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ENVIRONMENTAL ASSESSMENT

PROGRAMMATIC CANDIDATE CONSERVATION AGREEMENT WITH ASSURANCES FOR THE FISHER (*PEKANIA PENNANTI*) IN WASHINGTON

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RAMBOLL ENVIRON

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TABLES

ACRONYMS AND ABBREVIATIONS

Applicant	Washington Department of Fish and Wildlife
CCAA	Candidate Conservation Agreement with Assurances
CFR	Code of Federal Regulations
CI	Certificate of Inclusion
CM	Conservation Measures
DAHP	Washington Department of Archaeology and Historic Preservation
DPS	Distinct Population Segment
EA	Environmental Assessment
ESA	Endangered Species Act
Forest Practice Rules	Washington Forest Practices Rules
FR	Federal Register
HCP	Habitat Conservation Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
Permit	Enhancement of Survival Permit
RCW	Revised Code of Washington
RMZ	Riparian Management Zone
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources

1. INTRODUCTION

The fisher (*Pekania pennanti*) was listed as an endangered species by the State of Washington in 1998 (Hayes and Lewis 2006). On December 5, 2000, the U.S. Fish and Wildlife Service (USFWS) received a petition to list a distinct population segment (DPS) of the fisher that included portions of California, Oregon, and Washington as an endangered species under the Endangered Species Act (ESA). On April 8, 2004, USFWS published a 12-month status review (69 FR 18769) finding that the West Coast DPS of fisher was warranted for listing, but was precluded by higher priority actions.

On October 7, 2014, USFWS published a proposed rule (79 FR 60419) to list the West Coast DPS of fisher as threatened under the ESA. In that proposed rule, USFWS identified habitat loss from wildfire and vegetation management, toxicants (rodenticides), and the cumulative impact and synergistic effects of these and other stressors in small populations as threats to the continued existence of the West Coast DPS of fisher. Available information on the identified threats, population size, and other factors affecting the West Coast DPS of fisher are described in the Species Report (USFWS 2014a) made available at the time of publication of the proposed rule. Regulations required USFWS to issue a final rule implementing the proposed rule or a notice that the proposed regulation was being withdrawn by October 7, 2015. Due to substantial disagreement regarding available information USFWS issued a 6-month extension to make a final determination (80 FR 19953, Docket No. FWS–R8–ES–2014–0041). A final regulation implementing the proposed rule or a notice that the proposed regulation is being withdrawn will be issued by April 7, 2016. Until a final rule is issued, the fisher will remain a Candidate for listing.

The Washington Department of Fish and Wildlife (WDFW) prepared a Programmatic Candidate Conservation Agreement with Assurances (CCAA or Agreement) for the fisher in the State of Washington and has requested that USFWS issue an enhancement of survival permit (Permit) (50CFR 17.22(d) and 17.32 (d)) pursuant to Section 10(a)(1)(A) of the ESA. The WDFW will enroll willing landowners in the CCAA by issuing Certificates of Inclusion (CI) for coverage under the Permit. CI's will include site specific information describing the enrolled lands. The CCAA will include Conservation Measures (CM) that will be implemented upon enrollment, and the Permit will go into effect if the fisher is listed under the ESA. The requested term of the Permit is 20 years, and will cover enrolled properties that fully implement the terms and conditions of the Agreement.

The Applicant will receive assurances that USFWS will not require any additional conservation measures or any additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CCAA. Enrolled non-Federal landowners receive these assurances by agreeing to implement the CMs described in the CCAA and executing a CI with WDFW. These assurances become effective if the fisher is listed as a threatened or endangered species under the ESA during the term of the requested Permit, provided that the CMs and the terms and conditions of the Permit are being fully and completely implemented. Unless otherwise stated, these assurances will be authorized with the issuance of the requested Section 10(a)(1)(A) Permit to WDFW.

The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4321 et seq.) requires that Federal agencies analyze and publicly disclose the social, economic and environmental

effects associated with major Federal actions (§ 4332). The issuance of the requested Permit under Section 10(a)(1)(A) of the ESA (40 CFR § 1508.18(b)) constitutes such a major Federal action.

1.1 Purpose and Need

The proposed Federal action analyzed in this draft EA is the issuance of the requested Permit to WDFW (Applicant) by the USFWS based on commitments to implement the CMs described in the CCAA. The purpose of the proposed Federal action is to respond to the Applicant's application for a Permit under Section 10(a)(1)(A) of the ESA. The purpose of this environmental assessment (EA) is to analyze and disclose the social, economic, and environmental effects of the proposed Federal action of issuing the requested Permit and a reasonable range of alternatives including the "no action" alternative. This document is intended to inform decision-makers and the public before decisions are made and before actions are taken. This EA was prepared using an interdisciplinary approach to address all aspects of the natural and human environment relevant to the potential impacts of the proposed Federal action including the direct, indirect, and cumulative impacts. This document was prepared in compliance with NEPA; the President's Council for Environmental Quality (CEQ) Regulations (40 CFR Section 1500 – 1508); and the Department of the Interior's Departmental Manual (DM) for NEPA compliance, Fish and Wildlife Service (516 DM 6, 30 AM 2-3, 550 FW 1-3, 505 FW 1-5).

The need for the proposed Federal action is due to the likelihood that activities proposed by the Applicant and participating enrolled landowners on non-Federal properties could result in take of the fisher if the species becomes listed as threatened or endangered under the ESA.

This draft Environmental Assessment (EA) and the Applicant's Draft CCAA are being made available for a 30-day public comment period in accordance with USFWS regulations and policies.

The proposed CCAA is programmatic in nature. Under the proposed Agreement, WDFW would issue CIs to private landowners that agree to voluntarily implement the CMs, and commit to actions to ensure the reduction of threats, and ensure conservation of fishers on their properties. This EA is needed to allow the USFWS to analyze and disclose the effects of the proposed Federal action of issuing the requested Permit.

The proposed CCAA would support efforts to conserve the fisher by implementing the CMs including inventory and monitoring activities identified in the CCAA. The CMs are primarily associated with timber harvest practices on non-Federal lands. Lands eligible for enrollment in the CCAA include state, tribal, other non-Federal publicly owned, or privately owned forest lands within the historical range of the fisher in western Washington.

The proposed Agreement would cover approximately 12,475,600 acres (ac) within the historical range of the fisher in western Washington (WDFW 2015a), of which approximately 5,384,100 ac are private, 6,335,000 ac are State lands, and 756,500 ac are Tribal lands eligible for enrollment under the CCAA (CCAA Figure 1 and Figure 2) (Table 1), hereafter the EA study area. Under the CCAA, individual participating land owners would apply for and be issued a CI under the Section 10(a)(1)(A) Permit that would be issued to WDFW if the fisher

becomes listed. The individual land owner must agree to implement the CMs that contribute to the conservation of the fisher. If a CI is signed and issued to a participating land owner,

Table 1. Land area (acres in thousands) in private, public and tribal ownerships within the CCAA management zones in western Washington.

CCAA Zone	Private Lands	Public Lands	Tribal Lands	Total
1 SW Cascades	720.3	2,047.0		2,767.3
2 SE Cascades	436.1	356.3	512.9	1,305.4
3 NW Cascades	871.3	642.0		1,513.2
4 NE Cascades	287.9	940.0		1,227.8
5 Olympic Peninsula	1,523.1	2,002.0	238.9	3,764.1
6 SW Washington	1,545.4	347.7	4.7	1,897.7
Total	**5,384.1**	**6,335.0**	**756.5**	**12,475.6**

and the species is listed as threatened or endangered under the ESA, the proposed Permit would exempt prohibitions on incidental take of the fisher that may occur as a result of implementing the covered activities associated with land management practices as identified in the CCAA.

Activities proposed to be covered under the CCAA include specific land management activities commonly practiced on forest lands, as defined in the Washington State Forest Practices Act as of February 1, 2015. Additionally, the following activities are covered: transport of timber and rock, site preparation, collection of minor forest products, fire suppression, and recreation (including legal hunting and trapping[1]). If activities not included above are occurring on lands to be enrolled, non-Federal landowners can request that USFWS determine if they are consistent with the programmatic CCAA and Permit issuance criteria and whether additional NEPA analysis would be required before such activities could be covered. Procedures to modify or amend the Agreement are described in CCAA Sections 12 and 13. Covered activities may be conducted by the enrolled landowner, their employees, contractors, agents, or other assigns as described in the Permit and the associated CI.

1.2 Project Description

The Programmatic CCAA for the fisher in the State of Washington is a voluntary agreement whereby WDFW may enroll non-Federal landowners that agree to manage their lands to remove or reduce threats to the species that may become listed under the ESA in the future. In return for enrolling and managing their lands to benefit the covered species, participating landowners receive assurances that USFWS will not require additional conservation measures or any additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CCAA if the covered species becomes listed as threatened or endangered under the ESA, so long as the Agreement remains in place and is being properly implemented.

[1] It is not legal to hunt or trap fishers or other species classified as endangered or protected in Washington State (RCW 77.15.120; RCW 77.15.130).

The programmatic design of the CCAA streamlines the process for landowner enrollment, as follows:

- WDFW requests that the USFWS issue a Permit (50 CFR 17.22(d) and 17.32 (d)) pursuant to Section 10(a)(1)(A) of the ESA for a proposed 20-year period;
- WDFW will enroll willing landowners in the CCAA by issuing a CI for coverage under the Permit. CIs will include site specific information describing enrolled lands. While the CMs within the CCAA will be implemented upon enrollment, the Permit will go into effect if the fisher is listed under the ESA.

Landowners wishing to enroll in the CCAA must agree to implement the Agreement CMs on enrolled lands to meet the "CCAA Standard" (64 FR 32726, 50CFR 17.22(d)(8)). Because enrollment in the CCAA agreement is voluntary, participating landowners may choose to discontinue their participation at any point. Electing to end participation in the CCAA would terminate any assurances and ESA coverage otherwise provided under the Permit.

The programmatic CCAA was developed to achieve three goals:

- Promote CMs that reduce or remove threats to fishers in Washington;
- Provide a program of voluntary proactive recovery efforts that deliver conservation benefits intended to meet the USFWS CCAA standard; and,
- Provide WDFW assurances that they and participating non-Federal landowners will not be held responsible for additional conservation measures or any additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CCAA if the fisher becomes listed under the ESA, provided that the CCAA is being fully and properly implemented.

