


NATIVE ENDANGERED & THREATENED SP. HABITAT CONSERVATION PLAN
ENDANGERED & THREATENED WILDLIFE**Permit Number: TE812521-1**

Effective: 11/14/2019 Expires: 01/30/2067

Issuing Office:

Department of the Interior
U.S. FISH & WILDLIFE SERVICE
Endangered Species Permit Office
911 NE 11th Avenue
Portland, OR 97232-4181
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Acting

DEPUTY REGIONAL DIRECTOR

Permittee:

WASHINGTON DEPARTMENT OF NATURAL RESOURCES
1111 WASHINGTON ST. S.E.
MS# 47001
OLYMPIA, WA 98504-7000
U.S.A.

Name and Title of Principal Officer:

Josh Wilund, Department Supervisor

Authority: Statutes and Regulations: 16 USC 1539(a), 16 USC 1533(d); 50 CFR 17.22, 50 CFR 17.32, 50 CFR 13.

Location where authorized activity may be conducted:

Department of Natural Resources-Managed Forest Lands within the Range of the Northern Spotted Owl in the State of Washington.

Reporting requirements:

See permit conditions for reporting requirements

Authorizations and Conditions:

- A. General conditions set out in subpart d of 50 CFR 13, and specific conditions contained in federal regulations cited in block #2 above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal, of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.
- B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local, tribal, or other federal law.
- C. Valid for use by Permittee named above and its authorized officers, employees, contractors, and agents.
- D. Further conditions of authorization are contained in the attached special terms and conditions.

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- E. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accordance with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.
- F. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local, tribal, or other federal law.
- G. This permit is valid for use by Permittee named above and its authorized officers, employees, contractors, and agents.
- H. This permit is subject to the provisions of Title 50 *Code of Federal Regulations* Parts 10, 13, and 17.
- I. The authorization granted by this permit is subject to full and complete compliance with, and implementation of the 1997 Habitat Conservation Plan (HCP) and subsequent amendment(s) and Implementation Agreement (IA) executed by the Permittee, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, as amended by the 2019 Long-Term Conservation Strategy for the marbled murrelet (Amendment). This permit, the HCP, Amendment, and Implementing Agreement (IA), are binding upon the Permittee, and any authorized officer, employee, contractor, or agent conducting permitted activities.
- J. The term of this permit shall be from January 30, 1997 to January 30, 2067.
- K. COVERED SPECIES: The Permittee, and its authorized officers, employees, contractors, and agents are authorized to incidentally take the gray wolves (*Canis lupus*), northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*), Columbian white-tailed deer (*Odocoileus virginianus leucurus*), bull trout (*Salvelinus confluentus*), and the Oregon silverspot butterfly (*Speyeria zerene hippolyta*) in the course of otherwise lawful activities in accordance with the terms and conditions of the HCP, Amendment, IA, the ITP, and the Incidental Take Statement of the Biological Opinions authored and signed by the U.S. Fish and Wildlife Service in 1997, 1998, and 2019. Covered species listed at the time the original permit was issued that have since been delisted include the bald eagle (*Haliaeetus leucocephalus*), the American peregrine falcon (*Falco peregrinus*), and the Aleutian Canada geese (*Branta canadensis leucopareia*). Additional unlisted species that are covered by the 1997 HCP are described in Chapter 4F of the HCP. HCP coverage and conservation measures for these species are unchanged by this Amendment. Incidental take authorization for the grizzly bear expired January 30, 2002.

