

## **Draft Environmental Assessment for the Oregon Department of Forestry 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 areas include significant interspersed nonfederal lands, including Oregon Department of Forestry (ODF) lands. Access to nonfederal lands is important to efficient completion of the Experiment.

The USFWS and ODF have prepared a Safe Harbor Agreement (Agreement), whereby ODF will contribute to the conservation of the spotted owl by allowing researchers access to survey for barred owls on ODF lands throughout the Study Area, and to remove barred owls from ODF 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 data from ODF's spotted owl surveys and access to ODF's lands, 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.

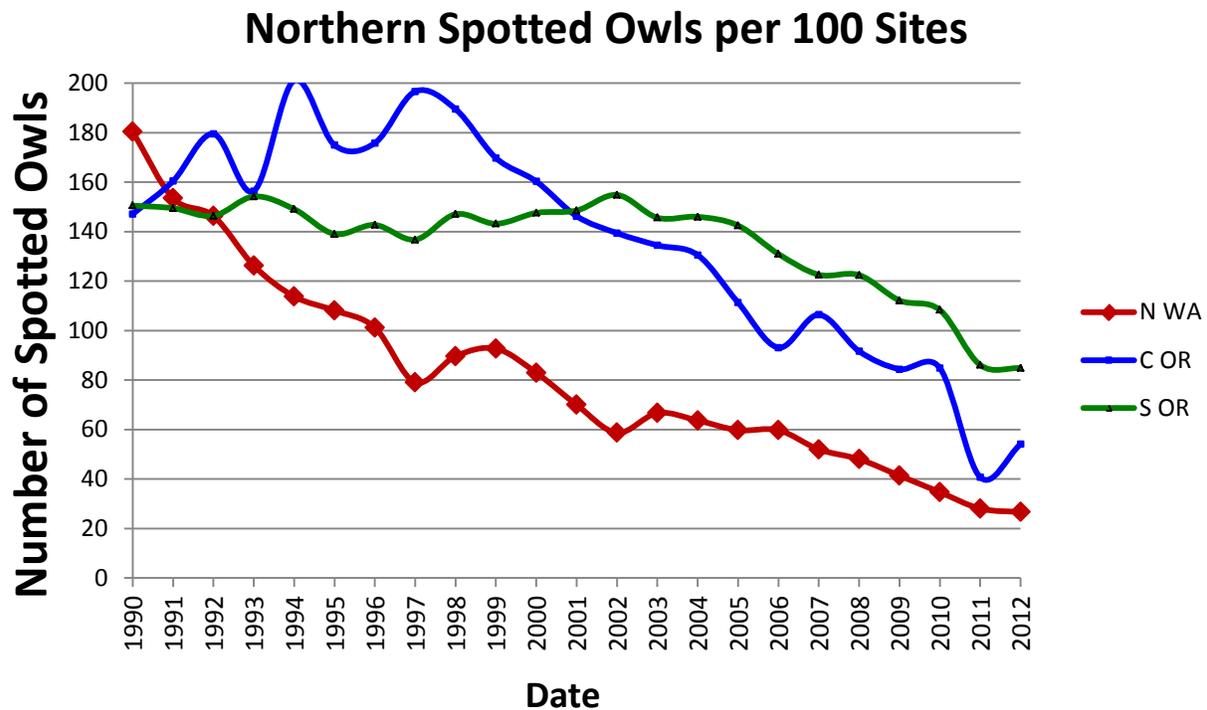
### **1.1 Background on the Barred Owl Effect on Spotted Owls**

Because the Agreement is specific to the implementation of the barred owl removal 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 on 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 2013 (Figure 1) (Dugger et al. 2016). In the Oregon Coast Ranges Demographic Study Area, populations fell by 73 percent between 1997 and 2013 (Dugger et al. 2016). Even in southern Oregon, on the Klamath Demography Study Area, spotted owl populations have declined 45

percent from 2002 to 2013 (Dugger et al. 2016). 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 the presence of barred owls has a strong negative effect on spotted owl annual survival rates and on the colonization of new sites on some study areas (Dugger et al. 2016). (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 that appears to be likely to succeed is the removal of barred owls in areas to 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 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 ODF manages land. The Experiment involves dividing the 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 and Bureau of Land Management (BLM) monitoring 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.

