

Exhibit D

Carmen-Smith Hydroelectric Project
(FERC No. 2242)

March 2023 Amended and Restated
Wildlife Management Plan

Submitted by:
Eugene Water & Electric Board



March 2023 Amended and Restated Wildlife Management Plan

Final Plan

Prepared by
Eugene Water & Electric Board
Eugene, Oregon

Stillwater Sciences
Arcata, California

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1 INTRODUCTION

The Eugene Water & Electric Board (EWEB) owns and operates the Carmen-Smith Hydroelectric Project (Project) under license No. 2242 from the Federal Energy Regulatory Commission (FERC). The Project is located on the upper McKenzie River in Linn and Lane Counties, Oregon. EWEB has developed this Wildlife Management Plan (WMP) to address wildlife-related issues at the Project during the term of the FERC operating license for the Project.

The WMP represents the culmination of the wildlife resources planning efforts conducted as part of the relicensing process for the Project. EWEB shall implement the actions identified in this WMP. EWEB in consultation with the Terrestrial Technical Subgroup and other parties to the Settlement Agreement identified and developed these actions, which are based on the results of terrestrial resource studies (the *Wildlife Distribution* study [Stillwater Sciences 2006a] and the *Wildlife Analyses* study [Stillwater Sciences 2006b]) conducted for the relicensing of the Carmen-Smith Project.

1.1 Areas Covered by the WMP

This WMP covers all lands within the FERC Project boundary and those lands adjacent to the FERC Project boundary that are either affected by Project operations or have the potential to be affected by Project operations.

1.2 Related Resource Management Plans

A number of other resource management plans developed for the Project reference or address wildlife-related management issues. These include the Carmen-Smith management plans for aquatics, vegetation, recreation, roads, and historic properties, which are included as part of the Settlement Agreement; the plans for transmission line management and fire suppression, which were developed following License issuance; the Carmen-Smith *Terrestrial Habitat Management Plan*, which was developed in 2022; and the *Leaburg Forest Project Stewardship Plan* (Trout Mountain Forestry 2016), which was approved in 2016 and is anticipated to be updated in 2023. The Parties to the Settlement Agreement will resolve any inconsistency between this WMP and other resource management plans by following the dispute resolution process in Section 7 of the Settlement Agreement.

Elements of this WMP are also included in EWEB's Employee Awareness Training Program referenced in the Final License Application (e.g., ESA-listed and special-status wildlife species, invasive non-native wildlife species).

2 PLANNING AND COORDINATION

The Parties agree to coordinate and to cooperate in implementation of this WMP, including the provisions of Sections 2.2.2.1 and 2.2.2.2. Such coordination and cooperation will be assisted by creation of a permanent work group, the Wildlife Management Plan Work Group (WWG). EWEB shall convene the WWG in accordance with Section 2.2.2 to discuss and to coordinate the wildlife management activities in this WMP.

2.1 Roles and Responsibilities

The WWG will function throughout the period of time the License is in effect. The WWG will include representatives from any interested Party including but not limited to EWEB, the United States Fish and Wildlife Service (USFWS), the United States Department of Agriculture Forest Service (USDA Forest Service), and the Oregon Department of Fish and Wildlife (ODFW). Each Party participating on the WWG will designate at least one representative and an alternate to serve on the WWG. The initial representatives and alternates are listed in Attachment A to this WMP. Changes to the initial representatives or alternates listed in Attachment A will be made in accordance with the provisions of Section 8.12 (Attachment B) of the Settlement Agreement.

EWEB is responsible for implementing this WMP. The USDA Forest Service has approval authority over activities involving National Forest System (NFS) lands. USFWS has regulatory authority over species listed under the Endangered Species Act of 1973 (ESA) and critical habitat designated under the ESA. ODFW has regulatory authority over wildlife under Oregon law.

2.1.1 In consultation with the WWG members when appropriate, EWEB shall:

- Prepare all study, design, operating or implementation plans or reports necessary to implement this WMP, consistent with Standard Construction Scheduling¹.
- Fund implementation of this WMP.
- Conduct any necessary environmental analyses and obtain any required authorizations to implement this WMP from federal, state and local governments.
- Implement and maintain all actions required under this WMP.
- Monitor actions implemented under this WMP to evaluate compliance with this WMP including performance standards.
- Implement contingency actions when actions implemented under this WMP do not achieve compliance with this WMP including performance standards.

¹ “Standard Construction Scheduling” means that EWEB will establish contractual construction schedule deadlines that are reasonably attainable by working normal 40-hour weeks. EWEB will require construction contractors to perform their work within normal working hours (Mondays through Fridays between the hours of 7 a.m. and 5 p.m.). EWEB will not require contractors to work overtime, extra shifts, or on national holidays as a baseline schedule assumption. EWEB will consider authorizing special work hour adjustment requests from a contractor on a case by case basis as necessary to accommodate fire season constraints, wildlife-related restrictions, equipment/material delivery delays, or similar circumstances. EWEB’s construction contract will include liquidated damage or other appropriate penalties for late completion of work if the causes are within the contractor’s control as well as the right to require the use of overtime or additional work shifts if EWEB desires to accelerate the contractor’s work.

- Make required reports to the WWG members and Federal Energy Regulatory Commission (FERC) and other governmental entities, as appropriate.
- Make necessary updates or amendments to this WMP after consultation with the other Parties and receipt of any necessary approvals, as described in Section 2.2.
- Assign a designated EWEB representative knowledgeable in wildlife to the WWG.

2.1.2 USDA Forest Service will:

- Review and approve, as appropriate, any environmental compliance and permitting and other authorizations for WMP actions on NFS lands.
- Issue required permits and authorizations for WMP actions on NFS lands, which include activities within the McKenzie Wild and Scenic River corridor not otherwise included in the License, consistent with 36 CFR 251 and other applicable laws.
- Provide WWG members with periodic updates to lists of special status wildlife species on NFS lands.
- Advise EWEB regarding any restrictions placed on habitats or activities due to listing of threatened and endangered species, critical habitat designations, and Biological Opinions related to NFS lands.
- Provide input to the WWG members on activities under this WMP that may affect wildlife within USDA Forest Service's regulatory authority.
- Assign a designated USDA Forest Service representative knowledgeable in wildlife to the WWG.

2.1.3 USFWS will:

Review and approve, as appropriate, any documents, including study, design, operating and implementation plans identified herein as requiring USFWS action.

- Provide WWG members periodic updates to lists of threatened and endangered species and critical habitat under the ESA and species proposed for listing in the area of the Project.
- Provide input to the WWG members on activities under this WMP that may affect wildlife within USFWS' regulatory authority.
- Assign a designated USFWS representative knowledgeable in wildlife to the WWG.

2.1.4 ODFW will:

- Review and approve, as appropriate, any documents, including study, design, operating and implementation plans identified herein as requiring ODFW action.
- Provide input to the WWG members on activities under this WMP that may affect wildlife within ODFW's regulatory authority.
- Assign a designated ODFW representative knowledgeable in wildlife to the WWG.

2.1.5 Representatives of any Party may:

- Provide input to the WWG members on activities under this WMP.

2.2 Implementation, Coordination, and Approval

2.2.1 Implementation

EWEB shall implement and maintain the actions in this WMP according to the timelines in this WMP.

2.2.2 Coordination and approval

EWEB shall:

- Coordinate, consult with, and convene meetings of the WWG.
- Convene a meeting of the WWG at least annually. There may be times when a more frequent or less frequent schedule for convening meetings than annually will be necessary. Meetings will be scheduled less frequently than annually only with the consensus of the WWG. For purposes of this WMP, consensus means that any decision must be acceptable to, or not opposed by, all representatives of the members of the WWG.
- Make best efforts to prepare and distribute to the WWG members an agenda and all meeting materials at least fourteen days before each meeting.
- Prepare draft notes of each meeting including a list of attendees and meeting handouts, agreements or decisions made in the meeting and actions to be taken, provide the notes to the WWG members for review and comment within a reasonable period of time, and provide to the WWG members final notes that include the comments.
- Provide at least 30 days' written notice before each meeting unless unexpected circumstances require input from the WWG members on shorter notice.

For annual meetings, EWEB shall convene the WWG within the first quarter of each calendar year, unless EWEB determines it is appropriate to convene the annual meeting in a different quarter based on activities implemented under the License. For any annual meeting, EWEB shall summarize the actions implemented under the WMP for the previous calendar year and shall provide the summary to the WWG members either in writing or by posting on EWEB's website. In the summary, EWEB shall also summarize the actions EWEB plans to implement under the WMP for the current calendar year.

2.2.2.1 Consultation process

EWEB shall, where this WMP requires consultation with the WWG before EWEB files with FERC any study, operating or implementation plan, report, or facility design: (i) where specified in this WMP, consult with the WWG during the development of the draft study, plan, report, or design, (ii) provide the WWG members with a copy of the draft study, operating or implementation plan, report, or facility design and all data supporting that draft study, operating or implementation plan, report, or facility design, and (iii) allow a minimum of 30 days (which EWEB may reasonably extend upon request of a member of the WWG if needed to facilitate consultation) for the WWG members to comment and to make recommendations, unless a different time period is established under the License or this WMP or is directed by FERC.

During the consultation period, EWEB shall convene at least one meeting of the WWG to discuss the draft study, operating or implementation plan, report, or facility design and reach consensus and if consensus cannot be reached proceed as described below. EWEB shall provide to the

WWG members a final version of the study, operating or implementation plan, report, or facility design at the time that EWEB provides the final version of the document for approval pursuant to Section 2.2.2.2 below.

If a member of the WWG does not respond to a request for consultation within 30 days, or as such period may have been extended, that member is not considered for purposes of obtaining consensus. If no members of the WWG respond to the request for consultation within 30 days, or as such period may have been extended, EWEB may file the study, operating or implementation plan, report, or facility design with FERC.

When consultation is required under this WMP and consensus is not reached by the WWG prior to the date EWEB is required to make a submission to FERC, EWEB shall make the submission to FERC according to the schedule provided in this WMP or the License, or as directed by FERC, and shall describe to FERC how EWEB's submission accommodates any comments and recommendations of the WWG members. If EWEB's submission does not adopt a recommendation, the submission shall include EWEB's reasons based on Project-specific information. EWEB shall provide FERC with a copy of any comments and recommendations provided by the WWG members during the consultation. Any WWG member may seek to resolve the consultation disagreement in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. The WWG members may submit their own comments to FERC. If applicable, once the dispute resolution process is completed, EWEB shall file the study, operating or implementation plan, report or facility design with FERC.

