

# Golden Eagle Survey Report Rolling Meadow Ranch

Humboldt County APNs

217-201-001, 217-181-027, 217-181-028, 217-182-  
001, 217-024-011, 217-024-006, 217-024-010, 217-024-003,  
217-025-001

McCann, California

*Prepared for:*  
Rolling Meadow Ranch

*Prepared by:*  
Michelle McKenzie  
Natural Resources Management Corporation  
1434 Third Street  
Eureka, CA 95501

February 15, 2021



## Introduction

The purpose of this report is to provide results for Golden Eagle (*Aquila chrysaetos*) occupancy surveys conducted in January and February, 2021. The Golden Eagle (GOEA) is a Fully Protected species on the Watch List for the California Department of Fish and Wildlife (CDFW), and a Bird of Conservation Concern for the US Fish and Wildlife Service (USFWS). Surveys were conducted due to the presence of GOEA foraging and nesting habitat in the general area, including on Rolling Meadow Ranch (RMR), as well as an historic record in the CDFW, California Natural Diversity Database (CNDDDB), south of the Eel River and within one mile of proposed projects (Figure 1).

A CDFW December 30, 2020 letter (subject: Rolling Meadows (SCH#20200703369) Conditional Use Permits Initial Study and Draft Mitigated Negative Declaration) states for GOEA that “complete protocol level golden eagle surveys for the Project have not yet occurred”. Past project Golden Eagle surveys took place in June-July of 2018 and April- June of 2019. Due to access issues in 2018 and 2019 surveys had not yet been done during the courtship season (January-February). For this reason, in 2021, GOEA surveys were completed during the courtship season when this species is most visible.

## Project Site

The project parcel, located approximately 6 miles east of the community of McCann, in Humboldt County, California (Figure 1), is shown with the nearest CNDDDB historic nesting location last known to be occupied in 2003.

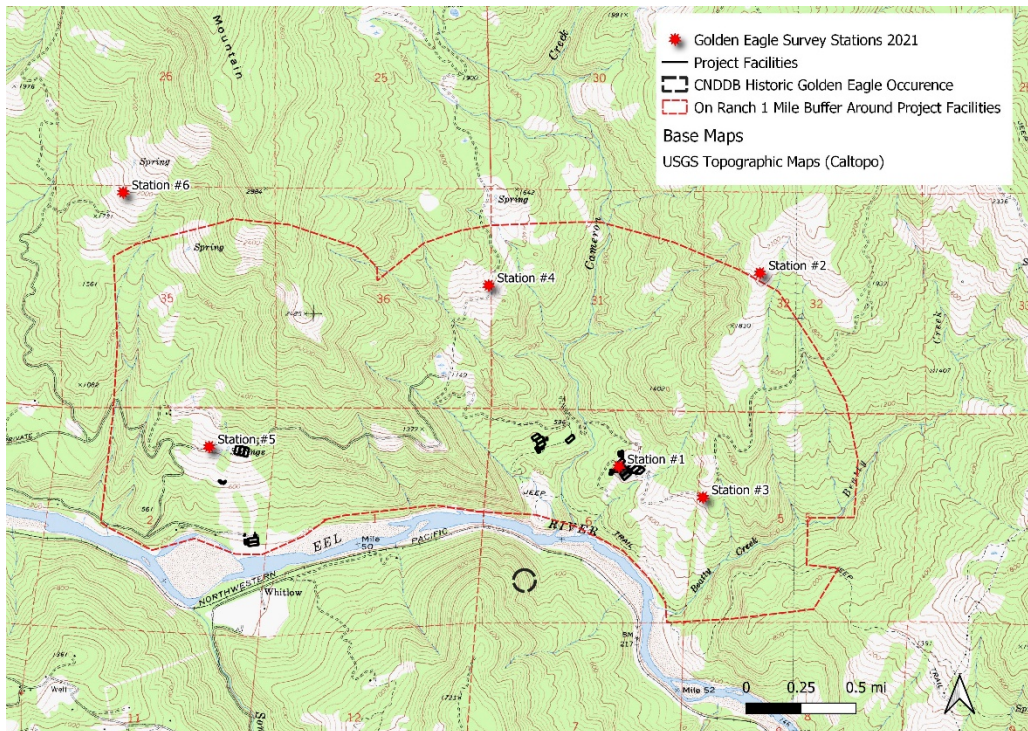


Figure 1. Vicinity map with nearest locations of historic CNDDDB records for Golden Eagle and 2021 survey stations

