of take for spotted owls (USFWS 2013b).

However, the USFWS noted the potential for an increase in spotted owl site occupancy as a result of the Experiment, and also noted that this was likely a short-lived improvement because barred owls are anticipated to reoccupy these sites soon after completion of the experimental removal.

> "We anticipate decreased competition between spotted owls and barred owls on the treatment area for the duration of the Experiment, leading to a potential increase in spotted owl site occupancy rates following barred owl removal." (USFWS 2013b, p148)
>
> "Because the areas treated are small relative to the range of the northern spotted owl, the effect of barred owl removal on spotted owl site occupancy is expected to diminish after barred owl removal ceases. Barred owls are expected to increase to pre-removal levels after a lag of 3 to 5 years, resulting in subsequent declines in spotted owl site occupancy once the Experiment is concluded." (USFWS 2013b, p149)

3.1.1 Effects on Spotted Owls under the No Action Alternative

Under this alternative, the USFWS would not issue a permit for incidental take to Weyerhaeuser. We anticipate that Weyerhaeuser would not allow access to their lands for barred owl surveys and removal without the certainty that they could return to baseline condition. Thus, Weyerhaeuser would continue to manage their lands under current Federal and State regulations. USFWS would not have access to Weyerhaeuser gated roads and lands within the Oregon Coast Ranges Study Area.

The non-baseline spotted owl sites (where resident spotted owls have not been detected in at least three years), and areas outside the sites where spotted owls have not been located despite extensive surveys, are likely to remain unoccupied unless barred owls are removed from the area, and once verified, unoccupied sites receive no protection under State or Federal regulations. Therefore, with the exception of a 70-acre core, habitat on Weyerhaeuser lands associated with these sites could be harvested under the No Action Alternative.

The Experiment, which this Agreement supports, is a short-term experiment, estimated to include 4 years of barred owl removal, with a maximum of 10 years. In the analysis of the effects of the Experiment, it was estimated that barred owl populations would return to pre-study levels within three to five years of the end of the barred owl removal (USFWS 2013b, p 148-9). Any spotted owl population gains from the Experiment are expected to be lost in this period. Thus, any spotted owls that do reoccupy the historic sites as a result of barred owl removal on accessible Federal lands would again be displaced within five years post-Experiment.

This was the expectation at the time of the decision to move forward with the Experiment (USFWS 2013a). The conservation value of the Experiment is specifically in the information on the effect of barred owl removal on spotted owl populations, the cost of such removal, potential methodologies, and the value of this information to the development of a long term barred owl management strategy. The USFWS did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites in the study areas (USFWS 2013b).

If USFWS or its contractors cannot conduct surveys on Weyerhaeuser lands within the Study Area, there will be gaps in the coverage of barred owl populations, complicating the analysis of the results of this Experiment. If barred owls are not removed from Weyerhaeuser lands within the Study Area, it is anticipated that barred owls will continue to occupy some lands within the

treatment area and affect some of the spotted owl sites in the area. This could lead to a muted response to the experimental removal of barred owls and affect the ability to detect the effect of the barred owl removal on spotted owl population performance. For example, if barred owls remain in an area, spotted owls may not be able to respond to the removal of some barred owls within a historic spotted owl site (currently unoccupied spotted owl sites). Removing some, but not all, of the barred owls that are currently utilizing an historic spotted owl site may not be enough to allow the spotted owls to return, masking the result of the removal.

Lack of access for surveys and permission to remove barred owls from Weyerhaeuser lands could lead to the need to extend the Experiment duration to compensate for weaker responses. If barred owls are not removed on Weyerhaeuser lands within the treatment area, young produced at barred owl sites on Weyerhaeuser lands within the treatment area may increase the likelihood that unoccupied spotted owl sites in the remainder of the treatment area would be reoccupied by barred owls, rather than spotted owls. In all cases, the lack of more complete removal could mask some of the experimental results and complicate the analysis, reducing the quality of data available to contribute to the development of a long-term barred owl management strategy.