While the fisher was extirpated from Washington in the mid-1900s, WDFW has worked with tribal, Federal, and private partners to recover the species in the State through reintroductions to the Olympic Peninsula, and planned, on-going, and future reintroductions to the Cascades Mountain Range. This species is not listed as threatened or endangered under ESA but is currently a candidate for listing. Therefore, there are no ESA regulations related to fishers currently impacting non-Federal lands. WDFW is seeking to utilize the CCAA to facilitate continued successful partnerships with landowners for fisher reintroductions in light of future potential Federal listings. Landowners may continue to enroll in the CCAA so long as the Agreement remains in effect and the fisher is not listed as threatened or endangered under the ESA.

1.3 Regulatory and Planning Environment

For a project or activity to be otherwise lawful, it must remain in compliance with all relevant Federal, state, and local laws, regulations, and ordinances.

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) as amended (42 USC § 4331 et seq.), requires that Federal agencies analyze and publicly disclose the social, economic and environmental effects associated with major Federal actions (42 USC § 4332). A major Federal action includes actions "with effects that may be major and which are potentially subject to Federal control and responsibility" (40 CFR § 1508.18). The issuance of an

enhancement of survival permit under Section 10(a)(1)(A) of the ESA constitutes a major Federal action (40 CFR § 1508.18(b)). While NEPA does not mandate any particular result, it requires the agency to follow particular procedures in its decision-making process. The purpose of these procedures is to ensure that the agency has the best possible information to make an "intelligent, optimally beneficial decision" and to ensure that the public is fully apprised of any environmental risks that may be associated with the proposed action.

The USFWS determined that an environmental assessment (EA) is the appropriate level of review for this proposed action. An EA consists of a concise public document that includes:

- A brief discussion of the need for the proposed Federal action;
- Evidence and succinct analysis determining whether to prepare an environmental impact statement or a finding of no significant impact;
- Brief discussions of required alternatives;
- Brief discussions of the environmental impacts of the proposed action and alternatives; and
- A listing of agencies and persons consulted (40 CFR §1508.9).

Endangered Species Act

Section 2 of the ESA states "encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants" and that "the purposes of this Act are to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of… treaties and conventions…".

Section 4 of the ESA outlines guidelines for identifying species that are threatened or endangered. Section 4(h)(3) requires that USFWS establish a ranking system to assist in identifying species that should receive priority review for listing. To fulfill their responsibilities, USFWS developed a program to identify species that warrant protection under the ESA (termed "candidates" or "candidate species") and to monitor and conserve those species for which protection is deemed appropriate until listing can proceed.

Section 6 of the ESA provides for cooperation between the USFWS and the States in threatened and endangered species conservation. The development of CCAAs requires collaborative stewardship recognizing the statutory role of State agencies, their traditional conservation responsibilities, and authorities for resident species.

Section 7 of the ESA requires all Federal agencies to review programs they administer and to utilize those programs to further the purposes of the ESA. In establishing the CCAA Policy, USFWS utilizes its Candidate Conservation Program to further the conservation of fish and wildlife. By providing assurances to non-Federal landowners that voluntarily agree to conserve species and their habitats, USFWS is helping to conserve the ecosystems upon which endangered and threatened species depend.

Section 9 of the ESA prohibits “take” of species that are listed as endangered, and Section 4 provides USFWS with the discretion to extend all or some of those protections deemed necessary and advisable to provide for the conservation of threatened species. Take includes harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species, or attempting to engage in any such conduct (16 USC §1538(19)). Harm is further defined in ESA implementing regulations as an act which actually kills or injures wildlife, including significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 C.F.R. §17.3).

Section 10(a)(1)(A) of the ESA allows USFWS to issue permits for acts that would otherwise be prohibited by Section 9 if such acts are expected to enhance the propagation or survival of the affected species. When evaluating a CCAA, USFWS must determine that the benefits of the CMs that will be implemented, when combined with those benefits that would be achieved if the CMs were implemented on other necessary properties, would preclude or remove any need to list the covered species (64 FR 32726, 50CFR 17.22(d)(8)). Only those threats or the proportion of those threats that can be controlled on the properties enrolled in the CCAA need to be addressed by participants in the Agreement.

To issue the requested Permit, USFWS must make positive findings for each of the following issuance criteria:

- The take will be incidental to an otherwise lawful activity and will be in accordance with the terms of the CCAA;
- The CCAA complies with the requirements of the CCAA policy;
- The probable direct and indirect effects of any authorized take will not appreciably reduce the likelihood of survival and recovery in the wild of any species;
- Implementation of the terms of the CCAA is consistent with applicable Federal, state, and Tribal laws and regulations;
- Implementation of the terms of this CCAA will not be in conflict with any ongoing conservation programs for fishers; and
- The Permit Applicant has shown capability for and commitment to implement all of the terms of the CCAA.

National Historical Preservation Act

As required by Section 106 of the National Historic Preservation Act (NHPA) of 1966, USFWS has considered the effect of its issuance of the requested Permit on historic properties. Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register; including artifacts, records, and remains which are related to such district, site, building, structure, or object, 16 U.S.C. Section 470(w)(5).

The issuance of a Permit pursuant to Section 10(a)(1)(A) of the Endangered Species Act (ESA) of 1973, is an undertaking according to NHPA. However, as defined by the ESA, the Permit only authorizes take of species that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity" which are described in the applicant’s CCAA. The

Permit does not authorize, allow, or cause the otherwise lawful activities that may result in take and are described in the CCAA.

The Permit, i.e. the undertaking, is limited to take of threatened and endangered species. Species do not meet the definition of historic properties. On this basis, issuance of the requested Permit is a NHPA Section 106 undertaking with no potential to cause effect on historic properties (36 CFR 800.3.1.a) and further Section 106 review is not required.

In conclusion, the otherwise lawful activities described in the CCAA are not being authorized by the USFWS Permit. Thus, USFWS has determined that the issuance of the requested Permit is an undertaking that is of the type that has no potential to cause effects on historic properties (36CFR800.3.a.1). As such, no historic properties will be affected as a result of the issuance of the Permit and the USFWS has no further obligation under Section 106. However, if a specific covered activity in the CCAA happens to be funded or implemented by the USFWS, that activity will become an USFWS Section 106 undertaking for which the USFWS will exercise the Section 106 review and compliance process.

Washington Forest Practices Rules

In 1974, the State Legislature passed the Forest Practices Act. The Forest Practices Act was designed to provide protection to forest soils, fisheries, wildlife, water quality and quantity, air quality, recreation, and scenic beauty. At the same time, the Act was intended to allow the maintenance of a viable forest products industry by regulating forest practices such as timber removal, road construction and maintenance, reforestation, and the use of forest chemicals. The Washington Forest Practices Rules, embodied in WAC Title 222, were first adopted in 1976 and apply to non-Federal and nontribal forest lands in the State. All forest landowners must conduct their forest management activities according to the Forest Practices Rules but only landowners that cut at least 5,000 board feet per year have to file a Forest Practices Application/Notification. Forest Practices Rules provide for exceptions to operating under standard rules, including Federal conservation plans authorized under Section 10 of the ESA. The Forest Practice Rules are available on the web at http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesRules/Pages/fp_rules.aspx.

2. DESCRIPTION OF THE ALTERNATIVES

This EA describes the anticipated environmental impacts of the proposed Federal action of issuing the requested Permit with a range of reasonable alternatives, including the "no action" alternative.

2.1 Alternative 1 – No Action

Under the No Action Alternative, USFWS would not issue the requested Permit and the proposed CCAA would not be implemented. Under this alternative, WDFW would not enroll landowners in the CCAA and no voluntary CMs would be implemented. WDFW would continue their efforts to recover fishers in the State (Hayes and Lewis 2006), focusing on the protection and monitoring of previously reintroduced individuals. Any fishers planned for reintroduction in the future would likely continue. However, the potential for success of future reintroductions could be hampered without the cooperation of non-Federal landowners in locating and conserving fishers where they occur on non-Federal lands.

2.2 Alternative 2 – Proposed Action: Issuance of the Requested Permit

The Proposed Action Alternative is the issuance of the requested 20-year Permit based on WDFW's commitment to implement the proposed CCAA including issuance of CIs to participating non-Federal landowners. The proposed CCAA would implement covered activities that contribute to the recovery of the fisher while providing coverage exempting take that may occur incidental to activities covered under the CCAA if the species becomes listed. The Agreement, Permit and CIs would provide an incentive for non-Federal landowners to participate in conservation efforts expected to support reintroduction of the fisher within the western portions of its historical range in Washington.

2.2.1 Enrolled Lands

Lands eligible for enrollment in this CCAA include state, tribal, non-Federal publicly owned, or privately owned forest lands within the historical range of the fisher in Washington (CCAA Figure 1 and Figure 2), excluding lands in northeastern and southeastern Washington (CCAA Figure 1). Enrolled properties will be described in documentation incorporated into the CI, and will include maps, figures, township/range/section, and/or legal descriptions as necessary to clearly delineate the precise boundaries of areas covered. See CCAA Section 3.0 for a complete description of enrolled lands.

2.2.2 Covered Activities

The term "covered activities" refers to those activities that may be carried out by participating landowners or their authorized representatives on enrolled lands that may result in incidental take of fisher consistent with the CCAA and the Permit during the term of the CI. Covered activities must be performed in compliance with all applicable Federal, state, and local statutes and regulations (including the Washington State Forest Practice Rules). See CCAA Section 4.0 for a complete description of covered activities.

2.2.3 Conservation Measures

To qualify for take coverage under the Permit and CI, all enrollees must agree to implement the CCAA CMs on enrolled lands. A summary of the CMs is provided below. For a complete description of CMs, see CCAA Section 5.0.

CM1. Allow WDFW or its agents, with reasonable prior notice (defined as no less than 24 hours), to access enrolled lands to perform the monitoring activities described in CCAA CM1. Monitoring activities focus on denning females that are known or suspected of denning on or in close proximity to enrolled lands.

CM2. Protect confirmed denning females and their young by limiting or preventing access and disturbance near occupied sites, including preventing the destruction of the denning structure itself (i.e., a tree, snag, log, or other structure). Specifically, landowners shall not conduct or authorize any of the activities described in the forest management activities in CCAA Section 4 within 0.25 miles of a known occupied den site. However, under certain conditions, some activities already underway may continue if habitat modifications do not occur and the activities are not conducted any closer to the denning fisher than at the time of denning confirmation.

CM3. Provide protection of denning female fishers by prohibiting trapping and nuisance animal control activities within 2.5 miles of known occupied dens. This will typically be during the denning period, 15 March through 30 September, or until the female has moved or left the den site.