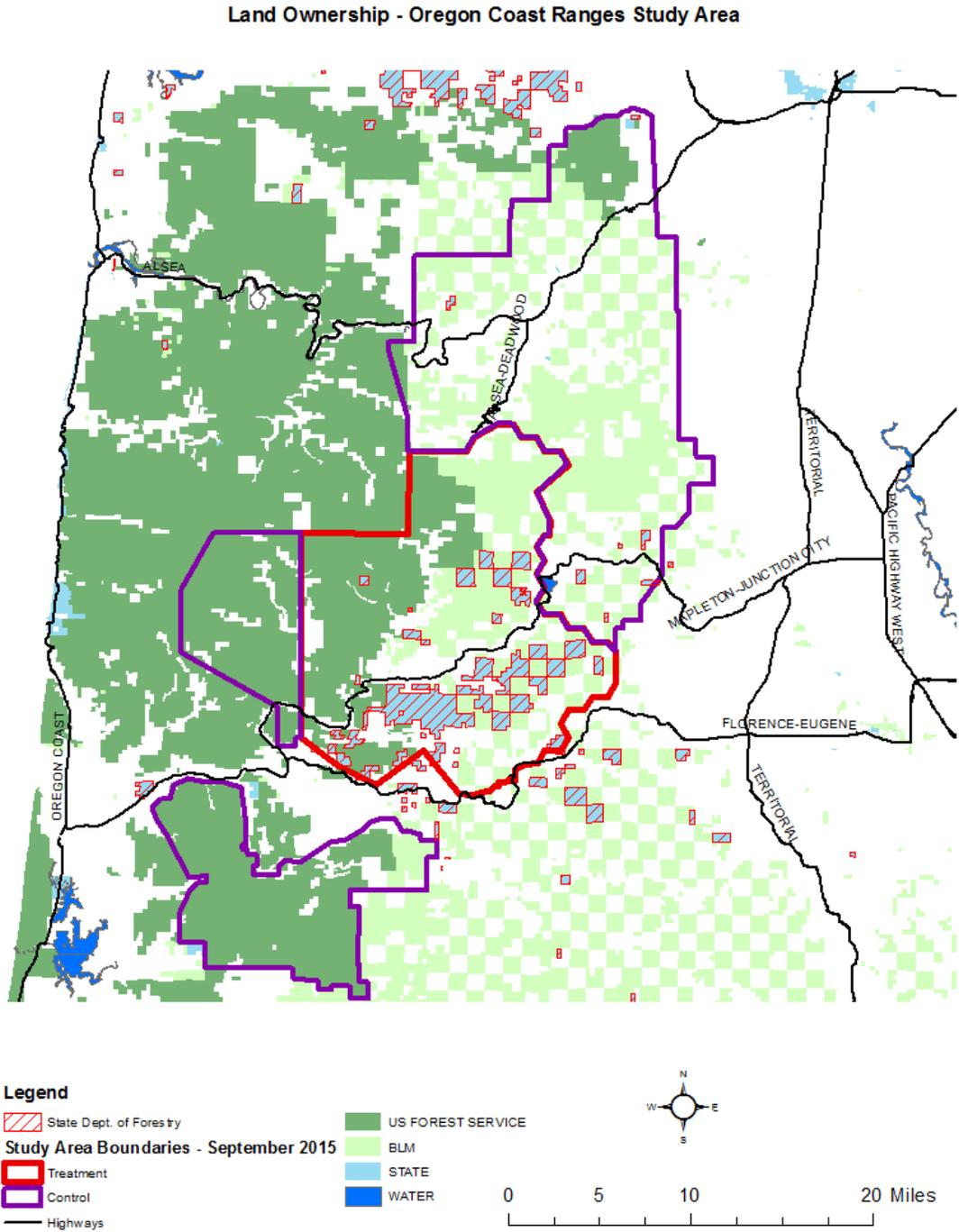
ODF lands are intermingled with Federal and other lands on the Oregon Coast Ranges Study Area (Map 1). While the Experiment can be conducted by surveying from public roads and removing barred owls on Federal lands, the resulting scientific data will be stronger and the efficiency will be greatly enhanced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

## **1.2 Purpose and Need for Action**

The USFWS' purpose for the proposed action of entering into a Safe Harbor Agreement and issuing an ESA section 10(a)(1)(A) Enhancement of Survival Permit to ODF 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

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



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 the information necessary to contribute to developing future options for potential management of barred owls as expeditiously as possible.

ODF's purpose for the Safe Harbor 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.

The mission of ODF is to serve the people of Oregon by protecting, managing, and promoting stewardship of Oregon's forests to enhance environmental, economic, and community sustainability. In alignment with this mission, management of State Forest lands is specifically aimed to provide the "Greatest Permanent Value" to the citizens of the State of Oregon as provided for in Chapter 530 of the Oregon Revised Statutes and further defined in Oregon Administrative Rule 629-035-0020. The definition of Greatest Permanent Value includes the protection, maintenance, and enhancement of habitat for native wildlife as well as managing lands for timber production.

ODF lands within the Oregon Coast Ranges Study Area are an important part of ODF's overall operating plans from both a short term and long term perspective. Therefore, in return for cooperation on the Experiment, ODF is seeking a safe harbor for their normal forest operations and management activities, including timber harvest operations that may result in incidental take of spotted owls that would not occur on their lands but for the experimental removal of barred owls.

