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TECHNICAL MEMORANDUM

DATE:	October 29, 2021
TO:	John Kuba - ConnectGen
FROM:	Joel Thompson and Samantha Hanson - WEST, Inc.
RE:	2021 Northern Goshawk Nest Survey Results, Fountain Wind Project, CA

Introduction

CG Fountain Wind LLC contracted Western EcoSystems Technology, Inc. (WEST) to provide biological survey support for the development of the proposed Fountain Wind Project (Project). The Project is located on approximately 29,500 acres (11,938 hectares) of private land in central Shasta County, California. The primary land use within the Project area is commercial timber production and the dominant vegetation type is early seral mixed coniferous forest (post-fire and unburned). Dominant overstory species include a combination of white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), ponderosa pine (*Pinus ponderosa*), sugar pine (*P. lambertiana*), and California black oak (*Quercus kelloggii*). Late seral forest is largely absent from the Project area due to both historical wildfire and commercial timber harvest activities.

Northern goshawk (goshawk; *Accipiter gentilis*) is currently designated as a California Species of Special Concern (CDFW 2021). Goshawks were detected within the Project area by WEST biologists during fixed-point large bird use surveys and incidentally, totaling six observations between April 2017 and March 2019 (Thompson et al. 2018, Thompson and Chatfield 2019). Goshawk nest sites have been documented historically within the Project area (Thompson and Hutchison 2018), although the last documented nesting activity within these historical occurrence areas, according to the California Natural Diversity Database (CNDDB), was in 2003 (CDFW 2021). In addition to the fixed-point surveys conducted in 2017-2019, WEST also conducted goshawk-specific surveys in the historical goshawk occurrence areas in 2018 (Thompson and Hutchison 2018). No goshawks were documented in the historical occurrence areas during the 2018 survey and, as noted in Thompson and Hutchison (2018), much of the goshawk habitat associated with the historical nest sites was included in and harvested under one or more approved timber harvest plans in recent years. However, areas of potentially suitable goshawk habitat still occur in and adjacent to the Project area. As such, surveys for goshawk were conducted in 2021, in accordance with Mitigation Measure 3.4-7 of Shasta County's

Environmental Impact Report for the Project (Shasta County 2021), to ensure that potentially suitable habitats within the Project vicinity were not being used by goshawks for nesting.

Methods

Field surveys were consistent with the acoustic survey methods recommended in the *Northern Goshawk Inventory and Monitoring Technical Guide* (Woodbridge and Hargis 2006). Goshawk surveys were conducted during the nesting season (March – August) in a survey area that included all potentially suitable nesting habitat located within a 0.25-mi buffer of proposed Project infrastructure (e.g., roads, underground collection, turbines pads, etc.). For the purpose of this survey, potentially suitable nesting habitat included all forest stands greater than approximately 40 years of age. This essentially included all forest patches within the Project and 0.25 mi buffer that have not been recently harvested and are not within the perimeter of the Fountain Fire, which burned through the northern and western portions of the Project in 1992. Forests within the fire perimeter are less than 30 years of age and lack the forest structure and open understory necessary to support nesting goshawks. Surveys did include some small (less than 1.0 acre) isolated patches of mature trees left as habitat retention areas during recent timber harvest.

Surveys consisted of acoustic broadcast of goshawk vocalizations from 276 fixed survey stations (Figure 1) placed at 200-meter intervals along parallel transects throughout the survey area. Broadcast stations were spaced consistent with recommendations in Woodbridge and Hargis (2006) and provided full coverage of all potentially suitable habitat within the survey area. Each station survey consisted of a 4-minute session of broadcasting and listening for goshawk vocalizations. Surveyors also listened for vocalizing goshawks and searched for signs of nesting (e.g., nest structures, whitewash, prey remains) while walking transects between survey stations. Two rounds of 4-minute acoustic playback surveys were conducted at each survey station during the mid to late nesting season (i.e., nestling/fledgling stage).

Results

Broadcast acoustical surveys were conducted on June 21-24 and July 12-15, 2021. No visual or auditory detections of goshawks were recorded and no evidence of nesting goshawks was observed during the survey effort.

Discussion and Conclusions

Based on the results of goshawk surveys conducted in potentially suitable goshawk habitat areas in 2021, the likelihood of goshawks nesting within 0.25 mi of project infrastructure and at risk of disturbance from Project construction appears to be low. These survey results support the available historical data and prior risk assessment (Thompson and Hutchison 2018), which indicated a low risk of impacts to goshawk nest sites given the limited amount of high-quality nesting habitat present and the lack of goshawk nesting activity documented in the Project area in recent years.



Figure 1. Northern goshawk acoustic survey stations located in areas of older forest considered potentially suitable for use by nesting northern goshawks at the Fountain Wind Project, Shasta County, California. Northern and western portions of the Project do not include suitable habitats and were not surveyed.

References

- California Department of Fish and Wildlife, Natural Diversity Database (CDFW). July 2021. Special Animals List. Periodic Publication. 55pp.
- Shasta County Department of Resource Management Planning Division (Shasta County). 2021. Fountain Wind Project, Final Environmental Impact Report. Use Permit No. UP 16-007. Available online at: https://www.co.shasta.ca.us/index/drm/planning/eir/fountain-wind-project
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- Woodbridge, B. and Hargis, C.D. 2006. Northern goshawk inventory and monitoring technical guide. Gen. Tech. Rep. WO-71. Washington, DC: U.S. Department of Agriculture, Forest Service. 80 pp.