3.1.2 Effects on Spotted Owls under the Preferred Action Alternative

Under the Safe Harbor Agreement, Weyerhaeuser would be permitted to take spotted owls that may reoccupy up to 16 historic spotted owl sites during the Barred Owl Removal Experiment and for five years following the end of the Experiment, for a total of 10 years. If the spotted owl response to barred owl removal is not as strong as anticipated, the USFWS may extend removal for up to a total of 10 years, and in this case would anticipate extending the Safe Harbor Agreement for up to a total of 15 years. Spotted owls have not been detected on these non-baseline sites for three or more years.

Duration of the spotted owl population gains

The Barred Owl Removal Experiment is a short-term experiment, estimated to include four years of barred owl removal. In the analysis of the effects of the Experiment, it was estimated that barred owl populations would return to pre-removal levels within three to five years of the end of the barred owl removal (USFWS 2013b, p 148-9). Any spotted owl population gains from the Experiment are expected to be lost in this period. Thus, any spotted owls that do reoccupy the historic sites as a result of barred owl removal on accessible lands would again be displaced within five years post-Experiment regardless of Weyerhaeuser's actions.

The eventual loss of the re-occupying spotted owls was the expectation at the time of the decision to move forward with the Experiment and the analysis of effects in the FEIS. The conservation value of the Experiment is primarily in the information gained on the effect of barred owl removal on spotted owl populations, the cost of such removal, and potential methodologies, and the value of this information to the development of a long term barred owl management strategy. The USFWS did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites or other non-baseline areas in the Study Area.

Incidental take

Incidental take of spotted owls under this Safe Harbor Agreement would be in the form of harm. Harm would occur from forest operation activities that result in spotted owl habitat loss or degradation supporting a reoccupied spotted owl site.

Spotted owls use a relatively large home range, often including over three square miles of land. Within the treatment area, the Federal, State, and private lands are interspersed on a square mile or smaller scale. Thus, an individual spotted owl will use habitat owned and managed by several landowners.

Incidental take as a result of habitat removal

Most habitat-based take under this Safe Harbor Agreement would be a result of timber harvest of the small amount of spotted owl habitat remaining on Weyerhaeuser lands. A small amount of additional habitat removal may occur with the development of roads to access lands for timber management or other operational activities on lands not owned by Weyerhaeuser, but for which they have existing easements and agreements. Within the treatment portion of the Oregon Coast Ranges Study Area, 76 percent of the remaining spotted owl nesting-roosting habitat occurs on Federal lands, 14 percent on State lands, 8 percent on other private lands, and 2 percent on Weyerhaeuser lands (Table 3). This represents a worst case analysis because modeled spotted owl habitat data overestimates the amount of habitat on private lands, as compared to Federal lands (see Davis et al. 2011for details). In a number of cases, Federal lands may contain sufficient habitat to support the spotted owls without contribution from Weyerhaeuser lands. Thus not all habitat removal on covered lands subject to the Safe Harbor Agreement may result in take of spotted owls.

Table 3. Spotted owl habitat within the treatment portion of the Oregon Coast Ranges Study Area.

Spotted Owl Habitat within the Treatment Area, Oregon Coast Ranges Study Area		
Landowner	**Acres of Spotted Owl Habitat[1]**	**% of Total Habitat**
Federal	39,600	76%
State	7,400	14%
Other Private	3,954	8%
Weyerhaeuser Lands	1072	2%
Total	52,000	

[1] Includes suitable and highly suitable nesting-roostng habitat

The potential effect of the removal of spotted owl habitat under this Safe Harbor Agreement on the Experiment depends on the amount of habitat lost relative to the available habitat within spotted owl sites. Of the 16 non-baseline spotted owl sites in the treatment area (Table 2) where incidental take is authorized under this Safe Harbor Agreement, 15 sites include varying amounts

of Weyerhaeuser lands (Table 4). There are approximately 817 acres of nesting-roosting habitat on the16 nonbaseline sites. These are the sites where incidental take resulting from habitat loss may occur under this Safe Harbor Agreement.

Table 4. Percent ownership of land and spotted owl suitable nesting-roosting habitat within the Thiessen polygons of spotted owl sites where Weyerhaeuser owns lands.

