

TECHNICAL MEMORANDUM

Eagle Nest Survey – Fort Babcock Formerly Used Defense Site (F10AK0353-04), Kruzof Island, Alaska

Date:	29 January 2024
Contract:	W911KB22C0019
Project:	Fort Babcock FUDS (F10AK0353-04) Remedial Action
To:	U.S. Army Corps of Engineers, USFS Tongass National Forest
From:	Brice Engineering, LLC
Attachments:	Figure 1: Site Location and Vicinity Map Figure 2: Fort Babcock Eagle Survey Area and Results Attachment 1: Eagle Nest Survey Photograph Log Attachment 2: Field Documentation Attachment 3: Response to Comments

1.0 INTRODUCTION

This Eagle Nest Survey Technical Memorandum (TM) describes the eagle nest survey that was conducted as part of the Hazardous, Toxic, or Radioactive Waste remedial action (RA) at the Fort Babcock Formerly Used Defense Site (FUDS) (F10AK0353-04), at Shoals Point on Kruzof Island, Alaska (Figure 1). This TM has been prepared by Brice Engineering, LLC (Brice) under U.S. Army Corps of Engineers (USACE) Contract W911KB22C0019 in accordance with the Bald and Golden Eagle Protection Act (BGEPA) and the *Manual for Electronic Deliverables* (MED) (USACE 2017).

1.1 Project Goals and Objectives

The RA at the Fort Babcock FUDS requires heavy equipment to perform tree clearing and grubbing. The clearing and grubbing have the potential to disturb nesting bald eagles or destroy nests. Take, defined as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb”, of any bald eagle (*Haliaeetus leucocephalus*) nest is prohibited by the BGEPA (16 U.S. Code 668-668c) unless allowed by permit. Brice subcontracted ABR Inc.—Environmental Research and Services (ABR) to conduct an aerial survey at Fort Babcock to locate any bald eagle nests within 660 feet of the planned RA activities and to evaluate the area for signs of nest occupancy for compliance with the BGEPA.

1.2 Site Location and Description

The Fort Babcock FUDS is approximately 11 miles west of Sitka, Alaska, at Shoals Point on the southeast corner of Kruzof Island (Figure 1). Sitka Sound separates Kruzof Island from the community of Sitka, and access to Fort Babcock is limited to marine vessels and may also be accessed by helicopter. The land is owned by the federal government and is currently managed by the U.S. Forest Service Tongass National Forest.

2.0 METHODS

The Brice subcontractor, ABR, followed methods and protocols for nest occupancy and productivity surveys established for inventory and monitoring of eagle nests using helicopters (U.S. Fish and Wildlife Service [USFWS] 2007; Pagel et al. 2010), as outlined in the Work Plan for Eagle Nest Survey (USACE 2022). The eagle nest survey was conducted on 13 September 2022 in a Jet Ranger helicopter and included the footprint of the RA and a buffer of 660 feet (Figure 2). The survey area was delineated by using a 0.5-mile (2,640-feet, 804-meter) buffer around planned work areas to identify any nearby alternate nests, should any nests have required removal, and to characterize nest density in and near the project area (Figure 2).

The eagle nest survey team mobilized to Fort Babcock from Juneau, Alaska. The team consisted of ABR Biologist Andrew Bankert and Brice Engineering Surveyor Jacob Austin, who commuted to Fort Babcock with the helicopter to conduct the eagle nest survey and return to Juneau the same day. The helicopter did not land at Fort Babcock FUDS during the survey. The survey was flown along a series of transects oriented north-south to provide 100 percent (%) coverage of the study area (Figure 2), starting along the coastal section and working inland.

The biologist seated in the front seat of the helicopter located and identified large eagle nest structures and collected data on nesting and/or productivity. Global Positioning System (GPS) locations of trees containing eagle nests were collected using a Garmin 76 handheld recreational grade GPS with a published accuracy of ± 10 feet (3 meters). A GPS-enabled Samsung tablet pre-loaded with imagery was also used to assist in navigating the project area.