### **1.3 Regulatory and Planning Environment**

Several Federal and State regulations and/or laws govern the activities proposed under the Safe Harbor 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 embodied in the Safe Harbor 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 would authorize incidental take of spotted owls that may re-occupy sites once barred owls are removed while the permit holder 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.*). The USFWS must comply with NEPA before deciding whether to issue a Section 10 permit. 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 and regulates non-Federal forest practices. 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 prohibit a person from taking threatened or endangered species, which are protected under the ESA.

### **1.3.5 State of Oregon Endangered Species Statutes**

As a State agency, ODF complies with protection and conservation measures for State listed species as defined in ORS 496.182.

## **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 USFWS would not issue a permit for incidental take of spotted owls to ODF. ODF has provided permission for USFWS and its contractors to survey for barred owls on ODF lands, both open and gated in 2015. The USFWS could conduct barred owl surveys from open roads through ODF lands, but would require permission to conduct surveys behind locked gates or in closed areas. However, based on discussions with ODF, we understand that ODF would not grant permission for the removal of barred owls from ODF lands without the certainty that they could return to baseline condition by way of a Permit. The USFWS would not remove barred owls from ODF lands for this Experiment without specific permission from ODF. Therefore, under the No Action Alternative, ODF would continue to manage their lands under current Federal and State regulations; USFWS would not have access to gated ODF roads and lands within the Oregon Coast Ranges Study Area for barred owls surveys, and would not remove barred owls on ODF lands in the treatment area.

### **2.2 Preferred 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 ODF for a period of 13 years, based on the estimation that we will complete the Experiment after 4 years of removal activities. This permit is specific to all covered activities for the first 10 years of the permit. For the last 3 years of the permit, incidental take is only authorized for covered activities related to the harvest of timber sales - auctioned and sold with a contract signed by August 31, 2025. In the FEIS and ROD for the Experiment, (USFWS 2013a and b) the USFWS noted 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 (13 year permit) and a Permit for 18 years (with the limited application in the last 3 years) in the event we need to extend the Experiment. In the latter case, this may assist us in considering whether to extend the Permit should an extension be requested by the permittee, although an amendment to extend the permit may require additional NEPA compliance if we determine it

would increase the amount of incidental take or cause effects on the environment not previously considered.

For USFWS to issue the Permit, the Agreement must contain 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](http://www.fws.gov/endangered/policy/SAFE_HAR.HTM) and [http://www.fws.gov/endangered/pdfs/FR/FRnoticeCCAA\\_SHAreg\\_revision.pdf](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 ODF Safe Harbor Agreement (ODF 2015) (incorporated by reference).

Under the Safe Harbor Agreement, ODF will:

- Provide access and permission for USFWS and the U.S. Geological Survey (USGS) biologists, or their contractors, to use roads managed by ODF, and to access ODF lands to survey barred owls throughout the Oregon Coast Ranges Study Area.
- Provide access to ODF lands and permission for USGS and USFWS biologists, or their contractors, to remove barred owls located on ODF lands within the treatment portion of the areas.
- Provide permission for USFWS and USGS biologists, or their contractors, to use roads owned or managed by ODF to access sites for the removal of barred owls located on Federal lands, and any other lands for which USFWS has landowner permission to removal barred owls within the treatment portion of the Experiment.
- Provide historic and current spotted owl survey data in the Study Area. This includes data on presence, banding, and reproductive surveys, if available.
- 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).

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 Safe Harbor Agreement, the USFWS established the baseline condition, for which no incidental take would be authorized. In the treatment portion of the Study Area, 20 occupied spotted owl sites (represented by their Thiessen polygons) overlap ODF lands or lands where ODF holds easements and agreements that allow them to access the covered lands for timber haul and management (Tables 1 and 2). Therefore, take will not be authorized on 20 currently or recently occupied sites identified in Tables 1 and 2.

The USFWS identified another 18 sites where spotted owls have not been detected in the past five years. These are the non-baseline sites (Table 3) for the purposes of the Experiment. If spotted owls reoccupy the non-baseline sites during or soon after the Experiment is implemented (a total of 13 to 18 years), they may be incidentally taken under the Permit by the covered activities.

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

<b>BASELINE SPOTTED OWL SITES</b>	
<b>Master Site #</b>	<b>Spotted Owl Site Name</b>
0812	Barber Creek
0776	East Taylor Creek
0762	Failor Creek
0160	Miller Creek
3553	Raleigh Creek
2721	Rock Creek
2723	San Antone Creek
3913	South Bear Creek
4680	Upper Greenleaf
4474	Upper Mcvey Creek
0159	Walker Creek West

**Table 2.** Elevated baseline spotted owl sites for ODF Safe Harbor Agreement, Oregon Coast Ranges Study Area. These are treated the same as the baseline sites under this Safe Harbor Agreement .