	Percent of Lands within Thiessen Polygon					**Percent of Suitable Nesting-Roosting Habitat within Thiessen Polygon**			
SITE NAME -	**Federal**	**State**	**Weyerhaeuser**	**Other private**		**Federal**	**State**	**Weyerhaeuser**	**Other private**
Chicken Creek	7	43	18	32		13	60	9	18
Deadwood Trib	76	0	16	8		89	0	7	4
Druggs Creek	47	22	25	6		65	31	5	0
East Fork Lobster	91	0	9	<1		97	0	2	0
Elk Mountain	57	9	2	31		75	16	<1	9
January Creek	53	2	10	35		79	3	9	9
Little Lake Creek	46	43	<1	11		43	56	<1	1
Lower Greenleaf	54	0	14	32		84	0	5	10
Lower Nelson	38	43	8	11		46	44	5	5
Major Tieko	81	0	18	1		90	0	9	1
McVey Creek	43	41	3	13		54	40	2	4
Nelson Creek	52	42	4	2		53	45	2	0
Old Man Rock Canyon	66	1	6	27		91	1	1	7
Prairie Peak	59	0	29	12		88	0	6	6
Upper Elk	66	15	19	0		77	17	6	0
Wheeler Creek	29	0	14	55		72	0	3	25

Weyerhaeuser is a minor owner on six of the 16 sites (based on the Thiessen polygon) with less than 10 percent of the land ownership. On 7 sites, Weyerhaeuser owns 10-20% of the Thiessen polygons, and owns 20-30% on two sites. The Thiessen polygon represents the area likely used by spotted owls associated with the site. Weyerhaeuser lands include less than five percent of the remaining nesting-roosting habitat on seven sites and between 5 and 10 percent on the remaining 9 sites. Federal lands contain the majority of the remaining nesting-roosting spotted owl habitat on six of these seven sites.

Thus, even if all non-baseline spotted owl sites are reoccupied by spotted owls, and Weyerhaeuser removed all habitat remaining on their lands within these sites under their Permit, many of these sites are likely to remain viable at some level as a result of habitat remaining on other landowners, including the Federal agencies.

If spotted owls do reoccupy Weyerhaeuser lands, and initiate nesting, Weyerhaeuser will maintain habitat for nesting spotted owls that may reoccupy non-baseline sites during the nesting and rearing season (March 1 to September 30 of the year). This allows the owl pairs to produce young and contribute to the future spotted owl population.

Incidental take as a result of disturbance

USFWS has concluded that noise disturbance from barred owl removal on the treatment area does not rise to the level of take (USFWS 2013b). Incidental take due to harassment would occur if loud forest management activities occur during the early part of the nesting season in the vicinity of nesting spotted owls, including but not limited to routine harvest, road maintenance and construction activities, rock pit development, and spraying and fertilization. USFWS data include the location of all known spotted owl site centers from over 20 years of spotted owl survey effort. Some sites may have multiple site centers as owls shifted their area of use, and many of these site centers represent nest sites. These historic site centers are the most likely to be reoccupied by spotted owls in response to barred owl removal, where habitat remains. Disturbance take is a short-term impact, limited to the year in which it occurs. It increases the potential for loss of nesting or young, but does not guarantee such loss.

Of the 48 historic spotted owl site centers known in the treatment area, none occur on Weyerhaeuser lands (Table 5), though three are close enough that forest management activities on Weyerhaeuser lands could result in some disturbance of the sites if these site centers were reoccupied. Some timber management and operations activities (e.g. road construction, timber hauling, rock pit use) may occur near site centers that occur in the vicinity of areas where Weyerhaeuser holds easements and agreements, though it cannot be determined to what extent. However, given the limited nature of these activities and the limited time over which these activities may cause disturbance, there is only a small possibility that these activities would occur near enough to a reoccupied core area to disturb spotted owls during the early nesting season. Given the small number of site centers on or immediately adjacent to Weyerhaeuser lands and the limited time frame when disturbance affect spotted owls, take from disturbance is not likely to represent a significant impact on spotted owls in the Study Area.

Table 5. Spotted owl site centers within the treatment portion of the Oregon Coast Ranges Study Area.