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- L. COVERED LANDS: This permit only authorizes incidental take of the Covered Species identified in section G within the lands described in Section 15.1, "Permit Lands Description," of the 1997 Implementation Agreement and inclusive of lands added since 1997 as reported under Section 17.2 of the IA.
- M. COVERED ACTIVITIES: Covered activities include "Forest Product Sales and Other Management Activities Other Than Land Sales, Purchases, and Exchanges" as described in Section 16 of the Implementation Agreement, and "Land Transfers, Purchases, Sales, and Exchanges" as described in Section 17 of the Implementation Agreement.
- N. LAND TRANSFERS: This permit does not restrict the Permittee from engaging in land transfers, dispositions, and acquisitions as described in Section 17 of the IA. The Permittee commits to maintaining the biological goals and objectives of the conservation program described in Amendment Section 6.0.
- O. Permittee shall notify the Service of new locations of permit species that are discovered within the area covered by the HCP, including, but not limited to, locations of occupied murrelet habitat; owl site centers; wolves; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies and additional stream reaches found to contain bull trout.
- P. Upon locating any dead, injured, or sick individuals of any federally listed species covered by this permit, Permittee shall contact the Service's Washington Fish and Wildlife Office, Lacey, (telephone 360-753-9440) and the Office of Law Enforcement, Resident Agent in Charge, Redmond, (telephone: 425-883-8122) for care and disposition instructions, and within 3 working days, notify the U.S. Fish and Wildlife Service's Washington Fish and Wildlife Office, Lacey, Washington (360-753-9440).

In the event of an injured or sick individual and Service personnel cannot be reached, Permittee shall make a good faith effort to contact a wildlife rehabilitation facility. Take extreme care in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, the Permittee and any officers, employees, contractors, or agents shall ensure that evidence intrinsic to the specimen is not unnecessarily disturbed. If directed to do so by the State Supervisor or the Resident Agent in Charge, transport or mail the dead individual in an appropriate container to the appropriate address as soon as possible.

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- Q. Permittee shall refer to permit number PRT-812521-1 in all correspondence and reports concerning permit activities. Any questions you may have about this permit should be directed to the State Supervisor, U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, Lacey, Washington (360-753-9440).
- R. All applicable provisions of this permit must be presented and clearly explained to all authorized officers, employees, contractors, or agents of Permittee conducting authorized activities.
- S. Permittee shall notify the Service if any non-timber activity (as described in the IA) is expected to increase beyond its 1996 level and include with such notification a description of any take likely to result from any such increase. The DNR will review new forest product sales, or other valuable material sales, licenses, permits, leases, rights-of-way, and public uses with the Services during the annual meetings.
- T. The amount and extent of take authorized by this permit is described for those Covered Species in each of the U.S. Fish and Wildlife Service's biological opinions authored and signed in 1997, 1998, and 2019 (see attached) and are herein incorporated by reference. The 2019 biological opinion authorizes the amount and extent of take for marbled murrelets in the permit area under the Amendment. The Permittee will report annually the amount of marbled murrelet habitat which has been harvested or otherwise removed by Covered Activities for marbled murrelets by HCP Planning Unit in raw and adjusted P-stage acres. Similarly, the Permittee will track and report mitigation consistent with implementation monitoring in Amendment Section 6.4. Other reporting requirements for other Covered Species are unchanged by the Amendment.

If, during the term of this permit, the conservation measures or extent of the Covered Activities are altered such that there may be an increase in the anticipated take of the Covered Species or a reduction in the mitigation; the Permittee shall contact the Service's Washington Fish and Wildlife Office (telephone: 360-753-9440). The Permittee must obtain an amendment to this permit before commencing any construction, operations, or other activities that might result in the incidental take of ESA listed species beyond that authorized by this permit.

If actions associated with implementation of the HCP are shown to result in the incidental take of ESA listed species not covered by this permit, those activities must immediately cease and any take that has occurred shall be reported to the Service's Washington Fish and Wildlife Office (telephone: 360-753-9440) within 48 hours.

If the amounts or extents of take authorized under this permit is exceeded for any of the Covered Species identified in this ITP, all activities causing such take must immediately cease and any take above that authorized under this permit shall be reported to the Service's Washington Fish and Wildlife Office, Lacey, Washington and Office of Law

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Enforcement, Resident Agent in Charge, Redmond, Washington (telephone: 425-883-8122) within 48 hours.

U. Acceptance of the permit serves as evidence that:

1. The Permittee agrees to abide by all conditions stated. Terms and conditions of the permit are inclusive. Please read these conditions carefully as violations of permit terms and conditions could result in your permit being suspended or revoked.
2. Retain records as required in 50 CFR 13.46. Acceptance of this permit authorizes the U.S. Fish and Wildlife Service to inspect and audit or copy any permits, books or records required to be kept by the permit and governing regulations (50 CFR 13.47).
3. You must allow Service personnel, or other persons designated by the Service, access to the Covered Areas and Conservation Lands with reasonable notice from the Service, for purposes of monitoring Covered Species at the site(s) while the permit is valid.

V. A copy of this permit must be on the premises of the Permittee, or in the possession of the Permittee, and their authorized officers, employees, contractors, or agents while conducting activities that may result in incidental take of the Covered Species.

***** End of Permit TE812521-1 *****

1997 Incidental Take Statement:

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harm is further defined by the FWS to include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by FWS as an act or omission which create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the proposed action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this incidental take statement.

The proposed DNR HCP and its associated documents identify the measures that are necessary and appropriate to minimize impacts to affected species likely to result from the proposed taking. All conservation measures described in the proposed HCP, together with the terms and conditions described in any associated Implementing Agreement and any incidental take permit or permits issued with respect to the proposed HCP, are hereby incorporated by reference as reasonable and prudent measures and terms and conditions in this Incidental Take Statement. Such terms and conditions are non-discretionary and must be undertaken for the exemptions under section 10(a)(1)(B) and section 7(o)(2) of the Act to apply. If the permittee fails to adhere to these terms and conditions, the amount of take authorized may be exceeded and the protective coverage of the section 10(a)(1)(B) permit and section 7(o)(2) of the Act may lapse.

Generally, section 9 take prohibitions do not apply to listed plant species on nonfederal lands. However, FWS must review the effects of its own actions on listed plants, even when those listed plants are found on non-federal lands. In approving an HCP and issuing an incidental take permit, the FWS must determine that such an action is not likely to jeopardize the continued existence of any listed plant. Also, in the interest of conserving listed plants, the FWS may request that a landowner voluntarily assist the FWS in restoring or enhancing listed plant habitats that are present within the area covered by the HCP.

AMOUNT OR EXTENT OF TAKE - NORTHERN SPOTTED OWL

The FWS anticipates incidental take of spotted owl pairs, young, and/or territorial singles associated with harvest of suitable habitat as outlined below. Incidental take on these acres may be in the form of harm due to the removal of suitable habitat on DNR-managed lands, as well as harassment when harvest of this habitat occurs during the nesting season. The FWS anticipates incidental take of spotted owls associated with nontimber resource activities will be in the form of disturbance and is also summarized below.

West-side Planning Units

In the near term (within the first 10 years), the FWS anticipates the incidental take in the form of harm or harassment of up to 70 known and 15 projected unknown spotted owl pairs, young, and/or territorial singles. In the long term (10 to 70 years), the FWS anticipates the incidental take in the form of harm or harassment of up to 36 potential future spotted owl pairs, young, and/or territorial singles.

East-side Planning Units

In the near term, the FWS anticipates the incidental take in the form of harm or harassment of up to 47 known and 16 projected unknown spotted owl pairs, young, and/or territorial singles. In the long term, the FWS anticipates the incidental take in the form of harm or harassment of up to 36 potential future spotted owl pairs, young, and/or territorial singles.

Olympic Experimental State Forest

In the near-term, the FWS anticipates the incidental take in the form of harm or harassment of up to 31 spotted owl pairs, young, and/or territorial singles. In the long-term, the FWS anticipates the incidental take in the form of harm or harassment of spotted owls associated with harvest of 3,300 to 16,300 acres per decade.

Disturbance-related Take

In addition, the FWS anticipates the incidental take of spotted owls adjacent to disturbance type activities which may occur on DNR-managed lands in all three areas. Disturbance may be caused by timber harvest activities as well as nontimber resource activities. The FWS anticipates that take may occur on an average of 26,675 acres of timber harvest activities per year for the first decade. The FWS anticipates that disturbance from nontimber resource activities could affect up to 1,060 acres per year. Incidental take due to these activities will be in the form of harassment, when activities occur during the nesting season and significantly disrupt normal behavior patterns.

