

APPENDIX D

Eagle Nest Survey



Stantec Consulting Services Inc.
725 East Fireweed Lane, Suite 200
Anchorage AK 99503-2245

June 29, 2022

Project/File: Seldon Road Extension Phase II, Project # CFHWY00562

Reference: Eagle Nest Survey

1 Purpose

This is the transmittal reporting the results of the June 2, 2022, eagle nest survey for the Alaska Department of Transportation and Public Facilities (DOT&PF) Seldon Road Extension Phase II (project). The survey was performed by Stantec Consulting Services Inc. (Stantec).

The purpose of the survey is to assist with compliance for protections for Bald and Golden Eagles under the Bald and Golden Eagle Protection Act and the National Environmental Policy Act. These animals are protected from 'take,' which the US Fish and Wildlife Service (USFWS) defines as to *pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb* (50 CFR 22.6). The Endangered Species Act defines take as to *harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct*. An 'incidental take' is when an activity unintentionally causes a take which is associated with, but not the purpose of, the activity (i.e., construction). Incidental take may be expected for a project, it just cannot be intentional.

Construction activity has the potential to cause an incidental take, by causing noise and disturbances, which both have the potential to disturb eagles.

To help manage the incidental take, and the related permitting requirements, professional wildlife biologists provide surveys to locate eagle nests within a specified proximity to proposed projects.

2 Methods

In email conversations with Stantec, Steve Lewis, a USFWS Alaskan raptor wildlife biologist recommended that Stantec complete the nest survey within 660 feet of the project footprint.

Four survey options were considered to complete the eagle nest survey:

- Pedestrian surveys were considered but were not completed because right-of-entry for the numerous private parcels in the study area was not available.
- Unmanned Aerial Vehicle (UAV) surveys were considered but were not completed because of USFWS concerns about potential incidental take on nesting eagles. USFWS indicated that this type

Reference: Eagle Nest Survey

of survey may require an incidental take permit, which would have increased cost and delayed the schedule.

- Fixed wing airplane surveys were considered but are not preferred due to safety concerns.
- Rotor wing surveys were considered and meet the project schedule and satisfy safety requirements.

Rotor wing surveys were selected as the preferred method for this project. Stantec contracted with Soloy Helicopters, LLC (Soloy) of Wasilla, Alaska to conduct the aerial rotor-winged surveys. Soloy is based at the Wasilla Airport, only a few miles from the project.

Stantec's Wildlife Biologist Ryan Cooper was the eagle nest observer. Ryan Cooper has a Master of Science in Biology from the University of Alaska Fairbanks and is a licensed private aircraft pilot. Ryan has completed numerous avian surveys (ground and aerial) over more than 12 years' experience in Alaska. Ryan has completed more than 4 summers of intensive aerial survey work in Alaska, including leading teams of more than 8 professionals.

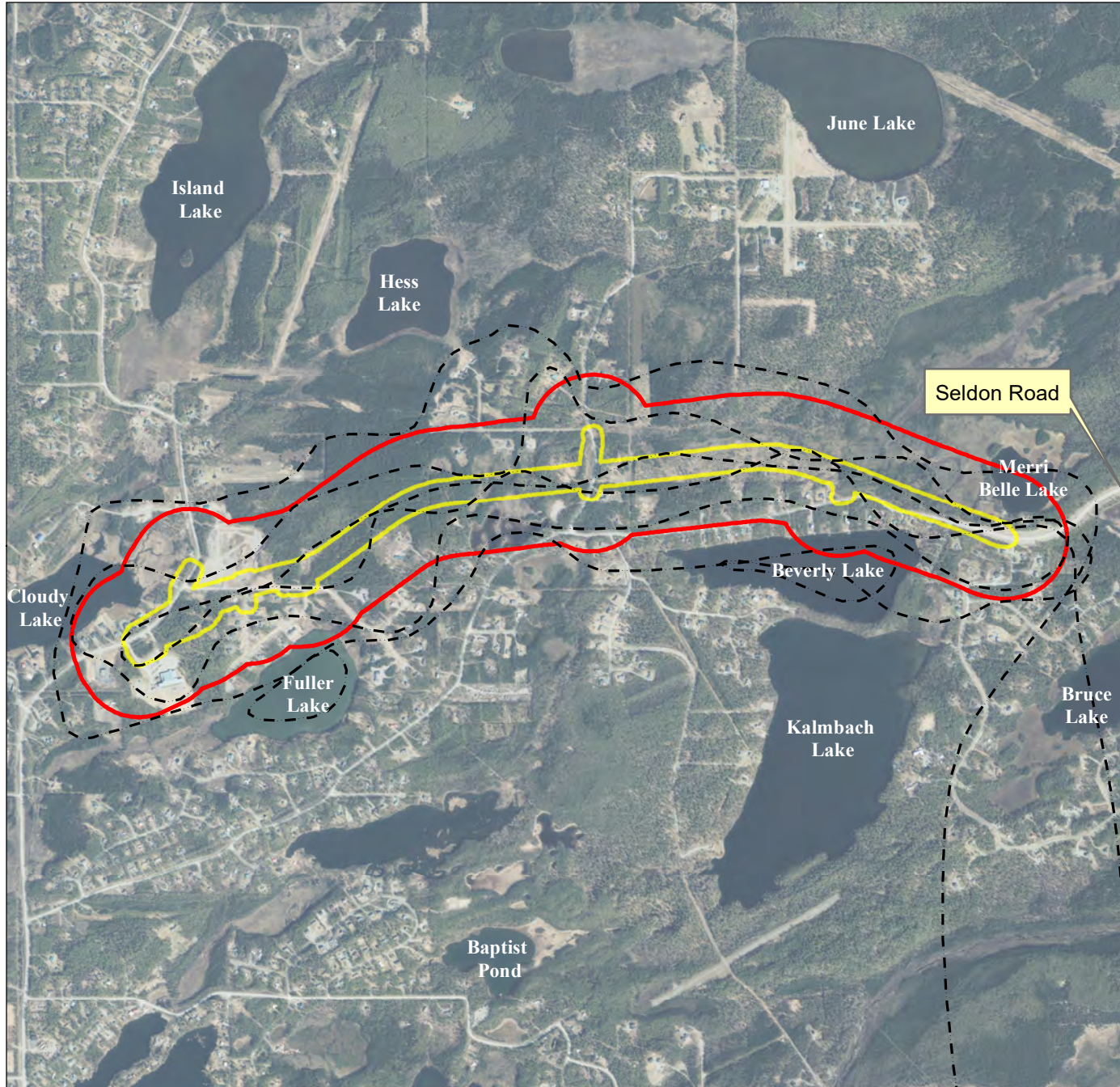
The study area was created by drawing a 660-foot buffer from the project study area (Figure 1). The project study area is slightly larger than the proposed footprint of the project. This method allowed for a conservative (slightly larger) survey area for nests around the project. The rotor wing survey also purposely flew outside the study area, to inspect habitat along the edge of the 660-foot buffer.




