

OREGON DEPARTMENT OF FISH AND WILDLIFE PROPOSED STUDY No. 8 Surveys for Sensitive Wildlife

8.1 Goals and Objectives - §5.9(b)(1) — *Describe the goals and objectives of each study proposal and the information to be obtained*

ODFW Statement:

Updated sensitive wildlife surveys should be done for the following species: greater sage grouse (*Centrocercus urophasianus*), pygmy rabbit (*Brachylagus idahoensis*), mountain quail (*Oreotyx pictus*), western burrowing owl (*Speotyto cunicularia*), willow flycatcher (*Epidonax traillii*), loggerhead shrike (*Lanius ludovicianus*), western toad (*Bufo boreas*) and Columbia Spotted Frog (*Rana lutiventris*) be included in this list.

Additionally, surveys for bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) need updating. Both species are afforded protective measures through the Eagle Protection Act. OID should consult with biologists from ODFW, BOR and the USFWS to determine the location of bald and golden eagle nest and roost sites in the project vicinity. Specific protective guidelines are in place that regulates activity near these sites.

The project has the potential to have short term impacts from construction and long term impacts from operation on sensitive wildlife species. These include noise and human activity associated with project construction and operation. This could alter behavioral patterns and migration routes and jeopardize nesting success of avian species in the vicinity. Some wildlife may be displaced from their habitats during construction of the powerhouse and burial of transmission lines. Overhead transmission lines pose a risk of electrocution to perching birds and collision to birds in flight. OID should survey to identify sensitive wildlife species that may be impacted by the project.

OID Response:

The goals and objectives of this study is to determine the potential presence of sensitive wildlife species occurrence in the area affected by the project so that appropriate mitigation measures could be implemented if the potential occurrence is high. Some avian species such as raptors may range over large areas when foraging and therefore occurrence in the region based on previous studies could serve as an indicator of presence.

8.2 Relevant Resource Management Goals - §5.9(b)(2) — *If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.*

ODFW Statement:

ODFW's wildlife policy (ORS 496.012) establishes wildlife management policy to prevent serious depletion of any indigenous species and maintain all species of fish and wildlife at optimum levels. The wildlife diversity program's goal is to maintain Oregon's wildlife diversity by protecting and enhancing populations and habitats of native wildlife at self-sustaining levels throughout natural geographic ranges (OAR 635-100-0010). The Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0010) requires or recommends, depending upon the habitat protection and mitigation opportunities provided by specific statutes, mitigation for losses of fish and wildlife habitat resulting from development actions.

OID Response:

OID understands and supports ODFW's wildlife management policy. Appropriate mitigation measures will be proposed for sensitive species likely occurring in the project affected area.

8.3 Background and Existing Information - §5.9(b)(4) — Describe existing information concerning the subject of the study proposal, and the need for additional information.

ODFW Statement:

There is information available from previous surveys done by previous Bowman Dam Hydroelectric Project applicants. This information along with information available from ODFW, BLM, USFWS and BOR should be used as a basis for informing the updated surveys and information that needs to be collected via this study. As these previous surveys are a number of years old it is important that updated information be collected in respect to informing the potential impact of the proposed Project activities on the various species. In particular updated information is necessary on the current status of breeding activities and nesting sites for golden eagles, bald eagles and other raptors in the vicinity of the Project.

OID Response:

As a first step in determining the potential presence of sensitive species within the area affected by Project construction and operation, OID will:

- 1. Formally request information on documented occurrences of rare, threatened and endangered plant and animal species within 2 miles of the Project boundary from the Oregon Biodiversity Information Center.*
- 2. Request similar information from the local offices of the Bureau of Land Management, U.S. Forest Service and Bureau of Reclamation.*
- 3. Review studies conducted in support of previous proposals to develop hydropower at Bowman Dam.*

At this time OID also requests any wildlife survey information ODFW may have in its files. OID will use this information to develop a list of sensitive species to be evaluated.

A wetland survey was conducted of the area affected by the project in 2013 on behalf of Ochoco Irrigation District (Sharp, Melanie M. and Kent E. Snyder, Ph.D, Normandaeu Associates, Inc. April 2013. Wetland Report Arthur R. Bowman Dam Crooked River, Oregon.).

A reptile and amphibian study and report was performed in 2013 for Portland General Electric's proposed Crooked River Hydroelectric Project (Northwest Ecological Research Institute. April 2013. Bowman Dam Herpetological Study Report.).

8.4 Project Nexus - §5.9(b)(5) — Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.

ODFW Statement:

Documenting presence or absence of sensitive wildlife species and level of utilization is essential to developing appropriate mitigation measures addressing potential project impacts.

The project has the potential to have short term impacts from construction and long term impacts from operation on sensitive wildlife species. These include noise and human activity associated with project construction and operation. This could alter behavioral patterns and migration routes and jeopardize nesting success of avian species in the vicinity. Overhead transmission lines pose a risk of electrocution to perching birds and collision to birds in flight. OID should survey to identify sensitive wildlife species that may be impacted by the project.

OID Response:

The project would result in some degree of habitat loss due to restoring the access road at the south abutment of the dam leading to the powerhouse location. Some additional loss of habitat would be lost to establishing a laydown and staging area during construction. To assess project effects it will be necessary to identify the quality of this habitat to support sensitive wildlife species.

Bald and golden eagles have been known to nest in the vicinity of the project. A review of known nest territories will be needed to determine if the nest territories could experience disturbance during construction.

Construction and operation of the Project has the potential to impact wildlife in three ways:

- 1. direct mortality of individual animals,*
- 2. loss or alteration of habitat, and*
- 3. modification of essential behaviors through human disturbance.*

Each of these potential impacts warrants a specific assessment. Direct mortality and loss/alteration of habitat can only occur within the areas directly disturbed during construction and/or occupied by Project features (Project Area, including powerline corridor and access road). Modification of behavior can occur at varying distances from the Project Area, depending on species-specific sensitivity to human presence.