AMOUNT OR EXTENT OF TAKE - MARBLED MURRELET

Over the length of the permit, the FWS anticipates incidental take of marbled murrelets associated with the harvest of between 18,245 and 74,286 acres of unsurveyed, suitable marbled murrelet habitat on DNR-managed lands, as discussed under Effects of the Action. Incidental take on these acres may be in the form of harm due to the removal of suitable, occupied habitat, as well as harassment, when harvest of this habitat occurs during the nesting season.

The FWS also anticipates the incidental take of marbled murrelets located on properties adjacent to disturbance type activities which may occur on DNR-managed lands. Disturbance may be caused by timber harvest activities as well as nontimber resource activities. The FWS anticipates that take from disturbance may occur on an average of 23,500 acres of timber harvest activities per year. The FWS anticipates that disturbance from nontimber resource activities could affect up to 338 acres per year. Incidental take due to these activities will be in the form of harassment, when such harvest or nontimber resource activities occur during the nesting season and significantly disrupt normal behavior patterns.

AMOUNT OR EXTENT OF TAKE - GRAY WOLF

The FWS anticipates incidental take of gray wolves with the harvest of timber on approximately 430,900 acres within 8 miles of Class 1 or Class 2 gray wolf sightings on DNR-managed lands over the life of the project, as discussed under Effects of the Action. Incidental take on these acres may be in the form of harm due to the removal of suitable habitat, as well as harassment, when harvest of this habitat occurs during the denning season and significantly disrupts normal behavior patterns.

Disturbance may also be caused by nontimber resource activities. The FWS anticipates that disturbance from nontimber resource activities could occur on approximately 4,520 acres per year from ORV use only. Incidental take due to these activities will be in the form of harassment, when such harvest or nontimber resource activities occur during the denning season. The FWS anticipates no incidental take of den sites occurred from nontimber resource activities.

AMOUNT OR EXTENT OF TAKE - GRIZZLY BEAR

The FWS anticipates incidental take of grizzly bears associated with approximately 159,000 acres of timber harvest that are within 10 miles of Class 1 or Class 2 grizzly bear sightings over the life of the project. Incidental take of grizzly bears associated with the timber harvest of these acres may be in the form of harm due to the removal of suitable habitat on DNR-managed lands, as well as harassment from disturbance when harvest of this habitat occurs during the denning season.

Disturbance may also be caused by nontimber resource activities. The FWS anticipates that disturbance from nontimber resource activities in the form of harassment could occur on approximately 1,010 acres per year from ORV use only. The FWS anticipates no incidental take of den sites from nontimber resource activities.

AMOUNT OR EXTENT OF TAKE - BALD EAGLE

The FWS anticipates incidental take of bald eagles associated with the harvest of timber on approximately 200,000 acres that are within 3 miles of anadromous fish bearing streams over the life

of the project. Incidental take on these acres may be in the form of harm due to the removal of suitable habitat on DNR-managed lands. Incidental take in the form of harassment may occur when harvest of this habitat occurs during the nesting or wintering season, and it significantly disrupts normal behavior patterns. The FWS anticipates that disturbance associated with 34,000 acres of timber harvest may occur annually on DNR-managed lands.

The FWS also anticipates the incidental take of bald eagles from nontimber resource activities could affect up to 326 acres per year. Incidental take due to these activities will be in the form of harassment, when such harvest or nontimber resource activities occur during the nesting or wintering season, and it significantly disrupts normal behavior patterns.

AMOUNT OR EXTENT OF TAKE - PEREGRINE FALCON

The FWS anticipates the incidental take of up to one pair of peregrine falcons due to disturbance from timber harvest activities on DNR-managed lands. Incidental take at these sites may be in the form of harassment when such disturbance occurs during the nesting season, and results in a significant disruption of normal behavior patterns. The FWS anticipates no incidental take of peregrine falcons due to disturbance from nontimber resource activities.

AMOUNT OR EXTENT OF TAKE - ALEUTIAN CANADA GOOSE

Incidental take in the form of harassment (disturbance) may be caused by timber harvest and nontimber resource activities. Due to the rare occurrence of Aleutian Canada geese on DNR-managed lands and their lack of association with habitats where these activities occur, the FWS does not anticipate these activities will incidentally take any Aleutian Canada geese.