CM4. Report to WDFW within 48 hours, upon finding any potentially occupied den sites or any dead, sick, or captured fishers on enrolled lands.

CM5. Cover all large water troughs or containers on enrolled lands or place a device within the structure (e.g., wooden pole to allow fishers to climb out) to prevent mortality of fishers from drowning, starvation or dehydration.

CM6. Where suitable habitat exists and where agreed upon by the Landowner and WDFW, allow the reintroduction of fishers on enrolled lands.

2.3 Other Alternatives Considered

Other alternatives considered but not analyzed in detail include the following.

2.3.1 Individual Landowner CCAAs

The WDFW initiated fisher reintroduction efforts in several areas of the species' historic range in Washington because the species was extirpated in the middle of the last century. The success of efforts to reintroduce the fisher on Federal lands will require support by landowners who are willing to contribute to the conservation of fishers that could traverse or occupy private and non-Federal lands. Another alternative that would contribute to reintroduction efforts and goals would be to enlist the support of individual landowners through development of their own CCAAs and issuance of enhancement of survival permits to landowners that have successfully completed the CCAA.

In concept, this alternative could accomplish the same goals as the proposed programmatic CCAA with participation by non-Federal landowners willing to implement the CMs. That is, this alternative could support the reintroduction of fisher on Federal ownership, through implementation of CMs on private, tribal and state ownership that protect denning fisher and their young, reduce or remove some of the threats to fisher in Washington; and contribute to the recovery of fisher in Washington. However, it would take an inordinate amount of time to develop and prepare individual landowner CCAAs that would result in issuance of an

incidental take permit by USFWS. The landowner would be required to cover the cost of staff necessary to prepare a CCAA, and to coordinate with USFWS. However, USFWS has limited staff availability to work with, perhaps, numerous willing landowners in a timely manner such that completed CCAAs would be in place prior to a potential future listing. In addition to the time it takes to prepare a CCAA, landowners would have to wait for a USFWS permit decision until a NEPA environmental review is conducted for each CCAA, either by USFWS or by a third party consultant firm hired by landowners. Either way, the NEPA environmental review process would likely take 4-6 months to complete because of required timeframes built into the process, e.g., 45-60 day public comment period, and a 30-day notice by USFWS that a permit will be issued, assuming a favorable outcome to the CCAA.

Overall, this alternative is not a reasonable approach to obtain the immediate support and conservation actions necessary to protect/conserve fishers as they disperse from Federal lands to non-Federal ownerships, following reintroduction. It also would not give landowners the assurances they seek, in a timely manner, to manage their forests as planned without fear of a future fisher listing. It would literally take years to get CCAAs in place with the number of non-Federal landowners likely necessary to make the reintroduction program successful, a process accomplished much more efficiently with a programmatic CCAA, a Permit issued to WDFW, and CIs issued to participating non-Federal landowners.

To summarize, landowners would likely be less willing to do the work to develop their own CCAA because of the time and associated costs, the USFWS does not have the staff to accommodate multiple requests within a timeframe considered necessary to support reintroduction efforts, and the separate NEPA environmental review process would add more time, overall, to the incidental take permitting process. This would result in individual landowners having substantially less incentive to significantly contribute to fisher conservation and recovery than what can be accomplished with a programmatic CCAA that enlists the contributions of multiple landowners within a relatively short time-frame at substantially less cost. Thus, this alternative does not meet the purpose and need.

3. AFFECTED ENVIRONMENT

The affected environment includes the human environment within the geographic scope of the area analyzed. An analysis of the human environment includes both the natural and physical environment and the relationship of people with that environment (40CFR §1058.14). The boundaries of the affected environment include the Permit area described in the Applicants' CCAA and the historical range of the fisher in western Washington affected by the Covered Activities.

Effects typically analyzed in an EA include ecological resources (such as climate, geology, surface and ground water, topography, soils, vegetation, wetlands, streams and shorelines, fish, and wildlife), aesthetics (noise), historic and cultural resources, economic (land use, public services, transportation, utilities), social (environmental justice), or health (air quality) resources, where appropriate, whether direct, indirect, or cumulative (40CFR §1058.8). Included in this analysis are elements of the natural and human environment (resources) that may differ among the alternatives, or for which analysis was required to demonstrate that any differences are not significant.

Elements of the natural and human environment not specifically addressed are those that would not be affected by the Proposed Action Alternative and/or those for which there would be no significant difference between the No Action Alternative and the Proposed Action Alternative. These elements include climate, air quality, water quality, geology and soils, vegetation, fish, archaeological, historical and cultural, and scenic resources.

This section describes in general terms the elements for which different effects are expected to occur between the No Action Alternative and the Proposed Action Alternative. These elements include noise, wildlife, recreation, land use and ownership, transportation, and socioeconomic resources.

3.1 Noise

Noise generated by human activity in a forested environment, particularly where timber harvest is conducted, is primarily associated with the forest management activities. Human activities associated with forests stands managed for timber harvest may include, but are not limited to, forest stand cruising, brush control, fertilization, pre-commercial thinning, commercial thinning, final harvests, and road maintenance and construction. Noise is generated by vehicles, i.e., pickup trucks, logging trucks, graders, etc., on roads and at landings, operation of timber harvest loaders, skidders, and/or towers, as well as people moving about in the forest stand. Noise from timber harvest and related operations at a specific harvest site may be short-term, i.e., lasting 1-60 days, or medium-term, i.e., lasting 61-90 days (USDA 2009).

A small amount of noise is also generated by people engaged in recreational activities, such as hunting and trapping, as well as hiking, camping, kayaking and fishing. Noise from these activities is primarily be in the vicinity of State or County campgrounds, or at campsites established near forest roads by hunters, as well as from use of their vehicles on forest roads and trails which include pickup trucks and 4-wheel all-terrain vehicles (ATVs).

3.2 Wildlife Species

3.2.1 Fisher

Status and Range-wide Distribution

The listing status and range-wide distribution of the fisher is described in the draft Programmatic CCAA (WDFW 2015a). Available information on the identified threats, population size, and other factors affecting the West Coast DPS of fisher are available in the USFWS Species Report (USFWS 2014a). The historic range and reintroduction efforts are provided in Lewis at al. (2012). The information in these documents is incorporated by reference. The natural history, habitat associations and prey information are briefly summarized below.

Natural History

The fisher is one of the larger members of the weasel family (*Mustelidae*) and occurs exclusively in the boreal and temperate forests of North America. With the exception of breeding males during the breeding season (March to May), fishers typically occupy a home range which are large in comparison to other mid-sized carnivores and are dominated by forested habitats. Females commonly use smaller home ranges than males (Lofroth et al. 2010). The average lifespan of fishers is unknown for populations that are not trapped, however, the longevity of a wild fisher is not expected to greatly exceed 10 years of age (Powell 1993).

The mating season for fishers occurs from late March to early May, when males leave established home ranges to search for reproductive females. Pregnant females can give birth to 1-4 kits from late March to early May and typically mate with a male within 10 days after giving birth. Birthing dens are always in cavities in live trees or snags (Raley et al. 2012); however, females may subsequently move kits to other den structures including cavities in snags or down logs, or to log piles or ground burrows.

Trapping, predation, vehicle collisions, poisoning, exposure, emaciation/starvation, infections, drowning, fighting among males, accidents, and disease are sources of mortality reported for fishers (Powell 1993, Lofroth et al. 2010). In harvested populations, trapping is typically the greatest source of mortality. Predation and vehicle collisions were the leading causes of mortalities of fishers reintroduced to Olympic National Park (Lewis 2014). Predators of fishers include bobcats (*Lynx rufus*), mountain lions (*Puma concolor*), coyotes (*Canis latrans*), lynx (*Lynx canadensis*), domestic dogs (*Canis familiaris*), and wolverines (*Gulo gulo*) (Powell 1993, Lofroth et al. 2010).

Habitat Associations

General

Fishers use forested habitats and, in western North America, fishers are commonly associated with conifer-dominated forests (Lofroth et al. 2010, Raley et al. 2012). Fisher home ranges are commonly found at low and mid-elevations and are frequently dominated by forests with 1) a moderate to dense forest canopy, 2) a mosaic of successional stages, 3) few large openings, 4) complex forest structure, and 5) large woody structures (Lofroth et al. 2010, Raley et al. 2012). Fishers are prey generalists and hunt for prey in a variety of stand types including early, mid, and late successional stands in managed or unmanaged forest landscapes.

Resting and Denning Habitat

Fishers frequently use large woody structures as rest sites between foraging bouts and as dens for birthing and kit-rearing. These structures include large cavity trees, snags, logs, and log piles which provide security from predators and protection from temperature extremes and inclement weather. These large structures are commonly found in late-successional and unmanaged forests, such as National Parks and wilderness areas. They may also be common in managed forest landscapes that contain late-successional stands or those where large structures are preserved or created (e.g., snag or cavity tree retention, snag or cavity creation).

Prey

Fishers are considered prey generalists because they can exploit a variety of prey species to meet their needs. The fisher diet varies by region but typically includes small and mid-sized mammals, ungulate carrion, insects, birds and fruit (Powell 1993, Lofroth et al. 2010). Mice, voles, shrews, squirrels, rabbits, snowshoe hares (*Lepus canadensis*), and porcupines (*Erethizon dorsatum*) are commonly reported among mammalian prey found in the fisher's diet (Powell 1993, Martin 1994, Weir et al. 2005, Golightly et al. 2006, Lofroth et al. 2010). The mountain beaver may also be an important prey species throughout western Washington as evidenced by fisher predation on mountain beavers on the Olympic Peninsula (Lewis et al. 2010, 2011).

3.2.2 Threatened and Endangered Wildlife

There are seven Federally-listed terrestrial wildlife species associated with forest lands within the CCAA fisher management zones in Washington that could potentially be affected by implementation of the CCAA, i.e., implementation of the CMs by participating land owners. These species are listed in Table 2 and described below.

Table 2. Federal and State status of listed terrestrial wildlife species associated with forest lands within the CCAA fisher management zones in Washington.

