ENVIRONMENTAL & STATISTICAL CONSULTANTS

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# TECHNICAL MEMORANDUM

**Date:** June 19, 2024

**To:** Andrew Krieger and Christopher Farmer; Badger Wind, LLC

**From:** Kristen Chodachek, Western EcoSystems Technology, Inc.

**Subject:** Badger Wind Project – 2024 Raptor Nest Surveys

## INTRODUCTION and BACKGROUND

Badger Wind, LLC (Badger Wind) is proposing the development of the Badger Wind Project (Project) in Logan and McIntosh counties, North Dakota (Figure 1). Western EcoSystems Technology, Inc. (WEST) completed raptor nest surveys in spring 2024 for the proposed Project. The objectives of the raptor nest surveys were two-fold: to determine the locations, condition, and status of all historical bald eagle (*Haliaeetus leucocephalus*) nest structures and to search for new nests of bald eagles within the Project area and a 2.0-mile (mi; 3.2-kilometer [km]) buffer (collectively, Survey Area).

Surveys were completed in accordance with the US Fish and Wildlife Service's (USFWS) Land-Based Wind Energy Guidelines (WEG; 2012), the USFWS Eagle Conservation Plan Guidance (ECPG; 2013), the USFWS Updated Eagle Nest Survey Protocol (2020), the USFWS Region 6 Recommended Protocol for Conducting Pre-construction Eagle Nest Surveys at Wind Energy Projects (USFWS 2021), and Permits for Incidental Take of Eagles and Eagle Nests; Final Rule (USFWS 2024).

Two previously known bald eagle nests (nest IDs BAEA19-01 and BAEA21-01; Figure 1) were included in surveys. Nest ID BAEA19-01 was previously discovered in spring 2019 and was occupied, active in 2019 and 2020; however, in the spring of 2021, the nest was classified as missing. Nest ID BAEA21-01 was discovered in March 2021 and was occupied, active for the breeding season. This memo presents the results to date for bald eagle nests within the Survey Area.

## METHODS

Raptor nest surveys consisted of a series of ground and aerial-based visits conducted between February 1 – May 19, 2024, following the eagle nest survey schedule outlined in the USFWS Region 6 recommendations (USFWS 2021).

Ground-based surveys were completed by an experienced WEST biologist on February 1, 2024 and April 9, 2024 from accessible public roads within a maximum distance of 0.8 mi (1.3 km) from each previously known eagle nest location allowing for a thorough visual inspection of the habitat. The biologist spent a maximum of 4-hours at each nest location scanning the area with binoculars and a high-powered scope.

Aerial helicopter surveys were completed on March 13, 2024 and May 19, 2024 by a licensed and qualified pilot experienced in conducting low-altitude wildlife surveys and up to two experienced biologists to observe and record nest locations and associated data. Surveys were concentrated over likely eagle and other raptor nesting habitat (e.g., large trees, human structures such as power poles, wooded areas, riparian corridors, forested margins of waterbodies, and any cliffs or rocky outcrops). In general, all potential nest habitats were surveyed by flying meandering transects at speeds of 60–75 mi per hour (97–121 km per hour) throughout the Survey Area. When a nest was seen, the helicopter approached slowly and was positioned such that the nest could be clearly observed.

The following data was recorded for each eagle nest: species occupying nest (if known), nest status, nest substrate, nest condition, nest height, nest size, number of adults, behavior of adults at the nest, visible number of eggs or nestlings, approximate age of nestlings. Photographs of eagle nests were taken when possible.

## RESULTS

Nest ID BAEA 21_01 is occupied active and nest ID BAEA19_01 is unoccupied. During a ground-based survey on April 9, 2024, one adult bald eagle was recorded in an incubating position in the eagle nest ID BAEA21_01 (Figure 2a) and two nestlings present in the nest during the aerial-based survey on May 19, 2024 (Figure 2b). Nest ID BAEA21_01 is greater than two-mi from the nearest turbine (Figure 1). No activity has been recorded for nest ID BAEA 19-01; during both aerial surveys, nest ID BAEA19_01 was in poor condition (e.g., in disrepair and requires major repair to be suitable for successful nesting; Figure 3).

## REFERENCES

US Fish and Wildlife Service (USFWS). 2013. Eagle Conservation Plan Guidance: Module 1 - Land-Based Wind Energy, Version 2. US Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management. April 2013. Frontmatter + 103 pp. Available online: https://www.fws.gov/sites/default/files/documents/eagle-conservation-plan-guidance.pdf

US Fish and Wildlife Service (USFWS). 2021. U.S. Fish and Wildlife Service (USFWS), Region 6, Recommended Protocol for Conducting Pre-Construction Eagle Nest Surveys at Wind Energy Projects. Version 3.0. Revised March 31, 2021. 6 pp. Available online: https://www.fws.gov/media/usfws-region-6-recommended-protocol-conducting-pre-construction-eagle-nest-surveys-wind

US Fish and Wildlife Service (USFWS). 2024. Permits for Incidental Take of Eagles and Eagle Nests; Final Rule. 50 CFR Parts 13 and 22. 89 Federal Register 29: 9920-9965. February 12, 2024.