AMOUNT OR EXTENT OF TAKE - COLUMBIAN WHITE-TAILED DEER

Incidental take in the form of harassment (disturbance) may be caused by timber harvest and nontimber resource activities. DNR-managed lands inhabited by the Columbian white-tailed deer are not part of the HCP area. The FWS does not anticipate any incidental take through implementation of the HCP.

AMOUNT OR EXTENT OF TAKE - OREGON SILVERSPOT BUTTERFLY

Incidental take in the form of harassment (disturbance) may be caused by timber harvest and nontimber resource activities. The Oregon silverspot butterfly is not known to exist on any DNR-managed lands and DNR-managed lands contain no potential habitat. The FWS does not anticipate these activities will incidentally take any Oregon silverspot butterflies.

1998 Incidental Take Statement:

INCIDENTAL TAKE STATEMENT

Section 9 of the Act, as amended, prohibits taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. *Harm in the definition of "take" in the Act means an act which actually kills or injures wildlife. Such act may include significant habitat degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. Harass in the definition of "take" in the Act means an intentional or negligent act, or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.* Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

This incidental take statement applies only to the listed Columbia River and the proposed Coastal/Puget Sound distinct population segments of the bull trout located west of the Cascade Crest. Other listed species were previously addressed in the January 1997, Biological Opinion. Should Washington State Department of Natural Resources request that any of the currently unlisted species be added to the permit, formal consultation under section 7 of the Act will be reinitiated, at which time a definitive incidental take statement would be issued for the species, provided the proposed action is in compliance with section 7(a)(2) of the Act. The Incidental Take Statement for the Coastal/Puget Sound DPS does not become effective unless the listing is final and the Service adopts this Conference Opinion as a Biological Opinion.

The measures described below are non-discretionary, and must be implemented by the Service so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Service has a continuing duty to regulate the

activity covered by this Incidental Take Statement. If the Service: (1) Fails to require the permittee to adhere to the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the permit or grant document, and/or (2) Fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service expects that this action is likely to result in incidental take of bull trout in the form of harm or harassment due to effects from timber harvest and related activities, including road building, stream crossings, canopy removal, and potential increases in sediments and temperature which may adversely impact bull trout at a number of life-history stages. The proposed Service action of adding bull trout to the subject permit is contingent upon the implementation of the conservation measures in the HCP and as such they are part of the proposed action. Estimates of incidental take account for the operation of these conservation measures. Because of the inherent biological characteristics of bull trout, the likelihood of discovering an individual death or injury attributable to this action is very small.

The Service anticipates that impacts to bull trout will be difficult to detect at the individual organism level for the following reason(s): (1) Bull trout are wide-ranging and are affected by factors beyond the control of WSDNR; (2) Juveniles, fry, and eggs have small body size and are, therefore, difficult to detect when alive; (3) Finding dead or impaired specimens is unlikely, especially considering the often small body size of eggs and fry, denseness of vegetation/substrate, and remoteness of the area; (4) Losses may be masked by seasonal fluctuations in numbers or other causes; (5) Dead or impaired specimens may be washed downstream of the site where the impact occurred; (6) Dead or impaired specimens may be consumed by other fish and wildlife species; and, (7) There is a large area with many stream miles to monitor. However, habitat conditions may be used as a surrogate preliminary indicator of take or impact. This assessment focused on the amounts and quality of habitats provided/impacted for the Columbia River Basin and Coastal/Puget Sound distinct population segments.

Therefore, even though the Service expects incidental take to occur from the effects of the action, the best scientific and commercial data available are not sufficient to enable the Service to estimate a specific number of individuals incidentally taken based on loss or injury of individuals of the species. For instance, if the bull trout population were to increase during the permit period, a larger number of individuals may become subject to some level of take. Conversely, if bull trout were to decrease, less take might occur. Consequently, take is estimated based on the quantity of habitat likely to be impacted in the 70 to 100-year period. In some cases, this impact may adversely affect bull trout sufficiently to result in harm or harassment.

Selective harvest in riparian buffers is expected to occur at any given location only a maximum of once per rotation. While this could vary between 60 and 140 years depending on the management zone, the Service assumed this would average 100 years. Harvest in many older riparian stands will be limited by provisions of the HCP with respect to functional habitat for salmonids. However, it is

difficult to predict how every stream would be addressed at this point in time, so the Service has relied on its best assessment of a worst-case scenario. The Service expects only about 1 percent of riparian stands to be entered per year at a maximum.