<b>Elevated Baseline Spotted Owl Sites</b>		
<b>Master Site Number</b>	<b>Spotted Owl Site Name</b>	<b>Last Year With Spotted Owl Response</b>
2137	Bear Creek West	2012
0773	Cape Horn	2012
0524	Elk Mountain	2011
2549	January Creek	2012
2546	Knapp Creek	2011
2313	Lower Greenleaf	2010
4088	McVey Creek	2012
0519	Meadow Creek	2013
2722	Wheeler Creek	2011

**Table 3.** Spotted owl sites that are not baseline sites.

<b>NON-BASELINE SPOTTED OWL SITES</b>		
<b>Master Site Number</b>	<b>Spotted Owl Site Name</b>	<b>Last year With Spotted Owl Response</b>
0779	Brush Creek	2008
2545	Chickahominy Creek	2010
4491	Chicken Creek	2010
2543	Druggs Creek	2009
0525	Greenleaf Creek	2006
4688	Iron Mountain	2008
3251	Lake Creek	2010
2552	Little Lake Creek	2007
3126	Lower Deadwood	2009
4492	Lower Nelson Creek	2011
2489	Misery Creek	2009
3554	Nelson Creek	2003
0814	Old Man Rock Canyon	2009
3362	Pat Creek	2007
0086	Upper Elk	2010
4686	Upper Hula	2006
4600	Upper San Antone	2008
0764	Velvet Creek	2008

### **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 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 and 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 Experiment 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).

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 Agreement could be carried out at any time under current State laws and regulations. In the absence of issuance of the Permit, the non-baseline sites and areas 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 reoccupancy of some of the non-baseline sites by spotted owls, which would result in the prohibition on take of these spotted owls and could impact some of the covered actions in the absence of a Permit. However, the Barred Owl Removal Experiment is a short-term action, with a maximum of 10 years of 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 3 to 5 years (USFWS 2013b, p 173). At that time there will no longer be restrictions on any covered activities based on the 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 proceed at a normal rate. If spotted owls do manage to reoccupy some sites

due to removal of barred owls on other adjacent ownerships, ODF may have to delay implementation of some activities until the experiment ends and barred owls reclaim the areas. If USFWS does issue the permit, the covered activities would proceed at normal rates. Therefore, the primary effect of the issuance of the permit would be only to temporarily delay (up to 15 years maximum) the implementation of some of the covered activities. For these reasons, the SHA and incidental take permit would not significantly affect these other resources; therefore, we have limited our analysis to the potential effects on northern spotted owls. As discussed above, the effects to barred owls from the Experiment were fully considered in the FEIS (USFWS 2013b).

### **3.1 Effect on Northern Spotted Owl**

The effects to the northern spotted owl resulting from ODF forest management on lands covered under the Agreement were not considered in the FEIS. 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).

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 of spotted owls to ODF. ODF would not allow access to their gated lands for barred owl surveys and would not give us permission to remove barred owls from ODF lands without the certainty that they could return to baseline condition. Thus, ODF would continue to manage their lands under current Federal and State regulations. USFWS would not have access to gated ODF roads and lands

within the Oregon Coast Ranges Study Area and would not remove barred owls on ODF lands in the treatment area.

The non-baseline spotted owl sites (where resident spotted owls have not been detected in at least five years), and areas outside the sites where spotted owls have not been located despite extensive surveys, are highly likely to remain unoccupied unless we remove barred owls from the area, and once verified, unoccupied sites receive no protection under State or Federal regulations. Even partial removal of barred owls from other ownerships in the area will likely leave enough barred owls in the area to potentially disrupt reoccupancy by spotted owls. Therefore, habitat on ODF lands associated with these non-baseline sites and areas could be harvested at any time under the No Action Alternative.

The Experiment, which this Agreement supports, is a short-term study, estimated to include 4 years of barred owl removal, with a maximum duration of 10 years. In our analysis of the effects of the Experiment, we 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 remove barred owls on ODF lands within the treatment portion of the Study Area, there will be substantial spatial gaps in our efforts to remove barred owl populations. This would lead to an imbedded population of barred owls within the treatment portion of the study area, providing an additional source of barred owls to recolonize recently cleared sites and affecting the ability of spotted owls to reoccupy non-baseline sites following barred owl removal.

The presence of an imbedded source population of barred owls could substantially reduce the power of the experiment to detect the effect of barred owl removal on spotted owl populations, affecting our ability to meet the purpose and need of the Experiment. At the very least, this will complicate the analysis of the results of this Experiment. For example, if barred owls remain in an area, spotted owls may not be able to respond to the removal of only barred owls within a historic spotted owl site. 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 and permission to remove barred owls from ODF lands could lead to the need to extend the Experiment duration to compensate for weaker responses or completely mask the results. If barred owls are not removed on ODF lands within the treatment area, young produced

at barred owl sites within the treatment area may increase the likelihood that currently unoccupied spotted owl sites 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, ODF would be permitted to take spotted owls that may reoccupy up to 18 historic spotted owl sites and other areas outside of baseline sites not known to have been previously occupied, during the Experiment, and for five years following the end of the Experiment, for a total of 10 years with allowances for an additional three years for timber sales on non-baseline sites that were sold with contracts signed prior to August 31, 2016. 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 consider extending the Safe Harbor Agreement and permit for up to a total of 18 years (with the same restrictions in the last 3 years). Spotted owls have not been detected on these non-baseline sites for five 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 our analysis of the effects of the Experiment, we 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 non-baseline sites or areas as a result of barred owl removal would again be displaced within five years post-Experiment, regardless of ODF'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 the non-baseline sites or areas in the Study Area as a result of this short-term experiment.