Common Name	Scientific Name	Federal / State Status
Canada lynx	*Lynx canadensis*	Threatened / Threatened
Columbia white-tailed deer (Columbia River DPS)	*Odocoileus virginianus leucurus*	Endangered / Endangered
Gray wolf	*Canis lupus*	Endangered / Endangered
Grizzly bear	*Ursus arctos horribilis*	Threatened / Endangered
Marbled murrelet	*Brachyramphus marmoratus*	Threatened / Threatened
Northern spotted owl	*Strix occidentalis caurina*	Threatened / Endangered
Yellow-billed cuckoo	*Coccyzus americanus*	Threatened / Candidate

Canada lynx (*Lynx canadensis*)

Canada lynx (lynx) in the contiguous U.S. were designated a DPS and listed as threatened under the ESA in 2000 because regulations governing forest management activities on Federal lands were deemed inadequate, at that time, to conserve lynx and their habitats (USFWS 2013a). The lynx has been listed as a State threatened species since 1993 (WDFW 1993). In Washington, resident lynx populations were historically found in the northeast and north-central regions and along the east slope of the Cascade Mountains (WDFW 1993). Established snow track survey routes conducted to detect the presence of lynx show that, currently, lynx occupy areas across the north central part of Washington (USFWS 2000). DNA survey results indicate the presence of lynx in the southern and central Cascades in Washington (USFWS 2000).

In Washington, lynx habitat generally consists of Engelmann spruce, subalpine fir, and lodgepole pine (seral species) stands above approximately 4,000 feet in elevation (Koehler and Brittell. 1990, Koehler et. al. 2008) with relatively flat slopes <30° (Maletzke 2004). Other vegetation that is intermixed with the above forest types and considered lynx habitat may include cool, moist Douglas-fir, grand fir, western larch, and aspen stands. Unlike other carnivores whose diets may be quite varied, lynx prey almost exclusively on snowshoe hares (*Lepus americanus*) (Koehler and Brittell. 1990), but also prey on red squirrel, grouse, and cricetids (Maletzke et al. 2008, Von Kienast 2003).

The lynx population in Washington had been roughly estimated at 225 individuals (Brittell *et al.* 1989) and 96–191 (WDFW 1993). However, these population estimates were likely high due to assumptions that habitat suitability and lynx density were uniform throughout the species' range within the State, which is not the case (WDFW 1993). Subsequent estimates of lynx in Washington put the number at fewer than 100 individuals in the State (WDFW 2001). Between 1985 and 2008, over 1,000 km^2 of suitable lynx habitat was removed by

wildfire. Subsequent analysis estimated the remaining habitat in Washington was capable of supporting only approximately 87 lynx (Koehler et al, 2008).

Columbian white-tailed deer (Odocoileus virginianus leucurus)

The Columbian white-tailed deer (CWTD) was listed as endangered under the Endangered Species Preservation Act of 1967 (32 FR 4001). The Columbia River DPS of the CWTD was identified and confirmed as endangered under a delisting rule to remove the Douglas County DPS of CWTD (68 FR 43647) in 2003 (USFWS 2015). On October 8, 2015, the CWTD was down-listed from endangered to threatened under the ESA and a special 4(d) rule concerning the species was finalized (80 FR 60850). There are currently five subpopulations of CWTD that meet objectives described in the 1983 revised Recovery Plan: Tenasillahe Island estimated at 154 deer, Puget Island estimated at 227 deer, and Westport/Wallace Island at estimated 154 deer. The Julia Butler Hansen National Wildlife Refuge (NWR) population has at least 88 deer (80 FR 60850), and there are now a minimum of 48 CWTD at Ridgefield NWR as a result of translocation efforts during 2013/14 and 2014/15. The Tenasillahe Island and Puget Island subpopulations are now considered to be located on secure habitat. The total population of the Columbia River DPS, including these three subpopulations and the Julia Butler Hansen NWR, has been maintained at over 400 deer every year since 1984, and is now exceeds 830 individuals.

The CWTD historically inhabited river valleys and uplands when available throughout western Washington and Oregon. Currently, approximately one third of the existing CWTD live on the Julia Butler Hansen NWR (including Tenasillahe Island) in Wahkiakum County. The remaining two thirds (> 500 deer) live on private lands along the lower Columbia River in Washington and Oregon, and on Puget Island in the Columbia River. Certain islands and adjacent uplands within the lower Columbia River upriver to as far as Ridgefield NWR contain most of the known range of the Columbia River DPS.

CWTD prefer plant communities that provide both forage and cover habitat. CWTD forage preferences are seasonal. In general, browse is chosen in summer, fall, and winter while forbs are most heavily utilized in spring, summer, and early fall. Grasses are not preferred at any time of the year but are eaten in proportion to their availability only in the early spring (USFWS 1983). CWTD are considered a prairie edge/woodland species with historically viable populations not confined to river valleys (Bailey 1936). They favor habitat with a diverse native understory of grasses, forbs, shrubs and deciduous trees accompanied by an open canopy of trees over ten feet tall for cover (USFWS 1983).

Gray wolf (*Canis lupus*)

The gray wolf was Federally listed as endangered throughout the lower 48 states, except Minnesota, by USFWS in 1978 (USFWS 2015a). In Washington, wolves are Federally listed in most of the State, but have been delisted where they are part of the Northern Rocky Mountain DPS. Therefore, Federally listed wolves are found in that portion of Washington west of the centerline of Highway 97 and Highway 17 north of Mesa, and that portion of Washington west of the centerline of Highway 395 south of Mesa.

Gray wolves are a highly social species and live in packs. The pack hunts, feeds, travels, rests, and rear the pups together. The size of the pack depends on rate of growth of the

pack and food availability. Wolves primarily prey on medium and large mammals, such as deer, elk, and moose. Wolves are wide-ranging predators that can exist in a wide variety of habitat types. They are habitat generalists in terms of terrain and vegetation (Boyd 1999, Oakleaf et al. 2006). Gray wolves are not wilderness dependent but their survival depends on the availability of cover and relatively secure areas that allows them to avoid humans and escape persecution (Fritts et. al. 2003, Carroll et al. 2003). An initial analysis for Washington suggests that suitable wolf habitat potentially occurs throughout the State except in the Columbia Basin and Puget Trough lowlands (USFWS 2015a).

As of 31 December 2014, the minimum known number of wolves in Washington increased by approximately 31% over the 2013 minimum estimate and was composed of at least 68 wolves in 16 known packs (Becker et al. 2015). Only three of these packs are found within the Federally-listed portion of the State. Pack sizes ranged from two to six and averaged 3.7 wolves per pack. A minimum estimate of 18 pups survived to the end of the calendar year. The estimated mean home range size of 12 packs with known territories was approximately 291 square miles (mi^2) and ranged from an estimated 100 mi^2 to 854 mi^2 (Becker et al. 2015).

Grizzly bear (*Ursus arctos horribilis*)

The grizzly bear was listed as threatened under the ESA in 1975. In 2013, the USFWS reaffirmed that the North Cascades ecosystem (NCE) grizzly bear warrants up-listing from threatened to endangered, under the ESA (USFWS 2013c). The North Cascades is a large ecosystem in north-central Washington State and south-central British Columbia. The largest area of the ecosystem, about 9,800 square miles, lies in the United States, with an additional 3,800 square miles across the international border in British Columbia. The NCE is isolated from other ecosystems in the United States and Canada with grizzly bear populations (USFWS 2015b).

Portions of two grizzly bear recovery zones exist in Washington State: the Selkirk Grizzly Bear Recovery Zone and the North Cascades Grizzly Bear Recovery Zone (North Cascades Recovery Zone), which encompasses the NCE. The NCE recovery zone includes all of the North Cascades National Park Service Complex and most of the Mount Baker-Snoqualmie, Wenatchee, and Okanogan National Forests. The recovery zone is composed of about 85 percent Federal lands, 5 percent state lands, and 10 percent private lands (FWS 1997). Historical records indicate that grizzly bears once occurred throughout the recovery zone (Bjorkland 1980; Sullivan 1983; Almack et al. 1993). Despite the historical presence of grizzly bears in the NCE, and the availability of sufficient habitat to recover and maintain a viable population, the current population is estimated to be fewer than 20 individuals within the United States (US) portion of this recovery zone. Only one confirmed grizzly bear sighting has taken place within the US portion of the NCE during the past decade, in October of 2010 (USFWS 2011).

Grizzly bears are rare in Washington, but there is a small population in the Selkirk Mountains (Upper Columbia Upstream of Grand Coulee Dam Region) of northeast Washington. Grizzly bears have also been documented in the Okanogan Highlands and in the North Cascades (North Puget and Upper Columbia Downstream of Grand Coulee Dam Regions). Contiguous, relatively undisturbed mountainous habitat with a high level of topographic and vegetative diversity is characteristic of most areas where the species exists (USFWS 1993). Direct and

indirect human-caused mortality and habitat loss have caused the decline in bear numbers (USFWS 1993).

Grizzly bears historically occurred in a wide variety of habitat types, suggesting a wide range of habitat tolerances. An abundant and varied food supply and large tracts of land providing relative isolation and freedom from human encroachment are important components of grizzly bear habitat (USFWS 1993).

Marbled murrelet (*Brachyramphus marmoratus marmoratus*)

The marbled murrelet (murrelet) was listed as threatened under the ESA in 1992 (USFWS 1992). One of the significant threats to the bird in Washington was the loss and alteration of nesting habitat (older forests) primarily as a result of timber harvesting (USFWS 1997).

Marbled murrelets nest inland in forests that are generally characterized by large trees with large branches or deformities for use as nest platforms. Murrelets nest in stands varying in size from several acres to thousands of acres. However, larger, unfragmented stands of old growth appear to provide the highest quality habitat (USFWS 2015c). In Washington, the murrelet is found in all nearshore marine areas with the greatest concentrations in northern Puget Sound (Table 3-24). Murrelets have been detected as far as 70 miles inland (Evans Mack et al. 2003). The general ecology of the murrelet is well described in the following documents: Ecology and Conservation of the Marbled Murrelet (Ralph et al. 1995); Recovery Plan for the Marbled Murrelet (USFWS 1997); Evaluation Report for the 5-Year Status Review of the Marbled Murrelets in Washington, Oregon, and California (McShane et al. 2004); and a report to the Washington Department of Natural Resources (WDNR) entitled: Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation Strategy (Raphael et al. 2008).

Northern spotted owl (*Strix occidentalis caurina*)

The northern spotted owl (spotted owl) was listed as threatened under the ESA in 1990 because of loss of suitable habitat, primarily the mature and old growth forests that it needs for survival (USFWS 1990). The USFWS revised designated spotted owl critical habitat primarily on Federal lands in 2012 (USFWS 2012) and anticipated that the major burden of conservation and recovery of northern spotted owl populations would be carried by these lands.