On the OESF, some entry into the 88,141 acres of riparian buffers is expected. Interior buffers are to be managed in a more-conservative manner and little take is expected to result from those actions. Of the 56,716 acres of interior buffer, about 20,000 acres are over 30 years old and would be subject to some selective harvest. This could result in 286 acres per year subject to single tree removal or other conservative treatments. Of the 31,425 acres of exterior buffer, only about 11,850 are over 30 years old. This could result in selective harvest of about 169 acres of exterior buffer per year on average. The Service estimates that up to 2,000 acres of thinning per year may occur in riparian buffers on the OESF. The OESF is estimated to have 121 miles of stream that contain bull trout (WSDNR 1997).

In the west-side planning units, 133,500 acres are in riparian buffers bordering roughly 380 miles of fish bearing streams that have been estimated to contain bull trout. Approximately one-quarter to one-third of those acres are located within the range of the listed Columbia River DPS. This equates to approximately 91 miles of fish-bearing streams estimated to contain bull trout in the Columbia River DPS. The remaining 289 miles of fish-bearing streams estimated to contain bull trout is within the Coastal/Puget Sound DPS (WSDNR 1997). About 60 percent, or 80,000 acres of the 133,500, are estimated to be over 25 years of age and might be subject to selective harvest during the HCP period (1,145 acres per year). About 53,000 acres may be subject to thinnings during the HCP period (760 acres per year).

In both the OESF and the other west-side planning units, about 10-20 percent of riparian buffers are in deciduous forest. While some of this is naturally deciduous and should not be altered, some of these stands could be converted to conifer stands for the long-term benefit of salmonids. Short-term impacts and associated take are expected to result from restoration activities on about 5 percent of riparian areas, or 4,407 acres of the OESF and 6,675 acres of other west-side planning units. Together, this should average no more than about 11,080 acres or 158 acres per year.

The Service estimates that of the riparian areas entered each per year, about 75 percent will be in yarding corridors. Fifteen percent of the riparian area associated with those entries would be removed to create the corridors each year. Of the 221,641 acres of west-side riparian buffers, 6,650 acres might be subject to some level of harvest or thinnings within the buffer or in adjacent stands during a given year. This assumes two mid-rotation treatments during a 100-year rotation. If only about 5,000 acres of this required use of yarding corridors and only 15 percent of that was in corridor itself, then no more than 750 acres would be placed in yarding corridors in any given year. This would actually be somewhat less where previous yarding corridors are used during subsequent entries.

Construction and maintenance of roads are anticipated to adversely impact bull trout sufficiently to result in harm or harassment, particularly during the early life-history stages. The Service anticipates incidental take in the form of harm of bull trout associated with the construction and maintenance of

29 miles of roads per year, as a result of implementing the HCP. This estimate is based on the addition of one road for every section of west-side land during the 70-year period. We also anticipate some incidental take in the form of harm associated with upgrading or removing 30 to 60 miles of road per year.

The rationale for the above estimates is based on the assumption that bull trout occur throughout lands managed by Washington Department of Natural Resources. Because bull trout distribution is not continuous, only a fraction of the acres and activities described above have the potential to impact bull trout. Take is generally expected to be avoided; but, if it occurs, only a minimal number of individuals would likely be affected. Bull trout occur in limited areas, especially during early life stages; and, should impacts sufficient to result in take occur, it would be rare and localized. Therefore, the number of individuals likely to be subject to disturbance at any particular time, or the numbers of individuals which may be taken, is low, yet unquantifiable. Estimates of take are in terms of the amount of habitat impacted to the extent that take could possibly occur.