#### **Incidental take**

Incidental take of spotted owls under this Safe Harbor Agreement would be in the form of harm and harassment. Harm would occur from forest operation activities that result in spotted owl habitat loss or degradation supporting a reoccupied spotted owl site, or potential new spotted owl sites that occur in non-baseline areas.

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. A small amount of additional habitat removal may occur with the development of roads to access lands for timber management or other operational activities. 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, and 10 percent on private lands (Table 4).

**Table 4.** Spotted owl nesting/roosting habitat within the treatment portion of the Oregon Coast Ranges Study Area.

<b>Spotted Owl Habitat within the Treatment Area, Oregon Coast Ranges Study Area</b>		
<b>Landowner</b>	<b>Acres of Spotted Owl Habitat<sup>1</sup></b>	<b>% of Total Habitat</b>
Federal	39,600	76%
State	7,400	14%
Other Private	5,030	10%
<b>Total</b>	<b>52,000</b>	
<sup>1</sup> Includes suitable and highly suitable habitat		

On the 18 non-baseline sites, ODF manages less than 10% of the land within the Thiessen polygons at 6 sites, between 16 and 33 percent at 5 sites, and greater than 33 percent of the lands at 7 sites (Table 5). Some of the lands managed by ODF are reserved as Marbled Murrelet Management Areas or are withdrawn from timber harvest for various other administrative reasons and thus are unlikely to be impacted during the duration of this Agreement.

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 owls sites. There are 18 non-baseline spotted owl sites in the treatment area (Table 3) where incidental take is authorized under this Safe Harbor Agreement that include varying amounts of ODF lands (Table 5). These are the sites where incidental take resulting from habitat loss may occur under this Safe Harbor Agreement. Within the lands available for timber harvest on the non-baseline sites, 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.

**Table 5.** Area and percent ownership of land and spotted owl nesting/roosting habitat within the non-baseline Thiessen polygons of spotted owl sites where ODF owns lands. ODF lands are broken out into ODF protected lands (not managed for timber and likely to continue to support spotted owls) and ODF Available lands that may be impacted by timber harvest.

SITE NAME		Area in Thiessen			NSO Nesting/Roosting Habitat in Thiessen				
		Federal	ODF	Private	Federal	ODF Protected (MMMA, Riparian, etc.)	ODF Available	ODF (Total)	Private
<b>Brush Creek</b>	<b>Acres</b>	<b>1168</b>	<b>921</b>	<b>1136</b>	<b>814</b>	<b>285</b>	<b>124</b>	<b>409</b>	<b>144</b>
	%	36	29	35	60	21	9	30	10
<b>Chickahominy Creek</b>	<b>Acres</b>	<b>536</b>	<b>246</b>	<b>880</b>	<b>72</b>	<b>1</b>	<b>105</b>	<b>106</b>	<b>141</b>
	%	32	15	53	23	0	33	33	44
<b>Chicken Creek</b>	<b>Acres</b>	<b>116</b>	<b>759</b>	<b>887</b>	<b>83</b>	<b>8</b>	<b>450</b>	<b>458</b>	<b>238</b>
	%	7	43	50	11	1	58	59	30
<b>Druggs Creek</b>	<b>Acres</b>	<b>1248</b>	<b>585</b>	<b>619</b>	<b>598</b>	<b>10</b>	<b>274</b>	<b>284</b>	<b>45</b>
	%	51	24	25	65	1	30	31	5
<b>Greenleaf Creek</b>	<b>Acres</b>	<b>1348</b>	<b>62</b>	<b>0</b>	<b>795</b>	<b>0</b>	<b>43</b>	<b>43</b>	<b>0</b>
	%	96	4	0	95	0	5	5	0
<b>Iron Mountain</b>	<b>Acres</b>	<b>817</b>	<b>260</b>	<b>300</b>	<b>250</b>	<b>0</b>	<b>73</b>	<b>73</b>	<b>26</b>
	%	59	19	22	72	0	21	21	7
<b>Lake Creek</b>	<b>Acres</b>	<b>37</b>	<b>1201</b>	<b>1064</b>	<b>31</b>	<b>55</b>	<b>202</b>	<b>257</b>	<b>114</b>
	%	2	52	46	8	14	50	64	28
<b>Little Lake Creek</b>	<b>Acres</b>	<b>1123</b>	<b>1036</b>	<b>271</b>	<b>453</b>	<b>33</b>	<b>562</b>	<b>595</b>	<b>15</b>
	%	46	43	11	443	3	53	56	1
<b>Lower Deadwood</b>	<b>Acres</b>	<b>1978</b>	<b>36</b>	<b>865</b>	<b>916</b>	<b>1</b>	<b>17</b>	<b>18</b>	<b>71</b>
	%	69	1	30	91	0	2	2	7
<b>Lower Nelson Creek</b>	<b>Acres</b>	<b>1335</b>	<b>1497</b>	<b>664</b>	<b>478</b>	<b>18</b>	<b>421</b>	<b>439</b>	<b>105</b>
	%	38	43	19	47	2	41	43	10
<b>Misery Creek</b>	<b>Acres</b>	<b>1811</b>	<b>144</b>	<b>129</b>	<b>842</b>	<b>23</b>	<b>15</b>	<b>38</b>	<b>29</b>
	%	87	7	6	93	2	2	4	3
<b>Nelson Creek</b>	<b>Acres</b>	<b>1296</b>	<b>1054</b>	<b>154</b>	<b>567</b>	<b>15</b>	<b>454</b>	<b>469</b>	<b>19</b>
	%	52	42	6	54	1	43	44	2
<b>Old Man Rock Creek</b>	<b>Acres</b>	<b>1987</b>	<b>2</b>	<b>1010</b>	<b>1187</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>105</b>
	%	66	<1	34	92	0	0	0	8
<b>Pat Creek</b>	<b>Acres</b>	<b>309</b>	<b>1334</b>	<b>949</b>	<b>180</b>	<b>82</b>	<b>184</b>	<b>266</b>	<b>70</b>
	%	12	51	37	35	16	36	52	13
<b>Upper Elk</b>	<b>Acres</b>	<b>1575</b>	<b>374</b>	<b>469</b>	<b>1031</b>	<b>9</b>	<b>218</b>	<b>227</b>	<b>82</b>
	%	65	16	19	77	1	12	17	6

<b>Upper Hula</b>	<b>Acres</b>	<b>168</b>	<b>1</b>	<b>639</b>	<b>152</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>112</b>
	%	21	<1	79	57	<1	0	<1	42
<b>Upper San Antone</b>	<b>Acres</b>	<b>40</b>	<b>651</b>	<b>203</b>	<b>28</b>	<b>49</b>	<b>152</b>	<b>201</b>	<b>11</b>
	%	4	73	23	12	21	63	84	4
<b>Velvet Creek</b>	<b>Acres</b>	<b>1992</b>	<b>91</b>	<b>484</b>	<b>608</b>	<b>4</b>	<b>51</b>	<b>55</b>	<b>77</b>
	%	78	3	19	82	1	7	8	10

ODF manages a total of 10,254 acres of land and 3,939 acres of nesting/roosting habitat within the non-baseline Thiessen polygons. Approximately 594 acres of nesting/roosting habitat are in protected status, leaving 3,345 acres available for timber harvest. This represents less than 7% of the total spotted owl nesting/roosting habitat in the treatment area (Table 6).

ODF uses different habitat data in their internal analysis of their actions which includes foraging and some dispersal habitat as potentially suitable spotted owl habitat. ODF estimates that it manages approximately 5,489 acres of potentially suitable owl habitat that is available for harvest on ODF lands within the non-baseline Thiessen polygons. However, because ODF does not have data for private lands, we will continue to use our nesting/roosting habitat data to analyze the effects of the action. Nesting/roosting habitat is likely the most important habitat in determining whether spotted owls can support themselves within a specific area.

**Table 6.** Potential habitat removal on ODF lands under the SHA.

<b>Spotted Owl Habitat within the Treatment Area, Oregon Coast Ranges Study Area</b>		
<b>ODF lands</b>	<b>Acres of Spotted Owl Habitat<sup>1</sup></b>	<b>% of Total Habitat in treatment area</b>
Treatment Area	7,400	14%
Available for harvest within non-baseline area	3,345	7%
<sup>1</sup> Includes suitable and highly suitable habitat (nesting/roosting habitat)		

If spotted owls do reoccupy ODF lands, and initiate nesting, ODF will maintain at least 70 acres of 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**

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, and rock pit development. 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 known spotted owl site centers known in the treatment area, 10 occur on ODF lands (Table 7) and 7 of these are non-baseline sites. Three additional non-baseline site centers are close enough that forest management activities on ODF lands could result in some disturbance of the sites if these site centers were reoccupied. However, given the limited area affected by these activities and the limited duration over which these activities may cause disturbance, there is a small possibility that these activities would fall near enough to a reoccupied core area to disturb spotted owls during the early nesting season.

**Table 7.** Spotted owl site centers within the treatment portion of the Oregon Coast Ranges Study Area.

<b>Spotted Owl Site Centers within the Treatment Area, Oregon Coast Ranges Study Area</b>		
<b>Landowner</b>	<b>Site Centers</b>	<b>% of Site Centers</b>
Federal	36	75%
ODF	10	21%
Other Private	2	4%
Total	48	

**Level of contribution of ODF lands to spotted owl sites**

ODF lands contain 14 percent of the suitable spotted owl 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 (Tables 1 and 2). Incidental take of spotted owls that reoccupy non-baseline sites may occur with the removal of this habitat (Table 3).

The USFWS does not expect all of the non-baseline sites to be reoccupied as a result of the Experiment. In addition, removal of some spotted owl nesting/roosting 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. Incidental take due to disturbance is likely to be very limited. Ten historic spotted owl site centers occur on ODF lands and three others are close to ODF lands. Historic site centers are the areas that are most likely to be reoccupied by spotted owls with the removal of barred owls. However, given the short duration of forest management activities that might disturb spotted owls, the limited period of time during which noise may disturb spotted owls (early nesting season), and the relatively short distance over which disturbance due to noise is anticipated, take resulting from disturbance is likely to be very limited.

### **Effect of the take on local and regional spotted owl populations**

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 five years, despite extensive survey efforts. The most likely source of spotted owls that may reoccupy these sites are territorial spotted owls that were displaced from these sites and remain in the area as floaters (non-territorial, non-breeding) birds. A few replacement birds may be younger spotted owls produced on one of the few remaining spotted owl sites and still looking for a territory, therefore joining the floater population. We are unlikely to entice the remaining territorial spotted owls to abandon their current sites and move onto the non-baseline sites from which we are removing barred owls. Experience shows that once spotted owls establish a territory, spotted owls have a high inclination to remain on that familiar territory. Therefore, 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 this Permit.

We have no evidence that floaters (young and displaced territorial 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 the 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. If we remove barred owls, these spotted owls may be able to establish territories and reproduce, thus contributing to future generations during the removal period.

This Experiment is short term and covers a relatively small area. Once complete, we have every reason to anticipate that barred owl populations will return to current levels within 5 years and again displace these spotted owls, sending the spotted owls back into the floater population. The length of the Permit is designed to coincide with the end of the effects of the removal and return to baseline condition. 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 experiment will also likely allow some non-territorial spotted owls to temporarily establish territories and contribute to the regional spotted owl population.

In developing the experiment and analyzing the effect of the experiment and this Safe Harbor Agreement for both the 13-year permit period and a potential 5-year extension, we did not anticipate long-term conservation contribution from the spotted owls that might reoccupy historic sites in the Study Area. The primary 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.

### **Critical habitat**

All ODF lands within the treatment area are designated critical habitat for the northern spotted owl (USFWS 2012). In the rule designating critical habitat (USFWS 2012), USFWS recommends maintaining areas currently functioning as spotted owl habitat. Actions such as thinning and fuels management that are likely to improve or speed the development of spotted owl habitat or restore ecological function are consistent with spotted owl recovery and conservation and are generally not considered to negatively impact critical habitat. There are approximately 18,361 acres of critical habitat on ODF lands in the treatment area, and approximately 10,254 acres is within non-baseline areas. Approximately 3,345 acres are considered to be nesting/roosting habitat.

### **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 Agreement in the Oregon Coast Ranges Study Area with Roseburg Resources Company (RRC) and Oxbow Timber I, LLC (Oxbow). RRC and Oxbow own approximately 9,400 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 308 acres of nesting/roosting habitat. RRC and Oxbow own no habitat on 6 of the 19 non-baseline sites covered under their permit, less than 10 percent of the nesting/roosting habitat on 11 of the sites, and 14 and 29 percent respectively on the remaining two sites.

The USFWS is currently developing a potential Safe Harbor Agreement with Weyerhaeuser Company in the Oregon Coast Ranges Study Area. Weyerhaeuser Company owns approximately 1,072 acres of forest lands within the treatment portion of the Oregon Coast Ranges Study Area in Lane County, Oregon. The Weyerhaeuser Safe Harbor Agreement and permit, if completed and issued, may authorize incidental take of spotted owls that may reoccupy up to 16 non-baseline sites and areas as a result of harvest or modification of 817 acres of nesting/roosting habitat. Weyerhaeuser owns less than 3 percent of the habitat on 6 of the 16

sites, less than 5 percent of the habitat on 9 of the 16 sites, and less than 10 percent of the habitat on all sites.

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 3,345 acres of nesting/roosting habitat. The SHA would provide for an elevated baseline, and as such ODF would not receive take authorization for some sites that are covered in the RRC or Weyerhaeuser Safe Harbor Agreements.

On the treatment area across all ownerships, there are 28 total baseline spotted owl sites and 32 non-baseline sites which may be incidentally taken if all three of these Safe Harbor permits are issued (Many of these sites overlap two or more ownerships.) 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 would 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.

As described in the "Effect of the take on local and regional spotted owl populations" section above, the non-baseline sites are not currently occupied by spotted owls and are unlikely to become reoccupied unless the Experiment is implemented. The Experiment and these Incidental Take Permits, 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 Experiment and these Permits will also likely allow some non-territorial spotted owls to temporarily establish territories and contribute to the regional spotted owl population.