Spotted Owl Site Centers within the Treatment Area, Oregon Coast Ranges Study Area		
Landowner	**Site Centers**	**% of Site Centers**
Federal	36	75%

State	10	21%
Other Private	2	4%
Weyerhaeuser lands	0	0%
Total	48	
[1] May be multiple site centers for some spotted owl sites		

Level of contribution of Weyerhaeuser lands to spotted owl sites

Weyerhaeuser lands contain less than two percent of the spotted owl nesting-roosting habitat within the treatment portion of the Oregon Coast Ranges Study Area. No incidental take of spotted owls associated with the baseline sites is authorized by this Safe Harbor Agreement (Table 1). Incidental take of spotted owls that reoccupy non-baseline sites may occur with the removal of this small area of habitat (Table 2). However, removal of some of this habitat may not result in incidental take of any spotted owls because the lands lie outside the areas used by spotted owls and because some sites may retain sufficient habitat to support the spotted owls on Federal lands. The USFWS does not expect all of the non-baseline sites to be reoccupied as a result of the Barred Owl Removal Experiment. Incidental take due to disturbance is also likely to be very limited. No historic spotted owl site centers occur on Weyerhaeuser lands. These are the areas that are most likely to be reoccupied by spotted owls with the removal of barred owls. Three site centers are close to the boundary of Weyerhaeuser lands or associated with timber management and operations activities (e.g. road construction, timber hauling, rock pit use) near site centers that occur in the vicinity of Weyerhaeuser easements and agreements such that if occupied, incidental take due to disturbance could occur.

The spotted owls that may be incidentally taken under this Agreement are reoccupying sites or areas where no resident spotted owls have been located in the last three years, despite extensive survey efforts. When the experiment ends, barred owl populations are anticipated to recover to pre-removal levels in three to five years, likely resulting in the displacement of the spotted owls that did reoccupy these sites. Therefore, we anticipated that these spotted owls would be temporarily contributing to the spotted owl population for the duration of the experiment.

In developing the experiment and analyzing the effect of the experiment and this Safe Harbor Agreement, we did not anticipate long-term conservation contribution from the spotted owls that might reoccupy historic sites in the Study Area. The conservation value of the Experiment, and the Agreement which supports the Experiment, 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 range barred owl management strategies. The 2011 Revised Recovery Plan for the Northern Spotted Owl (USFWS 2011) clearly identified the need for the information that would be provided from the Barred Owl Removal Experiment. Thus, even with some small amount of habitat loss, the Barred Owl Removal Experiment still has significant value to the recovery of the spotted owl. It is important to note that all spotted owl habitat involved in the Permit, whether within or outside a spotted owl site, is currently available for harvest by the Weyerhaeuser without restrictions.

3.2. Cumulative Effects

Cumulative Effects from the Barred Owl Removal Experiment, including the No Action and Proposed Action Alternatives were analyzed in the FEIS for the Barred Owl Removal Experiment (USFWS 2013b, p. 239). The Cumulative Impacts Section of the FEIS for the Barred Owl Removal Experiment is incorporated by reference. The Barred Owl Removal Experiment is currently being implemented on this Study Area and barred owls are being removed from Federal lands within the treatment portion of the Study Area. This Safe Harbor Agreement contributes to the full implementation of the experiment. This analysis evaluates effects not reasonably foreseeable at the time of the FEIS.

The Council on Environmental Quality's regulations for implementing NEPA define cumulative effects as: "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). The effects of the proposed project and the conditions resulting from past are contained in the above Section 3.1.

The USFWS has completed a Safe Harbor Agreements in the Oregon Coast Ranges Study Area with Roseburg Resources Company (RRC) and Oxbow Timber I, LLC (Oxbow). RRC and Oxbow own approximately 9400 acres of forest lands within the treatment portion of the Oregon Coast Ranges Study Area in Lane County, Oregon. The RRC and Oxbow Safe Harbor Agreement, and Permit authorizes incidental take of spotted owls that may reoccupy up to 19 non-baseline sites and areas as a result of the harvest or modification of 307 acres of nesting-roosting habitat. RRC and Oxbow own no habitat on 6 of the 19 non-baseline sites, less than 10 percent of the nesting-roosting habitat on 14 of the sites, and less 15 and 30 percent on the remaining two sites. Most of these sites are in the southern portion of the treatment area, whereas Weyerhaeuser's lands are primarily in the northern portion of the treatment area.

The USFWS is now in conversations with the Oregon Department of Forestry (ODF) concerning potential Safe Harbor Agreements in the Oregon Coast Ranges Study Area, however, no application have even been received to date. The Safe Harbor Agreement process is an applicant driven process. There is no certainty that the applicants will follow through with an application, and applicants can withdraw at any time. Not only has no application been received, it is also important to emphasize that we have made no decision to issue section 10 permits to ODF; such decisions would be made only after all applicable substantive and procedural requirements have been met. Therefore, we do not believe this potential action is foreseeable. However, to ensure a robust NEPA analysis, we have added a discussion of the ODF Safe Harbor Agreement that is currently under discussion.

The Oregon Department of Forestry (ODF) manages approximately 20,000 acres of forest lands within the treatment portion of the Oregon Coast Ranges Study Area. The ODF Safe Harbor Agreement and permit, if completed and issued, may authorize take for of spotted owls that may reoccupy up to 18 non-baseline sites and areas, as a result of the harvest or modification of up to 3,892 acres of nesting-roosting habitat. The current draft of the SHA provides for an elevated

baseline, and as such ODF would not receive take authorization for some sites that are covered in the RRC Safe Harbor Agreement.

All three of the Safe Harbor Agreements (RRC and Oxbow, Weyerhaeuser, and ODF) do, or will likely, contain the same basic requirements of the applicants: 1) access to lands and roads for the survey of barred owls on the applicant's lands throughout the study area; 2) access and permission to remove barred owls from the applicant's lands within the treatment portion of the study area; and 3) avoidance of disturbance of actively nesting spotted owls. All three Safe Harbor Agreements contribute to the implementation of Recovery Action 29 through support of the Barred Owl Removal Experiment. The information gained from this experiment is critical to the development of a long-term management strategy to address the barred owl threat to the spotted owl as part of the recovery strategy for the northern spotted owl. Access to the lands included in this Safe Harbor Agreement is crucial to efficient and effective implementation of this experiment. This Safe Harbor Agreement, in conjunction with the two potential Safe Harbor Agreements, will contribute to our ability to remove the majority of barred owls from the treatment area and avoid creating pockets of barred owls within the treatment area that could reduce the power of the experiment to detect the effect, and thereby lengthen the duration of the study.

3.3 Conclusion

For the following reasons, the USFWS concludes that the issuance of a Permit allowing incidental take of non-baseline spotted owls resulting from implementation of the Weyerhaeuser Safe Harbor Agreement will not significantly impact the northern spotted owl.

- The Safe Harbor Agreement does not authorize incidental take of spotted owls in9 currently occupied spotted owl sites (Table 1). These are the baseline for the Agreement and not covered by the incidental take Permit.

- Spotted owls may be taken under the Permit are only temporarily reoccupying non-baseline sites or areas.
    - The experimental removal of barred owls will be conducted for an estimated four years, with a maximum of 10 years, after which barred owls are anticipated to again displace spotted owls from these sites as the barred owl population rebuilds over the following three to five years.
    - Spotted owl presence on these sites is temporary in all cases. Any non-baseline sites that become occupied by spotted owls during the Experiment would likely become unoccupied again as barred owls repopulate the area following the end of the removal Experiment.
    - In developing the Experiment and assessing the effects in the FEIS (USFWS 2013b), there was no anticipated long-term conservation value from the spotted owls that might reoccupy historic sites in the Study Area.

- The conservation value of the Permit is in its support of the Experiment and, thus, in the information gained from the Experiment regarding the effect of barred owl removal on

spotted owl populations, the cost of such removal, and potential methodologies, and the value of this information to the development of a long term barred owl management strategy.

- The Permit will authorize incidental take of any spotted owls that may reoccupy up to 16 currently unoccupied spotted owl sites during the course of the experimental removal of barred owls, as defined in the Agreement. The actual take and impact of that take is likely to be small because:
    - Not all currently unoccupied spotted owl sites are likely to be reoccupied during the Experiment.
    - Less than 2 percent of the current spotted owl habitat would be removed in the treatment portion of the Study Area. Removal of small patches of habitat at a distance from the site center of some of these sites may not result in incidental take of the spotted owls in the areas if Federal and other lands have sufficient habitat.
    - Disturbance of a few spotted owl nest sites may occur within the vicinity of Weyerhaeuser lands or where Weyerhaeuser holds easements and agreements. This take is temporary and limited to the year of the disturbance.
    - Spotted owl habitat within treatment portion of the Oregon Coast Ranges Study Area represents only 0.39 percent of northern spotted owl habitat range-wide, therefore this will have little effect on the range-wide condition of the species.