2019 Incidental Take Statement:

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. *Harm* is defined by the USFWS as an act which actually kills or

injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). *Harass* is defined by the USFWS as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The proposed Washington State Department of Natural Resources Marbled Murrelet Long-Term Conservation Strategy Amendment to the 1997 Final State Trust Lands HCP and its associated documents clearly identify anticipated impacts to affected species likely to result from the proposed taking and the measures that are necessary and appropriate to minimize those impacts. All conservation measures described in the proposed HCP Amendment, together with the terms and conditions described in any associated Implementing Agreement, and any section 10(a)(1)(B) permit or permits issued with respect to the proposed HCP Amendment, are hereby incorporated by reference within this Incidental Take Statement as reasonable and prudent measures and terms and conditions pursuant to 50 CFR §402.14(i). Such terms and conditions are non-discretionary. The amount or extent of incidental take anticipated under the proposed Washington State Department of Natural Resources Marbled Murrelet Long-Term Conservation Strategy Amendment to the 1997 Final State Trust Lands HCP, associated reporting requirements, and provisions for disposition of dead or injured animals, are as described in the HCP Amendment, Implementing Agreement, and the accompanying section 10(a)(1)(B) permit(s).

18 AMOUNT OR EXTENT OF TAKE

The USFWS anticipates incidental take of marbled murrelet will be difficult to detect for the following reason(s): the species is wide-ranging; has a small body size; finding a dead or impaired specimen is unlikely; the species occurs in habitat that makes detection difficult; murrelets are cryptic, nest locations are rarely located, and available data suggest a patchy and inconsistent distribution in the action area. However, pursuant to 50 CFR 402.14(i)(1)(i), a surrogate can be used to express the anticipated level of take in an Incidental Take Statement, provided three criteria are met: (1) measuring take impacts to a listed species is not practical; (2) a link is established between the effects of the action on the surrogate and take of the listed species; and (3) a clear standard is set for determining when the level of anticipated take based on the surrogate has been exceeded.

The USFWS' regulations state that significant habitat modification or degradation caused by an action that results in death or injury to a listed species by significantly impairing its essential behavior patterns constitutes take in the form of harm. Those regulations further state that an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt its normal behavioral patterns constitutes

take in the form of harass. Such annoyance can be caused by actions that modify or degrade habitat conditions (e.g., excessive noise or smoke). In cases where this causal link between effects of a federal action to habitat and take of listed species is established, and the biological opinion or incidental take statement explains why it is not practical to express and monitor the level of take in terms of individuals of the listed species, the Service's regulations authorize the use of habitat as a surrogate for expressing and monitoring the anticipated level of take, provided a clear standard is established for determining when the level of anticipated take has been exceeded.

The following narrative presents the USFWS' analysis and findings with respect to the three regulatory criteria for use of a surrogate in this Incidental Take Statement to express the anticipated level of take likely to be caused by the proposed action.

The following level of take of marbled murrelet (nesting adults, eggs, nestlings) can be anticipated by quantifying the amount of nesting habitat removed, quantifying the amount of nesting habitat degraded by edge effects, and by quantifying the amount of nesting habitat exposed to disturbance because:

1. A habitat-based approach to evaluating the effects to murrelets is appropriate due to the difficulty in locating actual murrelet nest sites, the variation in the number of murrelets that breed each year, and the patchy distribution of murrelets in nesting habitat. However, numerous studies have demonstrated that murrelet numbers are strongly correlated with the amount of available nesting habitat, and where habitat is removed, marbled murrelet numbers decline.
2. A habitat surrogate will measure the amount of habitat removed, habitat degraded by edge effects, and habitat exposed to disturbance. In the accompanying Opinion, we have provided a detailed explanation of the P-stage habitat classification system used to quantify the probability of murrelet use of habitat, and how we used estimates of marbled murrelet nesting density at the landscape scale to enumerate the proportion of murrelets likely to be affected by the covered activities.
3. Monitoring the amount and quality of murrelet nesting habitat on the landscape provided by the WDNR State Lands HCP is a consistent and reliable method to track HCP implementation and is consistent with existing monitoring and reporting programs established under the 1997 HCP.

We anticipate that implementation of the Long-Term Strategy will begin in 2020 and continue through the remaining term of the HCP (2067). The following level of take of marbled murrelets (nesting adults, eggs, nestlings) can be anticipated by the loss of acres of suitable murrelet nesting habitat, the degradation of murrelet nesting habitat from edge effects caused by forest management, and disturbance effects associated with forest management activities. These habitat areas are the best available surrogate measure of the anticipated take.