3.0 RESULTS

Four Bald Eagle nests were located within the survey area (Figure 2). All nests were in Sitka spruce trees within 410 feet (125 meters) of the coast and were located approximately 85% of the way up the trees. Two nests were less than 30 feet (9 meters) inside the 330-foot buffer, and the other two nests were beyond the 660-foot buffer. The nests encountered are summarized in Table 1.

Nest 1 was located 20 feet (6 meters) inside the 330-foot buffer to the southwest of the proposed camp/staging area (Attachment 1, Photographs 1 and 2). Nest 1 was in good condition, and a single fledgling Bald Eagle was observed in the nest. There were copious amounts of fresh whitewash on adjacent limbs, indicating it hatched from this nest in 2022 (Attachment 1, Photograph 2). The fledgling was large and likely flight-capable at the time of the survey in mid-September. This nest was on the west edge of tall Sitka spruce trees distributed along the coastline, which should provide a good visibility buffer between the nest and the proposed road clearing areas along the coast to the east. However, the entire stand of tall trees at the camp/staging area approximately 400 feet (122 meters) to the northeast will be removed, and activities at the camp/staging area are less likely to be buffered by dense vegetation.

Nest 2 was located 30 feet (9 meters) inside the 330-foot buffer to the south end of the proposed clearing area and 0.58 miles (933 meters) from Nest 1 (Attachment 1, Photograph 3). This nest was overgrown with grass, and it did not look like eagles had used it for several years.

Nest 3 was located outside the 660-foot buffer to the northeast of the proposed clearing area and 0.53 miles (850 meters) from Nest 1 (Attachment 1, Photograph 4). This nest was active, and an adult Bald Eagle was observed perched in the nest and another adult nearby. Copious amounts of whitewash were observed on the adjacent limbs indicating young may have fledged from this nest.

Nest 4 was located in a dead Sitka spruce tree outside the 660-foot buffer to the southwest of the proposed clearing area and 0.68 miles (1,100 meters) from Nest 1 (Attachment 1, Photograph 5). This nest

showed no signs that young were raised or eggs were laid in 2022, and the amount of vegetation growing in it indicated that it likely has not been used for nesting for a few years. However, an adult Bald Eagle was observed between Nest 4 and Nest 1, and a fresh feather was observed on the edge of Nest 4. It was unclear if the feather was from a prey item consumed by a Bald Eagle, a perched Bald Eagle, or from another bird using the nest as a perch.

Table 1 **Locations and Descriptions of Bald Eagle Nests Located on 13 September 2022 within 0.5 Miles (805 Meters) of Planned Clearing at Fort Babcock, Kruzof Island, Alaska**

NEST NUMBER	LATITUDE	LONGITUDE	STATUS	CONDITION	SUBSTRATE
1	57.02176	-135.63874	Fledgling Perched	Good	Sitka spruce
2	27.01381	-135.63383	Unoccupied	Poor	Sitka spruce
3	57.02795	-135.63055	Adult Perched	Good	Sitka spruce
4	57.01251	-135.64408	Unknown Occupancy	Fair	Sitka spruce, dead

Two additional adult bald eagles were observed during the survey. It was undetermined whether they were territorially associated with any nest in the area or if they were transient birds. It may be possible that Nest 2 and Nest 4 were occupied by territorial adults earlier in the year; however, no indisputable evidence persisted for the survey. The entire land area within the 0.5-mile buffer was surveyed, but the search was focused within 492 feet (150 meters) of the coast. This distance was closest to the proposed clearing area and contains the tallest trees most suitable for nesting bald eagles, as trees become shorter further inland.

Following the initial survey, two additional passes within 492 feet (150 meters) of the coast were made to search for nests that may have been missed during the initial survey pass. No additional nests were observed. No safety concerns or issues occurred during the survey. There were no work plan deviations.