## **Field Surveys**

Wildlife biologists Michelle McKenzie and Tom Kirk conducted GOEA surveys at 6 locations (stations) on RMR that ensured visual coverage of at least a one-mile radius around the project areas on the parcel. In general, the 'viewshed' covered by the survey station locations was greater than one mile (Figure 2). To avoid missing small areas of view obscured by nearby trees, and to maintain alertness, the surveyor would slowly walk to alternate views within 50 meters of the GPS station location over the course of the survey period.

Surveys were conducted as outlined in the ISMND Mitigation Measure Biology #16. Surveys were done per feedback from the Humboldt County Planning Department, which requested 2 surveys during the courtship season to determine occupancy. Adult GOEA are most conspicuous when performing aerial courtship displays; eagle pairs tend to become more secretive once incubation of eggs begins (Driscoll 2010, Pagel et al 2010). In California, courtship at territories is expected to start from late December (Pagel et al) to January (Driscoll), and continue through mid-February.

In 2021, two surveys were conducted at 6 stations across RMR. Surveys were conducted from January 17 through February 10, for a duration of 4 hours each. This resulted in 12 surveys totaling 48 survey hours. Surveys were conducted in the morning and afternoon during periods of dry weather (Appendix B). In 2018, four surveys totaling 4 hours and 50 minutes of survey time were conducted from July 2 through July 16. In 2019, three surveys totaling 9 hours and 15 minutes of survey hours were conducted from April 9 through June 14. A total of 62 survey hours were completed between 2018 and 2021.



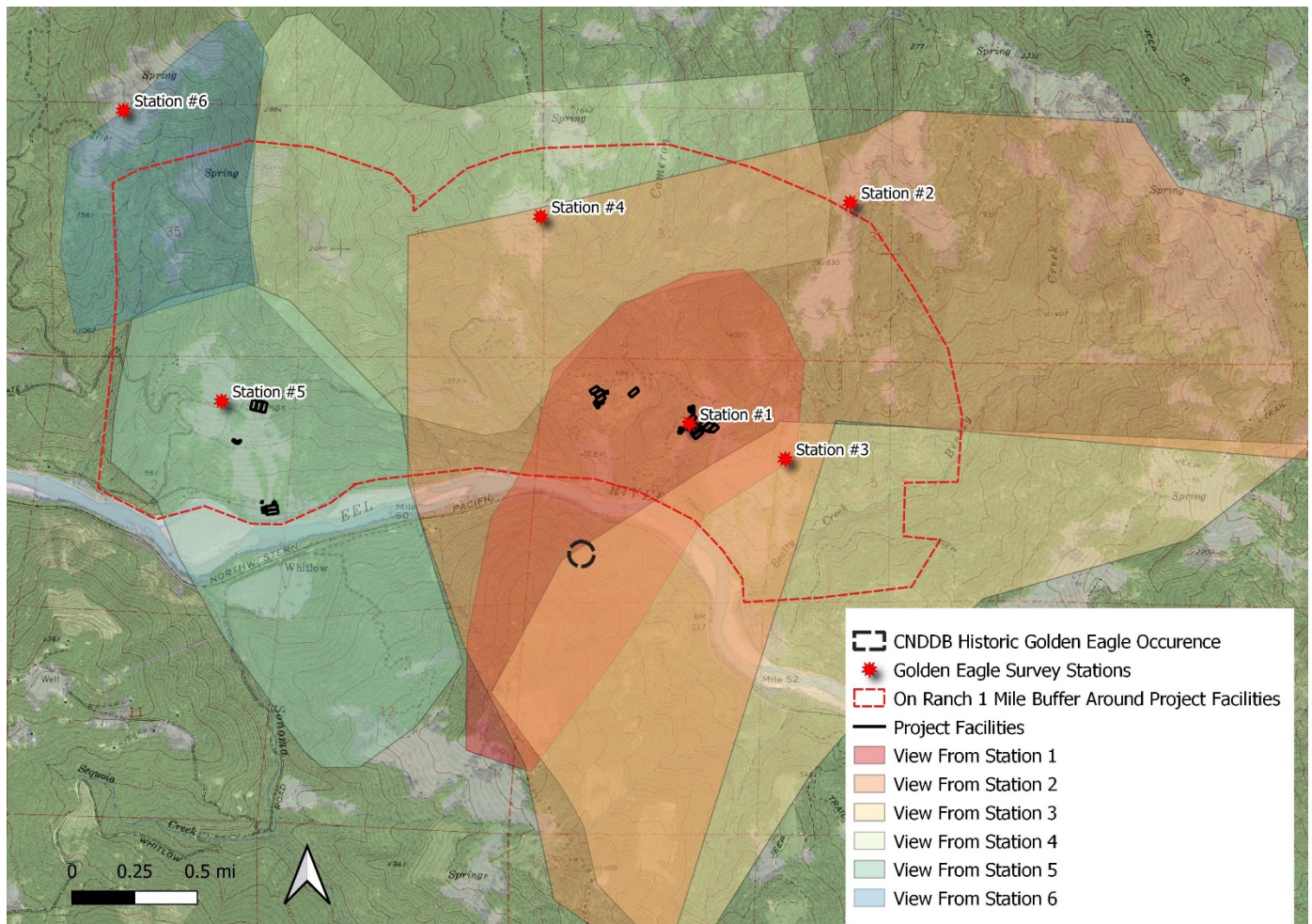


Figure 2. GOEA survey station map with viewshed extent

## Results and Discussion

There were no GOEA detections during the 2021 surveys. The most commonly observed species was the red-tailed hawk (RTHA), which was observed pair soaring on multiple occasions, suggesting weather conditions during surveys were optimal for courtship.

In the CDFW December 2020 letter, the agency describes the deficiencies in the GOEA surveys to include 1) none were conducted during the courtship season, 2) survey duration of less than 4 hours, 3) surveyor location movement during surveys, 4) insufficient Project area coverage from survey locations, 5) anecdotal conclusions based on out-of-season observations that the documented 2003 nest site is unoccupied, and 6) no evaluation of potential alternative nest sites within the Project vicinity.

To date, surveys have now been conducted during the courtship season with each survey being conducted for 4 hours in duration. During the surveys, the surveyor wore cryptic clothing and covered survey equipment in camouflage tarps; vehicles were parked under the nearest tree canopy. To avoid missing small areas of view obscured by nearby trees, and to maintain



alertness, the surveyor would slowly walk to alternate views within 50 meters of the GPS station location over the course of the survey period. This method, described in Pagel et al, is accepted as a way to achieve complete inventory of all potential habitat. With a total of 6 surveys stations, the RMR and associated project areas are sufficiently covered up to 1 mile on RMR and 2 miles in most directions (Figure 2, Photos 1-6), suggesting any use of the area by Golden Eagle, including historic or alternate nest sites, would have been observed.

Additional surveys outside of the 1-mile buffer around the project areas but within 1.3, 2.5, and 4 miles took place in 2020 and 2021 for proposed timber projects. In 2020, SPI conducted two surveys at 3 stations and had no GOEA observations (Appendix B). So far in 2021, Holmgren Forestry has conducted one visit at 2 stations on 2/9/2021 with no GOEA observations at either station (Personal Communication 2/11/2021; Appendix B). SPI and Holmgren Forestry survey station locations are shown on Figure 3.

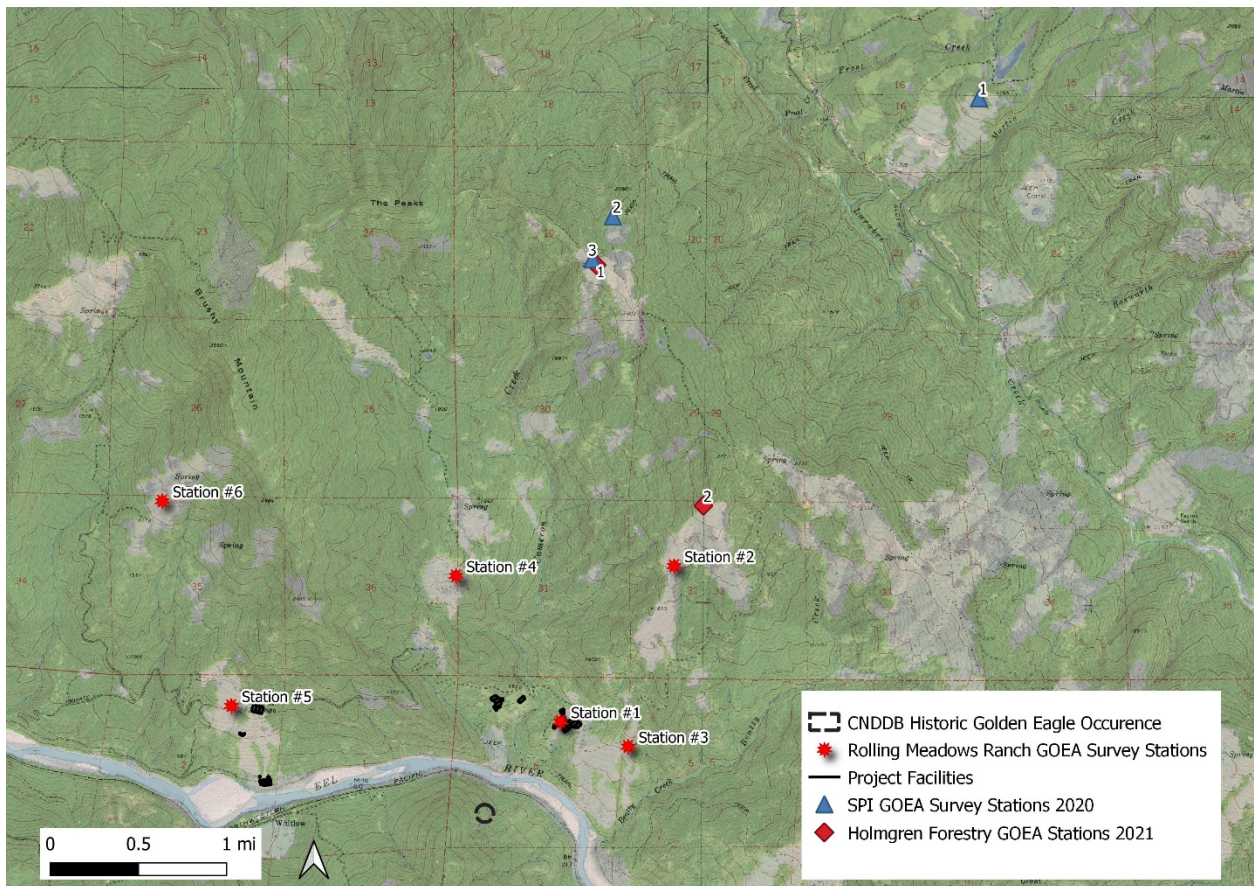


Figure 3. GOEA survey station map with SPI and Holmgren Forestry Survey Station





Photo 1. View from Station 2, looking south





Photo 2. View from Station 3, looking east





Photo 3. View from Station 4, looking south



Photo 4. View from Station 6, looking east



Photo 5. View from Station 6 looking ESE

**Literature Cited**

Driscoll, D.E. 2010. Protocol for golden eagle occupancy, reproduction, and prey population assessment. American Eagle Research Institute, AZ. 55pp.

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, US Fish and Wildlife Service. 26pp.



**Appendix A. NRM GOEA Survey Forms**

**Golden Eagle (GOEA) Breeding Area Occupancy  
Survey Form**

**American Eagle Research Institute Survey Protocol (Driscoll 2010):**

At least 4 surveys, 4 separate days, for 4 hours each

During courtship flight/pair bonding/pre-egg laying: January-February

Surveys are conducted after 1000 and located at vantage points for a 2-mile radius around the project area

**Additional Information:**

Surveys to determine occupancy are best conducted during courtship and before egg laying (February-March), when adults become more secretive. Courtship flight consists of 'pair soaring' around the breeding area, and 'undulations' of U-shaped flights (deep drop with folded wings/rapid upward climb). It is common for GOEA to move among alternate nests in different years.

Survey the area using as many points necessary to ensure coverage of the entire radius, certain to include points providing observer the ability to scan from the highest elevation possible and view the largest percentage of sky. It is important to scan ridge tops, just below ridgetops, and open sky for raptors utilizing thermals.

Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 1/17/2021	<b>Surveyor:</b> T. Kirk	<b>SURVEY #:</b> 1
<b>Wind Speed:</b> 5-10mph from south	<b>% Cloud Cover:</b> 15 to 90 (1600); high clouds	<b>Temperature (F):</b> 55-70
<b>Survey START:</b> 1245	<b>Survey FINISH:</b> 1645	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station # 1</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) At the barn/old homestead location on open flat across Eel River from historic nest location	
	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals)  1318: American kestrel (AMKE) circling near barn 1321-1326: Red-tailed hawk (RTHA) flew in from east, circling over Eel River 1438: Turkey Vulture (TUVU) soaring west to east, far south of project area 1513: RTHA riding thermals to north (pinpoint in the sky) 1542: RTHA (2) riding thermals to the northeast 1545: RTHA (2) second pair circling above, flew east 1601: RTHA riding thermals to east	

## Golden Eagle (GOEA) Breeding Area Occupancy Survey Form

### American Eagle Research Institute Survey Protocol (Driscoll 2010):

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Survey the area using as many points necessary to ensure coverage of the entire radius, certain to include points providing observer the ability to scan from the highest elevation possible and view the largest percentage of sky. It is important to scan ridge tops, just below ridgetops, and open sky for raptors utilizing thermals.

Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 1/20/2021	<b>Surveyors:</b> M. McKenzie / T. Kirk	<b>SURVEY #:</b> 1
<b>Wind Speed:</b> 3-5mph, increasing to 5-8mph (1200)	<b>% Cloud Cover:</b> 10-20	<b>Temperature (F):</b> 55-62
<b>Survey START:</b> 1000	<b>Survey FINISH:</b> 1400	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station # 2</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) Approximately 2.2 miles NE of Station #1 on ranch road that starts near pond, heading east	
<b>M. McKenzie</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1017: Red-tailed hawk (RTHA) perched nearby/hunting 1106: American kestrel (AMKE) flying east to west out of site; wind picking up 1127: RTHA pair in Douglas-fir stand, secretive; one quietly flew off, the other started calling 1155: RTHA riding thermals high to the east 1240: Wind picking up 1304: AMKE flying south, calling 1325: RTHA flying thermals high to northeast	

<b>Station #4</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) At junction turn Left, continue 0.5 miles (Right goes to barn, Stations #1, 2)
<b>T. Kirk</b> <b>Start: 0945</b> <b>Finish: 1345</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals)  0947: AMKE circling, landing in nearby tree 0948-1140: nothing 1141: RTHA circling to north, called twice 1144: AMKE flies out to pester RTHA; ride thermals, both fly out of sight to north 1200: RTHA flying over ridge to south and disappears 1245: RTHA flying to ridge to south



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### Additional Information:

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Survey the area using as many points necessary to ensure coverage of the entire radius, certain to include points providing observer the ability to scan from the highest elevation possible and view the largest percentage of sky. It is important to scan ridge tops, just below ridgetops, and open sky for raptors utilizing thermals.

Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 1/19/2021	<b>Surveyor:</b> M. McKenzie / T. Kirk	<b>SURVEY #:</b> 1
<b>Wind Speed:</b> 5-10mph	<b>% Cloud Cover:</b> 15 to 30	<b>Temperature (F):</b> 55-65
<b>Survey START:</b> 1300	<b>Survey FINISH:</b> 1700	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station #3</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) 1.7 miles past Station #2 (Station #1 at barn)	
<b>M. McKenzie</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1311: Red-tailed hawk (RTHA) soaring thermals to west 1323: American kestrel (AMKE) hunting, calling to east 1338: AMKE pair calling to east 1412: RTHA perched in tree to east, hunting 1430: RTHA, very large, soaring upstream just above Eel River 1546: RTHA gliding downstream in vicinity of historic GOEA nest	

<b>Station #5</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) 0.6 miles from entrance gate to first open view, directly across from Whitlow
<b>T. Kirk</b> <b>Start: 1245</b> <b>Finish: 1645</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals)  1407: Turkey vulture (TUVU) riding thermals to the north, disappearing north 1408-1645: no raptors, no eagles

## Golden Eagle (GOEA) Breeding Area Occupancy Survey Form

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At least 4 surveys, 4 separate days, for 4 hours each

During courtship flight/pair bonding/pre-egg laying: January-February

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Survey the area using as many points necessary to ensure coverage of the entire radius, certain to include points providing observer the ability to scan from the highest elevation possible and view the largest percentage of sky. It is important to scan ridge tops, just below ridgetops, and open sky for raptors utilizing thermals.

Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 2/6/2021	<b>Surveyor:</b> T. Kirk	<b>SURVEY #:</b> 1
<b>Wind Speed/Direction:</b> 5-15 West	<b>% Cloud Cover:</b> 5	<b>Temperature (F):</b> 55-65
<b>Survey START:</b> 1331	<b>Survey FINISH:</b> 1731	<b>Survey TOTAL:</b> 4 hours
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station #6</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) Approximately 2 miles up alternate road on western portion of parcel, W side Brushy Mtn; 1920' elevation	
	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals)  1402: RTHA landed in tree NW 1410-1440: no raptors 1454: wind picking up with gusts to 10-20 mph 1512: cloud cover up to 15% to W 1554: MAKE flying S to N, landed in tree 1604: RTHA soaring to W 1615: RTHA circling to N 1700-1731: no raptors	

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Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 2/10/2021	<b>Surveyor:</b> M. McKenzie / T. Kirk	<b>SURVEY #:</b> 2
<b>Wind Speed:</b> 5-10mph W	<b>% Cloud Cover:</b> 5	<b>Temperature (F):</b> 60
<b>Survey START:</b> 1050	<b>Survey FINISH:</b> 1450	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station # 1</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) At the barn/old homestead location on open flat across Eel River from historic nest location	
	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1101: AMKE pair on snag at edge of prairie overlooking Eel River, adjacent to barn 1102-1304: no raptors 1305: RTHA on ridge to E, seen flying over and disappearing 1328: COHA pair (male flashing white coverts) interacting above, disappearing W 1402: RTHA above N ridge in thermals 1433: AMKE over Eel River to S	

<b>Station #6</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) Approximately 2 miles up alternate road on western portion of parcel, W side Brushy Mtn; 1970' elevation
<b>T. Kirk</b> <b>Start: 1215</b> <b>Finish: 1615</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1220: RTHA circling ridge to E 1225: RTHA (3) soaring thermals over ridge to NE 1301: RTHA over NE ridge 1308: RTHA pair calling/flying together 1311: both flew over ridge 1319: RTHA over NE ridge 1350: RTHA circling N 1405-1411: RTHA pair circling over ranch 1435: RTHA soaring S to N 1439: RTHA circling N 1453: RTHA pair calling in N 1515: same pair, still calling and flying together 1522: AMKE circling over field to S 1525: wind and cloud cover slightly increasing



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Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 2/9/2021	<b>Surveyors:</b> T. Kirk	<b>SURVEY #:</b> 2
<b>Wind Speed:</b> 0-5mph W	<b>% Cloud Cover:</b> 65-90	<b>Temperature (F):</b> 50
<b>Survey START:</b> 1115	<b>Survey FINISH:</b> 1515	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station # 2</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) Approximately 2.2 miles NE of Station #1 on ranch road that starts near pond, heading east	
	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1116: AMKE on location 1312: RTHA circling thermals to SE 1330: cloud cover increasing; still good viewing 1407: RTHA soaring over nearby ridge to E 1410: steady 5mph breezes out of W 1418: RTHA mobbed by AMKE; soaring and circling to SE 1427: AMKE hunting prairie at survey station	

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<b>Date:</b> 1/29/2021	<b>Surveyor:</b> M. McKenzie / T. Kirk	<b>SURVEY #:</b> 2
<b>Wind Speed:</b> 0-5mph	<b>% Cloud Cover:</b> 40-80; valley fog	<b>Temperature (F):</b> 50
<b>Survey START:</b> 1215	<b>Survey FINISH:</b> 1615	<b>Survey TOTAL:</b> 4hr
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station #3</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) 1.7 miles past Station #2 (Station #1 at barn)	
<b>M. McKenzie</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1225: fog pulling back from Eel River valley 1231: RTHA pair riding high in thermals to SE 1244: RTHA pair came in to land at top of large Douglas-fir directly behind survey station 1250: RTHA pair left perch to soar directly above Eel River 1319: RTHA pair back in SW skies 1330: valley fog cleared 1350: winds picking up; clouds rolling in from SW 1436-1503: RTHA soaring above far E ridge was joined by BAEA. The bald eagle flew to NE below ridge line to reveal full adult plumage against forest; climbed thermals with RTHA pair for great size/soaring comparison 1441: AMKE and RTHA perched in two different snags N of station	

<b>Station #4</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) At main junction at wetland turn Left, continue 0.5 miles (Right goes to barn, Stations #1-3)
<b>T. Kirk</b> <b>Start: 1230</b> <b>Finish: 1630</b>	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals)  1245: AMKE flew in from NE 1316: clouds clearing to 25% 1327: RTHA riding thermals S to N 1355: AMKE flying overhead to S 1404: AMKE landed in nearby tree; jays mobbing 1415: AMKE airborne again 1435: AMKE perched again 1530: overcast to 85% cloud cover

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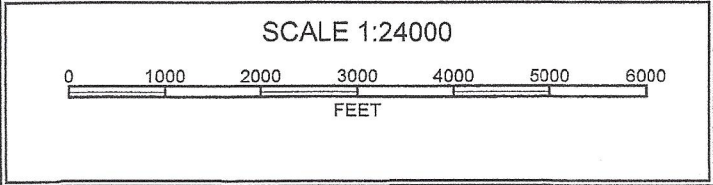
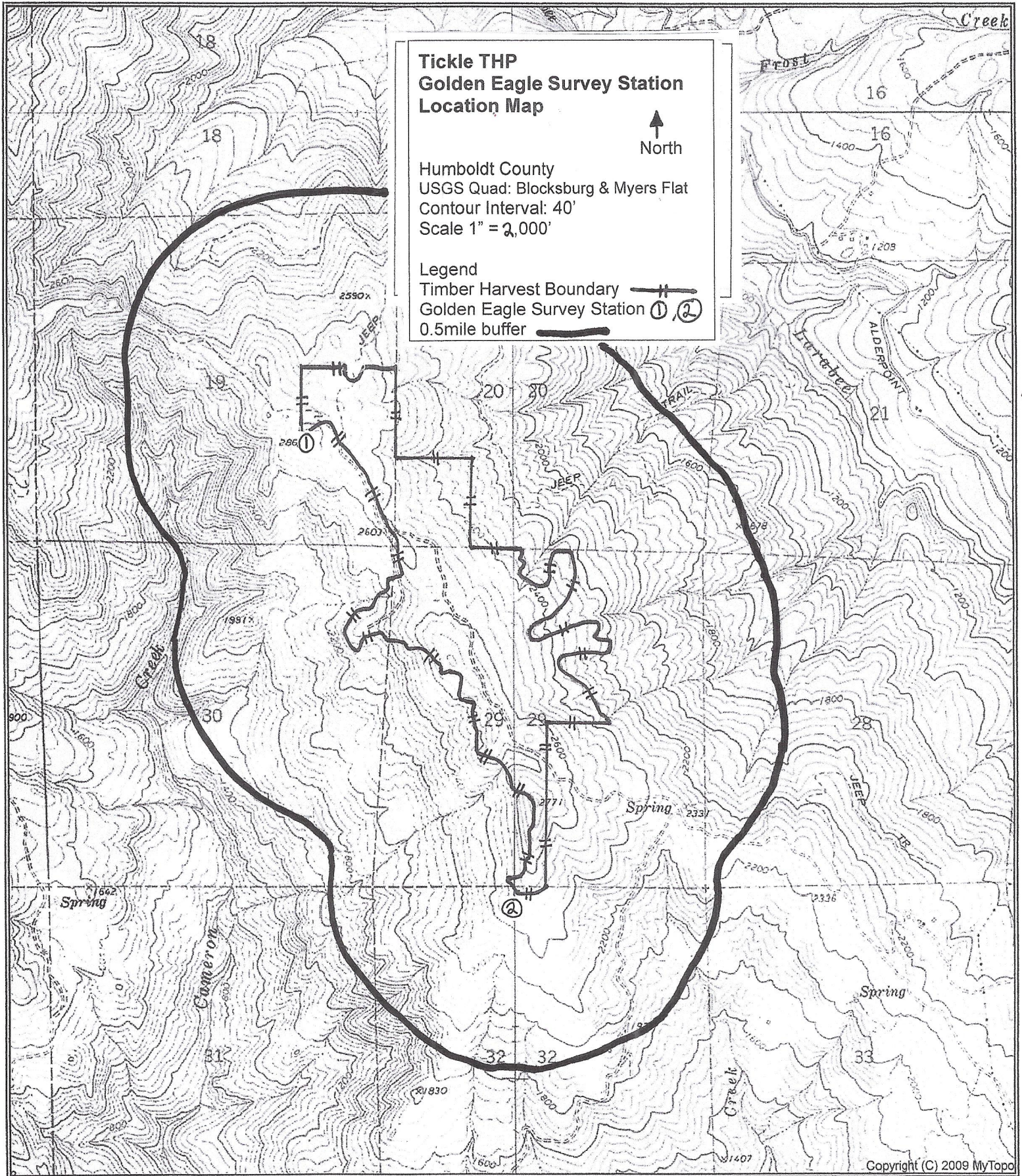
Vehicles must be parked under tree canopy to provide aerial cover. Surveyor should wear clothing to match surroundings and conceal survey equipment with camouflage material.