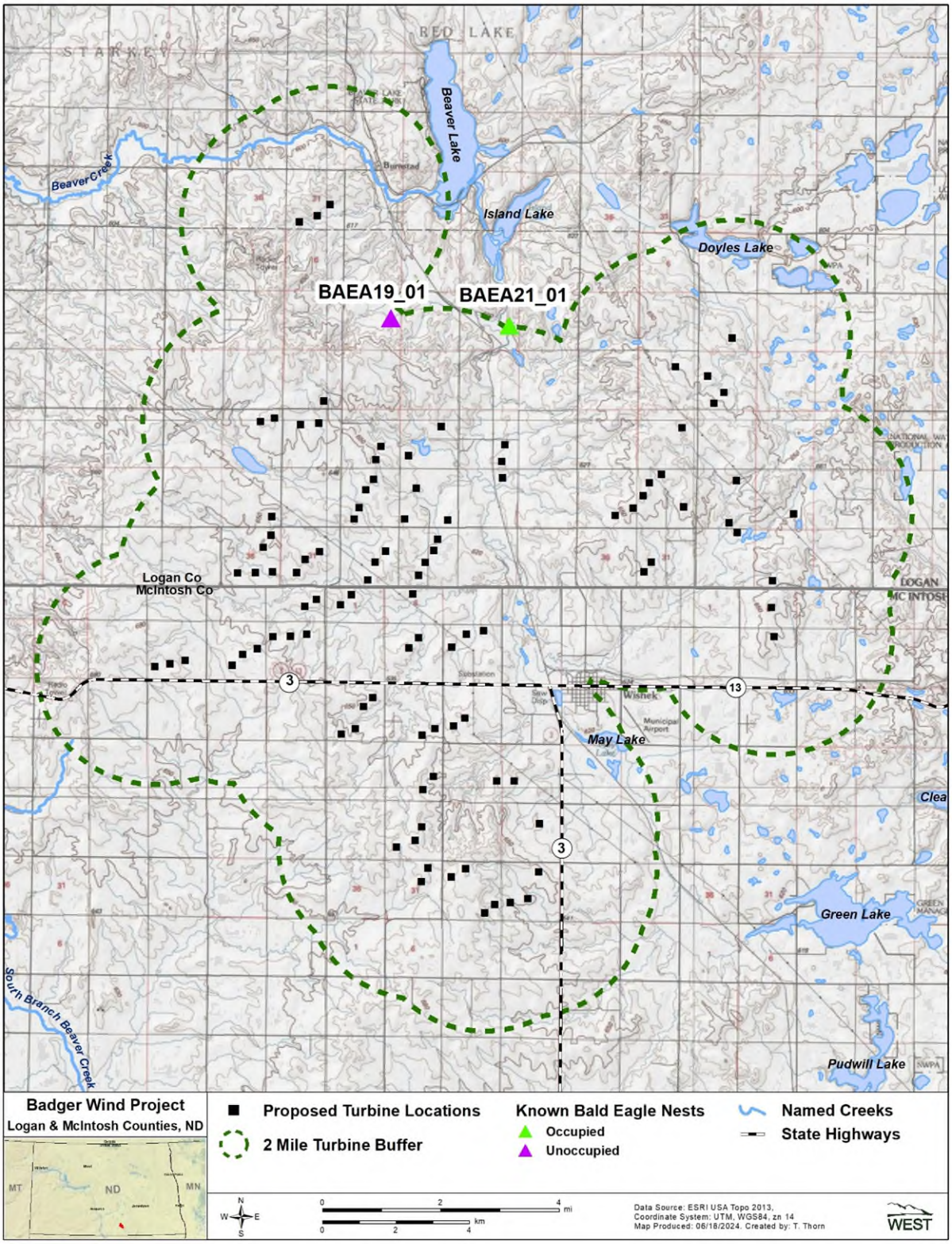


**Figure 1. Bald eagle nest locations at the Badger Wind Energy Project in Logan and McIntosh counties, North Dakota.**

**Figure 2a. Bald eagle nest ID BAEA21_01 on April 9, 2024 with an adult bald eagle in an incubating positions, Badger Wind Energy Project in Logan and McIntosh counties, North Dakota.**

**Figure 2b. Bald eagle nest ID BAEA21_01 on May 19, 2024 with two nestlings, Badger Wind Energy Project in Logan and McIntosh counties, North Dakota.**

**Figure 3. Bald eagle nest ID BAEA19_01 on April 9, 2024 in poor condition, Badger Wind Energy Project in Logan and McIntosh counties, North Dakota.**