4.0 CONCLUSIONS

All nests are located outside of the clearing area; therefore, no action for nest removal is needed. Two nests (one active and one inactive) are located within the 330-foot buffer of clearing, indicating that an eagle attending a nest may be disturbed by activities associated with clearing. The preferred option to mitigate possible take is to conduct all clearing activities between 15 October and 1 February, when bald eagles are not typically nesting (USFWS 2022). Other recommendations, if clearing must occur during the breeding season, include retaining the maximum number of trees practicable within 660 feet of the nest, prioritizing mature trees within 330 feet of the nest, trees adjacent to foraging areas, and trees with documented use as perch or roost trees (USFWS 2022). Finally, if possible, preserve trees that serve as visual and auditory buffers for the nest (USFWS 2022). Due to the lapse between the initial eagle nest survey and clearing activities, another aerial eagle nest survey is recommended during the breeding season prior to clearing activities.

To mitigate potential nest area disturbance by the camp activities, the sleeping quarters and other quieter spaces will be positioned closest to the nest area. Noisier activities, such as operation of vehicles or equipment, will be positioned as far away from the nest area as possible and only allowed to operate out of view of the nest, if possible.

USACE may also consult with USFWS concerning substantive requirements of an Incidental Take Permit. Such permits are typically required if disturbance or other take of eagles will occur, where the take is not

the purpose of the activity. However, USACE will not seek an Incidental Take Permit because permits are not required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The consultation will require providing the locations of known nests and descriptions of the proposed activities. If USFWS issues a permit, then USACE will comply with the substantive requirements of the permit. A permit can be valid for up to 5 years.

5.0 REFERENCES

- 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*. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Anchorage, Alaska. 30 pp.
- U.S. Army Corps of Engineers (USACE). 2017. *Manual for Electronic Deliverables, Requirements for Submittal of Documents, Chemistry Data, Geospatial Data, and Other Items*. April.
- USACE. 2022. *Work Plan for Eagle Nest Survey Technical Memorandum*. Fort Babcock Formerly Used Defense Site, Kruzof Island, Alaska. August. F10AK035304_07.04_0001_a.
- U.S. Fish and Wildlife Service (USFWS). 2007. *National Bald Eagle Management Guidelines*. Washington, DC. 25 pp.
- USFWS. 2022. *Disturbance General Permit Conditions*. Washington, DC. 25 pp.

FIGURES

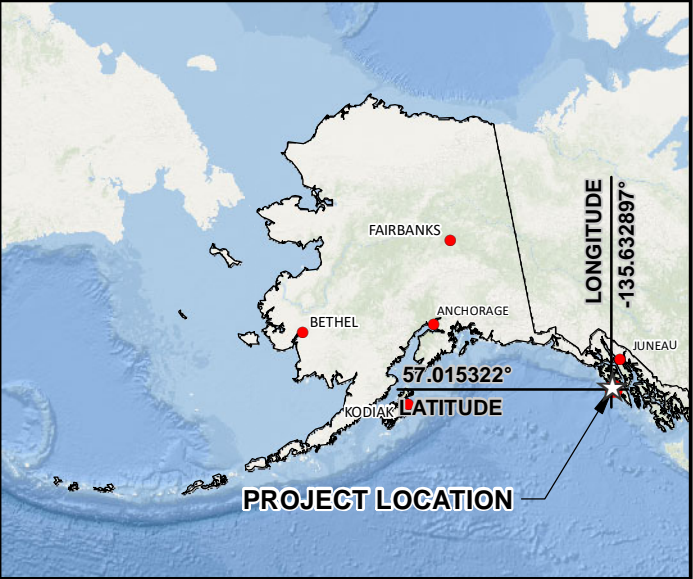
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1 INCH



EAGLE NEST SURVEY
TECHNICAL MEMORANDUM
FT BABCOCK FUDS, KRUFZOF ISLAND, ALASKA
SITE LOCATION AND VICINITY MAP



Legend

 FUDS Property

Abbreviations

FUDS Formerly Used Defense Site

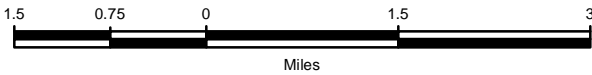
Notes

1. For conceptual purposes only. All locations are approximate.

References

1. Basemap source: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community. Garmin, GEBCO, NOAA NGDC, and other contributors.