- Beginning in 2020, we anticipate incidental take of murrelets in the form of harm and harass associated with the removal of up to 38,774 raw acres of habitat, which equates to 11,085 adjusted habitat acres. Approximately 5,000 adjusted acres will be deferred from harvest for a minimum of 10 years following implementation of the proposed Long-Term Strategy. The distribution of the habitat to be removed by HCP planning unit is listed below in Table 66.
- We anticipate incidental take of murrelets in the form of harm and harass associated with the removal of 114 adjusted acres of habitat for new roads (104 adjusted acres) or yarding corridors (10 adjusted acres) in occupied sites, occupied site buffers, or Special Habitat Areas.
- We anticipate incidental take of murrelets in the form of harm from habitat degradation associated with edge effects caused by covered forest management activities. The amount of habitat degraded by edge effects is approximately 6 percent of adjusted acres of habitat per decade conserved in long-term forest cover mapped as *outer edge* or *inner edge* around *interior* forest patches of murrelet nesting habitat. The estimated amount of habitat degraded by edge effects per decade is listed below in Table 67.
- We anticipate incidental take of murrelets in the form of harm and harass from disturbance associated with habitat modification and prolonged exposure to audio/visual disturbance caused by covered activities. The amount of exposed to disturbance is approximately 2.3 percent of the adjusted acres of habitat per decade conserved in long-term forest cover mapped as *outer edge* or *inner edge* around *interior* forest patches of murrelet nesting habitat. The estimated amount of habitat disturbed per decades is listed below in Table 68.
- We anticipate incidental take of murrelets in the form of harm and harass from habitat degradation associated with edge effects and disturbance caused by covered activities to 225 acres of murrelet nesting habitat per year located on adjacent federal lands (within a distance of 328-ft of WDNR-managed lands).

Table 66. Summary of the take of marbled murrelets from nesting habitat released for harvest on WDNR-managed lands.

HCP planning unit:	Columbia	South Coast	OESF	Straits	North Puget	South Puget	Yakima	Totals
Raw habitat acres released for harvest	4,088	3,782	6,662	4,009	14,769	5,314	150	38,774
P-stage-weighted acres released for harvest	1,161	1,110	2,326	1,104	4,886	1,640	122	12,349
Adjusted acres released for harvest	1,040	841	2,128	1,030	4,457	1,469	120	11,085

Note: The take of habitat is 38,774 raw acres over the remaining term of the HCP. The summary acres presented above provide an index of the habitat take per HCP unit. Take acres are not limited to the level indicated by each individual HCP planning unit. Take is limited by the total take acres of 38,774 raw acres.

Table 67. Summary of the take of murrelets associated with nesting habitat degraded by edge effects on WDNR-managed lands per decade.

Effects Category	HCP Decade					Effects to Murrelets
	1	2	3	4	5	
Total habitat degraded by edge effects in LTFC (excluding <i>stringers</i>) (adjusted acres):	5,489	5,833	6,287	6,913	7,470	Habitat with increased nest failure per decade due to edge effects.
Percent of habitat (adjusted acres) in LTFC degraded by edge effects per decade:	6%	6%	6%	6%	7%	Habitat with increased nest failure per decade due to edge effects.
Habitat degraded (raw acres) based on average P-stage	11,364	11,393	11,818	12,994	13,937	

Note: LTFC = long-term forest cover.

Table 68. Summary of the average annual take of murrelets from disturbance on WDNR-managed lands.

Activity Group	HCP Decade					Effects to Murrelets
	1	2	3	4	5	
Total average annual habitat exposed to audio/visual disturbance (adjusted acres)	2,184	2,253	2,338	2,449	2,549	Disruption of nesting behaviors, increased nest failure.
Average annual percentage of habitat in LTFC exposed to disturbance effects	2.3%	2.3%	2.3%	2.3%	2.3%	Disruption of nesting behaviors, increased nest failure.
Average habitat (raw acres) exposed to disturbance (based on average P-stage)	4,522	4,400	4,395	4,603	4,756	-

Note: LTFC = long-term forest cover.