<b>Date:</b> 2/6/2021	<b>Surveyor:</b> M. McKenzie	<b>SURVEY #:</b> 2
<b>Wind Speed/Direction:</b> 5-10 West	<b>% Cloud Cover:</b> 5	<b>Temperature (F):</b> 55-65
<b>Survey START:</b> 1230	<b>Survey FINISH:</b> 1630	<b>Survey TOTAL:</b> 4 hours
<b>Area (USGS 7.5 topo map/Client):</b> Myers Flat & Blocksburg / Rolling Meadow Ranch		
<b>Station #5</b>	<b>DESCRIPTION</b> (Mark location in GPS and include approximate mileage or landmark) 0.6 miles from entrance gate to first open view, directly across from Whitlow	
	<b>RESULTS</b> (Include all raptor or vulture species observed, particularly those utilizing thermals) 1338: RTHA flying upstream Eel River 1405: SSHA flying W to E in straight line, out of sight 1408: SSHA back and hunting over flat to SE 1450: RTHA circling over Eel River 1517: SSHA back into view 1530: getting gusty 1558: SSHA back into view 1610-1630: no raptor activity	



**Appendix B.** Holmgren and SPI GOEA Survey Data









# AMENDMENT NO 3(minor) Sierra Pacific Industries

548 N. Fortuna Blvd • Fortuna, CA 95540 • (707) 617-2409

April 20, 2020

CAL FIRE  
Resource Management  
135 Ridgway Avenue  
Santa Rosa, CA 95401

RE: THP 1-19-00119 HUM, Jets – Amend Golden Eagle Surveys

This amendment conforms to the rules and the regulations of the Board of Forestry and the Forest Practice Act

Reviewed by SH Date routed 4/21/2020  
cc: Unit (2), BOE, SUB, RPF

Dear Sir or Madam:

**Golden Eagle:** As specified in the approved plan, golden eagle surveys were conducted at 3 survey locations shown on the Golden Eagle Survey Map (in approved plan). During surveys no golden eagles were observed.

Date	Station	Visit	Start	End	GOEA Observation	Comment	Weather	Visibility
2/12/2020	1	1	10:10	13:13	N		Overcast then sunny	Good
2/12/2020	2	1	10:30	13:30	N		Overcast then sunny	Good
2/12/2020	3	1	10:25	13:25	N		Overcast then sunny	Good
3/13/2020	1	2	10:25	14:05	N		Clear	Good
3/13/2020	2	2	10:05	13:05	N		Clear	Good
3/21/2020	3	2	10:00	13:05	N		Clear	Good

Please consider this to be a minor amendment as it is not expected to make a significant change in the conduct of timber operations, and can reasonably be expected not to significantly adversely affect timberland productivity or values relating to soil, water quality, watershed, wildlife, fisheries, range and forage, recreation, aesthetics, or archeology.

Thank you for your attention to this matter.

Sincerely,

Michael C. Lommori  
Forester, RPF#2724

Attachment

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**APR 20 2020**  
COAST AREA OFFICE  
RESOURCE MANAGEMENT





Contours = 40'

**Jets THP**  
GOEA Map

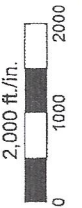
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- Harvest Unit
- Ownership Boundary
- GOEA Survey Area
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- County Road
- Seasonal Road
- Powerline
- GOEA Survey Station

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PART OF PLAN MAR 06 2020

COAST AREA OFFICE  
RESOURCE MANAGEMENT



54.1 NEW 3/6/2020