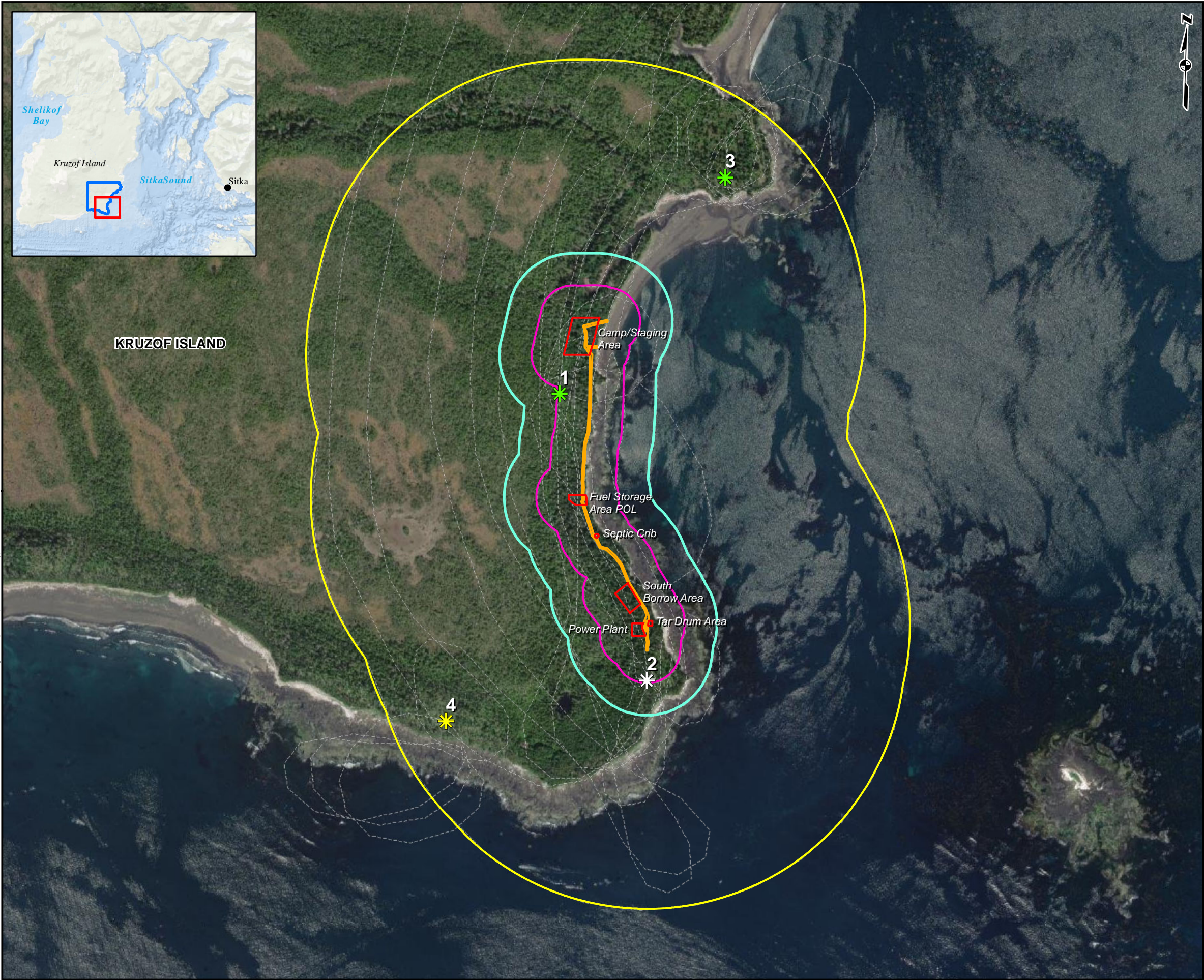
ALASKA STATE PLANE COORDINATE SYSTEM ZONE 1, U.S. SURVEY FEET
HORIZONTAL DATUM: NAD83 (2011) | VERTICAL DATUM: NAVD88



PROJECT No.: W911KB22C0019	DATE: 1/16/2024	FIGURE: 1
P.M.: E.D.	DRAWN: J.C.	

