

Draft Environmental Assessment for the Roseburg Resources Company and Oxbow Timber I, LLC Safe Harbor Agreement

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

Through this Safe Harbor Agreement, RRC and Oxbow will contribute to the conservation of the spotted owl by allowing the researchers to survey for barred owls on RRC and Oxbow lands throughout the Study Area, and remove barred owls from RRC and Oxbow lands within the removal portion of the experiment. This information and access 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 the information and access, the USFWS would 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.

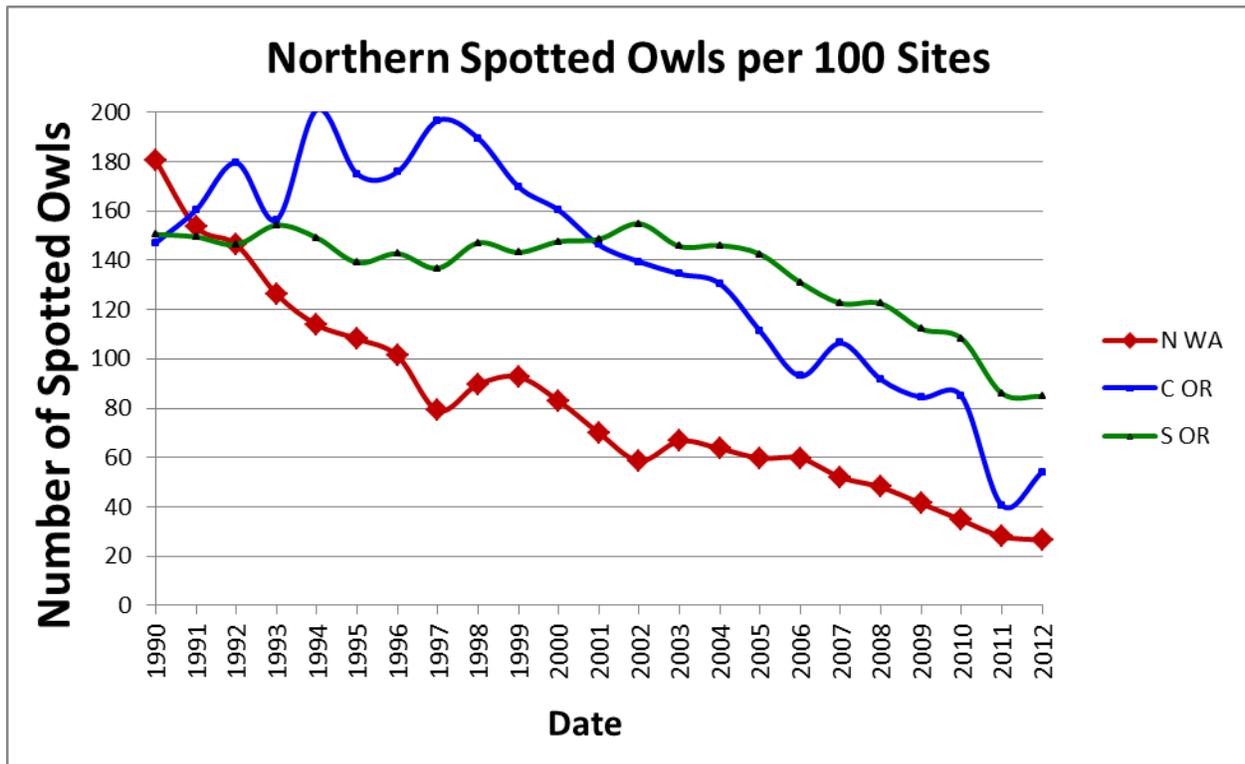
1.1 Background on the Barred Owl Effect on Spotted Owls

Because the Safe Harbor 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 2012 (Figure 1). In the Oregon Coast Ranges, 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, not all areas experienced significant declines in habitat during these decline timeframes.

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 show that spotted owls have a strong negative effect on spotted owl survival and 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, 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 (Gutierrez et al. 2007, Johnson et al. 2008). While we continue to explore all options, the USFWS identified the need to conduct an experiment to test this removal of barred owls in Recovery Action 29 of the 2011 Revised Recovery Plan for the Northern Spotted Owl.

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 RRC and Oxbow own or manage 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, Bureau of Land Management (BLM) monitoring, and RRC 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.

RRC and Oxbow 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 RRC and Oxbow lands for surveys, and permission to remove barred owls from RRC and Oxbow lands.

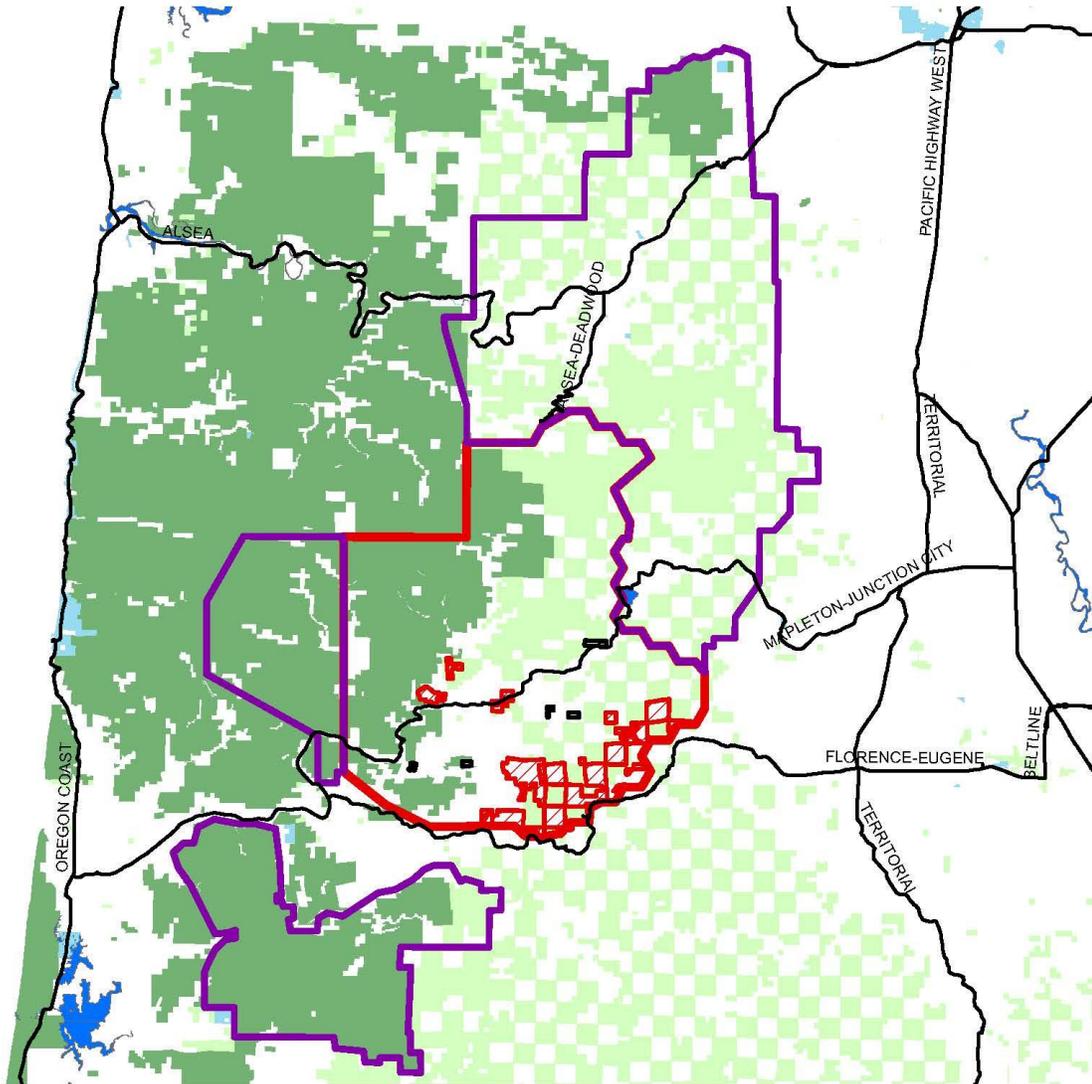
1.2 Purpose and Need for Action

The USFWS' purpose for the proposed action of entering into a Safe Harbor Agreement and issuing an ESA section 10(a)(1) Enhancement of Survival Permit to RRC and Oxbow is to gain enhanced access to important areas within the Oregon Coast Ranges Study Area for barred owl surveys and barred owl removal from spotted owl surveys that have already been conducted.

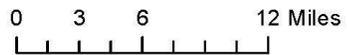
The need for this access and information is to complete the Barred Owl Removal Experiment in the most efficient and effective manner for the conservation of the northern spotted owl in accordance with Recovery Action 29 of the Recovery Plan (USFWS 2011, p. III-65). More specifically, the experiment will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

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

Land Ownership - Oregon Coast Ranges Study Area



- Legend**
- Highways
 - Study Area Boundaries
 - Treatment
 - Control
 - Owner
 - ▨ OXBOW
 - ▨ RRC
 - US FOREST SERVICE
 - BLM
 - STATE
 - PRIVATE
 - WATER



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

RRC's and Oxbow's purpose for this 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. RRC and Oxbow 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 RRC and Oxbow lands within the Oregon Coast Ranges Study Area are an important part of RRC's and Oxbow's overall operating plans from both a short term and long term perspective. Therefore, in return for cooperation on the experiment, RRC and Oxbow need certainty for their continued forest operations and management on their lands as would occur in the absence of the Barred Owl Removal Experiment.

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." Sections 2, 7, and 10 of the ESA allow USFWS to enter into an agreement embodied in the Safe Harbor Agreement. 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) 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 Safe Harbor Agreement, landowners may return their lands to mutually agreed baseline conditions, as described in the Safe Harbor Agreement.

The Section 10 Permit associated with this Safe Harbor Agreement would authorize incidental take of the spotted owl that may occur while the Applicants conduct forest management activities. The Permit would authorize incidental take during implementation of the Safe Harbor Agreement for conducting 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 this Safe Harbor 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 Safe Harbor 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 that Federal law prohibits a person from taking certain threatened or endangered species, which are protected under the ESA.

Forest management operations 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 Safe Harbor Agreement would not be signed and the USFWS would not issue a Permit to the Applicants. Under this alternative, RRC and Oxbow would continue to manage their lands under current Federal and State regulations. USFWS would not have access to RRC or Oxbow lands and roads within the Study Area. Barred owl surveys that require access to RRC or Oxbow lands and roads or the ability to walk across RRC or Oxbow lands to access other ownerships, resulting in gaps in the data for the Study Area. No barred owls would be removed from RRC or Oxbow lands within the treatment area, unless they can be called to adjacent lands.

2.2 Proposed Action Alternative

Under the Proposed Action Alternative, the Safe Harbor Agreement would be implemented in the Oregon Coast Ranges Study Area and the USFWS would issue a Permit to RRC and Oxbow for a period of 10 years, based on the estimation that we will complete the Barred Owl Removal Experiment after 4 years of removal activities. In the FEIS and ROD for the experiment, (USFWS 2013 and b) we note 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, we have analyzed the expected permit length (10 year permit, including 5 years following the completion of the experiment) and a permit for 15 years in the event we need to extend the experiment, and therefore the Permit. For USFWS to issue the Permit, the Safe Harbor Agreement must contain voluntary conservation measures that are reasonably expected to provide a net conservation benefit to spotted owls. The Safe Harbor 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 Safe Harbor Agreement. For more information, see the Roseburg Resources and Oxbow Safe Harbor Agreement (RRC 2015) (incorporated by reference).

Under the Safe Harbor Agreement, RRC and Oxbow will:

- Provide access and permission for USFWS and the U.S. Geological Survey (USGS) biologists to use roads owned or managed by RRC and Oxbow, and to access RRC and Oxbow lands to survey barred owls throughout the Oregon Coast Ranges Study Area.
- Provide access to RRC and Oxbow lands and permission for USGS and USFWS biologists to remove barred owls located on RRC or Oxbow lands within the treatment portion of the areas.
- Provide permission for USFWS and USGS biologists to use roads owned or managed by RRC or Oxbow 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.
- 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 Barred Owl Removal Experiment in an efficient and effective manner and minimize effects to nesting spotted owls that may reoccupy 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 Oregon Coast Ranges Study Area, nine occupied spotted owl sites (represented by their Thiessen polygons) overlap RRC or Oxbow lands or lands where RRC or Oxbow holds easements and agreements that allow them to access the covered lands for timber haul and management (Table 1). USFWS identified another 19 sites where spotted owls have not been detected in the past three years. These are the non-baseline sites (Table 2). If spotted owls reoccupy these sites during or soon after the Barred Owl Removal 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 Roseburg Resources and Oxbow Safe Harbor Agreement, Oregon Coast Ranges Study Area.

BASELINE SPOTTED OWL SITES	
Master Site Number	Spotted Owl Site Name
0812	Barber Creek
0762	Failor Creek
0160	Miller Creek
3553	Raleigh Creek
2721	Rock Creek
2723	San Antone Creek
4474	Upper McVey Creek
0159	Walker Creek West
4559	West Fork Deadwood

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

POSSIBLE NON-BASELINE SPOTTED OWL SITES		
Master Site Number	Spotted Owl Site Name	Last Year With Spotted Owl Response
Oregon Coast Ranges Study Area		
0526	Boyle Creek	2012
0779	Brush Creek	2008
2637	Buck Creek	2008
2545	Chickahominy Creek	2010
4491	Chicken Creek	2010
0524	Elk Mountain	2011
2549	January Creek	2012
2546	Knapp Creek	2008
3251	Lake Creek	2010
3126	Lower Deadwood	2009
2313	Lower Greenleaf	2010
4088	McVey Creek	2012
0519	Meadow Creek	2011
3554	Nelson Creek	2003
4600	North San Antone	2008
3362	Pat Creek	2007
4686	Upper Hula	2006
0764	Velvet Creek	2008
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 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.

The Safe Harbor Agreement does not change the analysis of effects of the Preferred Alternative in the FEIS for the Barred Owl Removal Experiment on barred owls, ongoing spotted owl demographic study areas, other species, the social environment, recreation and visitor use, costs of the experiment, or the cultural environment. As noted in the FEIS Effects to the Economy, “[a]ny safe harbor agreements would lessen the effects described in the economic analysis” (USFWS 2013, p 452). The only effects analysis that would potentially change under this Safe Harbor Agreement is the effect on the northern spotted owl. These effects are analyzed 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 this 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, RRC and Oxbow would continue to manage their lands under current Federal and State regulations. USFWS would not have access to RRC and Oxbow roads and lands within the Oregon Coast Ranges Study Area.

Under the Safe Harbor Agreement, take of spotted owls would only be permitted for non-baseline sites, where spotted owls have not been detected in at least three years despite extensive survey efforts. These sites are 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. Therefore, habitat on RRC and Oxbow lands associated with these sites could be harvested under the No Action Alternative.

This is a short-term experiment, estimated to include 4 years of barred owl removal, with a maximum 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. 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. We did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites in the study areas.

If USFWS or its contractors cannot conduct surveys on RRC and Oxbow lands within the Study Area, there will be holes in our coverage of barred owl populations, complicating the analysis of the results of this experiment. If we cannot remove barred owls from RRC and Oxbow lands within the Study Area, we anticipate 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 our ability to detect the effect of

the barred owl removal. 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 could lead to the need to extend the experiment duration to compensate for weaker responses. 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 Action Alternative

Under the Safe Harbor Agreement, RRC and Oxbow would be permitted to take spotted owls that may reoccupy up to 19 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, we 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 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 historic sites as a result of barred owl removal on accessible Federal lands would again be displaced within five years post-experiment.

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 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. We did not anticipate long-term conservation value from the spotted owls that might reoccupy historic sites in the Study Area.

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.

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 RRC and Oxbow 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 RRC or Oxbow, but for which they have existing easements and agreements. Within the treatment portion of the Oregon Coast Ranges Study Area, 75 percent of the remaining spotted owl suitable habitat occurs on Federal lands, 15 percent on State lands, 8 percent on other private lands, and 2 percent on RRC and Oxbow lands Table 3. This actually represents a worst case analysis because our spotted owl habitat data overestimates the amount of habitat on private lands, as compared to Federal lands. In a few cases, Federal lands may contain sufficient habitat to support the spotted owls without contribution from RRC and Oxbow lands. Thus not all habitat removal with the Safe Harbor Agreement’s 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 Habitat¹	% of Total Habitat
Federal	39,600	76%
State	7,400	14%
Other Private	4,200	8%
RRC and Oxbow Lands	830	2%
Total	52,000	
¹ Includes suitable and highly suitable 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. Of the 19 non-baseline spotted owl sites in the treatment area (Table 2) where take is authorized under this Safe Harbor Agreement, 13 include varying amounts of RRC or Oxbow lands (Table 4). These are the sites where take resulting from habitat loss may occur under this Safe Harbor Agreement.

Table 4. Percent ownership of land and spotted owl suitable habitat within the Thiessen polygons of spotted owl sites where RRC or Oxbow own lands.

SITE NAME -	Percent of Lands within Thiessen Polygon				Percent of Suitable Habitat within Thiessen Polygon			
	Federal	State	RRC and Oxbow Lands	Other private	Federal	State	RRC and Oxbow lands	Other private
Boyle Creek	40	0	10	50	78	0	4	18
Brush Creek	36	34	1	28	57	33	1	9
Chickahominy Creek	36	11	17	26	24	28	29	18
Chicken Creek	7	43	1	49	11	58	1	30
Elk Mountain	57	9	7	26	75	16	2	7
January Creek	53	2	35	10	79	3	8	10
Knapp Creek	45	38	12	5	71	27	1	1
McVey Creek	43	41	1	15	54	40	1	5
Meadow Creek	42	1	46	11	67	5	14	14
Nelson Creek	52	42	2	5	53	45	0	2
North San Antone Creek	16	61	23	0	12	84	5	0
Pat Creek	17	77	4	2	33	54	1	11
Wheeler Creek	29	0	4	66	72	0	0	28

RRC and Oxbow are minor owners on seven of the 13 sites (based on the Thiessen polygon) with less than 10 percent of the land ownership. The Thiessen polygon represents the area likely used by spotted owls associated with the site. RRC and Oxbow lands include less than five percent of the remaining suitable habitat on these seven sites, and 1 percent or less on six of the seven sites. Federal lands contain the majority of the remaining suitable spotted owl habitat on six of these seven sites.

On the remaining five non-baseline spotted owl sites, RRC and Oxbow own between 10 and 46 percent of the land within the Thiessen polygon. However, on four of these five sites, RRC and Oxbow manage less than 10 percent of the remaining suitable habitat. Again, Federal lands contain the majority of remaining suitable habitat on four of these five sites.

Thus, even if all non-baseline spotted owl sites are reoccupied by spotted owls, and RRC and Oxbow remove 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 RRC or Oxbow lands, and initiate nesting, RRC and Oxbow 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

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. Our 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 RRC or Oxbow lands (Table 5), though three are close enough that forest management activities on RRC or Oxbow 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 RRC or Oxbow holds easements and agreements, though we cannot determine 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 fall 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 RRC and Oxbow 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%
RRC and Oxbow lands	0	0%
Total	48	
¹ May be multiple site centers for some spotted owl sites		

Level of contribution of RRC and Oxbow lands to spotted owl sites

RRC and Oxbow lands contain less than two percent of the suitable spotted owl habitat within the treatment portion of the Oregon Coast Ranges Study Area. No take of spotted owls associated with the baseline sites is authorized by this Safe Harbor Agreement (Table 1). 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 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. Nor do we expect all of the non-baseline sites to be reoccupied as a result of the Barred Owl Removal Experiment. Take due to disturbance is also likely to be very limited. No historic spotted owl site centers occur on RRC and Oxbow 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 RRC and Oxbow 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 RRC or Oxbow easements and agreements such that if occupied, incidental take due to disturbance could occur.

Conclusion

For the following reasons, we conclude that the RRC and Oxbow Safe Harbor Agreement will not significantly impact the northern spotted owl.

- The Safe Harbor Agreement does not authorize the removal of nine currently occupied spotted owl sites. These are the baseline for the Agreement.
- The spotted owls that may be taken under this Agreement are occupying sites that are likely to be only temporary.
 - 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 their 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 be lost 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 experiment is primarily in the information 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 Safe Harbor Agreement would authorize incidental take of any spotted owls that may reoccupy up to 19 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 Coast Ranges 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 RRC and Oxbow lands or where RRC or Oxbow 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.

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.

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
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 98th Ave, Suite 100, Portland, Oregon 97216.

6. References

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