The primary conservation value of the Experiment, and the Agreements which support 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. 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. Thus, even with some habitat loss, the Barred Owl Removal Experiment still has significant value to the recovery of the spotted owl.

Under this Permit, ODF would be able to continue normal operations, potentially resulting in the removal of up to 3,345 acres of spotted owl nesting/roosting habitat, generally equating to older diverse forests. This represents less than 7 percent of the nesting/roosting habitat available in the treatment portion of the Study Area, 2 percent of the nesting/roosting habitat in entire Study Area, 0.4 percent of the habitat in the Oregon Coast modeling region, one of 11 modeling regions in the range of the northern spotted owl, and 0.03 percent of the spotted owl nesting/roosting habitat rangewide.

The RRC and Oxbow Agreement permits the removal of up to 308 acres of nesting/roosting habitat and the Weyerhaeuser Agreement, if signed, would permit the removal of up to 817 acres of nesting roosting habitat. Between all three of the Safe Harbor Agreements (RRC and Oxbow, Weyerhaeuser, and ODF), a total of 4,470 acres of nesting/roosting habitat would be available for harvest. The would represent 8 percent of the 52,000 acres of nesting/roosting habitat in the treatment portion of the Study Area, 3 percent of the nesting/roosting habitat in entire Study Area, 0.6 percent of the habitat in the Oregon Coast modeling region, one of 11 modeling regions in the range of the northern spotted owl, and 0.04 percent of the spotted owl nesting/roosting habitat rangewide.

### **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 ODF Safe Harbor Agreement will not significantly impact the northern spotted owl.

- The Safe Harbor Agreement does not authorize incidental take of spotted owls in 20 currently or recently occupied spotted owl sites (Tables 1 and 2). These are the baseline conditions for the Agreement and are not covered by the incidental take permit. 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 spotted owls that 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), we did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites in the Study Area.

- The conservation value of the Permit is 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 18 currently unoccupied (non-baseline) spotted owl sites or other currently unoccupied non-baseline lands during and immediately following 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.
  - The permit would authorize the removal of less than 7% of the current spotted owl nesting/roosting habitat in the treatment portion of the Study Area. And some of this removal may not result in take. 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.
  - Spotted owl habitat within treatment portion of the Oregon Coast Ranges Study Area represents less than 0.5 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 because these sites do not currently have spotted owls and would be unlikely to be recolonized without barred owl removal.

Impacts to barred owls from the Experiment were addressed in the FEIS. 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 ODF Safe Harbor Agreement will not significantly impact other resources.

- The actual amount of spotted owl habitat that may be affected under this Agreement and Permit represents a very small portion of the spotted owl nesting/roosting habitat rangewide. This represents a very small impact on the regional forest environment.
- All covered activities under this Agreement could be carried out at any time under current State laws and regulations in the absence of the SHA and Permit because we would be unable to remove barred owls from ODF lands in the treatment portion of the study unit. The effect of the SHA and Permit would be that the covered activities could occur during the Permit term when, otherwise, they might be delayed until barred owls re-occupy the site after the Experiment has ended.
- The issuance of an incidental take permit only allows take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. (50 CFR 17.3, emphasis

added). Thus, issuance of this Permit does not permit any activity that does not conform to Federal and State Laws.

#### 4 List of Preparers

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

<b>Name</b>	<b>Affiliation</b>	<b>Responsibility</b>
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
Robin Bown	U.S. Fish and Wildlife Service, Barred Owl Removal Experiment USFWS Project Lead, Oregon Fish and Wildlife Office	Draft EA analysis and preparation, spotted owl expert
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

#### 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). 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 and 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.

We 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. We have discussed 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 98<sup>th</sup> 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.
- Dugger, K.M., E.D. Forsman, A.B. Franklin, R.J. Davis, G.C. White, C.J. Schwarz, K.P. Burnham, J.D. Nichols, J.E. Hines, C.B. Yackulic, P.F. Doherty., L. Bailey, D.A. Clark, S.H. Ackers, L.S. Andrews, B. Augustine, B.L. Biswell, J.Blakesley, P.C. Carlson, M.J. Clement, L.V. Diller, E.M. Glenn, A.Green, S.A. Gremel, D.R. Herter, J. M. Higley, J. Hobson, R.B. Horn, K.P. Huyvaert, C. McCafferty, T. McDonald, K. McDonnell, G.S. Olson, J.A. Reid, J. Rockweit, V. Ruiz, J.Saenz, and S.G. Sovern.2016. The effects of habitat, climate, and Barred Owls on long-term demography of Northern Spotted Owls. *The Condor*: February 2016, Vol. 118, No. 1, pp. 57-116.
- 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.
- ODF Safe Harbor Agreement. 2015. Draft Safe Harbor Agreement for Oregon Department of Forestry Safe Harbor Agreement.
- 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.