Stantec provided a georeferenced map on an electronic tablet to assist the pilot with navigation. This tablet provides live location tracking, so that the pilot can fly transects in the study area. The survey team also had primary and backup Global Positioning System (GPS) devices, binoculars, telephoto cameras, and electronic tablet maps. These extra devices provide redundancy should any single device fail.

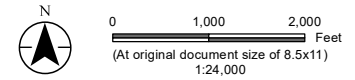
Preflight briefings took place between Stantec and the pilot. The pilot performed a pre-flight safety briefing. Stantec performed a pre-flight briefing with the pilot to review best practices on completing eagle nest surveys. Discussion points included (Pagel et al. 2010, Bird and Bildstein 1987):

- Pre-flight briefings should take place to familiarize pilots and observers with the area, objectives, and project.
- The best speeds to fly for nest detection are 20 – 40 knots.
- Flights should conduct multiple passes to view the same area from different angles.
- If hovering near nests is required for species identification, flights should hover for no more than 30 seconds, and at distances of >20 meters.
- Flying eagles should be given deference at all times.
- Disturbance of eagle behavior should be noted by the observer, to better inform future surveys.

\\us0308-ppfs02\shared_projects\2047079800\gl\mxd\Eagle_Survey_Collector\seldon_road_eagle_report_107.mxd Revised: 2022-06-07 By: nycoper

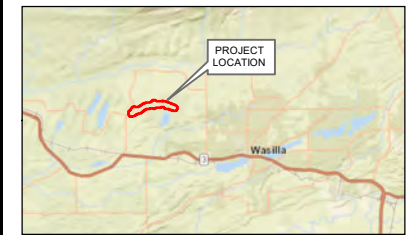


-  Project Study Area
-  Eagle Survey Flight Path
-  Raptor Study Area (660-foot Buffer)



Notes
 1. Coordinate System: NAD 1983 StatePlane Alaska 4 FIPS 5004 Feet
 2. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



Project Location Wasilla, Alaska	Prepared by RJC on 2022-06-02 TR by ZB on 2022-06-03 IR Review by SK on 2022-06-03
Client/Project	2047079800

Department of Transportation and Public Facilities
 Seldon Road Extension Phase II
 Figure No.
1
 Title
Project Map

Reference: Eagle Nest Survey

- During the flight, the locations of all observed nests should be recorded with GPS. Telephoto pictures should be taken of the nests. The condition and status of the nest (e.g., occupied versus unoccupied) and the species utilizing the nest should be recorded.

3 Results

The USFWS Eagle Nest Atlas is not regularly updated but does provide one source of background information. The atlas was consulted and does not list any nests within the study area (USFWS 2019).

The flight took place between 9:00 and 9:30 am on Thursday, June 2, 2022. The flight paths were laid out to provide overlapping surveys of all the habitat. Multiple passes were conducted from different viewing angles for each part of the project. Flight paths are depicted on Figure 1.