The spotted owl prefers structurally complex mature and old-growth coniferous forests with moderate to high canopy closure, a multi-layered, multi-species canopy with large overstory trees, a high incidence of snags or large trees with deformities, large accumulations of fallen trees and other debris, and a well-developed shrub layer (Thomas et al. 1990). The spotted owl inhabits structurally complex forests from southwest British Columbia through the Cascade Mountains and coastal ranges in Washington, Oregon, and California, as far south as Marin County (USFWS 2011). The spotted owl's range in Washington encompasses the coastal mountains (including the Olympics and Willapa Hills) and Cascade Range (both western and eastern Washington). Detailed information about the status, threats, life history and conservation needs of the spotted owl are presented in the USFWS Revised Recovery Plan for the Northern Spotted Owl (USFWS 2011), and the final revised rule designating critical habitat (USFWS 2012 [77FR 71876]).

Yellow-billed cuckoo (*Coccyzus americanus*)

The Western U.S. DPS of the yellow-billed cuckoo was listed as threatened in 2014 (USFWS 2014c). Historically, the yellow-billed cuckoo was locally common in Washington, occurring on both sides of the Cascade Mountains and throughout the Puget lowlands. The last confirmed breeding records are from the 1930's. Recently, incidental sightings have occurred throughout the State and the possibility of a vestigial breeding population exists (Wahl et al. 2005, p. 210). There have been a few exploratory surveys done (in Okanogan, Yakima, Cowlitz, and Wahkiakum counties) but no comprehensive, protocol surveys have been conducted in the State. Available data suggest that if yellow-billed cuckoos still breed in Washington, their numbers are extremely low, with pairs numbering in the single digits (FR 78, No. 192, p. 61635). While breeding has not been confirmed, recent observations indicate that western yellow-billed cuckoos occasionally occur in Washington and the possibility of breeding in the State cannot be ruled out (FR 79, No. 192 p, 60014).

The western yellow-billed cuckoo nests almost exclusively in low to moderate elevation riparian woodlands that are 50 acres or larger (FR 78, No. 192, p. 61633). At a landscape level, the amount of cottonwood/willow-dominated vegetation and width of riparian habitat influences distribution and abundance (Gaines and Laymon 1984, p. 76 in FR 78, No. 192, p. 61633). The species may occur on both sides of the Cascade Mountains in suitable nesting habitat, as well as under a wide array of migratory and foraging habitat conditions. Based on the limited available data there are no clear patterns of occurrence. Although breeding for the western yellow-billed cuckoo has not been recently confirmed in Oregon, Washington, and British Columbia, moist riparian areas are within the historic breeding range of the species, and recent observations indicate that western yellow-billed cuckoos occasionally occur in these areas and, thus, the possibility of breeding in Oregon, Washington, and British Columbia cannot be ruled out at this time (USFWS 2014d).

3.2.3 Other Wildlife Species of Concern

Although the focus of the CCAA is the fisher, forest lands within the CCAA fisher management zones in Washington provide a range of habitat conditions for nineteen other vertebrate species of concern that could be affected if the CCAA is approved and implemented. These species are either State Sensitive or State Candidate species. Habitat characteristics for these species are related to a variety of factors including, but not limited to, forest age class; amount, size and type of streams; annual moisture volume; and aspect. The vertebrate species of concern associated with western Washington forests within the CCAA fisher management zones that could be affected by implementation of the CCAA are listed in Table 3. These species are discussed below.

Amphibians

Most of the amphibians identified as potentially occurring within the CCAA fisher management zones are stream-associated species. The Cascade torrent salamander (*Rhyacotriton cascadae*), Dunn's salamander (*Plethodon dunni*), Rocky Mountain tailed frog (*Ascaphus montanus*), and Van Dyke's salamander (*Plethodon vandykei*) are typically found in riparian habitat or cool, moist microsites within other habitats, e.g., wet rocky substrates, splash zones of streams, seeps, and along lakeshores, and are often found in or near headwater streams (Leonard et al. 1993). These four amphibian species were addressed as covered species in the Washington State Forest Practices Habitat Conservation Plan (WDNR

Table 3. Terrestrial wildlife species of concern associated with forest lands within the CCAA fisher management zones in Washington.

Common Name	Scientific Name	Federal / State Status
Bald eagle	*Haliaeetus leucocephalus*	Concern / Sensitive
Cascade red fox	*Vulpes vulpes cascadensis*	None / Candidate
Cascade torrent salamander	*Rhyacotriton cascadae*	None / Candidate
Common sharp-tailed snake	*Contia tenuis*	None / Candidate
Dunn's salamander	*Plethodon dunni*	None / Candidate
Flammulated owl	*Otus flammeolus*	None / Candidate
Golden eagle	*Aquila chrysaetos*	None / Candidate
Keen's myotis	*Myotis keenii*	None / Candidate
Larch Mountain salamander	*Plethodon larselli*	None / Sensitive
Lewis' woodpecker	*Melanerpes lewis*	None / Candidate
North American wolverine	*Gulo gulo luscus*	None/ Candidate
Northern goshawk	*Accipiter gentilis*	None / Candidate
Pileated woodpecker	*Dryocopus pileatus*	None / Candidate
Rocky Mountain Tailed Frog	*Ascaphus montanus*	None / Candidate
Townsend's big-eared bat	*Corynorhinus townsendii*	None / Candidate
Van Dyke's salamander	*Plethodon vandykei*	None / Candidate
Vaux's swift	*Chaetura vauxi*	None / Candidate
White-headed woodpecker	*Picoides albolarvatus*	None / Candidate

2005), and the effects of State forest practices on these species were analyzed in the Final Environmental Impact Statement (National Marine Fisheries Service and USFWS 2006).

The larch mountain salamander (*Plethodon larselli*) is one of the rarest species of salamanders in the Pacific Northwest (Leonard et al. 1993). In Washington, it is known to occur in Lewis, Clark, Skamania, and Klickitat Counties (WDFW 2015c). Most populations are found on steep talus slopes of the Columbian River Gorge, and this salamander species is considered truly terrestrial as it is almost never found associated with free water (Leonard et al. 1993).

Reptiles

The common sharp-tailed snake (*Contia tenuis*) is the only reptile in Washington that could occur on non-Federal forest lands within the CCAA fisher management zones. However, in Washington, the species has a spotty distribution with almost all records from the east slope of the Cascades (Nussbaum et al. 1983). These snakes are known from forest openings dominated by Garry oak (*Quercus garryana*), particularly with rock accumulations, and from

riparian deciduous woodland with accumulations of decaying down woody logs within ponderosa pine, oak, or shrub-steppe (Hallock 2009).

Birds

Bald eagles (*Haliaeetus leucocephalus*) are a common breeding bird near low elevation water bodies in much of Washington (Seavey 2005). The U.S. Fish and Wildlife Service initially proposed Federal delisting the bald eagle in 1999, but this was delayed while protections under Federal laws were clarified and a long-term monitoring plan was developed (USFWS 2007). The species was delisted under the ESA in 2007 and was down-listed to State sensitive in Washington in 2008. Bald eagles are affected by shoreline development, fisheries, and forest management, and there is a continued need to conserve nesting habitat and foraging opportunities. Bald eagles can be found in all the forested parts of Washington throughout the year, but they are much more abundant in the cooler, maritime region west of the Cascade Mountains than in the drier eastern half of the State. Bald eagle nests are most numerous near marine shorelines, but nests are also found on many of the lakes, reservoirs, and rivers of Washington.

The golden eagle (*Aquila chrysaetos*) breeds at higher densities in mountainous and open areas dominated by shrub-steppe communities, but also nests at lower densities in conifer forest where open space occurs (e.g., burns, clearcuts). Most nests in mountainous areas occur on large cliffs, but tree nests are used in flat terrain at lower elevations in more open and semi-open landscapes and in areas dominated by conifer forest (Kochert et al. 2002, Watson 2010). Washington breeding birds are non-migratory. Golden eagles forage in grasslands and shrublands and prey primarily on mammals, such as jackrabbits, cottontails, ground squirrels, and marmots, and secondarily on birds, such as ring-necked pheasants and chukars (Knight and Erickson 1978, Kochert et al. 2002). However, in Washington, a number of prey species of golden eagles have declined, including jackrabbits, Washington and Townsend's ground squirrels, and yellow-bellied marmots. Inadequate prey availability can affect territory occupancy and nesting success of golden eagles (Kochert et al. 2002).

The northern goshawk (*Accipiter gentilis*) is a State candidate for listing as a threatened species (WDW 2015). Northern goshawks are generally associated with mature coniferous forests but will use mixed coniferous and deciduous forests as well; they have been found to occur on managed forests (Bosakowski et al. 1999). However, Austin (1994) demonstrated through statistical analysis that goshawks prefer closed-canopy mature and old-growth forests. In the Pacific Northwest, goshawks are associated with late-successional coniferous forests and are most abundant in old growth (Thomas et al. 1993). Habitat loss resulting from intensive timber harvest is believed to be the principal reason for its decline. The species occurs throughout Washington, primarily in both wet and dry conifer forest habitats (Wahl and Paulson 1991).

The flammulated owl (*Otus flammeolus*) inhabits dry montane forests of eastern Washington. Their breeding range extends from southern British Columbia to Mexico. Flammulated owls are largely insectivorous, and migrate south when cold temperatures make insects scarce, wintering from central Mexico to El Salvador (McCallum 1994). Flammulated owls are a late spring migrant, with most arriving in Washington in late May (Buchanan 2005). In Washington, flammulated owls are an uncommon to fairly common summer resident in the

ponderosa pine (*Pinus ponderosa*) zone of the Cascades, northeastern Washington, and Blue Mountains (Buchanan 2005).

Lewis' woodpecker (*Melanerpes lewis*) is a candidate species for State listing (WDFW 2013). This species has shown a recent decline in the Western states, possibly due to competition for snags and nest cavities and loss of their historic riparian and ponderosa pine habitat (Saab and Vierling 2001, Sauer et al. 2001). In Washington, the Lewis' woodpecker is only locally abundant as a breeding bird, and its range has contracted within the last half of this century to include only habitats east of the Cascade crest. Currently in Washington, Lewis' woodpeckers only breed east of the Cascades from the Columbia Gorge north, and east into the Okanogan highlands and northeast Washington. Their present breeding range also includes the Blue Mountains (Tobalske 1997).

The pileated woodpecker (*Dryocopus pileatus*) is a candidate species for State listing (WDFW 2013). The pileated woodpecker occurs throughout Washington in mature and old-growth forests with large snags and fallen trees. Pileated woodpeckers inhabit mature and old-growth forests, and second-growth forests with large snags and fallen trees (Bull and Jackson 1995, Aubry and Raley 1996). Large snags and large decaying live trees in older forests are used by pileated woodpeckers for nesting and roosting throughout their range (Mellen et al. 1992, Bull and Jackson 1995, Aubry and Raley 2002b). In western Oregon and western Washington, they may use younger forests (<40 years old) as foraging habitat (Mellen et al. 1992, Aubry and Raley 1996).