2.2.2.2 Agency approval process

Where this WMP or the License requires consultation with the WWG and approval by one or more Governmental Parties, EWEB's submission of a study, operating or implementation plan, report, or facility design to the WWG members will also constitute submission for approval to such Governmental Party, if a member of the WWG. When approval of a Governmental Party is required, EWEB shall provide to the Governmental Party a final version of the study, operating or implementation plan, report, or facility design on which approval is sought. Unless a different time period is established in the License or in this WMP or is directed by FERC, EWEB shall, where approval by a Governmental Party is required, allow a minimum of 30 days for the Governmental Party to provide its approval before EWEB files any study, operating or implementation plan, report, or facility design with FERC. If consensus is achieved by the WWG pursuant to Section 2.2.2.1, such approval shall be deemed to have been obtained. Each Governmental Party who is a member of the WWG with approval authority will document its approval in writing to EWEB, which approval or approvals EWEB shall include in any filing with FERC. Unless otherwise required by the License or this WMP or directed by FERC, EWEB shall, if requested by any Governmental Party with approval authority, grant a 30-day extension for the completion of consultation. Any Governmental Party or Parties will endeavor to make approval decisions during consultation whenever possible.

If a Governmental Party does not respond to a request for approval within 30 days, or as such period may have been extended, the obligation for obtaining approval from that Governmental Party will be deemed to have been satisfied for purposes of meeting the requirements of the License and this Settlement Agreement. If no Governmental Parties with approval authority respond to the request for approval within 30 days, or as such period may have been extended, EWEB may file the study, operating or implementation plan, report or facility design with FERC.

When approval of a Governmental Party is required under this WMP and approval has not been provided, EWEB or the Governmental Party may seek to resolve the lack of approval in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. If the dispute has not been resolved after the dispute resolution process outlined in Sections 7.1, 7.1.1, and 7.1.2 of the Settlement Agreement or approval has not been provided prior to the date that EWEB is required to make a submission to FERC, EWEB shall make the submission to FERC according to the schedule provided in this WMP or the License, or as directed by FERC, and shall describe to FERC why approval was not provided. In such instance, the Governmental Party whose approval was required may submit its own explanation as to why approval was not provided. EWEB or the Governmental Party may seek to resolve the lack of approval in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. If applicable, once the dispute resolution process is completed, EWEB shall file the study, operating or implementation plan, report or facility design with FERC. If resolution was not achieved through dispute resolution, then the Governmental Party may submit its own explanation as to why resolution was not achieved.

2.2.2.3 Expedited consultation and agency approval process

When consultation under Section 2.2.2.1 above or Governmental Party approval under Section 2.2.2.2 above is required and the time provided for consultation in Section 2.2.2.1 or approval in Section 2.2.2.2 is not reasonably available because EWEB must implement an action under the License within a shorter period of time due to extraordinary circumstances beyond EWEB's reasonable control, EWEB shall provide notice to the Work Group and Governmental Party, as applicable, that: (a) an expedited consultation and approval process will occur within the time available, (b) the location, date and time for the process, (c) the subject for the process, and (d) why EWEB must take action within the shorter period of time. EWEB shall complete as much of the consultation and approval process as can occur in the time reasonably available before EWEB must implement the action. If consultation is not completed or an approval is not obtained within the time available, EWEB may implement the action to the extent allowed by law, but the Parties may still require that the consultation process in Section 2.2.2.1 above and the approval process in Section 2.2.2.2 above, as applicable, be completed after EWEB has implemented the action.

2.2.2.4 Consultation and Approval Process for Measures in the McKenzie Wild and Scenic River Corridor

Where this WMP requires consultation with the WWG and approval or authorization by the USDA Forest Service for measures that will be undertaken in the McKenzie Wild and Scenic River corridor that FERC does not require in the License, EWEB shall follow the consultation requirements described in Section 2.2.2.1 and the agency approval process described in 2.2.2.2.

Before initiating any habitat or ground-disturbing measures in the McKenzie Wild and Scenic River corridor located on NFS lands, EWEB shall obtain from the USDA Forest Service and file with the Commission any appropriate authorization for the occupancy and use of NFS lands for measures not otherwise included in the License.

2.3 Periodic Plan Review and Revision

EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, shall periodically review this WMP to determine if revisions are needed. The first such review will occur 5 years after License issuance unless otherwise agreed to by consensus of the WWG in consultation with the WWG. Subsequent reviews will occur every 5 to 10 years after that time unless otherwise agreed to by consensus of the WWG in consultation with the WWG to determine if and what specific revisions are needed. EWEB shall summarize any needed revisions at a meeting of the WWG, and 30 days prior to that meeting, distribute draft revisions to the WWG for review. Based on discussion at the WWG meeting, EWEB shall develop a revised draft WMP for review within 90 days after the meeting. EWEB shall provide all members of the WWG an opportunity to review and to comment on, and to reach consensus on the revised draft WMP in accordance with the procedures in Section 2.2.2.1 of this WMP. Any WWG member may seek to resolve a lack of consensus in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, shall then prepare a final revised WMP. If a required approval is not obtained, any WWG member may seek to resolve the lack of approval in accordance with the dispute resolution process in Section 7 of the Settlement Agreement.

In submitting the final revised WMP to FERC, EWEB shall also submit documentation of all WWG and agency consultation, agency approvals, copies of comments and recommendations on the draft and revised WMP, and specific descriptions of how the comments and recommendations were accommodated by the final revised WMP. If EWEB does not adopt a recommendation, the filing shall include EWEB's reasons, based on project specific information.

Revisions to the WMP will not be required to be implemented until EWEB is notified by the Commission that the revisions to the WMP are approved. Upon Commission approval, EWEB shall implement the revised WMP, including any changes required by the Commission.

EWEB may make minor (non-substantial) changes to this WMP consistent with the provisions of Articles 2 and 3 of the License, provided, however, that EWEB provides a minimum of 30 days advance notice of the minor changes to the WWG (unless circumstances beyond the reasonable control of EWEB require shorter advance notice) and no member of the WWG contends that the proposed changes are not minor. If any member of the WWG objects that the proposed changes are not minor, EWEB shall proceed through the consultation process in Section 2.2.2.1 above for the proposed changes. If EWEB elects, the objection by the member of the WWG that the proposed changes are not minor may also be considered during the consultation process.

3 OBJECTIVES

The objectives of this plan are to:

- Protect special-status wildlife species on Project lands and at Project facilities.
- Limit potential impacts from Project-related activities on wildlife species on NFS lands and private Project lands.
- Limit potential impacts from Project-related activities on invasive non-native wildlife species on Project lands and at Project facilities.

4 ELEMENTS

4.1 Maintain Seasonal Activity Restrictions for Northern Spotted Owl, Bald Eagle, Peregrine Falcon, and Harlequin Duck

Three wildlife species that are listed as threatened, or recently delisted, under the federal or state Endangered Species Act (ESA) have been documented to occur in the Project vicinity: (1) bald eagle (federally and state delisted but protected under the Bald and Golden Eagle Protection Act [Eagle Act] and the Migratory Bird Treaty Act [MBTA] and managed by the USDA Forest Service as a Region 6 Sensitive Species); (2) peregrine falcon (federally and state delisted but protected under the MBTA and the Willamette National Forest Plan Standards and Guidelines); and (3) northern spotted owl (federally and state threatened and an ODFW Oregon Conservation Strategy Species for the West Cascades Ecoregion). The harlequin duck is an ODFW Oregon Conservation Strategy Species for the West Cascades Ecoregion, USDA Forest Service Region 6 Sensitive Species, and protected under the MBTA.

The USDA Forest Service manages habitat and applies seasonal activity restrictions for these species as needed. For the northern spotted owl, the criteria is based on programmatic consultation guidelines in the USFWS Biological Opinion for *May Affect and is Likely to Adversely Affect* (LAA) projects (USFWS 2019), and Letter of Concurrence for *May Affect but is Not Likely to Adversely Affect* (NLAA) projects (USFWS 2018).

EWEB shall implement the following actions for the term of the License for these species:

- For normal Project operations (i.e., under conditions not associated with new construction activities), EWEB shall continue seasonal activity restrictions in place for these species as specified in this WMP, which are designed to prevent the potential disturbance of special-status wildlife.
- For new construction activities, EWEB shall, in consultation with the WWG and subject to approval of the USFWS, ODFW, and USDA Forest Service, develop seasonal restrictions applicable to new construction activities. EWEB shall develop, in consultation with the WWG and subject to approval of the USFWS, ODFW, and the USDA Forest Service, and implement seasonal activity restrictions for any additional wildlife species listed as endangered or threatened under the federal or state endangered species laws as provided below in Section 4.6.
- EWEB shall review the most recently available information for assessment and minimization of disturbance as supplied by the USDA Forest Service and/or USFWS and/or ODFW in accordance with Section 2 on an annual basis, with the goal of minimizing effects of the Project on the breeding activities of protected species.

EWEB shall implement protections for these four species as described below.

a) Northern spotted owl

EWEB shall adhere to the requirements and conditions identified in the USFWS Biological Opinion (USFWS 2010 and 2015) to reduce and monitor impacts on northern spotted owl as a result of Project-related activities (e.g., update the spotted owl analysis prior to implementing construction activities to foresee potential impacts). To the extent reasonably possible, adverse effects shall be avoided (e.g., EWEB shall schedule noise and habitat removal activities outside the spotted owl breeding period or as late as possible into the breeding period).

Noise disturbance impacts

Project actions previously consulted on with the USFWS are covered under the USFWS Biological Opinion (USFWS 2010 and 2015). If a new action (not previously consulted on) has a *May affect* determination (NLAA or LAA) or will occur within a potential spotted owl site, then EWEB shall modify the timing of the action, survey the action area for northern spotted owls using the techniques currently shown to most likely identify occupancy and nesting status, and/or consult with the USFWS. Site-specific conditions (e.g., topography, ambient noise, habitat quality) and the extent/scope of the activities shall be considered when evaluating and determining potential effects of a Project action.

If a site-specific survey is conducted in the year of the activity and no spotted owl occupancy or nesting is found, then no disturbance or disruption would occur (i.e., the action would have no effect) and there would be no seasonal restriction applied. Survey results shall be documented in the northern spotted owl annual report provided to the USFWS. If results document occupancy or nesting, then EWEB shall inform the USFWS and USDA Forest Service and either modify the timing of the action to reduce impacts to a no effect or NLAA determination, or consult further with the USFWS.

The sources of noise from anticipated EWEB Project actions are provided in Table 4-1. The disturbance and disruption distances are for known or potential northern spotted owl sites during the breeding period (March 1 through September 30). Implementing seasonal restrictions during the critical breeding period (March 1 through July 15) for standard noise-generating activities (e.g., chainsaw use, heavy equipment) within the disruption distance is intended to avoid harm or loss of reproduction. Noise disturbance that occurs at greater than the disruption distance during the critical breeding period is considered a NLAA determination.

Table 4-1. Disturbance and disruption distances for known or potential¹ northern spotted owl sites during the breeding period (Willamette Planning Province Interagency Level I Team 2017).

Source	Disturbance distance ²	Disruption distance ³	
	Entire breeding period (March 1 – September 30)	Critical breeding period (March 1 – July 15)	Late breeding period (July 16 – September 30)
Chainsaw use	0.25 mile	65 yards	N/A
Heavy equipment	0.25 mile	65 yards	N/A
Blasting	1 mile	0.25 mile 100 yards (injury)	100 yards (injury)
Burning	0.25 mile	0.25 mile	N/A
Helicopter—Chinook 47d	0.5 mile	265 yards	100 yards (hovering only)
Helicopter—Boeing Vertol 107, Sikorsky S-64 (SkyCrane)	0.25 mile	150 yards	50 yards (hovering only)
Helicopter—Kmax, Bell 206 L4, Hughes 500	0.25 mile	110 yards	50 yards (hovering only)
Aircraft (small fixed-wing aircraft; e.g., Cessna 185)	0.25 mile	110 yards	N/A
Light maintenance	0.25 mile	N/A	N/A
Hauling on open roads	0.25 mile	N/A	N/A
Pile-driving, rock crushing, and screening equipment	0.25 mile	120 yards	≤ 5 yards (injury)
Tree climbing	25 yards	25 yards	N/A
Siren (warning/alarms) ⁴	0.25 mile	0.25 mile	N/A
Drone	0.25 mile	65 yards from nest patches	N/A, if spotted owls are not pursued

¹ *Known spotted owl site* (also referred to as “activity center” in this document) = a site that was or is occupied by a pair or resident single (1990 to present) as defined by survey protocol. The specific site location is determined by the unit biologist based on the best and/or most recent information (USFWS 2015). A site may be determined to be inactive or unoccupied only in accordance with the current survey protocol (USFWS 2012) or other USFWS-accepted protocols (e.g., demography area protocols) (USFWS 2019). Distances are measured from the edge of the 300-meter nest patch, unless the current nest tree is known, in which case the distance is measured from that tree (USFWS 2019). For example, the total disturbance distance for chainsaw use is 0.44 mile from the activity center (0.25 mile + nest patch radius, or approximately 0.19 mile).

Potential spotted owl site = an area able to support resident spotted owls (i.e., a potential breeding pair), where spotted owls are not known to occur and surveys have not been conducted to protocol (USFWS 2019).

² *Disturbance distance* is the distance from the project boundary outward within which the action is likely to cause a spotted owl, if present, to be distracted from its normal activity.

³ *Disruption distance* is the distance from the project boundary outward within which the action is likely to cause a spotted owl, if present, to be distracted to such an extent as to disrupt its normal behavior and create the likelihood of injury or loss of reproduction.

⁴ Sirens are considered “other” for the purposes of analyzing disturbance. The siren will result in a sound level of 120 dB at 100 feet (A. Talabere, EWEB, pers. comm., August 2021), which is equivalent to a 50 horsepower siren that will result in a sound level of 130 dB at 100 feet and is identified as ‘extreme’ and results in disruption distance of 0.25 mile (USFWS 2006) during the critical breeding period.

Habitat removal impacts

EWEB shall consult with the USFWS, ODFW, and USDA Forest Service for all northern spotted owl habitat removal due to Project-related activity that is not identified in the USFWS Biological Opinion (USFWS 2010 and 2015) and may affect northern spotted owls (i.e., within designated critical habitat or suitable nesting/foraging habitat in the home range [1.2 miles] of an activity center). If critical habitat or take² of owls exceeds the amount covered under USFWS consultations, EWEB shall re-consult with the USFWS. All habitat removal for actions covered under previous USFWS consultation and for new Project actions, and any impacts to activity centers, shall be documented in the northern spotted owl annual report provided to the USFWS. As of 2022, some Carmen-Smith Project actions are being covered by the Willamette Planning Province's existing consultation for LAA (Willamette Planning Province Terrestrial Level I Team 2019 and USFWS 2019) and NLAA (Willamette Planning Province Interagency Level I Team 2018 and USFWS 2018) activities. The 2019 LAA consultation for spotted owls is being updated in 2023. EWEB shall address any changes in the most current Willamette Planning Province consultation documents and coordinate with the USDA Forest Service wildlife biologist regarding these actions.

b) Bald eagle

EWEB shall implement the current applicable *National Bald Eagle Management Guidelines* (USFWS 2007b) for Project-related activities that are planned to occur during the breeding period and within the disturbance distance of an occupied bald eagle nest (Table 4-2). EWEB shall also follow activity restrictions required for blasting and helicopter use for bald eagles during the breeding period from January 1 to August 31. The ending date of the seasonal restriction can be shortened if bald eagles abandon the nest area due to nest failure or early fledgling of young, as confirmed by an EWEB or USDA Forest Service wildlife biologist. EWEB shall not cut a historic eagle nest tree, unless it poses a hazard or other safety concern, in which case EWEB shall obtain the appropriate permit from USFWS, if necessary, to remove the tree.

The USFWS, ODFW, and USDA Forest Service may reduce or lift the restrictions on Project-related activities for a given area in a given year, depending on the anticipated impacts of the proposed action (perceived risk), the need for implementation, and/or if it determines that there is no reasonable potential for impact (e.g., surveys performed according to the *Observations at Bald Eagle Nest Sites in the Carmen-Smith Project Area: Monitoring Protocol & Reporting Guide, Attachment C, April 2020*, or other similar protocol as modified and approved by the USDA Forest Service and USFWS indicate that no bald eagle nesting activity is occurring within a zone of potential disturbance).

² Categories of effects and assessment of owl take from habitat removal (USDA Forest Service 2017):

- *No effect*: when the activity center is located farther than 1.2 miles from habitat removal
- *May affect but is not likely to adversely affect* (take 0 owls): when the percentage of nesting and foraging habitat pre-habitat removal and post-habitat removal within the core area and home range areas are greater than 50 percent and 40 percent, respectively
- *May affect and is likely to adversely affect* (take # of owls): when the percentage of nesting and foraging habitat pre-habitat removal and/or post-habitat removal within the core or home range areas is less than 50 percent, or nest patch is subject to commercial thinning of nesting and foraging habitat or dispersal-only habitat. The number of take for each activity center assumes 1 female, 1 male, and 1.5 young, rounded up to whole number of 4 owls, which is accounted for as 1 pair in the USFWS Biological Opinion.

Table 4-2. Disturbance distance for bald eagle nests during the breeding period (January 1 to August 31).

Activity	Disturbance distance
Road brushing and maintenance; use of chainsaws; use of heavy equipment; burning; use of a pile driver	0.25 mile (radius circle around the nest point); 0.5 mile line-of-sight (eagle view from nest, not from ground)
Use of a Type I, II, III, or IV helicopter*; use of a fixed-wing aircraft	0.5 mile (radius circle around the nest point)

*Incident Command System (ICS) definitions:

Type I helicopters seat at least 16 people and have a minimum capacity of 5,000 lbs. Both a CH-47 (Chinook) and UH-60 (Blackhawk) are Type I helicopters.

Type II helicopters seat at least 10 people and have a minimum capacity of 2,500 lbs. Both a Bell UH1-H and a Bell 212 are Type II helicopters.

Type III helicopters seat at least 5 people and have a minimum capacity of 1,200 lbs. Both a Bell 206 and a Hughes 500 are Type III helicopters.

Type IV helicopters seat at least 3 people and have a minimum capacity of 600 lbs.

For construction activities that are proposed within the disturbance distance of an occupied bald eagle nest, EWEB shall consult with the USFWS, ODFW, and USDA Forest Service unit biologist on reasonable measures designed to avoid disturbance during the bald eagle breeding period. Rare exceptions (see USFWS 2007b) may occur if there are conflicts with other resources, and in these cases, EWEB shall obtain the appropriate take permits under the Eagle Act from USFWS, if necessary. EWEB shall consult with the USDA Forest Service wildlife biologist for construction activities that include blasting activities based on topography and the extent of the blasting.

c) Peregrine falcon

EWEB shall implement the following applicable activity restrictions near a known occupied peregrine falcon nest site from January 15 to July 31: (1) within the primary nest protection zone which is generally up to 0.5 mile for the known or suspected nest ledge, with the exception of vehicle access, no activity is allowed; (2) within the secondary nest protection zone which is generally within 1 mile of the nest site, the use of heavy equipment for new construction or habitat enhancement projects may be seasonally prohibited (e.g., drilling, logging, construction of facilities, or other concentrated activities); and (3) within the tertiary management zone which is generally within 3 miles of the nest site, the use of explosives may be seasonally prohibited and the use of helicopters may be prohibited within 2 miles. Management in these zones shall follow current best professional judgment and knowledge for active site management.

In the event of an emergency in which EWEB needs to conduct repair or replacement of infrastructure, and the repair or replacement cannot be scheduled outside of the falcon breeding season, the restrictions shall be lifted. EWEB shall follow the procedural protocols and communicate with the Environmental Management Department as described in the most current *Transmission Line Management Plan*, Appendix A: Transmission Line Operations Guide. If the nest site is occupied, monitoring of the work may be advised and useful to further knowledge.

For any newly discovered occupied nest sites, the primary and secondary zones shall be drawn according to topography by a USDA Forest Service wildlife biologist, while the tertiary zone

shall be a 3-mile radius circle around the nest site. Seasonal restrictions shall consider the proposed action (e.g., activity type, extent, duration, and location relative to the nest), site-specific topography, and ambient conditions around the nest site.

The USDA Forest Service may reduce or lift the restrictions on Project-related activities for a known occupied nest for a given year, depending on the anticipated impacts of the proposed action, the need for implementation, and/or if it determines that the nest site is unoccupied by the peregrine falcon for that year based on protocol surveys. The ending date of the seasonal restriction can be shortened if peregrine falcons abandon the nest area due to nest failure or early fledgling of young with wildlife biologist concurrence.

If Project-related activities are planned to occur within the breeding season near a potential falcon nesting site not known to be occupied, then EWEB shall modify the timing of the action, survey the action area for falcons using protocol surveys to identify occupancy and nesting status, and/or consult with the USDA Forest Service, ODFW, and USFWS. Site-specific conditions (e.g., topography, ambient noise, habitat quality) and the extent/scope of the activities shall be considered when evaluating and determining potential effects of a Project action.

Table 4-3. Peregrine Falcon ‘McKenzie’ Nest Site Protection Measures by Activity Type in the Nest Protection Zones.

Activity	Primary Zone Seasonal Restriction?	Secondary Zone Seasonal Restriction?	Tertiary Zone Seasonal Restriction?
Vehicle access	No	No	No
Road maintenance, including the use of chainsaws ¹	Coordinate with the EWEB wildlife biologist	No	No
Foot traffic and other human disturbance, including climbing of transmission poles, parking of vehicles ²	Yes	No	No
Annual or regular transmission line vegetation maintenance using power tools	Yes	No	No
Chainsaw use, power tools, heavy equipment use	Yes	No	No
Snag creation using hand tools and tree climbing	Yes	No	No
Use of drones	Yes	Yes	No
Blasting and use of helicopters	Yes	Yes	Needs review by the EWEB and USDA Forest Service wildlife biologists and is dependent on the timing and duration of activity ³
Emergency access	No ⁴	No	No

¹ Chainsaw or other heavy equipment use in the primary nest protection zone, especially during the early nesting season, may disrupt peregrine falcons to the point of nest failure. Close coordination between the transmission line managers and the wildlife biologists will determine the extent and duration of needed work, urgency, and potential impacts. Nest monitoring prior to the work, and monitoring of the needed activities by the wildlife biologists may be required to better assess and determine impacts.

² Peregrine falcon site monitoring by wildlife biologists in the primary zone is excluded from the seasonal restriction because it is needed to determine presence and nesting outcomes.

³ Helicopters will be seasonally restricted up to two miles from the nest site, based on topography, flight paths, and overall timing. Blasting will generally be seasonally restricted within three miles and will be evaluated on a case-by-case basis.

⁴ If any of the above-mentioned seasonally restricted activities need to take place due to an emergency, EWEB shall follow the procedural protocols and communicate with the Environmental Management Department as described in the most current *Transmission Line Management Plan*, Appendix A: Transmission Line Operations Guide. If the nest site is occupied, monitoring of the work may be advised and useful to further knowledge.

The seasonal restrictions in Table 4-3 are specific to the McKenzie site, the only confirmed peregrine falcon nest site near the Carmen-Smith Project at the time of filing this amended WMP. Depending on site-specific topography, secondary zone work activities may be restricted for other peregrine falcon sites (i.e., for work within a broader versus a narrow valley).

For any newly discovered occupied nest sites, EWEB shall coordinate with the USDA Forest Service wildlife biologist, develop appropriate protection measures based on the local topography of that site, and update this section of the WMP.

d) Harlequin duck

EWEB shall implement applicable seasonal activity restriction requirements for harlequin ducks, from March 15 to July 15 (or March 15 to June 20), designed to minimize or avoid disturbance of any nesting harlequin ducks along streams that may be affected by any Project-related activity, including fisheries habitat enhancements. EWEB will apply full season (March 15 to July 15) restrictions where activities are occurring along entire stream reaches. EWEB will apply March 15 – June 20 restrictions where activities are occurring at spots along the stream reach. EWEB shall consult with the USDA Forest Service and ODFW on the development of applicable Project-related activity restrictions for harlequin ducks on a case-specific basis. Restrictions may include limiting operations to appropriate time periods or distance restrictions. The restrictions shall be designed to minimize or avoid disturbance to nesting harlequin ducks within stream channels or riparian zones that are identified by the USDA Forest Service wildlife biologist as potentially suitable nesting habitat.

High quality harlequin duck habitat areas have been identified and delineated. EWEB, after consultation with the WWG, and subject to approval by the USDA Forest Service, USFWS, and ODFW, may reduce the restrictions on Project-related construction activities or habitat enhancement projects conducted as part of License implementation, such as the addition of gravel, wood, and/or a gauging station to the Smith or Lower Carmen Bypass Reaches. Harlequin duck nest surveys cannot be effectively conducted due to the camouflaging nature of these ground nests, and the tendency for hens to remain quietly on nests. Entire areas near suitable streams are impossible to survey for reasons that include surveyor safety. The USFWS, USDA Forest Service, and ODFW may, by consensus, lift the restrictions on Project-related activities for a given area for a given year if they determine that the ecological benefits of performing aquatic or riparian habitat enhancements outweigh the risks of disturbance to harlequin duck. This is expected to rarely occur and would need to be approved by the USDA Forest Service District Ranger. In the rare case that a seasonal restriction is recommended and cannot feasibly be implemented, EWEB shall consult with the USDA Forest Service, ODFW, USFWS, and other WWG members on whether post-implementation monitoring will take place.

4.1.1 Post-implementation monitoring

EWEB shall perform post-implementation monitoring activities as described in the sections above.

4.1.2 Performance standards

For routine operations and maintenance, and activities to implement and maintain the protection, mitigation, and enhancement (PME) measures required under the License that could create disturbances to the northern spotted owl, the bald eagle, the peregrine falcon or the harlequin duck, EWEB shall implement the requirements of this Plan.

4.1.3 Maintenance actions

EWEB shall annually maintain and update confidential EWEB databases and other current information about special-status wildlife species distribution and habitat in the vicinity of the Project.

4.1.4 Contingency actions

If activity restrictions required by this Plan are not correctly implemented, EWEB shall take corrective actions designed to achieve the applicable activity restrictions. If corrected actions do not achieve the applicable activity restriction in the case of federally listed species ESA Section 7 consultation with be reinitiated with the USFWS. Subsequent actions by EWEB may include mitigation measures.

4.1.5 Timeline

EWEB is currently implementing seasonal activity restrictions for special-status species, and will continue to do so throughout the term of the License. EWEB, in consultation with the WWG and subject to approval of the USFWS, USDA Forest Service, and ODFW, shall evaluate and update the activity restrictions annually.

4.2 Bald Eagle Surveys and Nest Site Monitoring

Bald eagles are known to occur within the Carmen-Smith Project area (Stillwater Sciences 2006a). Suitable foraging habitats include Project reservoirs and the McKenzie River. Suitable nesting habitat includes large, mature trees surrounded by groups of smaller trees near water features such as river systems, large lakes, and reservoirs. During studies conducted by EWEB during the relicensing of the Carmen-Smith Project (Stillwater Sciences 2006a), bald eagles were observed at or near each of the Project reservoirs, but no indication of nesting near the Project was observed. In 2019, a bald eagle nest was observed by the USDA Forest Service in the vicinity of Smith Reservoir. The nest was active in 2020 and 2021 but found to be no longer present and unoccupied during the 2022 breeding period. EWEB and/or the USDA Forest Service will monitor the nest site annually through 2026 to determine if this nest will be re-built or if the site can be considered abandoned and that restrictions are no longer warranted (USFWS 2007b).

Ongoing surveys of bald eagles conducted by EWEB at Project reservoirs will provide useful information to EWEB, the USFWS, and the USDA Forest Service when planning activities that could potentially disturb bald eagles, such as construction of fish passage facilities at Trail Bridge Dam and reconstruction of Lakes End Campground on Smith Reservoir. The information could also be used, if nests are identified, to impose temporary restrictions on recreational uses near nest sites designed to reduce the risk of disturbance to bald eagles.

EWEB shall implement the following actions to monitor eagles at Project reservoirs without a known, nearby nest:

- Annually, EWEB shall conduct a minimum of two four-hour surveys of each Project reservoir without a known, nearby nest. EWEB shall monitor and map bald eagle presence and movement within 0.5 mile, or 1 mile line-of-sight, of the three Project reservoirs. EWEB shall use a ground-based approach consistent with the bald eagle survey procedure

described in the *Wildlife Distribution* technical report (Stillwater Sciences 2006a), unless a boat survey from the reservoir itself will provide data on how eagles are using parts of the reservoir that are not easily visible when following the ground-based protocol in the technical report.

- EWEB shall complete the surveys annually between April 1 and June 30 for the term of the License, but shall survey earlier in the calendar year if requested by a WWG member and if access and weather conditions allow.

EWEB shall implement the following actions to monitor eagles at Project reservoirs with a known, nearby nest:

- If Project-related construction, tree removal, or similar type project is expected, planned for, or underway within the disturbance distances of the nest (as identified in Table 4-2), EWEB shall complete at least three surveys annually, between March 1 and June 30. Surveying during the month of March may be valuable to detect any pair bonding or other early nesting behaviors. At the request of a WWG member or if the EWEB wildlife biologist deems it appropriate, EWEB shall conduct additional surveys in a given year, based on the anticipated impacts of a proposed action or if a major action is planned (e.g., use of helicopters during the breeding period).
- If no Project-related construction, tree removal, or similar type projects are expected, planned for, or underway within the disturbance distances of the nest (as identified in Table 4-2), EWEB shall complete at least two surveys annually between April 1 and June 30, but shall survey earlier in the calendar year if requested by a WWG member and if access and weather conditions allow.
- For each survey, EWEB will monitor and map bald eagle presence and movement within 0.5 mile, or 1 mile line-of-sight, of the reservoir. EWEB shall use a ground-based approach consistent with the bald eagle survey procedure described in the *Wildlife Distribution* technical report (Stillwater Sciences 2006a), unless a boat survey from the reservoir itself will provide data on how eagles are using parts of the reservoir that are not easily visible when following the ground-based protocol.
- EWEB shall use a qualified bald eagle surveyor to conduct the surveys.
- EWEB, in collaboration with the USDA Forest Service, shall monitor bald eagle nests occurring within the Project boundary. Nest monitoring will be conducted according to the current USDA Forest Service protocol, as provided in Attachment C, or other similar protocol as modified and approved by the USDA Forest Service, USFWS, and ODFW.
- EWEB shall note and report any bald eagle nesting activities observed around Project reservoirs to the USDA Forest Service, USFWS, and ODFW within 48 hours of observing the nesting activities.
- EWEB shall report the results of the annual surveys, including any bald eagle nesting, roosting, or foraging activities observed around Project reservoirs, to the WWG annually.
- EWEB shall consider information from the surveys and nest monitoring in the planning of construction, operations, and maintenance activities, including the management of recreation at Project reservoirs, and will adhere to all relevant protections as described in Section 4.1.

4.2.1 Post-implementation monitoring

Nest monitoring will be conducted according to the methodology described in Section 4.2 above.

4.2.2 Performance standards

Annual eagle surveys will be conducted according to the methodology specified in Section 4.2 of this WMP. Nest monitoring will be conducted according to the current USDA Forest Service protocol, as provided in Attachment C, or other similar protocol as modified and approved by the USDA Forest Service, USFWS, and ODFW.

4.2.3 Maintenance actions

No maintenance applies to this element.

4.2.4 Contingency actions

If surveys are not correctly implemented, EWEB shall take actions as quickly as reasonably practical to implement the applicable survey protocol.

If eagle survey and/or nest monitoring data indicate that bald eagles may not be sufficiently protected, EWEB, in consultation with the WWG and subject to the approval of the USFWS and USDA Forest Service, shall:

- Revise Project construction and operations, and/or make necessary changes at recreation sites to minimize the effects of these impacts on the eagles.
- Follow relevant guidelines of the *National Bald Eagle Management Guidelines* (USFWS 2007b), or current applicable document approved by the USFWS.

In the event that an eagle is harmed, harassed, or killed due to Project-related activities or operations, EWEB shall implement contingency actions. These contingency actions will be determined through consultation with the WWG and will be subject to the approval of the USFWS and USDA Forest Service. If necessary, EWEB shall apply for any anticipated take of bald eagles from the USFWS, as required by the Eagle Act.

4.2.5 Timeline

EWEB shall conduct the first year of surveys as specified in Section 4.2 above. EWEB shall implement the surveys annually throughout the term of the License.

4.3 Improve Transmission Line Visibility

Project facilities can pose a risk of collision to raptors, special-status birds, and other bird species. The collision hazards posed by the Project facilities to avian species were assessed using the 2006 Avian Power Line Interaction Committee (APLIC) standards (APLIC 2006, Stillwater Sciences 2006b). The assessment noted that the transmission line crosses water bodies in several locations, and because birds tend to use water bodies as flight paths and foraging areas, the water crossings increase the collision hazard (CEC 2002). The primary water bodies that the transmission line crosses include Trail Bridge Reservoir, Deer Creek, and the mainstem McKenzie River.

EWEB shall install visibility-enhancing devices to the transmission lines, in order to reduce the risk of injury from collision with the lines where they cross Project reservoirs, Deer Creek, and the McKenzie River (Table 4-4). In addition to installations at the spans listed in Table 4-4, EWEB shall install visibility-enhancing devices, when feasible and at the WWG's request during consultation, onto any new power lines that EWEB installs over water bodies within the Carmen-Smith Project boundary. These devices will be of a type, spacing, and alignment on the transmission line plane according to the most recent standards of the Avian Power Line Interaction Committee at the time of installation and replacement. An example of one type of visibility enhancing device is shown in Figure 1.

Table 4-4. Primary transmission line water crossings at the Carmen-Smith Project with bird flight diverters installed.

Location	Tower Numbers	Diverter Installed
Carmen Bypass Reach	1–2	27
Trail Bridge Reservoir	3–4	19
Trail Bridge Reservoir	4–5	15
Trail Bridge Reservoir	5–6	34
Trail Bridge tailrace	6–7	14
Deer Creek	20–21	12
Mainstem McKenzie River	41–42	8
Mainstem McKenzie River	42–43	6
Mainstem McKenzie River at Rainbow	132–133	5
Total		140

In addition to installing visibility-enhancing devices to the lines, the realignment of the transmission line along Deer Creek removed 2,640 ft of line from the riparian area. By reducing the amount of line running down Deer Creek, the collision risk posed by the Project is further reduced.

4.3.1 Post-implementation monitoring

EWEB shall visually inspect the structures added to improve the visibility of the transmission lines pursuant to this Section 4.3, from the ground using binoculars, every two years for the term of the License. EWEB shall note any missing or damaged structures and schedule replacement or repair during the next maintenance period (see Section 4.3.3 below). EWEB may conduct the monitoring in conjunction with other transmission line inspection and maintenance activities.

EWEB shall implement a reporting system in which all observed injuries or mortalities of raptors, waterfowl, and other birds at Project reservoirs or along Project transmission lines will be recorded. EWEB shall record all pertinent reasonably available information, such as species, apparent injury, location, date and time, person(s) that discovered or observed the bird. This information shall be relayed within 24 hours to EWEB's Environmental Management Department, and EWEB shall then notify the USDA Forest Service and, in the case of species listed under the federal Endangered Species Act, the MBTA, and the Eagle Act, the USFWS, within 48 hours of the observation. EWEB shall summarize and provide to the WWG annual records of any observed or reported injuries or mortalities.

4.3.2 Performance standards

Visibility-enhancing devices of the type and at the locations and spacing described above, without damage, shall be in place and functioning properly.

4.3.3 Maintenance actions

EWEB shall perform maintenance of any noted deficiencies within 6 months of the inspection noting the deficiency. In addition, every 5 years or when replacements are necessary, whichever is sooner, EWEB, in consultation with the WWG, shall review the latest standards and technology and will evaluate the need to upgrade the devices.

4.3.4 Contingency actions

If installation of visibility-enhancing devices at locations and distances provided in this Section 4.3 is not reasonably feasible, EWEB shall, in consultation with the WWG and subject to approval by the USDA Forest Service if on NFS lands, determine the appropriate contingency actions that EWEB shall implement. If (1) collision with a Project transmission line results in injury or mortality of a raptor or waterfowl species that is listed under the federal or state Endangered Species Act occurs, or (2) a pattern, as defined by the WWG, of injury or mortality to other raptor or waterfowl species emerges over several years, EWEB shall develop, in consultation with the WWG and subject to approval by the USDA Forest Service and the USFWS, a plan that identifies actions to address the continued impacts. EWEB shall complete and implement the plan, in consultation with the WWG, within one year of completion of the monitoring report in which the problem is identified.

4.3.5 Timeline

EWEB shall install visibility-enhancing devices within 18 months after issuance of the License. The first monitoring cycle shall occur within two years of installation.

4.4 Restrict Access to Roads to Improve Elk Habitat

The current and anticipated future quality, quantity, and distribution of elk habitat were analyzed for the elk emphasis areas that overlap the Project reservoirs, transmission line corridor, and associated access roads. The analysis identified the following elk emphasis areas Gate Ikenick, Upper West Side McKenzie, Belknap/Paradise, and Florence Mills (Stillwater Sciences 2006b). Elk habitat conditions in the elk emphasis areas that overlap Project features generally satisfy the

management objectives of the Forest Plan as amended for elk habitat (Stillwater Sciences 2006b). The habitat effectiveness values for size and spacing of forage and cover areas tend to be high, values for forage quality tend to be low, and values for road density tend to be intermediate (Stillwater Sciences 2006b).

Because elk can be stressed during fall and winter months due to hunting pressure, the rutting season, migration, and harsh winter conditions, as well as during the late gestation and calving periods, EWEB shall implement year-round access restrictions specified in this Section 4.4 on six roads (identified in Table 4-5 and Figure 2) used by the Project, which restrictions are designed to help create diverse, high quality habitat patches that offer as little human disturbance as reasonably possible. These restrictions on road access could increase the value of habitat patches surrounding the roads.

Table 4-5. Roads identified for year-round access restriction.

Map code	Road(s) affected		Primary EWEB usage
	USDA Forest Service Road Number	Common road name	
1	FR 2650611	Dusty Road	Towers 51, 53, 54 access
2	FR 2654782	Budworm Creek Road	N/A
3	FR 2600263	Tower 100–102 Access Road	Towers 100 to 102 access
4	FR 2600261	Tower 104–106 Access Road	Towers 104 to 106 access
5	FR 2600258	Tower 107 Access Road	Tower 107 access
6	FR 2633706	Powers Creek Road	N/A

EWEB shall implement the road closures by installing gates with locks to provide access to Project and other NFS facilities for maintenance, instead of implementing permanent road closure mechanisms, such as berms or revegetation. Access shall be restricted to EWEB and USDA Forest Service personnel, and any other entities that the USDA Forest Service and EWEB determine have a need for access.

EWEB shall cooperate with the USDA Forest Service on their public process for evaluating and deciding on road restrictions. EWEB, in consultation with the WWG and subject to the approval of the USDA Forest Service, shall install and maintain the gates throughout the term of the License. EWEB shall install and maintain informational signs at locked gates according to the standards to inform the public about the reason for restrictions in accordance with the *Roads, Waste Areas, and Staging Areas Management Plan* (Martha Goodavish Planning & Design and Stillwater Sciences 2008a).

4.4.1 Post-implementation monitoring

EWEB shall annually inspect all gates installed pursuant to Section 4.4 of the WMP to determine if they are functional (e.g., are not vandalized) or need maintenance (e.g., painting). EWEB shall check and lock gates on a regular basis on roads used for routine Project operations and maintenance.

4.4.2 Performance standards

EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, shall develop and implement specifications for locations and mechanisms for restricting road access. EWEB shall install gates that are the tube steel type according to USDA Forest Service standards (see Martha Goodavish Planning & Design and Stillwater Sciences 2008a).

4.4.3 Maintenance actions

EWEB shall perform any necessary maintenance of road closures and associated informational signs on Project roads specified in this Section 4.4 that are managed by EWEB. If a gate is damaged, missing, or in need of repair or repainting, EWEB shall repair or replace the gate within 3 months of discovery.

4.4.4 Contingency actions

If EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, determines that it is not feasible to install or maintain a road restriction required in this Section 4.4, EWEB in consultation with the WWG and subject to approval of the USDA Forest Service shall develop reasonably practical contingency actions or other reasonably practical mitigation.

4.4.5 Timeline

EWEB, in consultation with the WWG and subject to USDA Forest Service approval, shall finalize plans for road restrictions within 12 months after issuance of the License. EWEB shall implement identified road restrictions within 18 months of License issuance. EWEB shall initiate monitoring within six months of the closures.

4.5 Terrestrial Habitat Management

EWEB shall manage a minimum of 343 acres of terrestrial wildlife habitat for the duration of the License, as described (and including the lands and acres listed) below.

- a) EWEB shall fund and manage a Terrestrial Wildlife Habitat Fund (Fund) for the term of the License. To create the Fund, EWEB shall deposit \$20,000 per year (2008 dollars, adjusted annually for inflation as provided below), into an interest-bearing account for the duration of the License.
- b) The money in the Fund shall be used for the creation and management of terrestrial wildlife habitat, including early seral habitat. Expenditures from the Fund shall be proposed by any member of the WWG, discussed through consultation and collaboration with the WWG per Settlement Agreement Section 4 (Coordination and Decision Making), and approved by EWEB and the USDA Forest Service. As part of the Terrestrial Habitat Management Plan (THMP) required in Section 4.5.5, EWEB shall develop guidelines for expenditures from the Fund in consultation with the WWG and subject to approval by the USDA Forest Service. Expenditures from the Fund allowed and approved within the general vicinity of the Carmen-Smith Project are described in the THMP (Stillwater Sciences and EWEB 2022) and shall be used in accordance with the THMP.
- c) Money remaining in the Fund at the conclusion of any given calendar year shall be maintained in the interest-bearing account for use in successive years in accordance with this WMP.
- d) The \$20,000 payment amount specified above shall be deemed to be stated as of the year 2008, and EWEB shall escalate such sum as of September 1 of each following year (starting in September 2009 according to the following formula:

$$AD = D \times (\text{NGDP}/\text{IGDP})$$

Where:

AD = Adjusted dollar amount as of September 1 of the year in which the adjustment is made.

D = Dollar amount prior to adjustment.

IGDP = GDP-IPD for the second quarter of the year of the previous adjustment date (or, in the case of the first adjustment, the second quarter of the year before the Effective Date).

NGDP = GDP-IDP for the second quarter of the year before the adjustment date.

“GDP-IPD” is the value published for the Gross Domestic Product Implicit Price Deflator by the U.S. Department of Commerce, Bureau of Economic Analysis in the publication Survey of Current Business, Table 1.1.9 (begin on the basis of year 2000 = 100), in the third month following the end of the applicable quarter. If that index ceases to be published, any reasonably equivalent index published by the Bureau of Economic Analysis may be substituted by the agreement of the USDA

Forest Service and EWEB. If the base year for GDP-IPD is changed or if publication of the index is discontinued, EWEB shall promptly make adjustments or, if necessary, select an appropriate alternative index acceptable to the USDA Forest Service to achieve the same economic effect.

- e) EWEB shall manage the original 79 acres of the Carmen-Smith 115-kV transmission line right-of-way on NFS land for early seral habitat for the term of the License. These acres shall count toward the minimum acreage of 343 acres to be managed by EWEB for terrestrial wildlife habitat.
- f) EWEB shall manage the acres of the newly widened transmission line right-of-way corridor on NFS land for the benefit of terrestrial wildlife habitat for the term of the License. These acres shall count toward the minimum acreage of 343 acres to be managed by EWEB for terrestrial wildlife habitat. EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, shall identify the portion of the widened transmission line right-of-way that can be managed for early seral habitat, and EWEB shall manage that portion for early seral habitat for the term of the License.
- g) EWEB shall, with the WWG's assistance, use best efforts to acquire conservation easements on private lands located along the Project's 115 kV transmission line that qualify as terrestrial wildlife habitat, as determined by EWEB, in consultation with the WWG and with subject to approval by the USDA Forest Service, and manage these lands for their appropriate terrestrial wildlife habitat objectives for the term of the License. Lands identified by conservation easements obtained under this agreement shall count toward the minimum acreage of 343 acres to be managed by EWEB for terrestrial wildlife habitat.
- h) EWEB shall manage terrestrial wildlife habitat on appropriate EWEB-owned lands above the Leaburg Canal for the term of the License in accordance with a *Wildlife Habitat Management Plan* that will be developed by EWEB in consultation with the WWG and subject to approval by the USDA Forest Service. EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, shall determine the number of acres to be managed and the habitat objectives for those acres. Lands from the appropriate EWEB-owned lands above the Leaburg Canal shall count toward the minimum acreage of 343 acres to be managed by EWEB for terrestrial wildlife habitat, and shall be identified and determined in the *Wildlife Habitat Management Plan*.
- i) Money from the Fund can also be allocated by EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, for early seral or other terrestrial habitat improvement projects in the general vicinity of the Carmen-Smith Project, including the vicinity of the 115-kV transmission line.
- j) Money from the Fund can be spent annually on smaller efforts, or accrue over time and be spent as a larger sum on a larger enhancement effort. In some cases, funding fewer, large habitat improvement projects may be more beneficial to wildlife than funding more, smaller habitat enhancements. Therefore, if internal financial conditions allow, EWEB may consider alternative payment schedules during the License period, such as making a large "lump sum" payment (covering multiple annual payments)

upfront to fund an extensive project. Unless a unique opportunity arises, in which case consultation with the WWG would occur, EWEB shall maintain an annual payment of \$20,000 into the Fund, adjusted for inflation as described above. EWEB shall track all expenditures from the Fund and report on those actions as part of the annual update provided to the WWG.

4.5.1 Post-implementation monitoring

EWEB shall report annually to the WWG on the number of acres of terrestrial wildlife habitat being managed under this Section 4.5. EWEB shall include in the report the location and current condition of the habitat, along with any habitat improvement activities undertaken during the previous year.

4.5.2 Performance standards

EWEB shall manage and maintain a minimum of 343 acres of terrestrial wildlife habitat for the duration of the License, as described in Section 4.5.

4.5.3 Maintenance actions

EWEB shall manage and maintain a minimum of 343 acres of terrestrial wildlife habitat for the duration of the License, as described in Section 4.5.

4.5.4 Contingency actions

If EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, determines that it is not feasible to implement the measures described above regarding the identification and management of the specified acreage of land for terrestrial wildlife habitat, EWEB in consultation with the WWG and subject to approval by the USDA Forest Service, shall propose and implement alternate terrestrial wildlife habitat management actions.

4.5.5 Timeline

- EWEB shall provide initial funding to the Terrestrial Wildlife Habitat Fund in the first full calendar year following License issuance, and shall provide subsequent annual funding each year through the end of the License.
- EWEB shall manage the existing Carmen-Smith 115-kV transmission line right-of-way for early seral habitat beginning in the first full calendar year following issuance of the License, in coordination with the vegetation management activities described in the *Vegetation Management Plan* (Stillwater Sciences 2008).
- EWEB shall, in consultation with the WWG and subject to approval by the USDA Forest Service, develop a plan for (1) widening the transmission line right-of-way, including management of the right-of-way for early seral habitat, and (2) attempting to acquire conservation easements on private lands located along the right-of-way, within two years after issuance of the License.
- EWEB shall, in consultation with the WWG and subject to approval by the USDA Forest Service, develop the Wildlife Habitat Management Plan for appropriate EWEB-owned lands above the Leaburg Canal within two years after issuance of the License.

4.6 Ongoing Review of ESA-Listed Wildlife Species

EWEB shall, in consultation with the WWG, review on an annual basis the most recent available information on the occurrence or potential occurrence in the Project area of species listed under the federal or state Endangered Species Act after the effective date of the Settlement Agreement, with the goal of minimizing effects of the Project on any newly listed species. EWEB, in consultation with the WWG and subject to approval by the USFWS (or NMFS if appropriate), shall determine if any additional seasonal activity restrictions and other requirements are necessary for any newly listed state or federal endangered or threatened species found to occur within the Project area and potentially affected by Project-related activities.

EWEB, in consultation with the WWG, shall also annually review the list of species listed under the federal or state Endangered Species Act that may be present in the Project area to determine if any new or updated wildlife surveys are necessary to determine the presence of a newly listed species, and to determine potential Project-related effects to these newly listed species. EWEB shall report to the WWG a minimum of 30 days prior to the next WWG Annual Meeting on any identified changes to the known listing status or occurrence information for ESA-listed wildlife species that may be present in the Project area which may be adversely impacted by Project operations or maintenance, and shall propose measures designed to address the changes in information, as necessary.

4.6.1 Post-implementation monitoring

No monitoring applies to this element.

4.6.2 Performance standards

No performance standards apply to this element.

4.6.3 Maintenance actions

No maintenance applies to this element.

4.6.4 Contingency actions

No contingency actions apply to this element.

4.6.5 Timeline

EWEB, in consultation with the WWG, shall annually review the current information on ESA-listed wildlife species as provided in Section 4.6, above.

4.7 Review of Construction Activities for Special-Status Species

Prior to initiating construction activities, including activities related to recreational use and developments, EWEB shall evaluate the potential impacts of ground-disturbing Project-related construction activities on special-status wildlife species, and modify construction plans as appropriate and reasonably feasible, with an overall goal of preventing or minimizing impacts.

EWEB shall consult with USFWS, ODFW, and the USDA Forest Service, as applicable, to address potential construction impacts on special-status wildlife species. For species that are on the current USDA Forest Service Region 6 Special Status Species List (<https://www.fs.usda.gov/r6/issssp/policy/>), or other nest or den sites that are found to be occupied and potentially impacted by Project-related activities, EWEB shall follow the most current USDA Forest Service standards and guidelines that apply to the Willamette National Forest, McKenzie River Ranger District, or will consult further with the USDA Forest Service wildlife biologist on a project-specific basis.

For the purposes of this document and associated plans under the Carmen-Smith FERC License, “special-status species” are defined as the following:

- Listed under the federal or state Endangered Species Act
- Included on the most current USDA Forest Service Region 6 Special Status Species List (USDA Forest Service 2021)
- USDA Forest Service Survey & Manage Species for which the known or suspected range includes the Carmen-Smith Project area, as identified with the USDA Forest Service
- ODFW Oregon Conservation Strategy Species for the West Cascades Ecoregion for which the known or suspected range includes the Carmen-Smith Project area, as identified with the ODFW (Oregon Conservation Strategy 2016)

4.7.1 Post-implementation monitoring

Any post-implementation monitoring of new construction projects shall be developed by EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, ODFW, and/or USFWS as applicable, as part of the specific plans for a given construction project.

4.7.2 Performance standards

The performance standards for new construction projects relating to wildlife are provided above in this WMP

4.7.3 Maintenance actions

The maintenance actions for new construction projects relating to wildlife are provided above in this WMP

4.7.4 Contingency actions

The contingency actions for new construction projects relating to wildlife are provided above in this WMP.

4.7.5 Timeline

Review and modification of construction plans shall occur intermittently over the course of the License term, according to the timeline of proposed construction activities.

4.8 Invasive Non-Native Wildlife Species

EWEB shall develop, in consultation with the WWG and subject to approval of the USDA Forest Service, and in coordination with the Recreation and Aesthetics Management Plan Work Group (RAWG) where recreation facilities or activities would be affected, and shall implement a program designed to prevent the introduction of non-native wildlife species to Project reservoirs, and to stream reaches and lands within the Project boundary. EWEB shall implement the program as part of the overall Project interpretation and education program (I&E Program) included as an element of the *Recreation and Aesthetics Management Plan* (Martha Goodavish Planning & Design and Stillwater Sciences 2008b).

4.8.1 Post-implementation monitoring

Any post-implementation monitoring of the program designed to prevent the introduction of non-native wildlife species to Project reservoirs, and to stream reaches and lands within the Project boundary shall be developed by EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, and in coordination with the RAWG where recreation facilities or activities would be affected, and subject to approval by the USDA Forest Service, as part of species-specific strategies for preventing and/or controlling introductions.

4.8.2 Performance standards

The performance standards for addressing invasive non-native wildlife species are provided above in this WMP.

4.8.3 Maintenance actions

Any maintenance actions shall be developed by EWEB, in consultation with the WWG and subject to approval by the USDA Forest Service, and in coordination with the RAWG where recreation facilities or activities would be affected, and subject to approval by the USDA Forest Service, as part of species-specific plans for preventing and/or controlling introductions.

4.8.4 Contingency actions

The contingency actions for addressing invasive non-native wildlife species are provided above in this WMP.

4.8.5 Timeline

EWEB, in consultation with the WWG, and in coordination with the RAWG where recreation facilities or activities would be affected (Martha Goodavish Planning & Design and Stillwater Sciences 2008b), and subject to approval by the USDA Forest Service, shall develop the timeline for this element as part of species-specific plans for preventing and/or controlling introductions.

5 REPORTING REQUIREMENTS

EWEB shall prepare an annual report regarding EWEB's implementation of this WMP. EWEB shall provide a draft of the annual report to the WWG for a 30-day comment period on the draft report. At the request of a WWG member, EWEB shall extend the comment period for an additional 30 days. EWEB shall submit a final report and response to comments on the draft report to the Commission within 90 days after the end of the comment period. EWEB shall include, at a minimum, the following information in the annual report:

1. A summary of the actions that EWEB implemented during the previous calendar year.
2. A discussion of any substantial differences between the actions provided in this WMP and the actions that EWEB implemented, including explanations for any substantial differences.
3. A summary of the actions EWEB plans to implement for the current calendar year.
4. A discussion of any substantial differences between the implementation schedule in this WMP and the schedule for the actions EWEB plans to implement in the current calendar year, including an explanation for any substantial differences.
5. Documentation of consultation with the WWG and approval by the agencies with approval authority regarding actions EWEB implemented under this WMP in the previous calendar year.
6. Results of any monitoring that occurred during the previous calendar year, conclusions that EWEB draws from the monitoring results, and any changes to this WMP EWEB proposes based on the monitoring results. EWEB shall consult with the WWG and obtain any necessary approvals as provided in Sections 2.2.2.1, 2.2.2.2, 2.2.2.3, and 2.3 of this WMP regarding any proposed changes to this WMP based on the monitoring results.
7. Results of the annual bald eagle survey, including any bald eagle nesting, roosting, or foraging activities around Project reservoirs.

6 OVERALL TIMELINE

The overall timeline of the work described in this WMP is illustrated in Figure 3.

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Figures

Figures



Figure 1. TYCO Swan Flight Diverter Type.

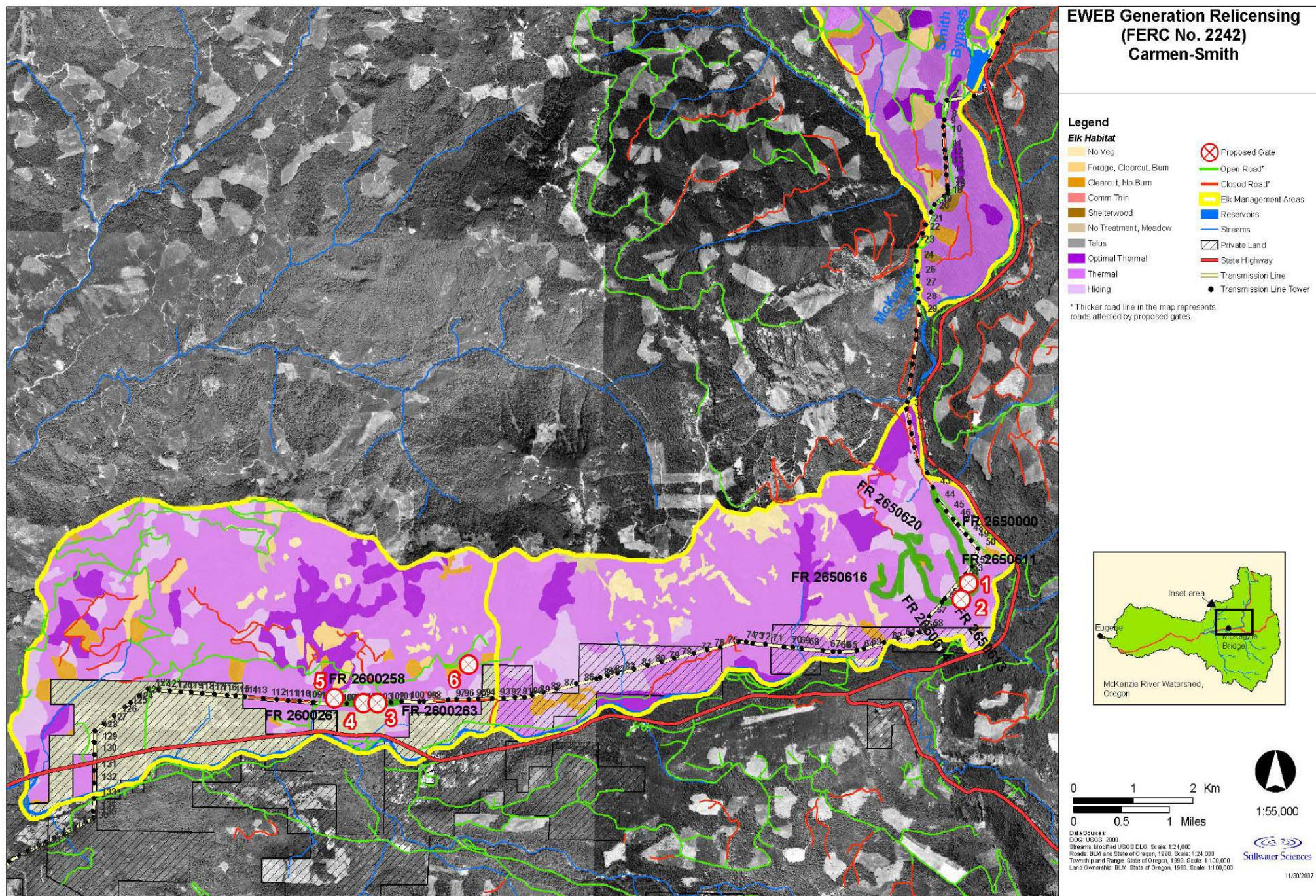
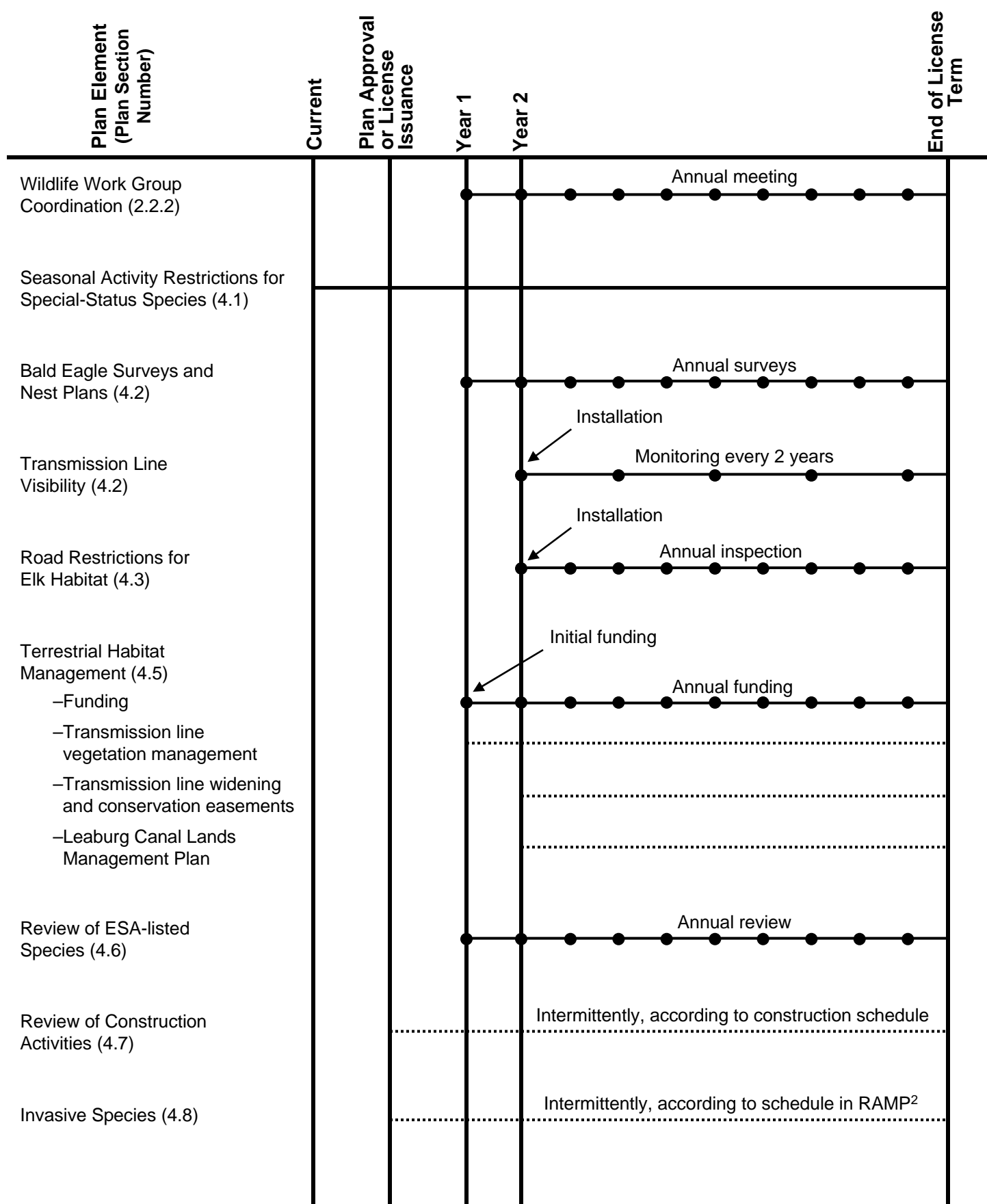


Figure 2. Proposed road closures and gate locations.

Figure 3. Wildlife Management Plan Overall Timeline¹



¹ For exact timing of implementation, monitoring, and other actions, see the section for each element.

² Recreation and Aesthetics Management Plan. See Action 21 Interpretation and Education Program (Section 4.2.1).

Attachments

Attachment A

Wildlife Management Plan Representatives

ATTACHMENT A
WILDLIFE MANAGEMENT PLAN REPRESENTATIVES

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Attachment B

Section 8.12 of the Settlement Agreement

8.12 Notice.

Except as otherwise provided in this Section 8.12, any notice required by this Agreement will be written and will be sent by first-class mail or comparable method of distribution (including e-mail) to all Parties still in existence or their successors and will be filed with FERC if required by this Agreement. For the purpose of this Agreement, a notice will be effective seven days after the date on which it is mailed or otherwise distributed. When this Agreement requires notice in less than seven days, notice will be provided by telephone, facsimile, or electronic mail and will be effective when provided. For the purpose of notice, the list of authorized representatives of the Parties as of the Effective Date is attached as Exhibit I. The Parties will provide notice as provided in this Section 8.12 of any change in the authorized representatives designated in Exhibit I, and EWEB will maintain the current distribution list of such representatives.

Attachment C

Observations at Bald Eagle Nest Sites in the Carmen-Smith Project Area: Monitoring Protocol & Reporting Guide

Observations at Bald Eagle Nest Sites in the Carmen-Smith Project Area: Monitoring Protocol & Reporting Guide

April 24, 2020

Revised from 2007 protocol developed by Frank Isaacs.

- 1) INTRODUCTION
- 2) PROTOCOL
- 3) REPORTING
- 4) EXAMPLES OF REPORTS
- 5) WHERE TO SEND REPORTS
- 6) LITERATURE

1 INTRODUCTION

Some thoughts on attitude and approach:

- The bald eagle nesting population in Oregon has been increasing and the distribution of nest sites has been expanding for 30+ years. It is rare for a breeding area to not be occupied by at least one adult bald eagle.

There are two sources of error that observers should be aware of and try to keep at a minimum:

- Error 1 is concluding that a breeding area is unoccupied after minimal survey effort. What we perceive as a failure by bald eagles to occupy a site is more likely a failure of the observer to find the eagles. If eagles are not found on the first visit, then follow-up visits are necessary. If all known nests in a breeding area appear to be unused, then a search for a new nest is warranted. Fresh material will usually be present on the edge of the nest in use.
- Error 2 occurs when trying to determine the number of eaglets on a nest. Eaglets can be out of view for long periods of time. Minimal survey effort can result in nests with young being classified as failures, or only one eaglet being counted where there are actually two or three.

If no chicks are immediately visible on a nest, look for evidence of young. White feces on the tree trunk or limbs adjacent to the nest surface may indicate the presence of unseen young. Eaglets defecate over the edge of the nest and much of the feces ends up on tree trunk and branches. Down feathers stuck to sticks on and around the nest surface also might indicate there are young present. If you see either of those clues, suspect young and spend more time observing. If you see one chick on a nest and don't have a clear view of the nest surface, then suspect two or three chicks, and wait until an adult visits the nest with prey before concluding there is just one chick. Upon arrival of an adult a second, or even two more chicks may stand or move into view. The extra time spent observing the nest will often be rewarded with interesting eagle action that would otherwise be missed.

2 **PROTOCOL**

Nests should be observed from a distant location that does not disturb the eagles. Use a spotting scope from a distance greater than 800m (1/2 mile), however you may need to be closer to view the nest site. If you disturb an eagle, leave the area.

The objective is to determine the outcome of nesting which requires at least two visits to the nest site at strategic times during the breeding season, which lasts from January through August.

The goal of the first monitoring session is to determine if a breeding area is occupied. The second session is conducted to determine the outcome of nesting. More than two visits may be required to determine nesting outcome.

The best timing for the first monitoring session is late March or early April, if the site is accessible. If no eagles are observed during that visit, the breeding area should be checked weekly until one or more adult bald eagles are observed, or 15 May, whichever comes first.

The second monitoring session should take place within a week of June 1. If mostly-feathered nestlings are observed; i.e., stage 3b or older (Carpenter 1990), and you are sure how many there are, or you are sure that the nesting attempt failed, no further visits are required. If the number of nestlings is uncertain, downy nestlings are observed (stage 3a or younger), or outcome is uncertain, additional monitoring is required. If nestlings are feathered and you need to verify the number of nestlings, then return within a few days. If outcome is uncertain, then return weekly until outcome is determined. If nestlings are downy during the late-May/early-June visit, then return in 4 weeks. Be aware that early nesting pairs may have eaglets that are at or near fledging on June 1.

When conducting a monitoring session, assume it will take 2 hours to determine nest status. Usually it doesn't take that long, but it is better to expect 2 hours and use 30 minutes than to think you will be done in a few minutes and then be disappointed for 2 hours. When looking for nestlings, assume there are nestlings and don't give up hope until you are certain none are present; it can take 2 or more hours or return visits to be positive. At places where nests are easy to observe, short monitoring sessions weekly or every two weeks are as effective as two long sessions.

Complete a report for every day a site is observed. If a site is observed very frequently, a report is only needed for significant events such as nest building, start of incubation, hatching, nesting outcome determined, fledging, etc. The goal is to determine the number of feathered nestlings. Fledging dates are not essential but provide valuable information and should be reported when known.

The earliest nesting pairs begin incubating in mid-February; late nesters begin incubating in late April. Egg laying has not been observed after May 1 in Oregon. If a nest is not being used by May 15, it will probably not be used that season. If you know that a pair are unusually early or late nesters, adjust your observation schedule accordingly.

Age of young should be described following the attached aging guide from Carpenter (1990).

3 REPORTING

Document the following information in your field notebook or on a field form.

Field notes or written summaries of observations provide the best descriptions of bald eagle nesting activities. They can follow a variety of formats or writing styles, and they can be as concise or extensive as needed. Abbreviations can be used, as long as the meanings are obvious. Ideally you would submit your completed observation form to the wildlife biologist within one week of observations, or sooner if you are aware of any activities that are in progress or may be planned that may disturb the eagle nest site.

The goal of each report is to accurately describe what was observed during a monitoring session.

Reports should contain the following information:

Observer(s) Name and Contact Information (email and phone number)

Date of Monitoring Session

Site Name

Survey Method (ground-based or aerial)

Location of Observation Point (ideally provide a UTM in NAD83) and/or a map

Number, Age Class, and Behavior of Each Bald Eagle Observed, including plumage stage of eaglets

Nest and Nest Tree Condition (if there has been a change)

Observation Times

Other Notes on anything that seems pertinent i.e. human activity that appears to be disturbing, weather that could have affected eagle behavior or the accuracy of the report, prey, eagle interactions with other species, etc.). For new nests, describe the nest, the nest tree, and the location of the new nest tree (send a detailed map if possible). If you use GPS coordinates to describe observation points or nest tree locations, include the datum used (NAD83/WGS84). If you use compass bearings, indicate if they are based on magnetic north or true north. Follow the most current data entry guidelines for the Willamette National Forest Region 6, in coordination with the USDA Forest Service wildlife biologist.

4 FIELD FORM

EAGLE SURVEY FORM

McKenzie River Ranger District, Willamette National Forest

1 - SITE NAME:

2 – OBSERVER(S) AND SURVEY DATE:

3 - SURVEY METHOD: G

4 - OBSERVATION POINT (LAT/LONG IN DECIMAL DEGREES):

5 - NUMBER OF ADULT BALD EAGLES OBSERVED:

6 - NESTING STATUS:

7- DEVELOPMENT OF NESTLINGS:

8 – OBSERVER PHONE AND EMAIL:

9 - OBSERVATION START AND END TIMES:

10 - NOTES:

Please show observations and movement patterns of eagles on a map. Drawings or photos are also helpful.

Use this area to report any unusual or notable observations and delete these orange comments before submitting the form. Include the following information if it applies:

- New nest(s).
- Nest building at existing or new nests.
- Copulation(s).
- Successful hunting attempt(s), and prey caught and eaten, or delivered to the nest.
- Adult(s) apparently feeding unseen nestlings.
- Subadult(s) in a nesting pair (describe plumage of subadult and sex if possible). Remember: females are larger than males, but usually that can only be determined if both members of the pair are perched close together.
- Subadult(s) observed (describe plumage and behavior).
- Extra adult(s) observed (describe behavior).
- Condition of nest tree(s) if there has been an obvious change, e. g., the tree died.
- Unusual human activity nearby that did or did not disturb the eagle(s).
- Sick, injured, or dead eagle(s) observed or reported.
- Interactions between eagle(s) and other species.
- Other species using an eagle nest.
- Reports from other observers that may be relevant.
- Obvious changes in habitat, e. g., trees logged or dying, human development, drought or flood conditions, etc.
- Weather or viewing conditions, if they affected the observation.
- Anything else that was interesting, unusual, or relevant.

5 WHERE TO SEND REPORTS

Please submit your bald eagle monitoring report to the McKenzie River Ranger District Wildlife Biologist Ruby Seitz, ruby.seitz@usda.gov, 541-822-7256.

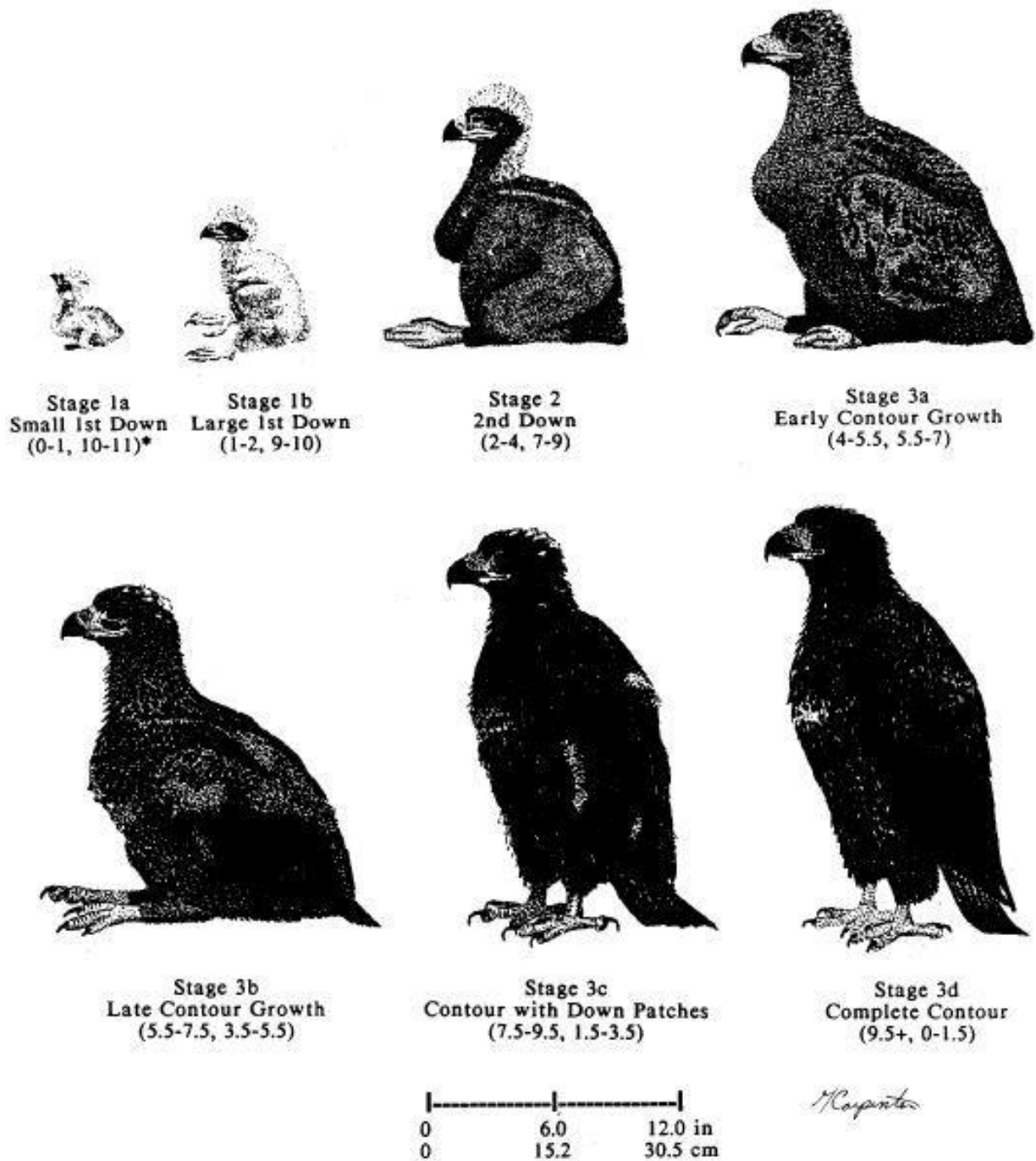
For specific bald eagle monitoring questions, you may also contact Frank Isaacs at: fbisaacs@gmail.com, 541-929-7154.

6 RELEVANT LITERATURE

Carpenter, G.P. 1990. An illustrated guide for identifying developmental stages of bald eagle nestlings in the field. Final draft, April 1990. San Francisco Zoological Society, San Francisco, California 94132. [attached]

Isaacs, F.B. and R.G. Anthony. 2011. Bald eagles (*Haliaeetus leucocephalus*) nesting in Oregon and along the Lower Columbia River, 1978-2007. Final report. Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University, Corvallis, Oregon, USA. 242pp.
<http://www.fs.fed.us/r6/sfpnw/issssp/documents/inventories/inv-rpt-bi-hale-oregon-1978-2007-2011-03.pdf>

McCollough, M.A. 1989. Molting sequence and aging of bald eagles. The Wilson Bulletin. 101:1-10. [available upon request]



* (approximate number of weeks since hatching, approximate number of weeks until fledging)

FROM: Carpenter, George P. 1990. An illustrated guide for identifying developmental stages of bald eagle nestlings in the field. Final draft, April 1990. San Francisco Zoological Society, San Francisco, CA 94132.