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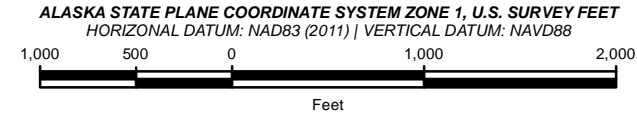
EAGLE NEST SURVEY
TECHNICAL MEMORANDUM
FT BABCOCK FUDS, KRUZOF ISLAND, ALASKA
EAGLE NEST SURVEY AREA AND RESULTS

- Legend**
- Active Nest
 - Possibly Active Nest
 - Old Inactive Nest
 - Survey Flight Line
- Raptor Survey Areas**
- 330 Foot Buffer
 - 660 Foot Buffer
 - 1/2 Mile Buffer
- Other Proposed Clearing Area
 - Proposed Road Clearing Area

Abbreviations
FUDS Formerly Used Defense Site

Notes
1. For conceptual purposes only. All locations are approximate.
2. Nest numbers correspond to Table 1 in report text.

References
1. Imagery from ESRI (Maxar WV02, 50 cm, 6/16/2022)



PROJECT No.: W911KB22C0019	DATE: 1/16/2024	FIGURE: 2
P.M.: E.D.	DRAWN: J.C.	

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ATTACHMENT 1
PHOTOGRAPH LOG

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Photograph 4: An adult Bald Eagle perched on Nest 3. Facing down.	1-2
Photograph 5: Nest 4, including a white feather on the rim of the nest. Facing down.	1-3

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Photograph 1: Nest 1 showing the nest location relative to other trees and the coast within the survey area. Facing ENE.



Photograph 2: Birds-eye view of fledgling Bald Eagle in Nest 1. Facing down.



Photograph 3: Closeup of Nest 2 showing the poor condition of the nest. Facing down.



Photograph 4: An adult Bald Eagle perched on Nest 3. Facing down.



Photograph 5: Nest 4, including a white feather on the rim of the nest. Facing down.

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ATTACHMENT 2
FIELD DOCUMENTATION

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Daily Safety Meeting Logs

Table 22: Daily Safety Meeting Logs

Date	Name	Attendees	List Topic(s) Discussed
2022-09-13	Andy Bankert	Andy Bankert	Don't scratch windows with clipboard. Keep stuff out of pilot area.

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ATTACHMENT 3
RESPONSE TO COMMENTS

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**REVIEW
COMMENTS**

PROJECT: Ft. Babcock FUDS HTRW-04 Remedial Action
DOCUMENT: Pre-Draft 2022 Eagle Nest Survey Tech Memo Report

Location: Fort Babcock, Alaska

**U.S. ARMY CORPS OF
ENGINEERS**

DATE: 9/29/2023
REVIEWER: Forest Service
PHONE: 907-451-5126

Action taken on comment by: USACE

Item No.	Drawing Sheet No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	USACE RESPONSE	USFS RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
1.		Conduct all clearing activities between 15 October and 1 February as recommended by USFWS, when bald eagles are not typically nesting.		Further coordination with USFWS would be needed to determine mitigation for the bald eagle nests that were found in Fall 2022. Clearing outside of the typical nesting window is a potential mitigation; however, the full extent of mitigation activities have not yet been identified. USACE would communicate USFWS's mitigation guidance to the USFS if the project were to proceed. In addition, it is recommended that another nest survey be conducted prior to any future clearing activities as other nests may have been built since the 2022 survey.	Accepted 10/23/2003 by Michele Parker, Acting Regional Environmental Program Manager, USFS Alaska Regional Office
2.	End of comments				

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