The white-headed woodpecker (*Picoides albolarvatus*) is a candidate species for State listing (WDFW 2013). White-headed woodpeckers are not abundant anywhere in their range, and abundance decreases north of California. They are uncommon to rare in their range in Washington, Oregon, and Idaho (Frederick and Moore 1991, Marshall 1997). In Washington, they are found in open-canopied ponderosa pine forests on the east slopes of the Cascade Range as well as in the Okanogan Highlands and Blue Mountains. They often use large well-decayed snags for nesting and roosting, and they forage primarily on the bark of large ponderosa pines (Thomas et al. 1979, Raphael and White 1984, Garrett et al. 1996). However, Kozma (2009) described 36 nest sites in managed forests with smaller trees (nest tree mean of ~36.6 cm dbh).

Mammals

Keen's myotis (*Myotis keenii*) are largely restricted to moist coastal forests of lower elevations dominated by western hemlock, Sitka spruce, and other conifers, although a few records come from urban sites (Firman et al. 1993, Burles and Nagorsen 2003, Boland et al. 2009a). Keen's myotis roost in caves, rock crevices, large trees, snags, and buildings (Burles and Nagorsen 2003, Boland et al. 2009a). Hibernacula are known to include mid-elevation caves. Keen's myotis has one of the smallest distributions of any North American bat, occurring in coastal areas from southeast Alaska to the Olympic Peninsula, Puget Sound, and Mt. Rainier in Washington (Burles and Nagorsen 2003, Boland et al. 2009a). They have been reported in five counties in Washington; San Juan, Clallam, Jefferson, Mason and Pierce Counties. No roosts of this species are currently known in Washington. The last confirmed detection in the State was in 2008.

Townsend's big eared bats (*Corynorhinus townsendii*) occupy a broad range of arid and moist habitats. Five subspecies are recognized, with only *C. t. townsendii* present in Washington. In Washington, this species is found in lowland conifer-hardwood forest, montane conifer forest, ponderosa pine forest and woodland, shrub-steppe, riparian habitats, and open fields (Johnson and Cassidy 1997, Woodruff and Ferguson 2005). Caves, lava tubes, mines, old buildings, bridges and concrete bunkers are commonly used as day roosts in Washington (Senger and Crawford 1984, Woodruff and Ferguson 2005). Hibernacula occur mainly in caves, mines, lava tubes, and occasionally in buildings (Pierson et al. 1999, Gruver and Keinath 2006). Documented records exist for most counties in Washington, but are lacking for the southern Columbia Basin and Blue Mountains (Hayes and Wiles 2013). Within the species' range, distribution is often linked to the presence of suitable sites for maternity roosts and hibernacula located near foraging habitat (Gruver and Keinath 2006).

The Cascade red fox (*Vulpes vulpes cascadensis*) is a rare, isolated Washington endemic subspecies. Recent genetic analyses indicate that the Cascade red fox is distinct from the montane fox in Oregon and only occurs in Washington (Sacks et al. 2010). The Cascade red fox and other montane red fox populations appear to be specialized for occupying subalpine and alpine habitats, and may possess physiological adaptations that other populations lack (Aubry 1984, Swanson et al. 2005). This fox species is known to occur in alpine and subalpine habitats on Mt. Rainier and Mt. Adams, and there is some evidence of their presence in the central Cascades. The population size at Mt. Rainier and Mt. Adams is unknown, and the fox's status elsewhere in its range is unknown. The volcanoes of the Cascade Range seem to provide islands of habitat for small populations of Cascade red fox that may be isolated. The Cascade red fox status in the North Cascades is uncertain. One was caught in a lynx trap in the North Cascades in the 1980s, but none have been caught during recent trapping for lynx or wolverines there. There were also no detections of Cascade red foxes in the North Cascades during forest carnivore surveys (camera sets, hair snares, etc.) conducted in the 1990s (WDFW 2013).

The North American wolverine (*Gulo gulo luscus*) occupies arctic, alpine and subalpine habitats in the northern portions of the northern hemisphere (Copeland et al. 2010). In 2010, the U.S. Fish and Wildlife Service concluded that listing the wolverine as a threatened or endangered species was warranted, based largely on the threat to the species' continued existence in much of the southern portion of its range due to climate change (USFWS 2010). In Washington, the wolverine historically occurred in the alpine and subalpine habitats of the Cascades, Blue Mountains, and Rocky Mountains. Ongoing research projects and recent carnivore surveys have detected wolverines in or near each of these areas of Washington. Wolverines did not historically occur on the Olympic Peninsula or in southwest Washington. In 2009 and 2010, photographs of wolverines confirmed the continued existence of wolverines in the southern Cascades.

3.3 Recreation

Recreation is not a primary land use by the public in most of the covered area, i.e., non-Federal forested lands within the historic range of the fisher in Washington. Private ownerships comprise approximately 5.4 million acres within the CCAA management zones in western Washington which are typically gated in an effort to restrict motorized public access to reduce theft, vandalism, dumping, and other problems (WDFW 2015a). Tribal ownerships comprise ¾ million acres and these lands are generally closed to the public. State lands

comprise about 6.3 million acres within the CCAA management zones in western Washington. About 25% of the recreational use in the State is on State lands (IAC 2002). However, State lands designated principally as recreational lands represent about 7% (648,580 acres) of the total recreational lands in the State. These lands are typically located farther away from urban centers and are used primarily for camping, hiking, hunting, and fishing.

Recreation activities conducted in forest lands of western Washington that may also be habitat for the fisher include hunting for forest grouse and big game, e.g., elk and deer, as well as off-road vehicle use, hiking, camping, fishing, wildlife viewing, and trapping. Recreation activities conducted in forest lands are seasonal; camping, fishing and wildlife viewing occurring for the most part in the summer, while hunting and trapping activities occur largely in the fall and early winter. Of these recreational activities, only furbearer trapping has the potential to be affected by restrictions on this activity in areas where fisher den site protections would be in place. Furbearer trapping may occur throughout the State; however, a trapper may not place traps on private property without permission of the owner where the land is improved and apparently used, or where the land is fenced or enclosed in a manner designed to exclude intruders or to indicate a property boundary line, or where notice is given by posting in a conspicuous manner (WDFW 2015d).

3.4 Transportation

Motor vehicle impacts with fishers on major highways and paved roads have been documented to result in fisher mortalities. Transportation that could be affected by the proposed action, however, would be limited to roadways near potential fisher den sites. There are numerous networks of graveled forest roads on the non-Federal lands throughout western Washington. These are primarily used by foresters/loggers and the general public. Given the locations and terrains of most of these roads, the use is likely to be fairly low and with minimal traffic. These roadways are likely to have lower speed limits compared to the larger roads where past fisher road kills have been documented.

3.5 Land Use and Ownership

State, tribal, or privately owned lands are eligible for enrollment in the CCAA. These lands are spread across multiple counties throughout the Cascades, the Olympic Peninsula, and Southwest Washington. Of the 12,475,600 acres within the CCAA management zones in western Washington, 43 percent are private lands, 51 percent are publicly owned, and six percent are tribal lands. About 32 percent of these lands are located in the Southern Cascades, 22 percent in the Northern Cascades, 30 percent in the Olympic Peninsula, and 15 percent in Southwest Washington (Table 1).

The vast majority of these lands are forest lands, with forest-related activities the primary use of these lands. These activities include logging, hunting, and other recreation. Activities that are covered by the proposed CCAA and the associated Permit include land management activities commonly practiced on forest lands, as defined within the Washington State Forest Practices Act as of February 1, 2015. A number of habitat conservation plans (HCPs) have also been developed for non-Federal lands within the CCAA management zones that include fisher as a covered species and currently support or could support reintroduced fisher populations.

3.6 Socioeconomics

Lands eligible to be enrolled in the CCAA are sparsely populated, and while there are small communities near some of these, they are located away from larger towns, cities or major economic centers. The primary economic activity on these lands and surrounding communities is timber harvest. In addition to timber harvest, some grazing also occurs on these lands, in cases where landowners allow grazing activities or provide grazing leases.

Forestry is a long-term business, taking an average of 40 to 60 years for trees to mature to harvest age, and be harvested and replanted (the forest management cycle). Planning is an essential part of maintaining a sustainable forestry operation and business. Planning for and designing a timber harvest can be a sophisticated, complex undertaking, and landowners and contractors need to comply with all Federal, state, and local laws. Harvest units are often planned several years in advance and take into consideration the condition of the site, new information about protection of the environment, and market conditions.

Timber harvest involves not only the landowners, but contractors who carry out the harvest in some cases. In most harvest operations, workers are hired from the local or surrounding communities, where timber harvest jobs and revenue can be the primary economic drivers. In addition to direct timber harvest, jobs in other forest industry sectors are also affected by the supply of timber. In the State of Washington, timber supply is primarily consumed by domestic sawmills producing lumber and other building products. Other consumers include veneer and plywood mills, poles and pilings, shake and shingle mills, chipping mills producing chips for pulp mills, and pulp and paper mills (which also consume wood residues from sawmills as well as recycled paper). Some of the timber supply is exported as logs.

The forest sector of Washington's economy has undergone major restructuring in the past twenty or so years because of changing Federal land management policies, the transition to harvesting second-growth timber, changing regulatory standards, changes in international markets, and loss of forest land to non-forest uses. The result has been a major decline in harvest levels and log exports, closures of small rural sawmills, and reinvestment and growth in large modern mills. Despite these changes, the forest sector has begun to grow again, and remains the dominant employer in many rural communities. Mirroring the decline in timber harvest in Washington State, the number of sawmill, veneer and plywood, and pulp and paper mills has also declined.

Past logging, natural disturbances and changing management approaches have produced wide variation in the average age of today's forests. In western Washington, about 75 percent of forest lands are younger than 100 years old, indicating that in the past 100 years there've been major disturbances, such as fires, windstorms, or timber harvests. Therefore, about 25 percent are old growth forests (older than 100 years), including about 10 percent greater than 200 years old. Forest ages vary dramatically by ownership and geographic location. In western Washington, a large majority of forests older than 100 years are on national forests. On national forest lands, almost 50 percent are older than 100 years. The balance is dramatically reversed on all other ownerships, with about 99 percent of all non-Federal lands less than 100 years of age in western Washington. This shows that the opportunities for old growth protection exist overwhelmingly on national forests, and that other landowners essentially manage second and third growth forests.

4. ENVIRONMENTAL CONSEQUENCES

4.1 Noise

4.1.1 No Action Alternative

Under the No Action Alternative, no Permit would be issued and voluntary participation by non-Federal landowners in fisher reintroduction efforts would likely be minimal. There would be no change to the amount and intensity of noise occurring in the forested environment. Timber harvest and related operations, hunting, fishing, trapping and other recreational activities would likely continue as usual on private, state and/or Tribal lands.

4.1.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, all the noise-generating activities are likely similar to those cited above for the No Action Alternative. However, under the Proposed Action Alternative, biologists may enter forested stands on enrolled properties to conduct den site monitoring activities using radio-telemetry or by incidental observation methods. The biologists may also evaluate fisher presence using remote cameras, hair-snaring devices, and bait and scent lures. These activities are not expected to create noise levels greater than activities under the No Action Alternative. Thus, noise effects of the Proposed Action Alternative are expected to be insignificant when compared to the No Action Alternative.

4.2 Wildlife Species

Under the No Action Alternative, it is assumed that ongoing timber harvest operations would continue on non-Federal ownerships. That is, species listed under the ESA would continue to be protected under Section 9 take prohibitions of the ESA, as well as under existing forest land HCPs, and timber harvest operations on non-Federal lands would continue according to current forest practices rules.

4.2.1 Fisher

4.2.1.1 No Action Alternative

Under the No Action Alternative, no Permit would be issued and voluntary participation by non-Federal landowners in implementing CMs related to fisher reintroduction efforts would likely be minimal, if any. WDFW would continue to monitor the reintroduced Olympic Peninsula fisher population on Federal lands and on non-Federal lands where access is granted to biologists. Reintroduction efforts on Federal lands in the Cascade Mountains would continue as planned (Lewis 2013). Fishers that disperse to non-Federal lands to establish den sites may not be discovered prior to timber harvest and, thus, could be destroyed during timber harvest operations. If a den site is discovered in an area of planned timber harvest, there would be no obligation or incentive for non-Federal landowners to protect more than the single tree or snag containing a known den site from timber harvest. That is, known occupied den sites would likely receive few protective restrictions on forest management activities that could disturb or harm denning fishers.

Under the No Action Alternative, there would be no formal Agreement for landowners to allow access to their lands to monitor den sites by WDFW or tribal biologists, and no obligation for landowners to report dead or sick fishers. Incidentally captured fishers would still be reported as required by State trapping regulations.. Lack of access to monitor dens sites on non-Federal lands could inhibit recovery efforts for fisher in Washington by reducing

the information available for making decisions about supplementary reintroductions and conclusions about the State and Federal status of fishers.

Under the No Action Alternative, denning fishers would not receive any additional protection from recreational trapping. However, the current WDFW furbearer trapping season runs November 1 to March 31, which is almost entirely outside of likely fisher denning activities. Therefore fisher would still receive protection (but not complete protection) under the No Action Alternative from being incidentally trapped while denning in known locations.

Under the No Action Alternative, denning fishers would also not receive any protection from the potential impacts of nuisance animal control activities. In cases where WDFW or a tribe has granted a landowner a permit to trap problem animals, these nuisance animal trapping and control activities could disturb or harm fishers that may be denning in the area. Under the No Action Alternative, there are no protections in place that restrict these trapping activities from occurring near known occupied fisher den sites.

Finally, under the No Action Alternative, there is no requirement for landowners to cover large water troughs or containers which would help to prevent potential mortality of fishers from drowning, starvation or dehydration. And, there would likely be very little cooperation for landowners to allow reintroduction of fishers on their lands because, if there land became occupied by fishers, it could result in ESA prohibitions on certain forest management activities should the fisher become listed in the future.

4.2.1.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, the proposed Permit would be issued, and enrolled landowners would contribute to and support the fisher reintroduction program. Enrolled landowners would implement the CMs identified in the Agreement, facilitating the protection of known fisher den sites on non-Federal lands and participating in the monitoring associated with the reintroduction project. Though non-Federal lands largely provide less ideal denning conditions for fishers, in places where a fisher chooses to den on non-Federal enrolled land, and that den has been located, CMs 2 and 3 would be implemented.

Implementation of CM 2 would result in temporary restrictions on harvest of part of a forest stand where an occupied fisher den site has been located. As a result, a portion of a scheduled timber harvest within 0.25 mile of a den site, i.e., approximately 128 acres, will be delayed until the landowner is notified by WDFW or, if applicable tribal biologists, that the site is no longer occupied, e.g., the female relocates her kits to a new den site. Landowners may, subsequently, elect to not harvest the remaining trees for logistical and/or economic reasons, but this is not a requirement of the CCAA or CI. CM 2 is also likely to benefit denning fishers by reducing traffic on forest roads in the vicinity of known dens. Traffic will be rerouted, where possible, and speeds will be reduced, thereby reducing disturbance and the potential for road mortality.

Implementation of CM 3 would require a cessation of trapping activities within 2.5 miles of an occupied den site from March 15 to September 30. Benefits to fisher in comparison to the No Action Alternative are expected to be minor because the current WDFW fur-bearer trapping season is from November 1 to March 31. Implementation of CM 3 also includes a prohibition of nuisance animal trapping within 2.5 miles of known occupied dens. In cases

where WDFW or a tribe has granted the enrolled landowner a permit to trap problem (nuisance) animals, trapping and control activities within 2.5 miles of the den site will cease for the prohibited period (March 15 to September 30) or until the landowner is informed that the denning female has moved the den site. We expect that implementation of CM 3 would reduce the chance that trapping activities, whether recreational or for nuisance animal control, will harm fishers occupying known den sites on enrolled lands.

Implementation of CM 5 would require landowners to cover large water troughs or containers, which would help to prevent potential mortality of fishers from drowning, starvation or dehydration. Fishers are likely to benefit from this CM because getting stuck in troughs and containers is a documented source of fisher mortality in many parts of their range.

As a result of the certainty and assurances provided by the CI, non-Federal landowners would have the incentive to participate in the Agreement, thus, increasing the chances of success of reintroducing fisher to its historic range in Washington. The Proposed Action Alternative could result in more landowners participating in fisher reintroduction than under the No Action Alternative. Monitoring efforts to determine fisher dispersal activity, den site locations, and the overall success of the reintroduction program would occur on non-Federal lands (CM 1), which we believe will help facilitate the potential success of the program. Mandatory reporting of dead, sick, or captured fishers (CM 4) would also facilitate the monitoring required to determine the success of the reintroduction program.

In summary, the Proposed Action Alternative will protect known denning fishers by implementing a buffer from forestry activities, reducing the potential impacts from traffic, and preventing nuisance animal control activities near known den locations. The Proposed Action alternative may also assist fisher recovery in Washington State by allowing monitoring of reintroduced fisher on enrolled lands. Thus, implementation of the CM activities by multiple landowners (the Proposed Action Alternative) across the landscape where fishers will or have been reintroduced, will benefit fishers more than under the No Action Alternative.

4.2.2 Threatened and Endangered Wildlife

4.2.2.1 No Action Alternative

Under the No Action Alternative, forest management activities would continue on non-Federal ownerships according to current Forest Practices Rules. Fisher reintroduction efforts on Federal lands would continue with likely limited participation by adjacent landowners. Impacts to Federally listed species from implementing Forest Practices Rules were analyzed in the Environmental Impact Statement (EIS) prepared for the WDNR Forest Practices HCP (NMFS and USFWS 2006). Thus, no further analyses of effects to threatened and endangered species under the No Action Alternative are necessary.

4.2.2.2 Proposed Action Alternative: Issuance of the Requested Permit

For all listed terrestrial wildlife species that may occur on non-Federal forest lands within the CCAA fisher management zones in Washington, it is expected that there would be only minor changes from the No Action Alternative. Those changes would primarily result from the implementation of CMs on enrolled properties, particularly CMs 2 and 3, which may affect timber harvest, road activity, trapping of furbearers, and nuisance animal control activities

for days, weeks, or months in vicinity of a known fisher den site. Forest practices would be affected only in that harvest unit and associated activities would be delayed, possibly for years but most likely for weeks or months. At the landscape level, managed forest stands are not considered suitable habitat for some species, such as lynx, CWTD and grizzly, so temporary retention of a small portion of managed forest will make little difference to habitat availability for these species. For other listed terrestrial species that may utilize non-Federal forests, the temporary retention of small portions of habitat, i.e., 128 acre patches, for a few days, weeks, or months will contribute to the quality of their habitat base, functioning as hiding cover, as well as potentially nesting, denning and foraging habitat for as long as the delay occurs. While habitat protections would most often be short-term due to the movement of fisher den sites, the protection of den sites may rarely result in retention of this small patch of habitat for up to five months or until the next rotation (35-50 years), if left on the landscape. The overall effect of implementing CMs 2 and 3 is expected to be neutral or slightly beneficial to all listed species described above, compared to the No Action Alternative.

Implementation of CM 1, monitoring activities, is expected to not significantly impact the listed species described above. The monitoring activities analyzed in this EA are identical to a component of the proposed action analyzed in a previous letter of concurrence for fisher reintroduction on Federal lands (USFWS 2015d). Therefore, we have already evaluated the effect of monitoring activities on listed species (USFWS 2015d, pp. 5-12), and similarly conclude in this EA that implementation of CM 1 would have insignificant effects on listed species.

4.2.3 Other Wildlife Species of Concern

4.2.3.1 No Action Alternative

Under the No Action Alternative, forest management activities would continue on non-Federal ownerships according to current Forest Practices Rules. Fisher reintroduction efforts on Federal lands would continue with little participation by landowners. Impacts of implementing Forest Practices Rules were analyzed in the EIS prepared for the WDNR Forest Practices HCP (NMFS and USFWS 2006). Thus, no further analyses of effects to other wildlife species of concern under the No Action Alternative are necessary.

4.2.3.1 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, for the other wildlife species of concern that may occur on or near non-Federal forest lands within the CCAA fisher management zones in Washington, there will be essentially no change from the No Action Alternative. Timber harvest practices, with minor harvest revisions, will continue as described for the No Action Alternative. Fisher monitoring activities will be similar to other forest stand management and timber harvest activities; thus, there will be no change to disturbance levels to listed terrestrial wildlife species. At the landscape level, managed forest stands are not likely inhabited by some species, such as Cascade red fox and the wolverine, so retention of a small portion of managed forest will make little difference to habitat availability for these species. For the other wildlife species that may utilize non-Federal forest stands, the retention of small portions of habitat, i.e., 128 acres patches, for a few days, weeks, or months will contribute to the quality of their habitat base, functioning as hiding cover, as well as nesting, denning and foraging habitat through their breeding season. This could be a significant benefit depending on the number and location of enrolled landowners. While

habitat protections would most often be short-term due to the movement of fisher den sites, the protection of den sites may rarely result in retention of this small patch of habitat for up to five months or until the next rotation (35-50 years), if left on the landscape. This would be considered a benefit to these species when compared to the No Action Alternative.

4.3 Recreation

4.3.1 No Action Alternative

Under the No Action Alternative, no Permit would be issued and voluntary participation by non-Federal landowners in fisher reintroduction efforts would likely be minimal. Recreational activities described above are expected to continue as they have in the recent past where allowed on private and state lands. Big game hunting and trapping will continue to be regulated by WDFW with specific areas designated within GMUs as open or closed to these activities (WDFW 2015d).

4.3.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, nearly all types of recreational activities that occur on forest lands in western Washington are expected to be no different from the No Action Alternative. However, trapping activity may be affected. Implementation of CM3 includes a prohibition of furbearer trapping within 2.5 miles of known occupied dens. Depending on where the den site is located, this could impact a trapper's ability to conduct this activity in areas typically trapped on an annual basis. However, the current WDFW furbearer trapping season dates are from November 1 through March 31 of the following year (WDFW 2015e). This is almost entirely outside the den site protection period identified in the CMs (WDFW 2015a), therefore we expect only minor effects on this activity.

4.4 Transportation

4.4.1 No Action Alternative

Under the No Action Alternative, CCAA would not be implemented. There will be no reductions in speed limits on roads near occupied fisher dens, and traffic will not be detoured away from occupied dens. Thus, traffic on roads near occupied den sites could disturb fishers and there is small chance that fisher mortality could occur on forest roads.

4.4.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, nearly all types of transportation activities that occur on forest lands in the CCAA management zones are expected to occur just as they would under the No Action Alternative. However, the Proposed Action Alternative, there may be some minor and temporary road use restrictions imposed on unpaved, graveled forest roads within 0.25 miles of an active den site. These restrictions could include detouring traffic to alternate routes away from occupied dens, where possible, and lowering the speed limits where needed. These restrictions could potentially affect the mobility of loggers using these for getting to a logging site or moving timber, and also of the general public using these roads for recreation purposes. However, most of these roads are not heavily used, and have lower speed limits, and the restrictions would be temporary. Therefore, although the effects of restrictions on these road uses would be different from the No Action Alternative, they are not likely to be significant to transportation in the analysis area as a whole.

4.5 Land Use and Ownership

4.5.1 No Action Alternative

Under the No Action Alternative, while non-Federal landowners would likely continue within other programs to implement conservation for fisher and other species, the CCAA would not be implemented. Non-Federal landowners would not be provided ESA incidental take authorization for the fisher in advance of a listing of the species. Therefore, some landowners would continue to be concerned about the potential regulatory implications of having fisher on their land. This concern may inhibit non-Federal landowner cooperation in conservation of the species. However, no changes in land ownership or land use resulting from the No Action Alternative are anticipated.

4.5.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, participating non-Federal landowners may delay timber harvest or may choose not to harvest in areas where fisher denning activities are confirmed. Participating landowners agree to allow access to WDFW and tribal biologists on their lands as needed for monitoring purposes. Therefore, while no changes in land ownership from one type to another as a result of the Proposed Action Alternative are anticipated, some minimal changes in land use may occur for participating non-Federal landowners, compared to the No Action Alternative.

4.6 Socioeconomics

4.6.1 No Action Alternative

Under the No Action Alternative, while non-Federal landowners would likely continue within other programs to implement conservation for fisher and other species, the CCAA would not be implemented. Non-Federal landowners would not be provided ESA incidental take authorization for the fisher in advance of a listing of the species. Timber harvest operations would continue as planned providing jobs and revenue consistent with past practices and operations. Thus, little or no long-term changes in socioeconomic impacts are anticipated under the No Action Alternative.

4.6.2 Proposed Action Alternative: Issuance of the Requested Permit

Under the Proposed Action Alternative, participating Federal landowners may delay timber harvest or may choose not to harvest in areas where fisher denning activities are confirmed, i.e. 0.25 miles from a den site or approximately 128 acres.

Harvest units are often planned several years in advance, and take into consideration several factors, including market conditions. Though significant numbers of fishers denning on non-Federal lands is unlikely due to available habitat conditions, such plans would be affected by fisher denning activities at or around planned harvest sites. While in most cases, it is anticipated that harvest would be delayed at that specific site until den sites are moved or denning is completed, in some cases, the decision may be made not to harvest the protected area (approximately 128 acres) at that site for logistical or economic reasons. This is a landowner option that they may choose of their own volition. Given that, generally, there are other alternative harvest sites available, it is anticipated that the effect of implementing the CMs would largely be some additional planning time for logistics. In some rare cases, there may not be alternative harvest sites available, and the landowner or contractor may need to cancel their harvest operation altogether, but such scenarios are unlikely. Therefore, effects

on timber revenues due to the Proposed Action Alternative are likely to be negligible, when compared to the No Action Alternative.

In most harvest operations, workers are hired from the local or surrounding communities, where timber harvest jobs and revenue can be the major economic drivers. Local communities may also be hired in other related industries, such as sawmills, veneer and plywood mills, poles and pilings, shake and shingle mills, chipping mills producing chips for pulp mills, and pulp and paper mills (which also consume wood residues from sawmills as well as recycled paper). If the landowner or contractor decides to delay harvest, or not return to complete the harvest of the unit that was within 0.25 miles of the den site, the local workers may be able to find jobs at the alternative harvest site(s), though they may be farther away and involve more commute time for those workers. So, while there could be some effect on local jobs due to the Proposed Action Alternative, this is likely to be insignificant, compared to the No Action Alternative.

5. CUMULATIVE IMPACTS

The Council on Environmental Quality regulations for implementing NEPA requires an assessment of cumulative effects during the decision making process for federal projects. Cumulative effects are defined 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 non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time.

The cumulative impacts of the activities proposed to occur within the scope of this EA vary little between the Proposed Action Alternative and the No Action Alternative. The differences primarily relate to the degree of participation and implementation of the CMs on the enrolled lands. Hence, this analysis focuses on the implementation of the CCAA and cumulative impacts to the fisher.

Because the boundaries of individual enrolled lands cannot be delineated at this time, it is not possible to develop a meaningful description of the nature or scope of future non-Federal actions that may occur within the action area. Certainly there will be numerous activities ongoing or that would occur in the future, however the locations and activities of enrolled landowners would not be known until the Permit is issued and willing participants enroll under the Agreement. While there is no way to predict the distribution or total acreage of lands enrolled during the term of the Permit, WDFW would not issue a CI to any non-Federal landowner that may have intentions of developing their land or take any other known action that would compromise implementation of the CMs for fisher. Consequently, we do not believe that any non-Federal actions that may occur in the future under this Agreement would have a negative impact on the success of other ongoing or future conservation efforts. However, it is conceivable that non-Federal actions on lands not enrolled under the Agreement could impair or impede the degree of overall Agreement success if located adjacent to enrolled properties. Since there is no credible method to estimate the level of development or conversion of critical habitats during the term of the Permit, we must rely on implementation of the Agreement and associated CMs to minimize and avoid adverse impacts at this time.

The purpose of this cumulative effects analysis is to assess whether the proposed action, when combined with other past, present, and future actions, has a significant effect on the human environment. In this case, except for the potential for a minimal amount of incidental take that could occur, the Proposed Action Alternative would have an overall beneficial effect to the fisher. Consequently, while some actions may cause adverse impacts to fishers or their habitat, implementation of the Proposed Action Alternative has the potential to reduce the overall cumulative impacts that could occur to the covered species, e.g., future timber harvest activities conducted by unenrolled landowners. Thus, cumulative impacts on the fisher would be insignificant. The Proposed Action Alternative is not expected to have a significant effect on other elements of the human environment, as no significant Project impacts to these resources are anticipated.

6. CONCLUSION

Under the No Action Alternative, none of the covered area would be enrolled in a CCAA and forest management activities would continue under current Forest Practices Rules. No Permit would be issued and voluntary participation by non-Federal landowners in implementing CMs related to fisher reintroduction efforts would likely be minimal, if any. WDFW would continue to monitor the reintroduced Olympic Peninsula fisher population on Federal lands and on non-Federal lands where access is granted to biologists. Reintroduction efforts on Federal lands in the Cascade Mountains would likely continue as planned. Fishers that disperse to non-Federal lands to establish den sites may not be discovered prior to timber harvest and, thus, could be destroyed during timber harvest operations. Benefits to fishers under the No Action Alternative would be minimal with respect to non-Federal landowner contributions to fisher conservation.

Under the Proposed Action Alternative, the proposed Permit would be issued, and enrolled landowners would contribute to and support the fisher reintroduction program. Enrolled landowners would implement the CMs identified in the Agreement, facilitating the protection of known fisher den sites on non-Federal lands, and likely facilitating fisher recovery in Washington State by allowing monitoring of reintroduced fisher on enrolled lands. Thus, under the Proposed Action Alternative, implementation of the CM activities by multiple landowners across the landscape where fishers will or have been reintroduced, will benefit fishers more than under the No Action Alternative.

There would be no significant difference in impacts between the No Action Alternative and the Proposed Action Alternative for the following elements of the natural and human environment: climate, air quality, water quality, geology and soils, vegetation, fish, archaeological, historical and cultural, and scenic resources. For those elements analyzed in this EA, i.e., noise, wildlife, recreation, land use and ownership, transportation, and socioeconomic resources, no significant differences in impacts would occur under the Proposed Action Alternative when compared to the No Action Alternative.

Based upon our evaluation of the environmental consequences of both alternatives, we conclude that the Proposed Action Alternative would provide the greatest benefit to fishers within the covered area. 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 fisher.

7. LIST OF AGENCIES, TRIBES, INDIVIDUALS AND ORGANIZATIONS CONTACTED

Federal Agencies

Olympic National Park
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Port Angeles, WA 98362

U.S.D.A. Forest Service
Pacific Northwest Research Station
3625 93rd Ave. SW
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U.S. Geological Survey
Forest and Rangeland Ecosystem Science Center
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State Agencies

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Environmental Organizations

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