OID will develop a map of the Project Area plus 0.25 mile that can be used to determine the presence of habitat for each of the sensitive species of interest. If habitat for a covered species occurs within the Project Area, it will be assumed that Project construction may alter habitat for the species. To determine the potential for direct harm of sensitive species, surveys of the Project Area will be conducted. Surveys will be limited to those sensitive species potentially present, based on habitats within the Project Area (i.e., no surveys will be conducted for a species if habitat for the species is not present). OID may forego surveys for one or more species if their presence has already been documented or is considered highly likely. If habitat for a covered species exists within 0.25 mile of the Project Area and the species is known to be present (as a result of surveys) or considered likely to be present (based on professional judgment), the potential for alteration of behavior will be determined based on species-specific sensitivities documented in the scientific literature.

Mitigation measures will be developed based on the results of the habitat assessment and surveys, and the nature of the impact (e.g., habitat loss vs. alteration of behavior vs. potential for direct mortality).

OID will also conduct a botanical survey of the area directly affected by project development including the access road and laydown and staging areas utilized during construction. The surveys will include on the ground searches for sensitive plants that may occur in the area and for noxious weeds. Surveys will be conducted at various seasons depending on the floristic conditions needed for accurate identifications. Survey methods include on the ground searches by a qualified botanical expert. The entire project affected area will be surveyed. The distribution tap right-of-way may be too

steep to safely survey on the ground. Therefore, botanical habitats will be identified such as soil or geologic formations, slope, aspect, and other conditions affecting plant occurrence will be identified.

8.5 Proposed Methodology §5.8(b)(6) — *Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field seasons(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.*

ODFW Statement:

Proposed study methods involve two observers documenting diurnal wildlife use, specifically sensitive species, in the project area for a minimum of 15 hours. ODFW recommends the survey period total 30 hours, with 15 hours occurring during the April-May avian nesting and amphibian breeding periods and 15 hours of survey during the proposed construction period November-February. Rather than random observations, it is suggested ODFW consult with ODFW to develop a systematic approach.

Emlen transects are an accepted practice frequently used to document presence and density of avian species (Emlen 1977). The applicant should further consult with ODFW and USFWS for help in designing effective survey protocols for amphibians and the other identified species.

This type of analysis is consistent with other sensitive wildlife species protection analyses completed during licensing proceedings for hydroelectric projects that have the potential to adversely affect state and federal sensitive wildlife species and ESA-listed wildlife species.

OID Response:

Many wildlife species are highly mobile, secretive, camouflaged, may be diurnal or nocturnal, and therefore have varying degrees of detectability. Because of this surveys to determine presence and density of species are difficult since presence may be proven, but absence cannot. Trapping and handling animals may cause unnecessary stress on animals and possible mortality.

The area of direct impact from project construction (Project Area) is small and OID proposes to survey it for the presence of sensitive species using methodologies developed and approved for each individual species (i.e., visual encounter spring breeding surveys for western toad and Columbia spotted frog). For the larger area of potential disturbance from human activity, OID proposes an alternate approach. OID will prepare a detailed map of wildlife habitats within the project effected area (Project Area plus ¼ mile) and rate the quality of each habitat type present for the species of interest. If suitable habitat is present for sensitive species that are known to occur in the region based on literature review, it will be assumed that the species may be present and appropriate disturbance avoidance/mitigation measures will be developed and implemented.

Raptor species in general may not breed or nest in the project effected area but may forage over a variety of habitat types. The greatest potential risk to raptors would be the presence of the distribution powerline tap from the powerhouse to the ridgeline north of the dam. To mitigate any potential electrocution or collision OID would design and construct the new powerline tap according to the recommendations of the Avian Power Line Interaction Committee.

There are historic records of bald and golden eagles nesting on the cliffs in the vicinity of the project. Bald and golden eagles will utilize the same nest territory year after year. A nest territory may

contain multiple nest sites and the active site may change from year to year. It will be important to determine if the nest territories are active prior to commencing construction. Breeding activities begin as early as February with courtship flights and nest construction. If active nest locations are within the line of sight of the construction area ODFW would consult with ODFW, FWS, and BLM to develop appropriate mitigation actions.

8.6 Level of Effort and Cost - §5.9(b)(7) — Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

ODFW Statement:

Proposed study methods involve two observers documenting diurnal wildlife use, specifically sensitive species, in the project area for a minimum of 15 hours. ODFW recommends this survey period a minimum of total 40 hours, with 15 hours occurring during the March - May avian nesting and amphibian breeding periods and 15 hours of survey during November-February. The total cost for conducting the analysis and preparing the report is estimated to be approximately \$30,000. Two analysts would be expected to work for approximately 20 – 30 days on various surveys and 10 days for pre-survey work and post survey report preparation.

The sensitive wildlife species surveys would be completed during the first study season of the TLP with the draft report available for comment by the federal agencies and ODFW prior to December 31, 2020.

OID Response: The ODFW recommendations for survey timing and level of effort are unclear. Further consultation/discussion with ODFW will be necessary to clarify study needs. This should occur after all existing information (studies and known occurrences) has been obtained and reviewed. In the interim, the following estimates are provided.

1. Obtain and review existing information: **\$6,000**
2. Preparation of habitat map for Project Area + ¼ mile: **\$10,000**
3. Conduct spring/summer surveys for rare plants, noxious weeds, amphibians, and raptors: **\$20,000**
4. Updated wetland delineation to US Army Corps of Engineers standard: **\$10,000**
5. Provide input/guidance on design and construction of raptor safe powerline: **\$4,000**

TOTAL: \$50,000