- The cumulative effects of incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, does not significantly impact the northern spotted owl.

4 List of Preparers

This document was prepared by the USFWS, Oregon Fish and Wildlife Office. The following individuals contributed to its preparation.

Name	**Affiliation**	**Responsibility**
Paul Henson	U.S. Fish and Wildlife Service, State Supervisor, Oregon Fish and Wildlife Office	Policy oversight and approval
Jody Caicco	U.S. Fish and Wildlife Service, Supervisor, Forest Resource Division, Oregon Fish and Wildlife Office	ESA process and technical oversight
Betsy Glenn	U.S. Fish and Wildlife Service, Barred Owl Removal Experiment Team, Oregon Fish and Wildlife Office	Draft EA analysis expert, spotted owl expert
Robin Bown	U.S. Fish and Wildlife Service, Barred Owl Removal Experiment USFWS Project Lead, Oregon Fish and Wildlife Office	Review, spotted owl expert

5 . Coordination

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

USFWS discussed the approach of a Safe Harbor Agreement for the Barred Owl Removal Experiment with the Private Forest Program of the Oregon Department of Forestry, BLM Districts and National Forests within the study areas included in the Experiment, and with regional offices of the BLM, U.S. Forest Service, and the National Park Service. Also discussed was the potential for Safe Harbor Agreements with Oregon Department of Forestry and several private landowners within the study areas.

The USFWS will publish a notice of availability of this EA and related documents in the Federal Register to initiate a 30-day public comment period. Documents will be posted on the USFWS's web site (http://www.fws.gov/ofwo/) and will be made available at the Oregon Fish and Wildlife Office, 2600 SE 98th Ave, Suite 100, Portland, Oregon 97216.

6. References

Buchanan, J.B., R.J. Gutiérrez, R.G. Anthony, T. Cullinan, L.V. Diller, E.D. Forsman, and A.B. Franklin. 2007. A synopsis of suggested approaches to address potential competitive interactions between barred owls (*Strix varia*) and spotted owls (*S. occidentalis*). Biological Invasions 9:679-691.

Davis, R.J., K.M. Dugger, S. Mohoric, L. Evers, and W.C. Aney. 2011. Northwest Forest Plan – the first 15 years (1994-2008): status and trends of northern spotted owl populations and habitats. Gen. Tech. Rep. PNW-GTR-850. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 147 pp.

Gutiérrez, R.J., M. Cody, S. Courtney, and A.B. Franklin. 2007. The invasion of barred owls and its potential effect on the spotted owl: a conservation conundrum. Biological Invasions 9:181–196.

Johnson, D.H., G.C. White, A.B. Franklin, L.V. Diller, I. Blackburn, D.J. Pierce, G.S. Olson, J.B. Buchanan, J. Thrailkill, B. Woodbridge, and M. Ostwald. 2008. Study designs for barred owl removal experiments to evaluate potential effects on northern spotted owls. Unpublished report, Washington Department of Fish and Wildlife, Olympia.

USFWS (U.S. Fish and Wildlife Service). 2011. Revised Recovery Plan for the Spotted Owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, Oregon.

USFWS (U.S. Fish and Wildlife Service). 2013a. Record of Decision for the Experimental Removal of Barred Owls to Benefit Threatened Spotted Owls. U.S. Fish and Wildlife Service, Portland, Oregon.

USFWS (U.S. Fish and Wildlife Service). 2013b. Final Environmental Impact Statement for the Experimental Removal of Barred Owls to Benefit Threatened Spotted Owls. U.S. Fish and Wildlife Service, Portland, Oregon.

Weyerhaeuser Company. 2015. Draft Safe Harbor Agreement between U.S. Fish and Wildlife Service and Weyerhaeuser Company.