The weather was 65-70 degrees Fahrenheit, with clear blue skies. The sun was bright and shining from the east. There was no precipitation, fog, or other weather hindrances to visibility. Leaf out had already occurred, and trees were in full foliage (Figure 2, 3).



Figure 2: Sample photo #1 of vegetation observed during the survey

Reference: Eagle Nest Survey



Figure 3: Sample photo #2 of vegetation observed during the survey

The survey started with participants familiarizing themselves with the study area, vegetation types, and likely nesting locations. Observers focused on likely eagle and nest locations, such as trees, outcrops, manmade structures, and waterbody shorelines.

Some of the study area has low probability of hosting eagle nesting habitat. These areas included habitat dominated by low spruce trees/shrubs. Separately, other low probability habitats were dominated by slender deciduous trees (e.g., birch). Both habitats have vegetation that is unlikely to have the structural stability to support eagle nests.

Higher probability eagle nest habitat is present in the study area. Observations focused on these areas, and this habitat was more likely to have the observers ask the pilots to insert extra flight paths (e.g., circling back). The study area found three different high probability habitat types:

- Large deciduous trees (e.g., cottonwood) growing as individuals, scattered throughout the study area
- Trees adjacent to shorelines and bodies of water

Reference: Eagle Nest Survey

- Human structures (e.g., powerlines, buildings)

The total flight time, including travel to and from the airport, was 30 minutes (0.5 hours). Six transects were flown, including extra loops over bodies of water to closely examine potential nesting habitat in those areas.

No nests were identified during the survey.

Only one gull (unidentified species) was observed flying during the survey. It was transiting the area. No other birds or wildlife were observed.

4 Discussion

Visibility into vegetation was moderate for the survey. Leaf out had already occurred. This primarily blocked visibility into the body of slender deciduous trees (e.g., birch). While visibility was low *into* the structure of these trees, visibility along the crowns of these trees was moderate. Nests in the trees may have been missed. The reduction in visibility is offset by these trees typically not having the structural strength to provide preferred eagle nest habitat.

The larger deciduous trees (e.g., cottonwood) that provide better nesting habitat had improved visibility. Leaf out typically does not preclude the observation of nests in these trees. The structure of these trees is more open, particularly when viewed from the air. Leaf out may have caused it to be more difficult to observe the status of a nest (e.g. number of fledglings), if any nest had been observed. These trees were also often growing individually, allowing the inspection of individual trees during overflights. No nests were observed in these trees, and no whitewash was observed. Whitewash occurs from eagle defecation while occupying favored perching locations.

5 Recommendations

The USFWS recommended the project survey for eagle nests in a buffer 660 feet around the proposed project. This effort outlined in this report completed the survey according to USFWS recommendations. There is still the possibility for nests due to the following:

- Eagle's nests could be built after the date of this survey
- Eagle's nests not detected during this survey

To avoid take, if eagle nests are observed within 660 feet of the project during project planning and/or construction, consultation with the USFWS is recommended to be initiated immediately. This can help avoid permitting delays and/or unintentional take of eagles.

Reference: Eagle Nest Survey

Please reach out with any questions,

STANTEC CONSULTING SERVICES INC.



Ryan Cooper MS, PWS
Wildlife Biologist
Phone: (907) 343-5241
ryan.cooper@stantec.com

6 References

- Bird, D. M., K. L. Bildstein. *Raptor Research Management and Techniques*. 1987. Hancock House Publishers Ltd. Accessed May 31, 2022 at https://raptorresearchfoundation.org/wp-content/uploads/2021/09/Raptor_Research_Management_Techniques_Book.pdf
- Pagel, J.E., D.M. Whittington, and G.T. Allen. 2010. *Interim Golden Eagle technical guidance: inventory and monitoring protocols; and other recommendations in support of eagle management and permit issuance*. Division of Migratory Bird Management, U.S. Fish and Wildlife Service. Accessed May 31, 2022 at <https://tethys.pnnl.gov/sites/default/files/publications/Pagel-2010.pdf>
- USFWS. 2019. *Alaska Bald Eagle Nest Atlas*. Accessed May 31, 2022 at <https://gis.data.alaska.gov/maps/d0be8220447747f2bb25e43a36513482/about>

Nest Survey Form

Observer: Ryan Cooper	Pilot Company: Sam Gawith, Soloy Helicopters	Date: 6/2/2022
Begin Time: 09:00	Begin Weather: Clear, No Clouds, 65F, Calm Winds	Flight Time: 0:30
End Time: 09:30	End Weather: Clear, No Clouds, 65F, Calm Winds	

Nest #	Lat	Long	Active?	Species	# Adult	# Young	Whitewash?	Nest Condition	Tree	Photos

Notes:

--	--	--	--	--	--	--	--	--	--	--

Notes:

--	--	--	--	--	--	--	--	--	--	--

Notes:

--	--	--	--	--	--	--	--	--	--	--

Notes: