

County of San Diego Department of Parks and Recreation

# Raptor Foraging Surveys & Nest Monitoring 2024–2025 Summary Report

Ramona Grasslands, El Capitan, and Hellhole Canyon County Preserves



November 2025





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- B. Raptor Foraging Survey Dates, Personnel, and Weather Conditions
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- D–G. Confidential Eagle Nest Monitoring Information (Not Included)
- H. Wildlife Compendium

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# RAPTOR FORAGING SURVEYS & NEST MONITORING

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## 2024–2025 Summary Report

### 1.0 Introduction

The Ramona Grasslands County Preserve (Ramona Grasslands Preserve) is a raptor foraging and territory area (CBI 2007; County of San Diego 2010; WRI 2007). *Territory* is defined as an area used by a resident pair of eagles for both nesting and foraging. Golden eagles (*Aquila chrysaetos*) forage on the Ramona Grasslands Preserve and have established territories in the vicinity (e.g., Bandy Canyon and Kimball Valley) (CBI 2007). In 2013, a bald eagle (*Haliaeetus leucocephalus*) territory was documented in the Ramona Grasslands Preserve for the first time and successfully fledged young. The El Capitan County Preserve (El Capitan Preserve) has an established golden eagle nesting territory on El Cajon Mountain (ICF Jones & Stokes 2008). The Hellhole Canyon County Preserve (Hellhole Canyon Preserve) has an established golden eagle nesting territory on Rodriguez Mountain. Raptor foraging surveys and golden eagle nest monitoring were conducted by Environmental Science Associates (ESA) at the Ramona Grasslands Preserve from August 2024 to July 2025 on behalf of the County of San Diego (County) Department of Parks and Recreation (DPR) to collect information on eagle and other raptor activity at the Ramona Grasslands Preserve. In addition, golden eagle nest monitoring was conducted by ESA at the El Capitan Preserve and the Hellhole Canyon Preserve from January to May 2025. This report summarizes the 2024–2025 monitoring results.

### 1.1 Purpose of Study

The purpose of this study is to monitor raptor foraging behavior on the Ramona Grasslands Preserve and to determine the status (occupied, failed/fledged) of the off-site golden eagle nest and on-site bald eagle nest. Additionally, the purpose is to determine the location and status of the on-site golden eagle nests on El Capitan and Hellhole Canyon Preserves. The information in this study and previous studies provides an understanding of raptor foraging and golden eagle distribution within the Ramona Grasslands Preserve and occupancy of the golden and bald eagle territories at all three preserves to inform future management decisions.

### 1.2 Study Locations

#### 1.2.1 Ramona Grasslands County Preserve

The Ramona Grasslands Preserve is in the unincorporated community of Ramona, in north-central San Diego County (**Figure 1**). A portion of the Ramona Grasslands Preserve falls within the Multiple Species Conservation Program (MSCP) County of San Diego Subarea Plan, but most of the Ramona Grasslands Preserve is within the Draft North County MSCP (ICF 2010, **Figure 2a**). The Ramona Grasslands

Preserve is intersected by Bandy Canyon, which contains Santa Maria Creek and is bordered by gentle hills and rocky cliff faces ranging in elevation from 1,350 to 1,700 feet above mean sea level. Rural residential development is to the south of the Ramona Grasslands Preserve, the town of Ramona is to the east, and the northern and western boundaries of the Ramona Grasslands Preserve are mainly characterized by open space and agricultural uses. The Ramona Grasslands Preserve is bisected by the Ramona Airport and Ramona Municipal Water District (RMWD) lands (**Figure 3**).

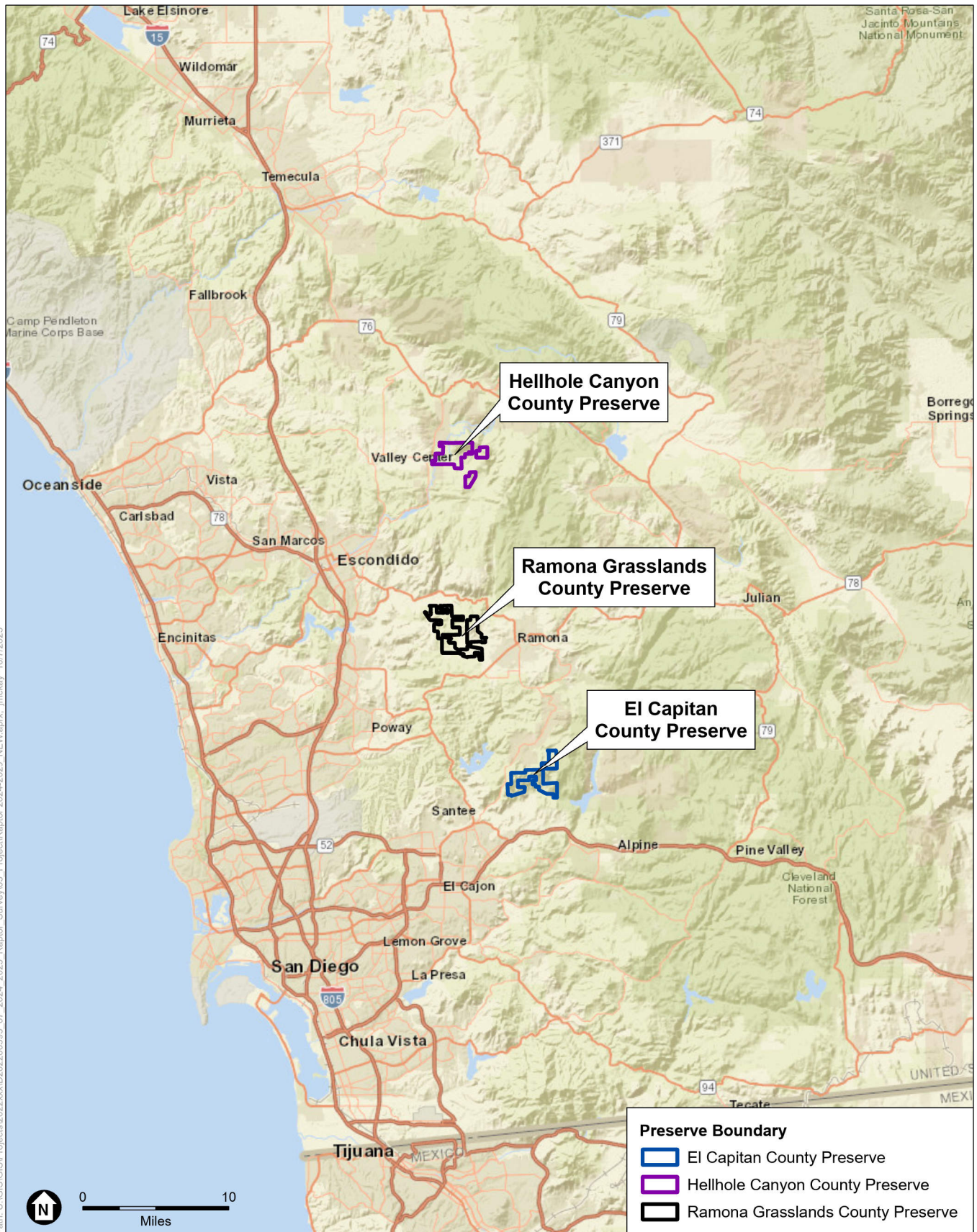
Grasslands within the Ramona Grasslands Preserve were historically used for commercial grazing, and managed grazing is still employed for vegetation management under County ownership. Passive recreation is allowed in the Ramona Grasslands Preserve. The Ramona Grasslands Preserve supports a multi-use trail system open to the public in the southwest portion of the Ramona Grasslands Preserve, as well as a multi-use trail system in the northwest portion of the Ramona Grasslands Preserve open outside of the golden eagle breeding season (August 15–November 15) on Saturdays and Sundays only. The northeast and southeast portions are currently closed to public use, but the Ramona Grasslands Preserve’s Public Access Plan proposes opening the northeast portion for future public use.

### **1.2.2 El Capitan County Preserve**

The El Capitan Preserve is in the unincorporated community of Lakeside in central San Diego County (**Figure 1**). Most of the El Capitan Preserve falls within the MSCP County of San Diego Subarea Plan with a small portion within the Draft North County MSCP area (**Figure 2b**). The El Capitan Preserve is north of the San Diego River, south of the Barona Indian Reservation, west of El Capitan Reservoir and U.S. Forest Service (USFS) Cleveland National Forest, and east of the San Vicente Reservoir and Wildcat Canyon. The El Capitan Preserve contains the western-facing portion of El Cajon Mountain, which is mainly viewable from the El Monte County Park (**Figure 4**). The El Capitan Preserve has a multi-use trail, approximately 5.5 miles long, that extends from the western portion of the El Capitan Preserve to the summit of El Cajon Mountain.

### **1.2.3 Hellhole Canyon County Preserve**

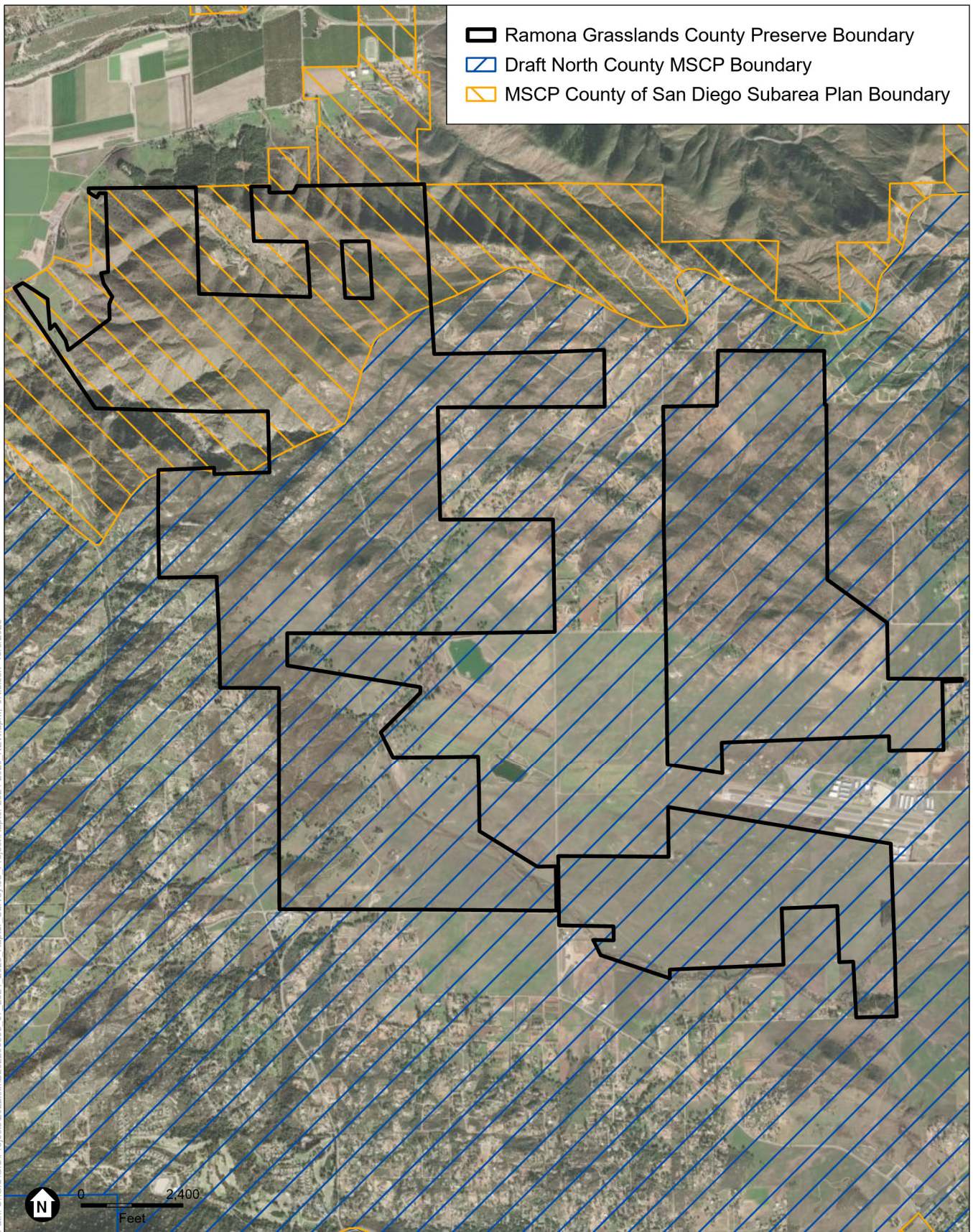
The Hellhole Canyon Preserve is in the unincorporated community of Valley Center in northern San Diego County (**Figure 1**). The Hellhole Canyon Preserve falls completely within the Draft North County MSCP area (**Figure 2c**). The Hellhole Canyon Preserve is north of the San Pasqual Indian Reservation, south of the Rincon and La Jolla Indian Reservations, west of Guejito Creek, and east of the unincorporated town of Valley Center. Hell Creek (east to west) and Escondido Canal (north to south) transect through the Hellhole Canyon Preserve (**Figure 5**). The Hellhole Canyon Preserve has 13.5 miles of multi-use trails that extend from the southern portion of the Hellhole Canyon Preserve along Hell Creek and up an unnamed peak.



SOURCE: ESA, 2025.

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**Figure 1**  
Regional Map

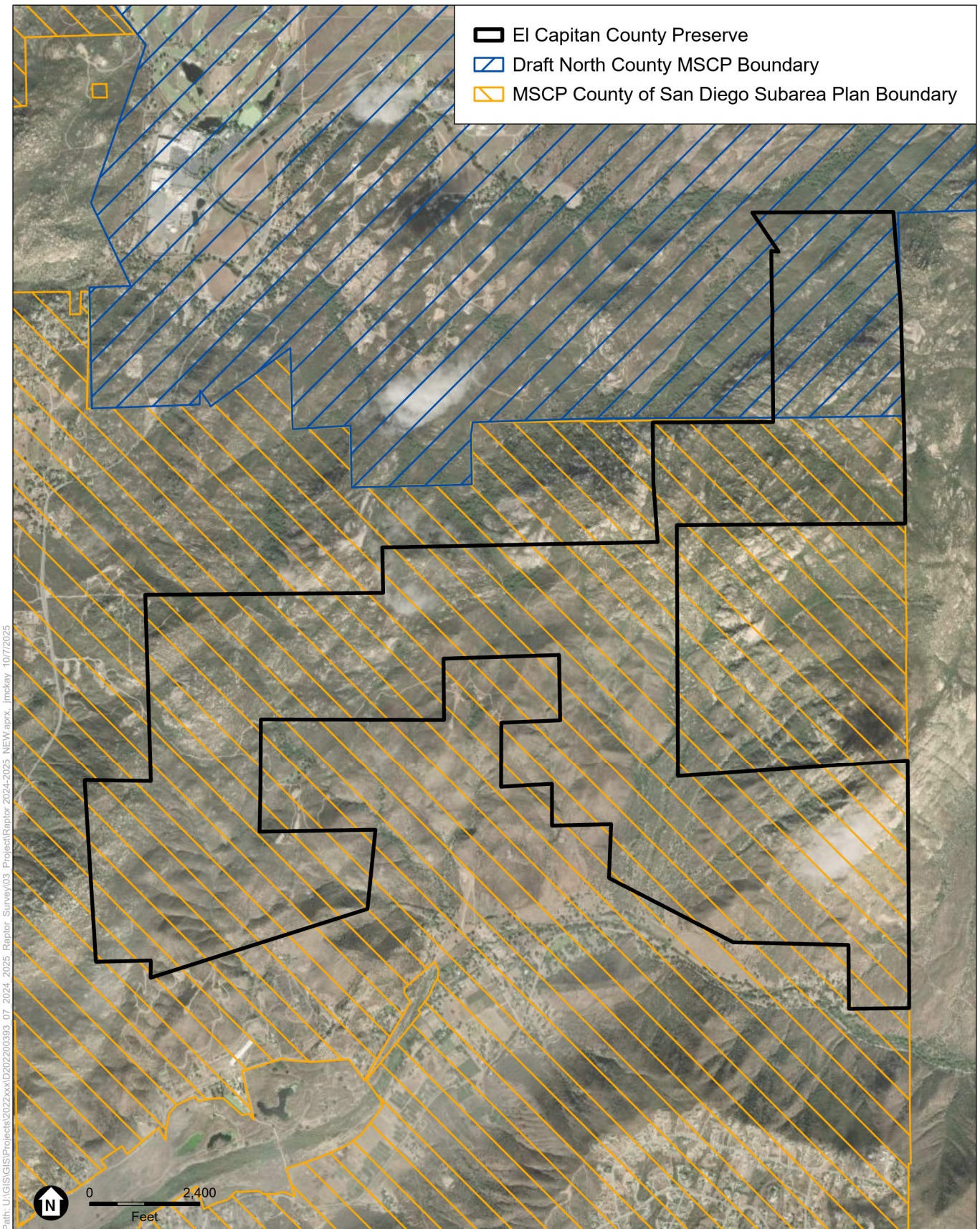


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SOURCE: SanGIS Imagery, 2017, ESA, 2025.

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**Figure 2a**  
 MSCP Plan Areas  
 Ramona Grasslands County Preserve



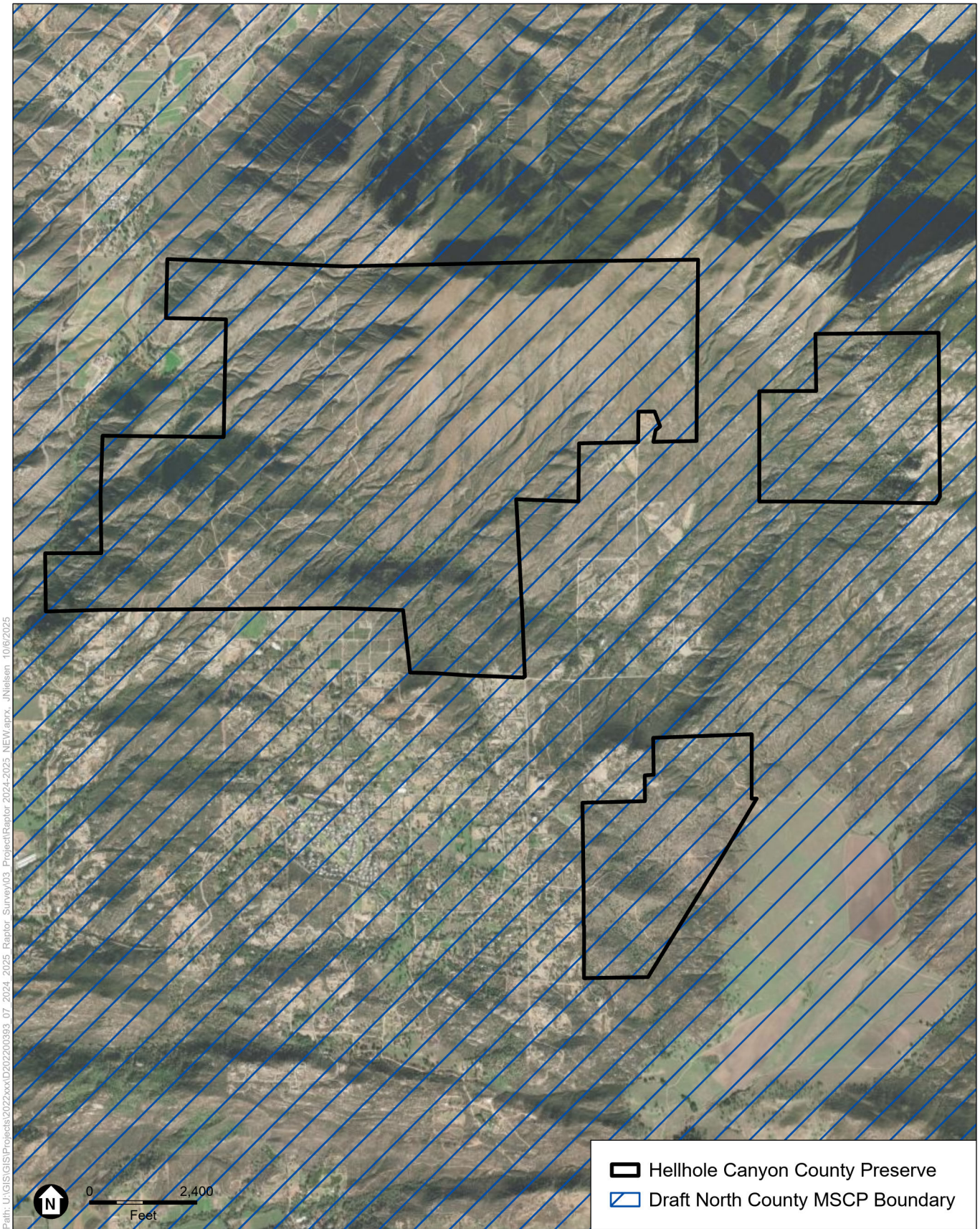
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SOURCE: SanGIS Imagery, 2017, ESA, 2025.

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**Figure 2b**  
 MSCP Plan Areas  
 El Capitan County Preserve



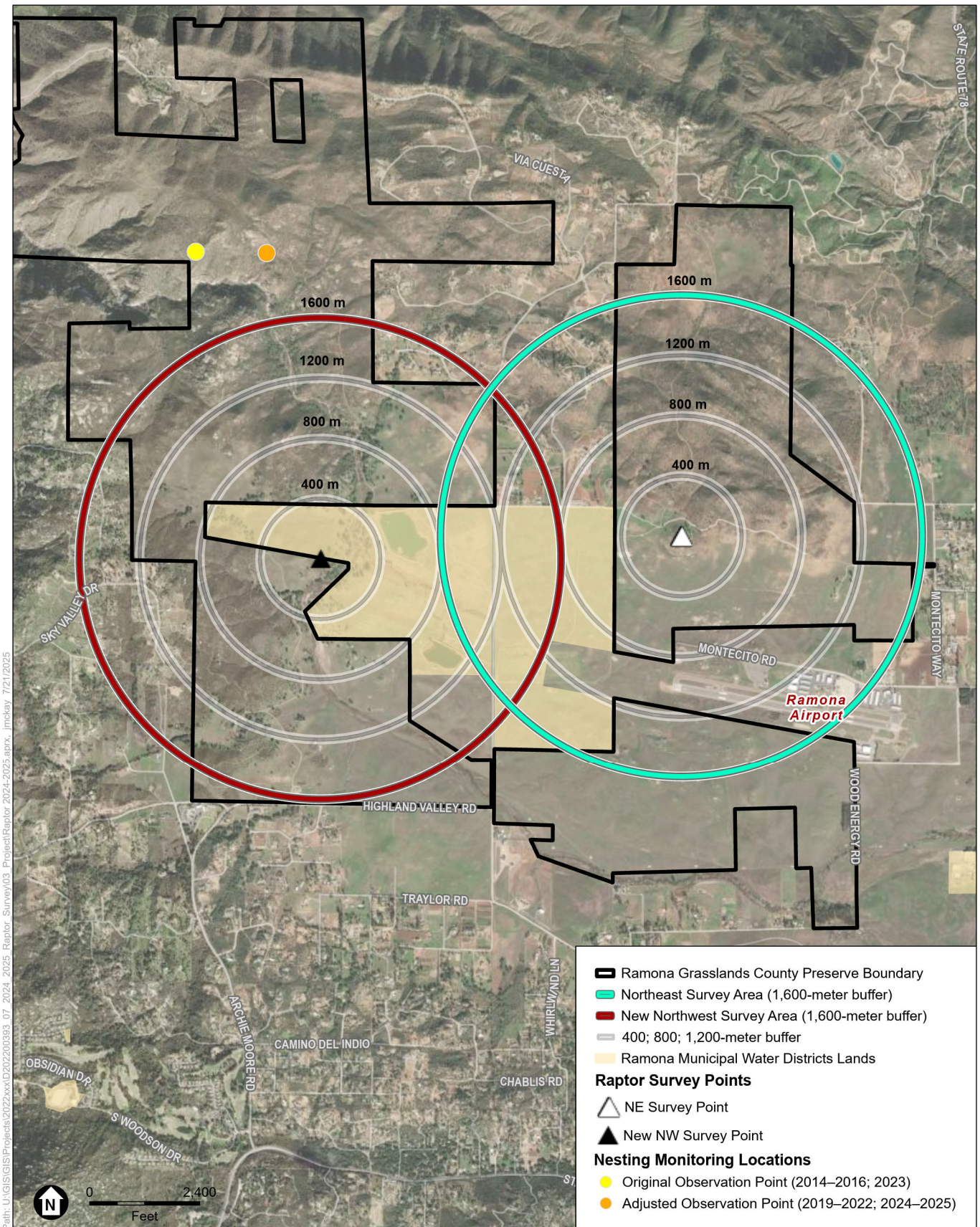


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SOURCE: SanGIS Imagery, 2017, ESA, 2025.

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**Figure 2c**  
 MSCP Plan Area  
 Hellhole Canyon County Preserve



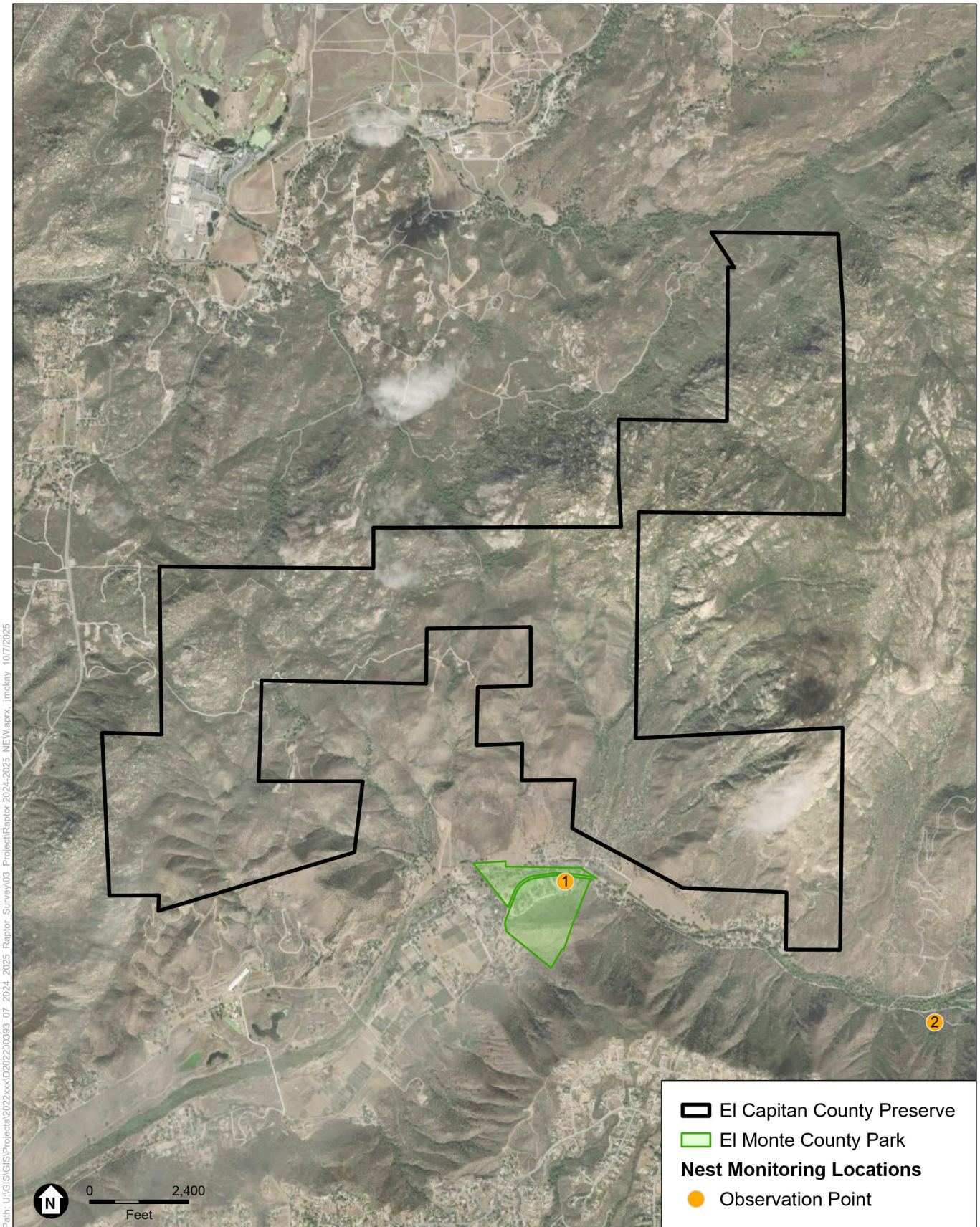
SOURCE: ESRI; AECOM; SanGIS 2023; ESA, 2025.

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**Figure 3**

Raptor Survey Points and Golden Eagle Nest Monitoring Locations  
Ramona Grasslands County Preserve

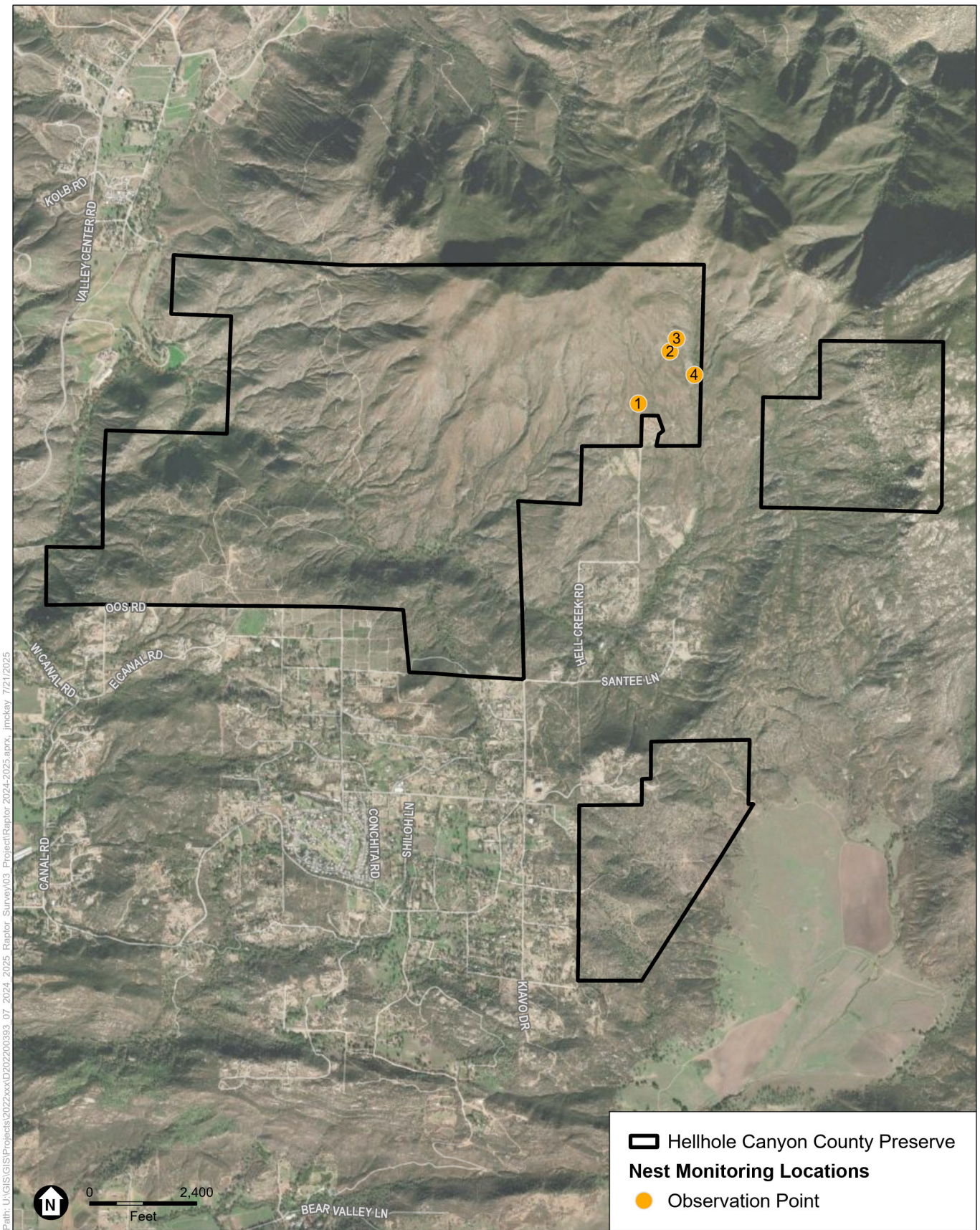




SOURCE: ESRI; AECOM; SanGIS 2023; ESA, 2025.

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**Figure 4**  
Golden Eagle Nest Monitoring Locations  
El Capitan County Preserve



SOURCE: ESRI; AECOM; SanGIS 2023; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 5**  
 Golden Eagle Nest Monitoring Locations  
 Hellhole Canyon County Preserve



## 2.0 Methodology

Raptor foraging and eagle nest monitoring surveys were conducted within the Ramona Grasslands Preserve between August 2024 and July 2025 by ESA biologists. Eagle nest monitoring surveys were conducted on the El Capitan Preserve between February and April 2025 and on the Hellhole Canyon Preserve between January and May 2025. Survey, data analysis, and monitoring methodologies are described below.

### 2.1 Raptor Foraging Surveys

Raptor foraging surveys were only conducted on the Ramona Grasslands Preserve. Raptor-adapted avian point count surveys generally followed the protocol established in the U.S. Fish and Wildlife Service (USFWS) *Eagle Conservation Plan Guidance, Module 1 – Land-based Wind Energy Version 2* (USFWS 2013). Although this guidance document was prepared primarily for fatality studies of wind energy projects, it contains useful survey protocols adapted for this study.

The entire Ramona Grasslands Preserve is the study area; however, to increase accuracy for positively identifying raptor species, the survey area focused on a 1,600-meter radius from two previously established survey points within the Ramona Grasslands Preserve. Surveys were focused specifically on observing and recording spatial usage and behaviors of raptors within and adjacent to the Ramona Grasslands Preserve. When recording data, precedence was given first to eagles, then to other special-status raptors, and finally to other non-special-status raptors. Data were collected on all raptor species when feasible. Data were collected at distances greater than 1,600 meters only to give a general idea of how each raptor was using the Ramona Grasslands Preserve, since accuracy in data collection deteriorates as the subject moves a greater distance away.

The ESA biologists surveyed from two survey areas in a single day. These two survey areas consisted of a 1,600-meter buffer from two previously established survey points. The survey points were selected for having optimal sky visibility to conduct 4-hour point counts to observe raptor foraging behavior and are labeled as the northeast survey point (NE survey point) and new northwest survey point (new NW survey point) in **Figure 3. Appendix A** presents photos taken in all cardinal directions from the NE and new NW survey points.

The NE survey point is located at a high point (a hill feature known as the “lookout” or “house on the hill”) within the northeast quadrant of the Ramona Grasslands Preserve. This location provides great sky visibility for the entire northeast quadrant of the Ramona Grasslands Preserve, specifically toward the southeast, southwest, and northwest. A small mountain ridge occurs to the north and northeast. Certain raptor behavior, such as prey diving, may not be visible from this vantage point toward the northern boundary of the northeast quadrant. This point count location provides good visibility of the rocky outcrops, the utility poles, and the flyway along the mountain ridgeline used by raptors for perching, foraging, and migration.

To avoid disturbance to a potential golden eagle perch site, ESA moved the NW survey point to a new location (new NW survey point) during the 2023–2024 survey period. The new NW survey point is located near an oak tree northeast of the Wildflower Loop trail with a clear view of the grasslands to the northwest, north, and east; the RMWD effluent pond to the northeast; and the preferred golden eagle perch site locations to the north in the northwest portion of the Ramona Grasslands Preserve.

The raptor point count field surveys were initiated on August 17, 2024, and the final survey was completed on July 23, 2025. Six surveys occurred in each season: fall (September, October, and November), winter (December, January, and February), spring (March, April, and May), and summer (June, July, and August). Surveys were conducted twice a month and each survey area was surveyed for a 4-hour period, typically between 6:00 a.m. and 5:00 p.m. The starting survey area rotated each survey (i.e., survey began in the morning at the NE survey area during the first survey period of the month, and the second survey period of the month the survey began in the morning at the new NW survey area). The ESA biologist surveyed twice per month for an entire calendar year, typically 2 to 3 weeks apart. Survey dates, personnel, and weather conditions are depicted in **Appendix B**.

Prior to beginning surveys, the ESA biologists used a range finder with aerial maps to establish distance references for mapping raptors. After the survey began, the biologists systematically scanned a 360-degree view of the horizon, overhead, and below their location with the unaided eye and with binoculars at an unlimited distance for the duration of the 4-hour survey. A spotting scope was also used to identify raptors within the survey areas. Raptor detections were recorded on the Fulcrum mobile application, which was installed on either a tablet device or smartphone to record and upload data forms. Flight path maps were created and recorded on the Field Maps mobile application for special-status raptor species with potential to breed on the Ramona Grasslands Preserve. Special-status raptors are defined as federally (USFWS) or state (California Department of Fish and Wildlife [CDFW]) listed as threatened or endangered, a state fully protected species or a Species of Special Concern, or an MSCP-covered species. Initial data collected included start and end times, date, and survey area. Weather data were taken at the beginning and end of the survey at each survey area.

When a raptor was detected within or near the Ramona Grasslands Preserve boundary, the ESA biologist recorded the following:

- Time of observation.
- Identification tag, if applicable (i.e., a unique value assigned to an individual raptor to allow the biologist to make multiple observations of the same individual and to allow data to be distinguished between multiple individuals that may be present in the Ramona Grasslands Preserve).
- Identification of raptor species.
- Detection type (i.e., visual or auditory).
- Number of individuals.
- Individuals' age/sex (if known).
- Initial distance and bearing of raptor(s) from the biologist.
- Direction-of-flight of the raptor observation.
- Raptor's behavior within the Ramona Grasslands Preserve; definitions of raptor behaviors are as follows:
  - **Direct flight.** Continuous flapping of wings in a directional flight.
  - **Circle-soaring.** Rising in a circular motion with wings outstretched (often associated with raptors catching thermals).

- **Meandering.** Wandering flight with no directional course.
  - **Kiting.** Remaining in a fixed place in moving air on motionless wings.
  - **Hovering.** Remaining in a fixed place into the wind by flapping.
  - **Stooping/prey diving.** Diving from above with wings folded, usually in pursuit of prey.
  - **Perched.** Stationary on an object such as a rock, utility pole, or tree.
- Time observed within or adjacent to the Ramona Grasslands Preserve; if only a single raptor was in view for an extended period of time or exhibited several types of raptor behavior, additional behavioral information was noted.

### 2.1.1 Data Analysis

Species richness, relative frequency of observations, and abundance estimates were calculated using data collected during the raptor foraging surveys. This analysis included all observations detected at each survey point to understand raptor activity and use at each survey area within the Ramona Grasslands Preserve. Metrics were quantified for each season and for the calendar year from August 2024 through July 2025.

#### ***Species Richness***

Species richness is a measure of the species diversity in an area. This was calculated by tallying all raptor species observed from a survey point for each season and for the calendar year. The relative frequency of raptor observations was quantified by summing the number of raptor observations, including repeat observations of the same individual, in a given season and dividing by the number of surveys in a given season.

#### ***Species Abundance***

Raptor use of an area was quantified by calculating the minutes of observation per survey. This metric is the sum of all minutes a raptor species was observed over all surveys in a season, divided by the number of surveys that occurred in that season. The minutes each species was observed included both perched and flight observations.

To avoid overestimating the abundance of raptors, a minimum number of individuals of each raptor species detected per season was calculated as a metric of abundance of individual raptor species. Without observing tagged/marked raptors or uniquely plumaged individuals, it is not possible to know how many unique individuals of each species were actually observed. Minimum numbers of unique individuals of a given raptor species for this survey period were determined as follows: multiple individuals observed during a single scan; differences in age or plumage characteristics (e.g., molt, color morph, aberrant/leucism); and/or observations of tagged/marked individuals. This metric (minimum number of individuals) is a better representation of species abundance than the sum of all observations across the survey effort.

## ***Flight Path Density Maps***

Flight paths of eagles and other special-status raptor species were digitized and analyzed for areas of concentrated usage using geographic information system (GIS) technology, specifically GIS software ArcGIS Pro 3.4.3 with the Spatial Analyst Extension. Prior to the analysis, flight paths were smoothed using the advanced editing tool. The density of the flight paths was derived using the linear density tool within the Spatial Analyst toolset. The tool's process resulted in a raster dataset, where each cell within the raster was assigned a value based on the total linear feet within a given radius of the cell, divided by the search area. A raster graphics image is a dot matrix data structure representing a generally rectangular grid of pixels, or points of color, viewable via a monitor, paper, or other display medium. For this analysis, the distance in linear feet measured was the digitized flight path of the various bird species. The search radius was set at 250 feet (76.2 meters), giving a total search area of each cell of approximately 196,349 square feet (18,241 square meters). The search radius of 250 feet was chosen to generalize patterns in near, but not overlapping, flight paths, but still allowed for each detail to identify many individual flight paths.

## **2.2 Golden Eagle Nest Monitoring**

Golden eagle nest monitoring visits were conducted between January and May 2025 to determine golden eagle nest status and nest success within or adjacent to the three Preserves. Survey dates, personnel, and weather conditions are summarized in **Table 1**. For Hellhole Canyon Preserve, the first visit in January was conducted to determine nest site location(s) when eagles are more likely to carry material to a nest site; such visits are conducted only for areas with new nest monitoring locations. The nest site locations were known for the Ramona Grasslands and El Capitan Preserves. The two visits to these preserves in February and March were conducted to determine whether the nest site was active. If a nest site was determined to be active in these preserves, the next three visits were conducted in April, May, and June to determine nest success.

Information collected during the eagle nest monitoring surveys is based on recommendations by Pagel et al. 2010. Initial data collected included the date, start and end times, and weather conditions during each nest visit. If golden eagles were observed, information such as eagle nesting behavior (e.g., nest building, incubating, feeding young) was documented. Additional observational data, such as number of fledglings, prey items, and territory interactions, were noted when feasible.

### **2.2.1 Ramona Grasslands County Preserve**

Golden eagle nest monitoring was conducted from an observation point (OP) at the Ramona Grasslands Preserve established by ESA in 2019 (**Figure 3**). The ESA biologist was able to look southwest across the canyon from the adjusted OP using a spotting scope to observe the golden eagle nesting behavior and determine nest success without disturbing the resident eagle pair.

**TABLE 1**  
**GOLDEN EAGLE NEST MONITORING SURVEY DATES, PERSONNEL, AND WEATHER CONDITIONS**

County Preserve	Survey Personnel	Date	Time	Weather Conditions
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	01/16/2025	07:45	Temp: 61 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.2 mph, Wind Direction: E
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	01/16/2025	11:45	Temp: 61 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.1 mph, Wind Direction: W
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	02/11/2025	07:40	Temp: 48 °F, 95% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2.5 mph, Wind Direction: S
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	02/11/2025	10:53	Temp: 49.8 °F, 95% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2.9 mph, Wind Direction: NW
El Capitan	Brennan Mulrooney, Dillon Travis	02/11/2025	06:53	Temp: 50 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 0 mph, Wind Direction: N/A
El Capitan	Brennan Mulrooney, Dillon Travis	02/11/2025	11:00	Temp: 53 °F, 80% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Hellhole Canyon	Jaclyn Catino-Davenport,	02/19/2025	07:45	Temp: 67.7 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 0.8 mph, Wind Direction: N
Hellhole Canyon	Jaclyn Catino-Davenport,	02/19/2025	09:45	Temp: 79.8 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: S
El Capitan	Brennan Mulrooney, Karla Alcaraz	03/17/2025	07:20	Temp: 50.2 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.1 mph, Wind Direction: E
El Capitan	Brennan Mulrooney, Karla Alcaraz	03/17/2025	11:20	Temp: 62 °F, 80% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6.5 mph, Wind Direction: SW
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	03/17/2025	07:03	Temp: 54.8 °F, 95% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.2 mph, Wind Direction: NW
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	03/17/2025	10:44	Temp: 58.5 °F, 70% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2.7 mph, Wind Direction: NW
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	03/21/2025	06:45	Temp: 56.4 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: E
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	03/21/2025	10:45	Temp: 82.2 °F, 0% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 1.9 mph, Wind Direction: W
El Capitan	Brennan Mulrooney, Karla Alcaraz	04/16/2025	07:05	Temp: 50 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: SW
El Capitan	Brennan Mulrooney, Karla Alcaraz	04/16/2025	11:05	Temp: 59 °F, 85% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6.5 mph, Wind Direction: SW

County Preserve	Survey Personnel	Date	Time	Weather Conditions
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	04/18/2025	06:41	Temp: 65.4 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 0 mph, Wind Direction: N/A
Ramona Grasslands	Jaclyn Catino-Davenport, Natasha Kabala	04/18/2025	10:27	Temp: 56.3 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: W
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	04/21/2025	06:16	Temp: 49.6 °F, 15% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2.1 mph, Wind Direction: NE
Hellhole Canyon	Jaclyn Catino-Davenport, Karla Alcaraz	04/21/2025	08:16	Temp: 61 °F, 10% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.5 mph, Wind Direction: SW
Hellhole Canyon	Brennan Mulrooney, Karla Alcaraz	05/22/2025	07:32	Temp: 62 °F, 3% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: NE
Hellhole Canyon	Brennan Mulrooney, Karla Alcaraz	05/22/2025	09:22	Temp: 73 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W

## 2.2.2 El Capitan County Preserve

Golden eagle nest monitoring was conducted first from an observation point located at the El Monte County Park, approximately 1,900 meters from the closest cliff face on El Cajon Mountain for the El Capitan Preserve, and from a second observation point at a dirt pullout off of El Monte Road to scan the opposite side of Cajon Mountain (**Figure 4**). The first observation point allowed a full view of El Cajon Mountain's south and west facing cliffs and on Silverdome's smaller cliff faces and rocky outcrops. The second observation point allowed for a full view of El Cajon Mountain's southwestern facing cliffs which were not visible from the first observation point. The ESA biologist scanned the cliff faces using a spotting scope to observe the golden eagle nesting behavior and determine nest success without disturbing the resident eagle pair.

## 2.2.3 Hellhole Canyon County Preserve

Golden eagle nest monitoring was conducted from multiple observation points located west of Hell Creek and within the Hellhole Canyon Preserve (**Figure 5**). The first observation point allowed a full view of Rodriguez Mountain's west-facing cliffs and mature trees. The second and third observation points were placed at higher elevations to provide a better vantage point of the known nest location. The fourth observation point was changed due to the lighting and distance from the previous second and third observations. The ESA biologist scanned the cliff faces using a spotting scope to observe the golden eagle nesting behavior and determine nest success without disturbing the resident eagle pair. There is a known golden eagle nest in proximity to Hellhole Canyon Preserve, on or near the Chabad addition, which last successfully fledged in 2018. The nest was known to be on Rodriguez Mountain, but it was unknown whether it was located on the Hellhole Canyon Preserve.

# 3.0 Raptor Foraging Survey Results

Various raptors use the Ramona Grasslands Preserve as year-round residents, seasonal visitors, or migrants that fly through the region. The Ramona Grasslands Preserve is actively used by raptors to forage and nest. All raptor species detected on and off the Ramona Grasslands Preserve for each season within the calendar year from August 2024 through July 2025 are depicted in **Table 2**.

## 3.1 Species Richness

A total of 24 surveys were completed within the Ramona Grasslands Preserve by ESA biologists during the 2024–2025 study year. As shown in last line item of **Table 3**, a total of 15 raptor species were detected at the new NW and the NE survey areas during the raptor point count surveys. Raptor detection field data, including species, sex, age, behavior, and observation time for each raptor detection, are provided in **Appendix C**.

As summarized in **Table 3**, 14 raptor species were observed at the new NW survey area and 14 raptor species were observed at the NE survey area. Raptor species richness was highest during the fall season at the new NW survey area but was highest during the winter season at the NE survey area. Raptor species richness was higher in the NE survey area than the new NW survey area during all seasons except during the fall season.

**TABLE 2**  
**DETECTED RAPTOR SPECIES BY SEASON**

Common Name	Scientific Name	Fall	Winter	Spring	Summer
Bald eagle	<i>Haliaeetus leucocephalus</i>	X	X	X	X
Golden eagle	<i>Aquila chrysaetos</i>	X	X	X	X
Red-tailed hawk	<i>Buteo jamaicensis</i>	X	X	X	X
Red-shouldered hawk	<i>Buteo lineatus</i>	X	X	X	X
Ferruginous hawk	<i>Buteo regalis</i>	X	X	X	–
Swainson's hawk	<i>Buteo swainsoni</i>	–	–	X	–
Northern harrier	<i>Circus hudsonius</i>	X	X	X	–
Cooper's hawk	<i>Astur (Accipiter) cooperii</i>	X	X	X	X
Sharp-shinned hawk	<i>Accipiter striatus</i>	X	X	–	–
American peregrine falcon	<i>Falco peregrinus anatum</i>	X	X	X	X
Prairie falcon	<i>Falco mexicanus</i>	X	X	X	–
Merlin	<i>Falco columbarius</i>	X	X	X	–
American kestrel	<i>Falco sparverius</i>	X	X	X	X
Osprey	<i>Pandion haliaetus</i>	X	–	–	–
White-tailed kite	<i>Elanus leucurus</i>	X	X	X	X

**TABLE 3**  
**NUMBER OF SURVEYS AND SPECIES RICHNESS (AUGUST 2024–JULY 2025)**

Season	Number of Surveys <sup>1</sup>	Number of Distinct Species Identified	Number of Raptor Observations per Survey <sup>2</sup>
<b>New NW Survey Area</b>			
Fall	6	13	23.3
Winter	6	11	16.2
Spring	6	10	12.2
Summer	6	7	11.5
New NW Survey Area Subtotal <sup>3</sup>	24	14	15.8
<b>NE Survey Area</b>			
Fall	6	11	22.2
Winter	6	11	20.0
Spring	6	11	14.8
Summer	6	6	13.2
NE Survey Area Subtotal <sup>3</sup>	24	14	17.5
<b>Total</b>	<b>48</b>	<b>15</b>	<b>16.7</b>

Notes:

- Each survey was 4 hours in length.
- May include repeat observations of the same individual.
- Subtotals summarize the number of distinct species observed per survey area over all four seasons. Many species were observed during more than one season; therefore, totals are cumulative rather than summative.

## 3.2 Species Abundance

Of the 15 raptor species identified, 4 were special-status raptors with potential to breed on the Ramona Grasslands Preserve: (1) golden eagle (federal Bald and Golden Eagle Protection Act, state fully protected, County of San Diego Group 1 species, MSCP–covered species, and Draft North County MSCP–covered species), (2) bald eagle (federal Bald and Golden Eagle Protection Act, state endangered and fully protected, County of San Diego Group 1 species, MSCP–covered species, and Draft North County MSCP–covered species), (3) Cooper’s hawk (*Astur [Accipiter] cooperii*) (state listed, County of San Diego Group 1 species, and MSCP–covered species), and (4) white-tailed kite (*Elanus leucurus*) (state fully protected, County of San Diego Group 1 species, MSCP–covered species, and Draft North County MSCP–covered species). To visually represent and better understand eagle abundance, the minutes of observation per survey area for eagles during all seasons are presented in a graph for each survey area (**Figure 6a** and **Figure 6b**). A detailed discussion of the four special-status species detected and density/spatial-use on the Ramona Grasslands Preserve is provided in Section 3.3.

Several special-status raptors that do not have the potential to breed on-site were also detected. For these species, the Ramona Grasslands Preserve is outside of their breeding range or suitable breeding habitat is absent. They are ferruginous hawk (*Buteo regalis*) (County of San Diego Group 1 species and MSCP–covered species); Swainson’s hawk (*Buteo swainsoni*) (state threatened, County of San Diego Group 1 species, and MSCP–covered species); northern harrier (*Circus hudsonius*) (state Species of Special Concern, County of San Diego Group 1 species, and MSCP–covered species); sharp-shinned hawk (*Accipiter striatus*) (County of San Diego Group 1 species); and American peregrine falcon (*Falco peregrinus anatum*) (state fully protected, County of San Diego Group 1 species, and MSCP–covered species).

Non-special-status raptors observed included red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), prairie falcon (*Falco mexicanus*), merlin (*Falco columbarius*), American kestrel (*Falco sparverius*), and osprey (*Pandion haliaetus*).

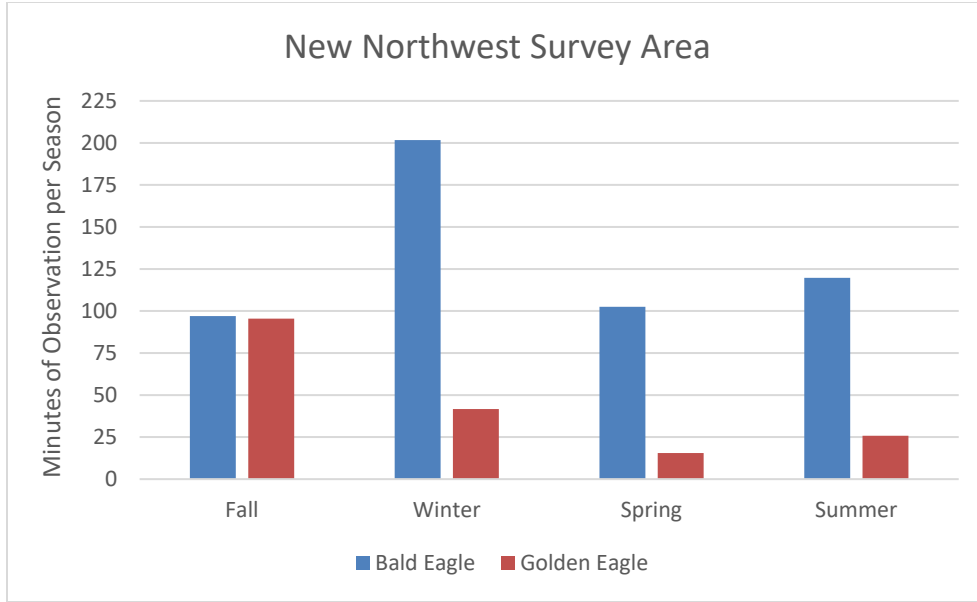
Red-tailed hawk was the most frequently observed raptor species, followed by bald eagle, within and adjacent to the Ramona Grasslands Preserve. However, not all red-tailed hawk observations were recorded because, when special-status species were detected, additional focus was required for those observations.

## 3.3 Flight Path Density Maps

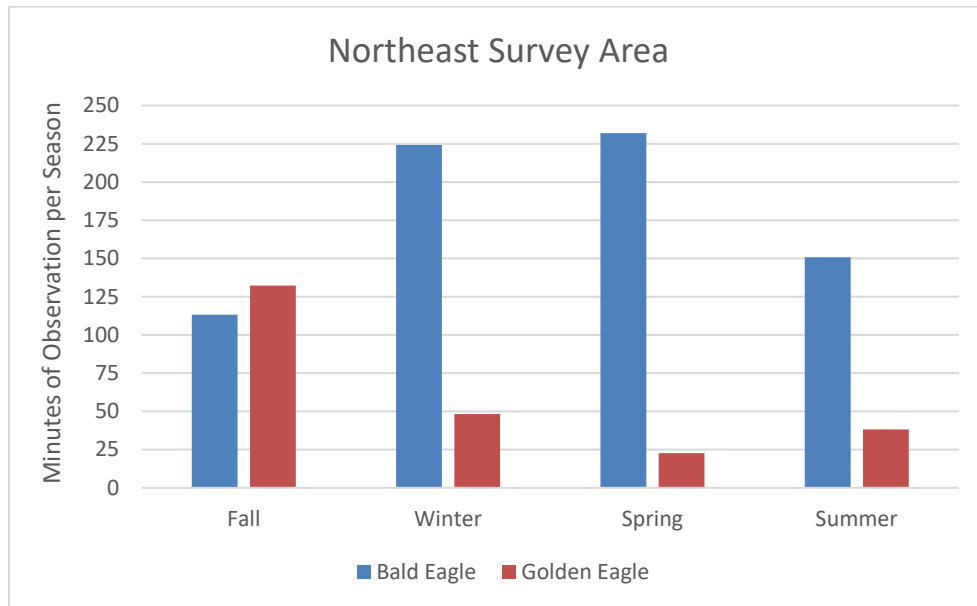
The density/spatial usage by the four special-status raptor species within the Ramona Grasslands Preserve, including areas of preference (if any), is described in detail below.

### 3.3.1 Golden Eagle

Golden eagles were detected in all seasons and in both survey areas but were not detected during every survey within the Ramona Grasslands Preserve (**Table 4**). Monitoring results indicate use of the Ramona Grasslands Preserve by a minimum of one resident golden eagle throughout the survey period. The golden eagle sightings during the 2024–2025 season were of adult birds (often seen together) assumed to be the Bandy Canyon pair, a juvenile golden eagle that was seen accompanying the assumed Bandy Canyon pair during the fall season, and other individuals that were not part of the Bandy Canyon pair but were not individually identifiable due to their lack of markers or unique plumage features.



**Figure 6a**  
Eagle Activity within the Vicinity of the New NW Survey Area



**Figure 6b**  
Eagle Activity within the Vicinity of the NE Survey Area

An overview of the seasonal and annual use of the Ramona Grasslands Preserve by golden eagle is presented in **Figures 7a** through **7e**. The northwestern portion of the Ramona Grasslands Preserve was most heavily used by golden eagles throughout the survey period, with minimal activity within the southern portion of the Ramona Grasslands Preserve, as depicted in the annual overview (**Figure 7e**). Golden eagle observations on the Ramona Grasslands Preserve were evenly split between the two survey areas during the 2024–2025 survey period. At the new NW survey area, golden eagles were observed for an average of 96 minutes per survey in the fall season, 42 minutes per survey in the winter season, 16 minutes per survey in the spring season, and 26 minutes per survey in the summer season (**Table 4**). From the NE survey area, golden eagles were observed for an average of 132 minutes per survey in the fall season, 48 minutes per survey in the winter season, 23 minutes per survey in the spring season, and 38 minutes per survey in the summer season (**Table 4**).

The highest number of individual golden eagles were observed during the fall season: one juvenile, one subadult, and two adults. No individuals with distinct markers were observed throughout the year. There was an observation of an adult golden eagle stealing an unknown prey item from a red-tailed hawk, but no successful prey capture attempts were observed. On one occasion, an adult golden eagle was observed stooping into an area south of the NW survey point out of view, but it was unknown if the individual successfully captured a prey item (**Figure 7a**).

There were two distinct adult individuals using the Ramona Grasslands Preserve in the winter season. Additionally, there were numerous observations of an unknown-aged golden eagle. While there were multiple observations during the winter season, there were no foraging activities documented (**Figure 7b**). However, an adult golden eagle was seen carrying an unknown prey item. The number of distinct individuals using the Ramona Grasslands Preserve remained the same throughout the spring season—two adult individuals. During the spring season, an adult golden eagle was seen successfully capturing a California ground squirrel (*Otospermophilus beecheyi*) within the southern grasslands. There were three distinct individuals using the Ramona Grasslands Preserve in the summer season (two adults and the juvenile from the 2024 breeding season). No foraging behavior was documented during the summer season (**Figure 7d**).

Compared to last survey period (2023–2024), golden eagles appeared to forage less during all seasons and from both survey areas within the Ramona Grasslands Preserve. The potential reason for the shift in foraging behavior, including the lack of attempts observed, is unknown. However, it may be a combination of unusual weather (lack of rain during the winter season [2024–2025] and an unusually cool summer) and the unsuccessful nesting attempt for the Bandy Canyon territory in 2025. While there were additional areas of high use within the NE survey area, those were of overlapping flight paths and not of foraging use within the Ramona Grasslands Preserve (**Figure 7e**).

### 3.3.2 Bald Eagle

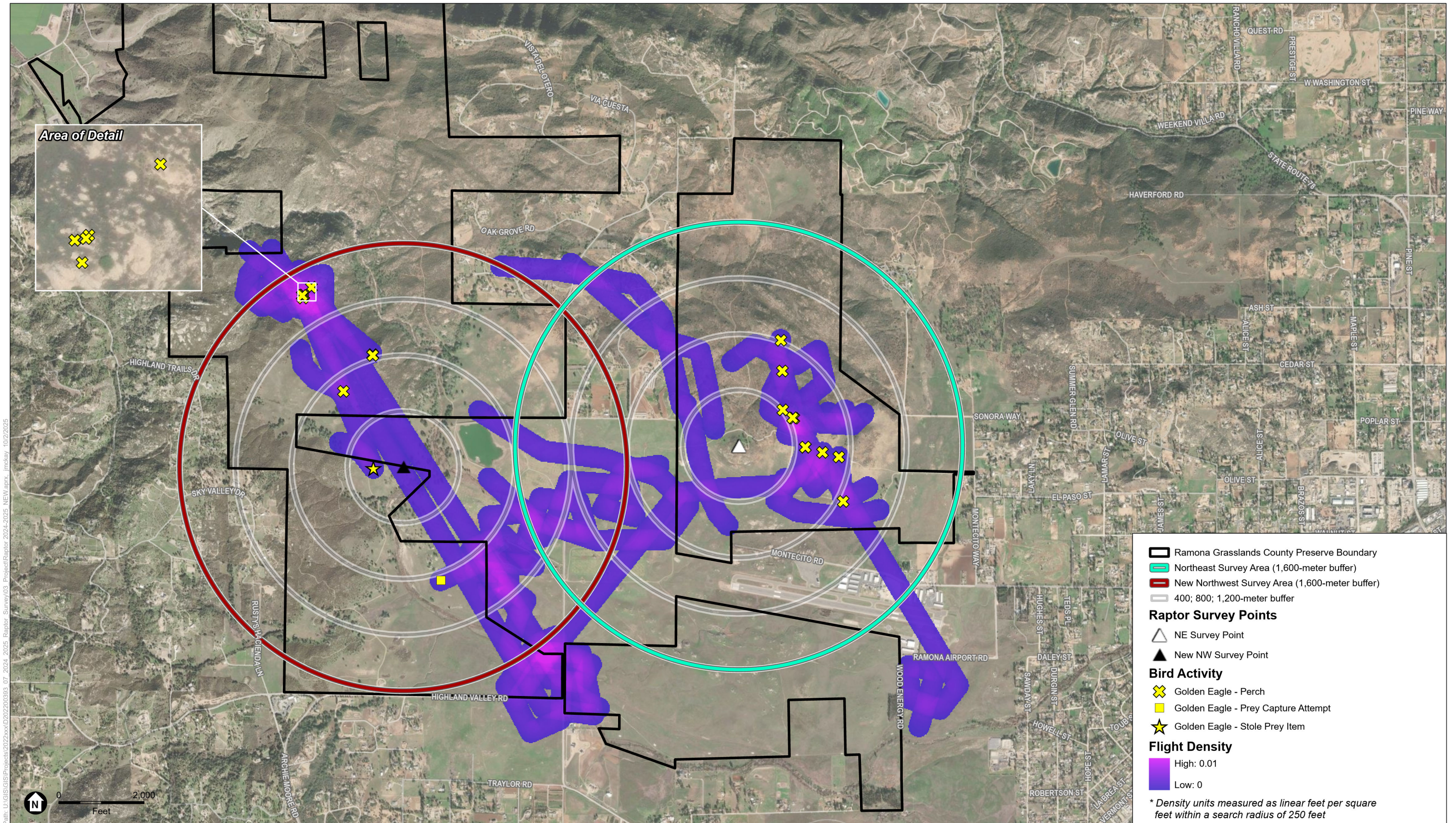
Bald eagles were detected in each season and survey area but were not detected during every survey within the Ramona Grasslands Preserve (**Table 4**). It is assumed the pair of bald eagles that nested in 2024 was the same pair that nested in the Ramona Grasslands Preserve during the 2025 breeding season. See Section 5.2.2 for more details.

**TABLE 4**  
**RAPTOR SPECIES OBSERVED AT EACH SURVEY AREA (AUGUST 2024–JULY 2025)**

Common Name	Scientific Name	Fall		Winter		Spring		Summer		Total (all seasons)	
		Minutes of observation per survey <sup>1</sup>	Minimum number of individuals <sup>2</sup>	Minutes of observation per survey <sup>1</sup>	Minimum number of individuals <sup>2</sup>	Minutes of observation per survey <sup>1</sup>	Minimum number of individuals <sup>2</sup>	Minutes of observation per survey <sup>1</sup>	Minimum number of individuals <sup>2</sup>	Minutes of observation per survey <sup>1</sup>	Minimum number of individuals <sup>2</sup>
<b>New NW Survey Area</b>											
Golden eagle	<i>Aquila chrysaetos</i>	95.5	3	41.7	2	15.5	2	25.8	3	44.63	3
Bald eagle	<i>Haliaeetus leucocephalus</i>	97.0	2	201.7	4	102.5	3	119.7	1	130.21	4
Red-tailed hawk	<i>Buteo jamaicensis</i>	321.3	6	446.3	10	387.0	7	157.7	7	328.08	10
Red-shouldered hawk	<i>Buteo lineatus</i>	38.8	2	24.3	1	12.5	3	1.0	1	19.17	3
Ferruginous hawk	<i>Buteo regalis</i>	–	–	9.8	2	4.3	2	–	–	3.54	2
Northern harrier	<i>Circus hudsonius</i>	1.3	2	–	–	–	–	–	–	0.33	2
Cooper's hawk	<i>Astur (Accipiter) cooperii</i>	15.8	2	0.3	1	1.3	2	9.2	1	6.67	2
Sharp-shinned hawk	<i>Accipiter striatus</i>	1.0	1	0.8	1	–	–	–	–	0.46	2
American peregrine falcon	<i>Falco peregrinus anatum</i>	0.3	1	3.3	1	7.2	1	–	–	2.71	2
Prairie falcon	<i>Falco mexicanus</i>	8.3	1	–	–	–	–	–	–	2.08	1
Merlin	<i>Falco columbarius</i>	0.5	1	9.5	1	4.2	1	–	–	3.54	2
American kestrel	<i>Falco sparverius</i>	60.7	3	69.3	3	26.7	2	13.8	3	42.63	4
Osprey	<i>Pandion haliaetus</i>	0.3	1	–	–	–	–	–	–	0.08	1
White-tailed kite	<i>Elanus leucurus</i>	27.8	2	17.7	1	18.5	1	6.8	2	17.71	2
<b>New NW Survey Area Subtotal</b>		<b>668.83</b>	<b>N/A</b>	<b>824.83</b>	<b>N/A</b>	<b>579.67</b>	<b>N/A</b>	<b>334.00</b>	<b>N/A</b>	<b>601.83</b>	<b>N/A</b>
<b>NE Survey Area</b>											
Golden eagle	<i>Aquila chrysaetos</i>	132.3	4	48.2	2	22.7	2	38.2	2	60.33	4
Bald eagle	<i>Haliaeetus leucocephalus</i>	113.2	3	224.2	2	232.0	2	150.8	2	180.04	3
Red-tailed hawk	<i>Buteo jamaicensis</i>	712.3	9	622.3	8	810.5	11	412.8	11	639.50	12
Ferruginous hawk	<i>Buteo regalis</i>	29.0	2	406.0	4	60.5	2	–	–	123.88	4
Swainson's hawk	<i>Buteo swainsoni</i>	–	–	–	–	45.7	2	–	–	11.42	2
Northern harrier	<i>Circus hudsonius</i>	1.5	2	0.2	1	0.8	2	–	–	0.63	2
Cooper's hawk	<i>Astur (Accipiter) cooperii</i>	27.2	2	–	–	0.2	1	4.0	3	7.83	3
Sharp-shinned hawk	<i>Accipiter striatus</i>	–	–	0.3	1	–	–	–	–	0.08	1
American peregrine falcon	<i>Falco peregrinus anatum</i>	–	–	7.5	1	–	–	22.2	1	7.42	2
Prairie falcon	<i>Falco mexicanus</i>	35.5	1	26.0	2	35.3	1	–	–	24.21	2
Merlin	<i>Falco columbarius</i>	0.2	1	17.5	1	5.7	1	–	–	5.83	1
American kestrel	<i>Falco sparverius</i>	135.0	3	140.7	4	170.5	4	256.2	5	175.58	5
Osprey	<i>Pandion haliaetus</i>	0.5	1	–	–	–	–	–	–	0.13	1
White-tailed kite	<i>Elanus leucurus</i>	9.0	1	3.3	1	31.0	3	–	–	10.83	3
<b>NE Survey Area Subtotal</b>		<b>1,195.67</b>	<b>N/A</b>	<b>1,496.17</b>	<b>N/A</b>	<b>1,414.83</b>	<b>N/A</b>	<b>884.17</b>	<b>N/A</b>	<b>1,247.71</b>	<b>N/A</b>
<b>Total<sup>3</sup></b>		<b>932.25</b>	<b>N/A</b>	<b>1,160.50</b>	<b>N/A</b>	<b>997.25</b>	<b>N/A</b>	<b>609.08</b>	<b>N/A</b>	<b>924.77</b>	<b>N/A</b>

## Notes:

1. Number of minutes a raptor species was observed over all surveys in a season divided by the number of surveys that occurred in that season (see Table 3).
2. Minimum number of individuals known to occur or use the area.
3. The total minutes of observation per survey does not equal the sum of the subtotals because the total number of minutes is divided by the total number of surveys at each survey location.



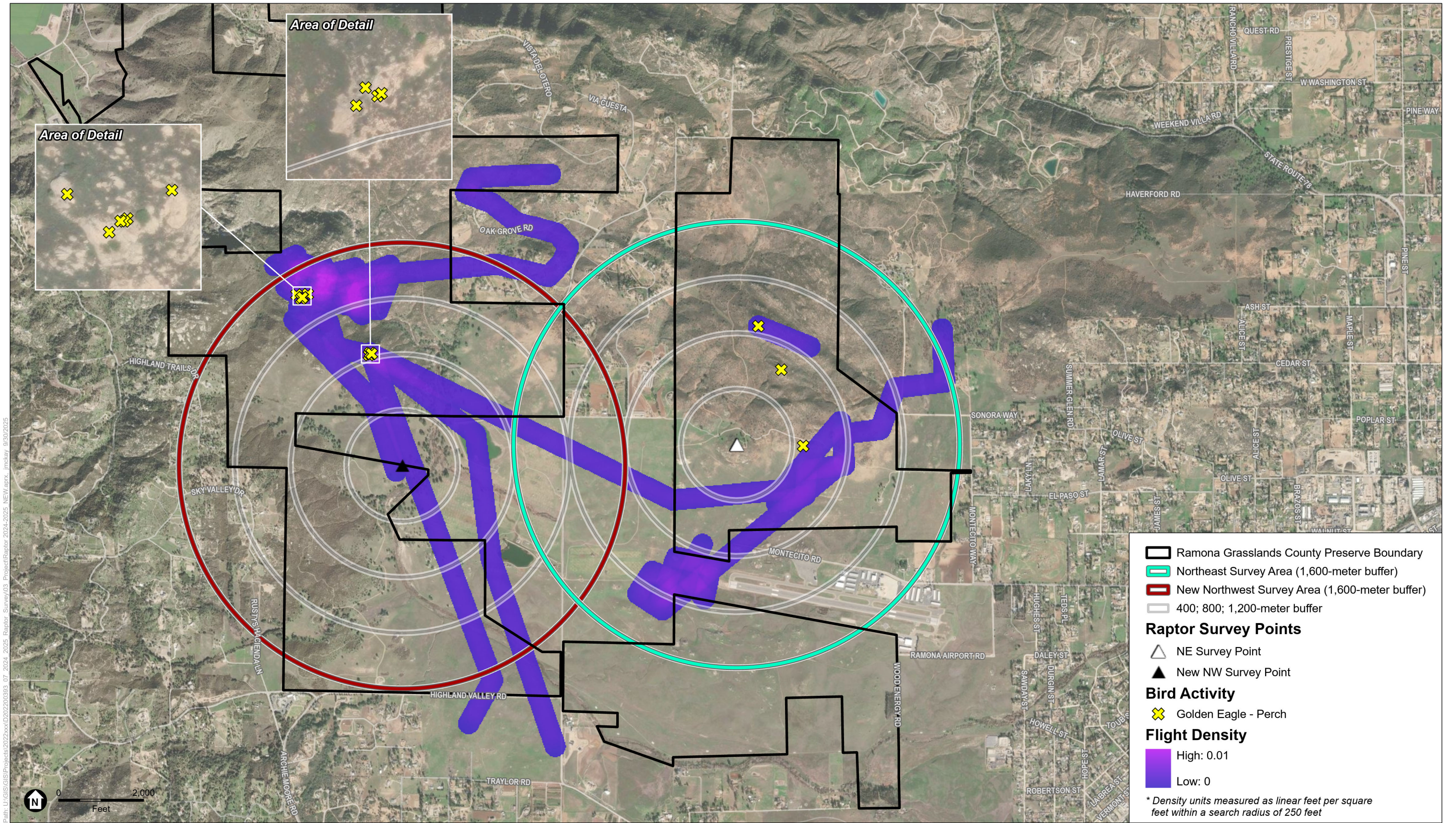
Path: U:\GIS\Projects\2022\220303\_07\_2024\_2025\_Raptor\_Survey\03\_Project\Raptor\_2024-2025\_NEV.aprx\_jmckay\_10/2/2025

SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 7a**  
Golden Eagle Fall Flight Path Density Map

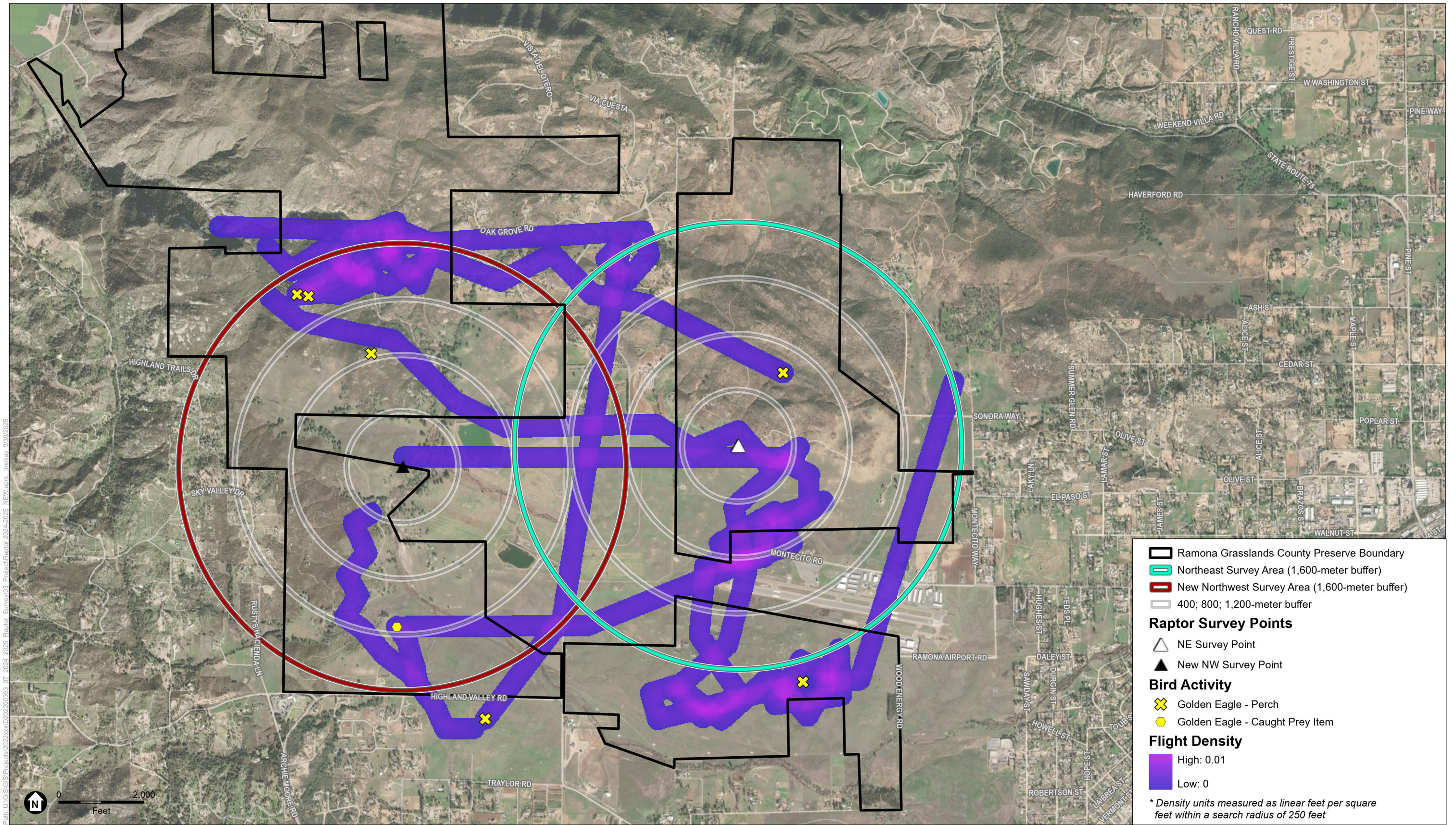




SOURCE: ESRI, 2025; ESA, 2025.

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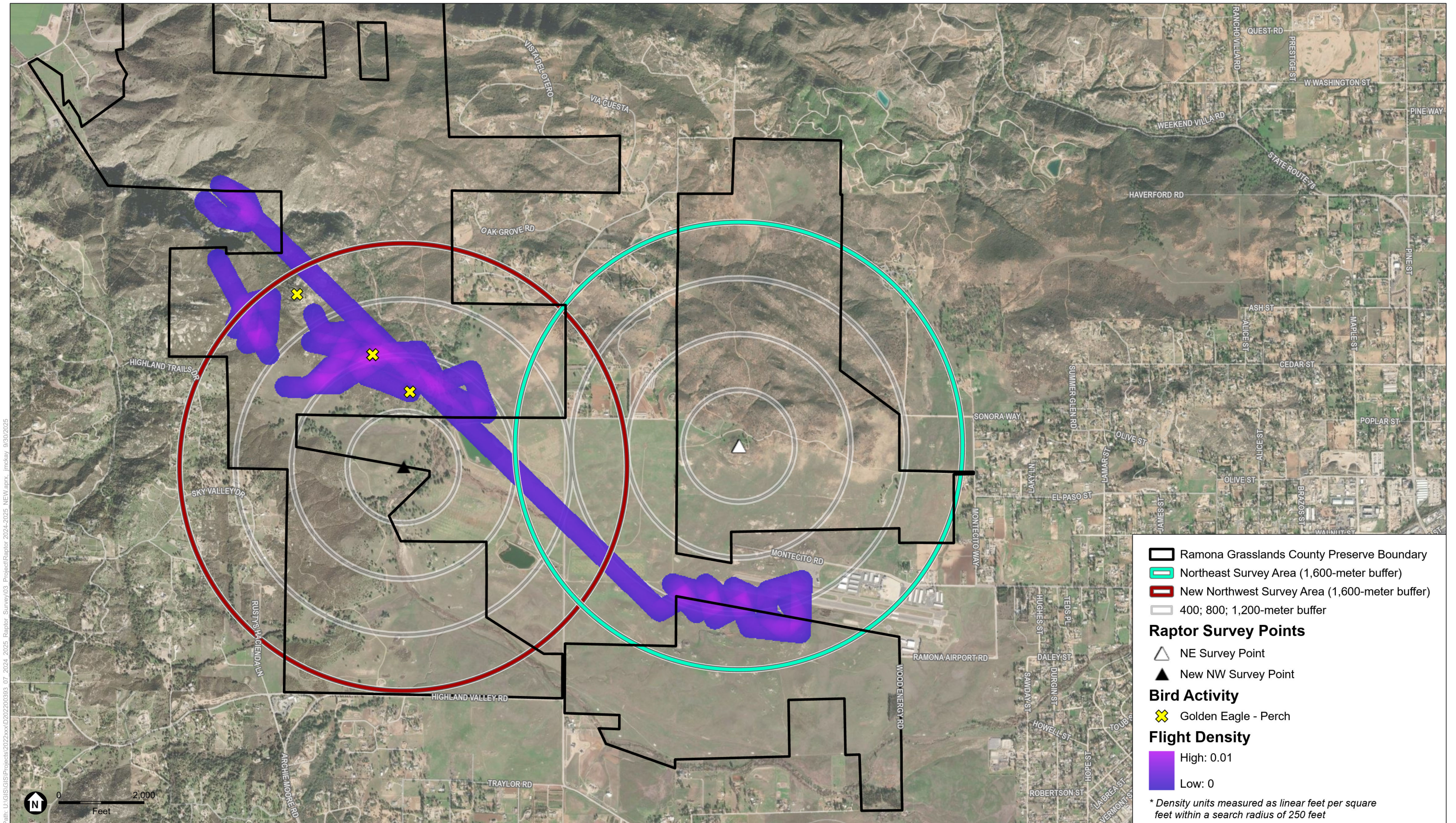
**Figure 7b**  
Golden Eagle Winter Flight Path Density Map



SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 7c**  
Golden Eagle Spring Flight Path Density Map

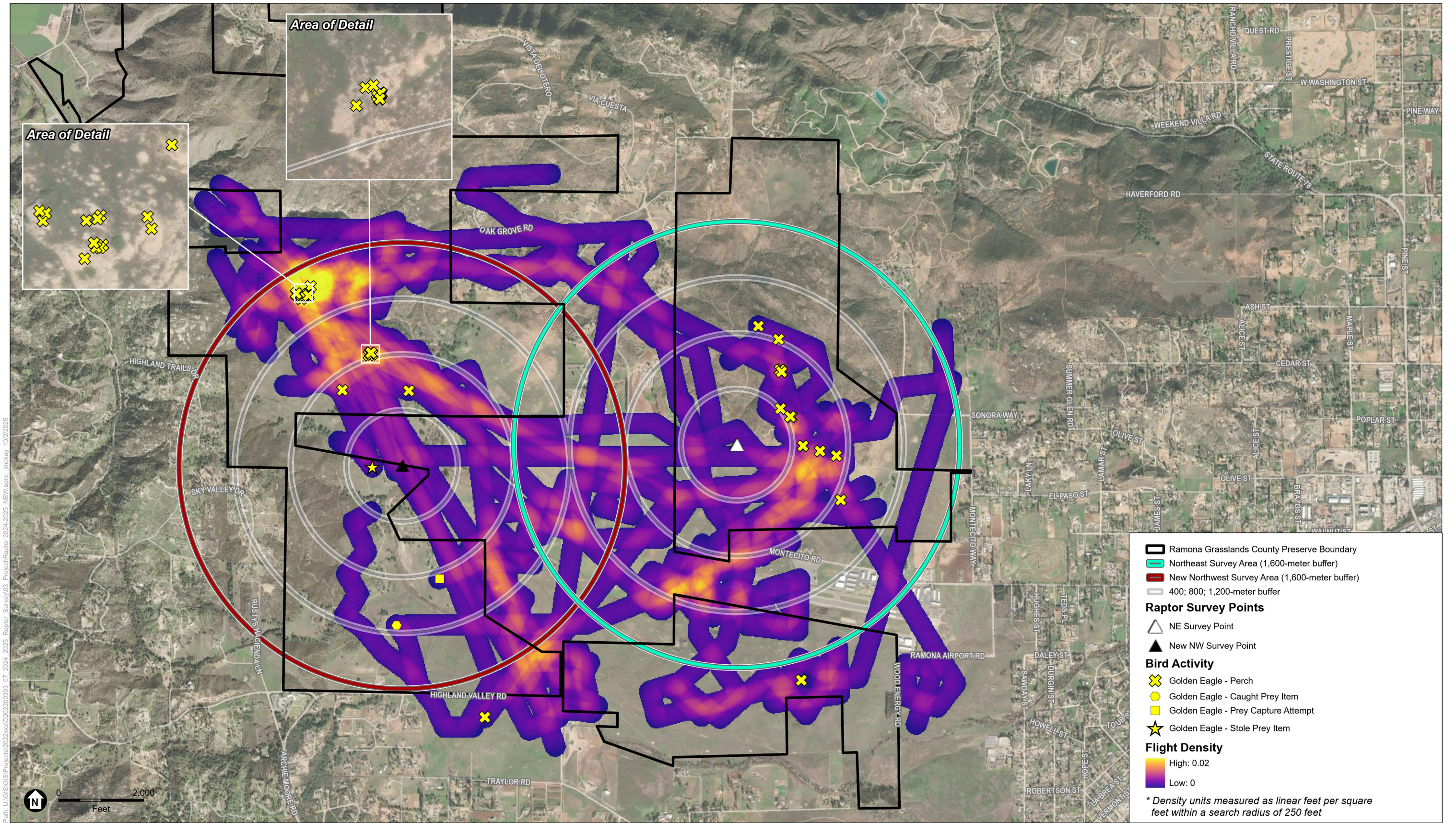


SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 7d**  
Golden Eagle Summer Flight Path Density Map





SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 7e**  
Golden Eagle Annual Flight Path Density Map

An overview of the seasonal and annual use of the Ramona Grasslands Preserve is depicted in **Figures 8a** through **8e**. The annual overview illustrates higher use surrounding the nest site throughout the survey period within the NE survey area (**Figure 8e**). At the new NW survey area, bald eagles were observed for an average of 97 minutes per survey in the fall season, 202 minutes per survey in the winter season, 103 minutes per survey in the spring season, and 120 minutes per survey in the summer season (**Table 4**). From the NE survey area, bald eagles were observed for an average of 113 minutes per survey in the fall season, 224 minutes per survey in the winter season, 232 minutes per survey in the spring season, and 151 minutes per survey in the summer season (**Table 4**).

There were three distinct individuals using the Ramona Grasslands Preserve in the fall season (two adults and one subadult). No individuals with distinct markers were observed throughout the year. The only foraging behavior observed was of an adult stealing an unknown prey item from a red-tailed hawk and returning to a perch site to eat it (**Figure 8a**). The subadult was observed flying northwest through the Ramona Grasslands Preserve within the NE survey area. The highest number of individual bald eagles were observed during the winter season: three adults and one subadult. This is also typically the season when breeding behavior is observed regularly. Two adults were observed on a nest, alternating nest incubation duties and gathering nest material multiple times throughout the season; an adult was first observed in an incubating position on January 24, 2025. There were multiple foraging attempts by bald eagle individuals during the winter season, and all were observed within the NE survey area (**Figure 8b**). The first observation was of an adult capturing a California ground squirrel. The second observation was of a subadult individual eating an unknown prey item on a utility pole east of the NE survey point. The third observation was of an adult carrying a California ground squirrel and flying to a utility pole to eat it. It is unknown if the adult captured or stole the prey item. During the last survey of the winter season, an adult was observed capturing one unknown prey item and carrying a second prey item (California ground squirrel). The adult proceeded to land on a utility pole to eat the prey items. It is unknown if the adult captured or stole the second prey item.

The number of distinct individuals using the Ramona Grasslands Preserve was the same in the spring season as in the fall season: two adults and one subadult. This was the season when the nest was documented to have failed for unknown reasons. There were multiple documentations of the adult pair perched together or singly throughout the survey areas, with the majority of the perch observations at the wooden utility pole adjacent to the nest tree, the eucalyptus grove where the nest was located, and the eucalyptus trees along the Ramona Grasslands Preserve boundary line (**Figure 8c**). There were four foraging behaviors documented during the spring season. Two observations were of an adult bald eagle flying in with an unknown prey item to the nest. One observation was of an adult bald eagle flying to a eucalyptus tree and eating an unknown prey item. It is unknown if the adult captured or stole the prey item. Another observation was of an adult bald eagle swooping and prey diving over the northernmost RMWD pond, but it failed to capture any prey items (e.g., waterbird species).

There were two distinct individual adults using the Ramona Grasslands Preserve in the summer season. No foraging behavior was documented during the summer season. Although an individual bald eagle was observed around the northernmost RMWD pond, the individual was harassed by common ravens (*Corvus corax*), which may have hindered any foraging activity during that survey period (**Figure 8d**).

The highest density and spatial use for bald eagles on the Ramona Grasslands Preserve were observed in the area around the nest tree within the NE survey area, where individuals were observed perched and actively hunting in the immediate area, as demonstrated by the annual overview map (**Figure 8e**).

### 3.3.3 Cooper's Hawk

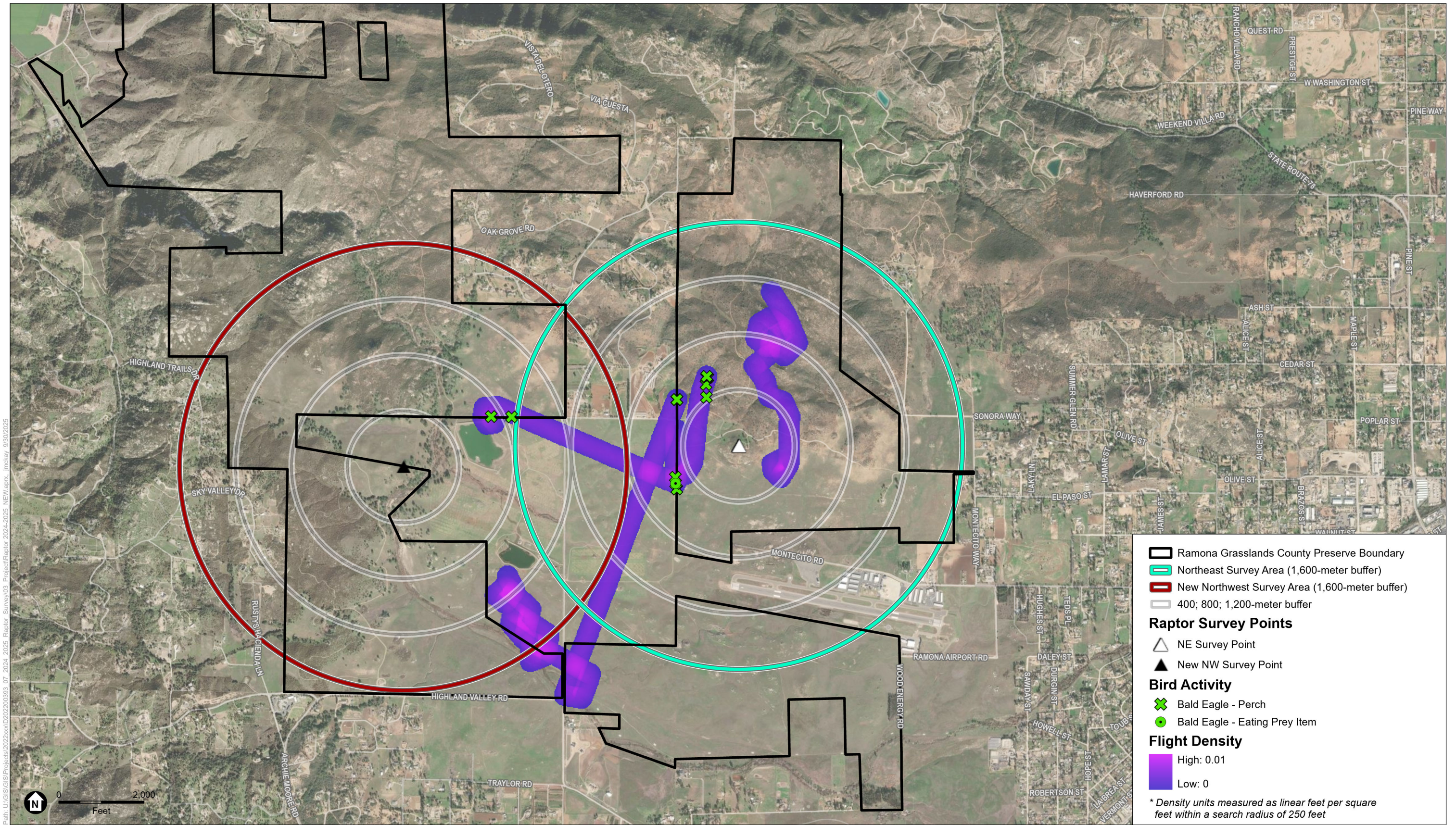
Cooper's hawks were detected in each season and survey area, except for the winter season in the NE survey area (**Table 4**). Cooper's hawks were not detected during every survey within the Ramona Grasslands Preserve. Multiple observations were detected on the same day, and each observation was unique based on behavior and length of time the behavior was observed. Without distinguishing markers or features, individual Cooper's hawk use on the Ramona Grasslands Preserve is unknown. Also, because this species is more likely to fly low to the ground rather than circle/soar like other raptor species, it is difficult to confirm the total number of individuals using the Ramona Grasslands Preserve or determine how regularly it is being used by the same individuals. Most of the observations were documented within 800 meters of the survey point, leading to documentation of short flight paths or of individuals perched and flying off in an unknown direction, which suggests sporadic use on the Ramona Grasslands Preserve.

Most of the observations occurred during the fall season. Over half of the observations during the fall season were of perched individuals, and all but one of the fall observations were initially observed within 800 meters of the survey point. At least two distinct individuals were documented during this season based on age-related plumage differences (**Figure 9a**). Only one individual was documented during the winter season. The unknown-age individual was seen meandering over the NW survey point (**Figure 9b**). Five observations occurred during the spring season with all but one observation within the NW survey area. Three observations were of perched individuals and the other two were of individuals (one adult, one unknown-age) circle soaring within the Ramona Grasslands Preserve (**Figure 9c**). The summer season had the second most Cooper's hawk observations; half of the observations were of perched individuals. Eight of the thirteen observations during the summer season were documented from the NE survey point. Two distinct juveniles were observed. One juvenile was documented attempting (and failing) to ambush a flock of California quail (*Callipepla californica*). At least three distinct individuals were documented during the summer season. These individuals were identifiable based on age-related plumage differences and/or were observed simultaneously (**Figure 9d**).

The seasonal spatial-use preferences of Cooper's hawk usage of the Ramona Grasslands Preserve are depicted in **Figures 9a** through **9d**. The annual overview is depicted in **Figure 9e**. Because of the limited number and length of flight paths observed, no spatial-use preferences can be inferred for Cooper's hawk on the Ramona Grasslands Preserve.

### 3.3.4 White-tailed Kite

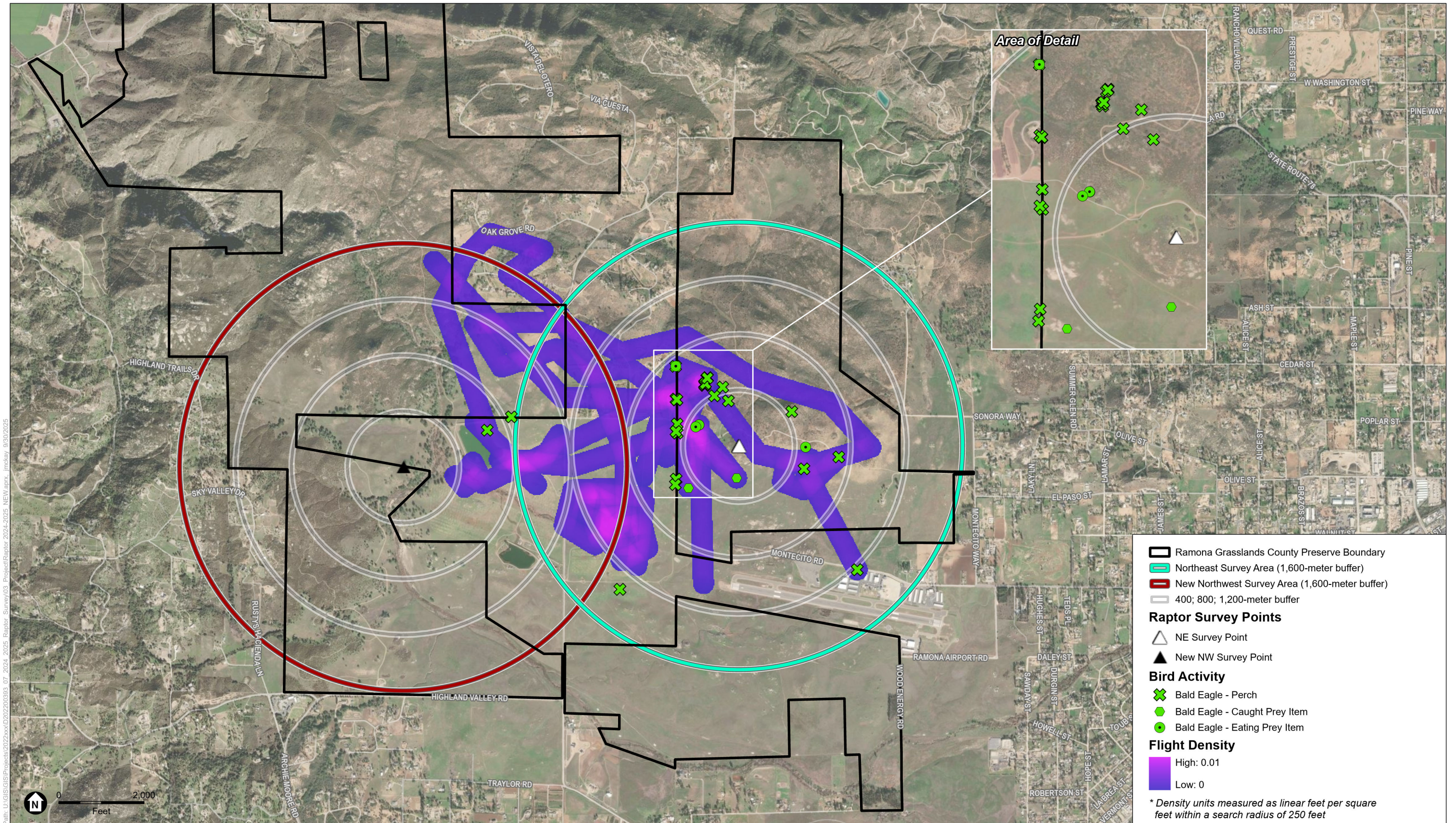
White-tailed kites were detected in each season and survey area, except for the summer season in the NE survey area (**Table 4**). White-tailed kites were not detected during every survey within the Ramona Grasslands Preserve. Each observation was unique based on behavior and length of time the behavior was observed. Without distinguishing markers or features, individual white-tailed kite use on the Ramona Grasslands Preserve is unknown.



SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 8a**  
Bald Eagle Fall Flight Path Density Map

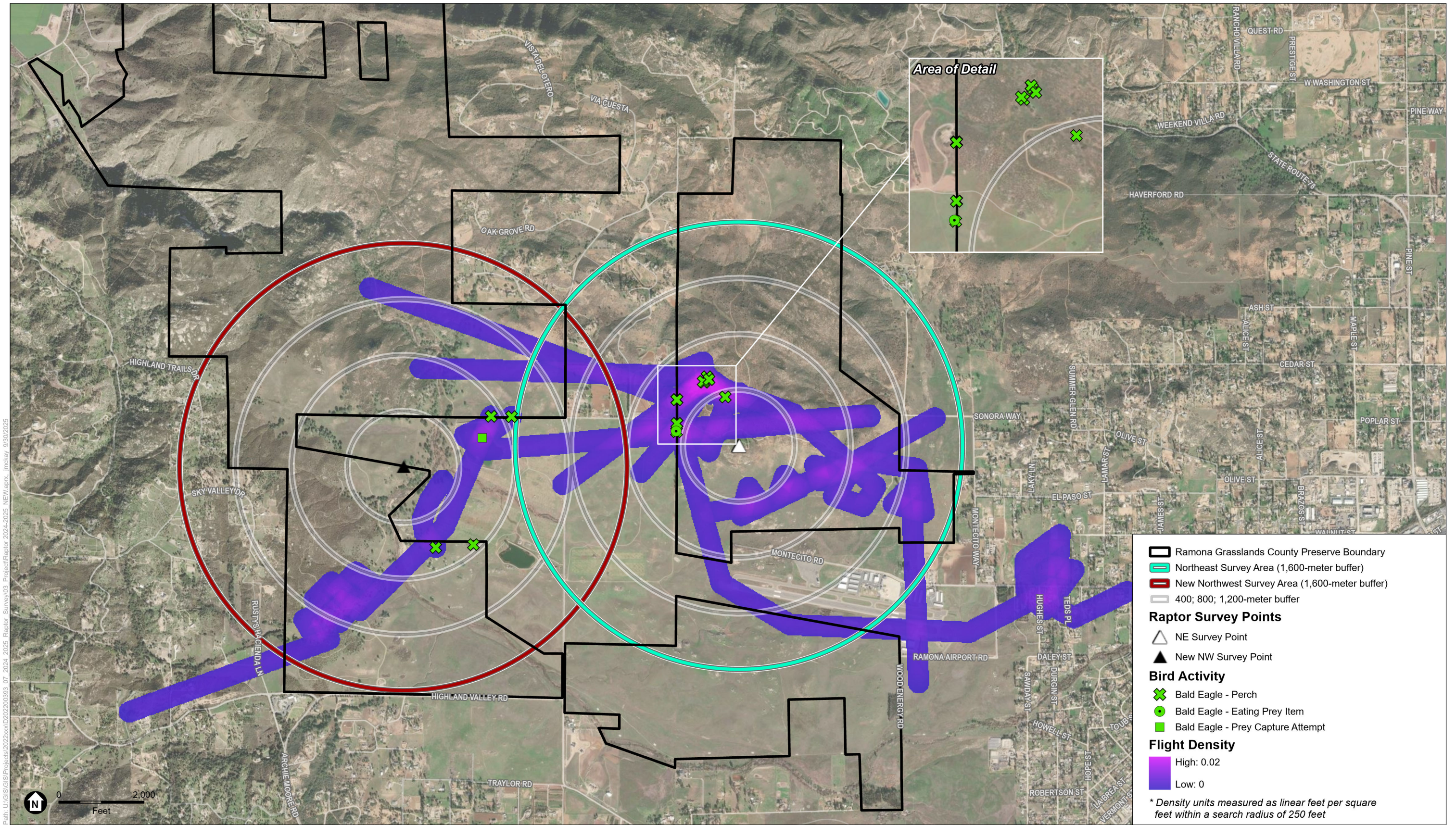


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 8b**  
Bald Eagle Winter Flight Path Density Map



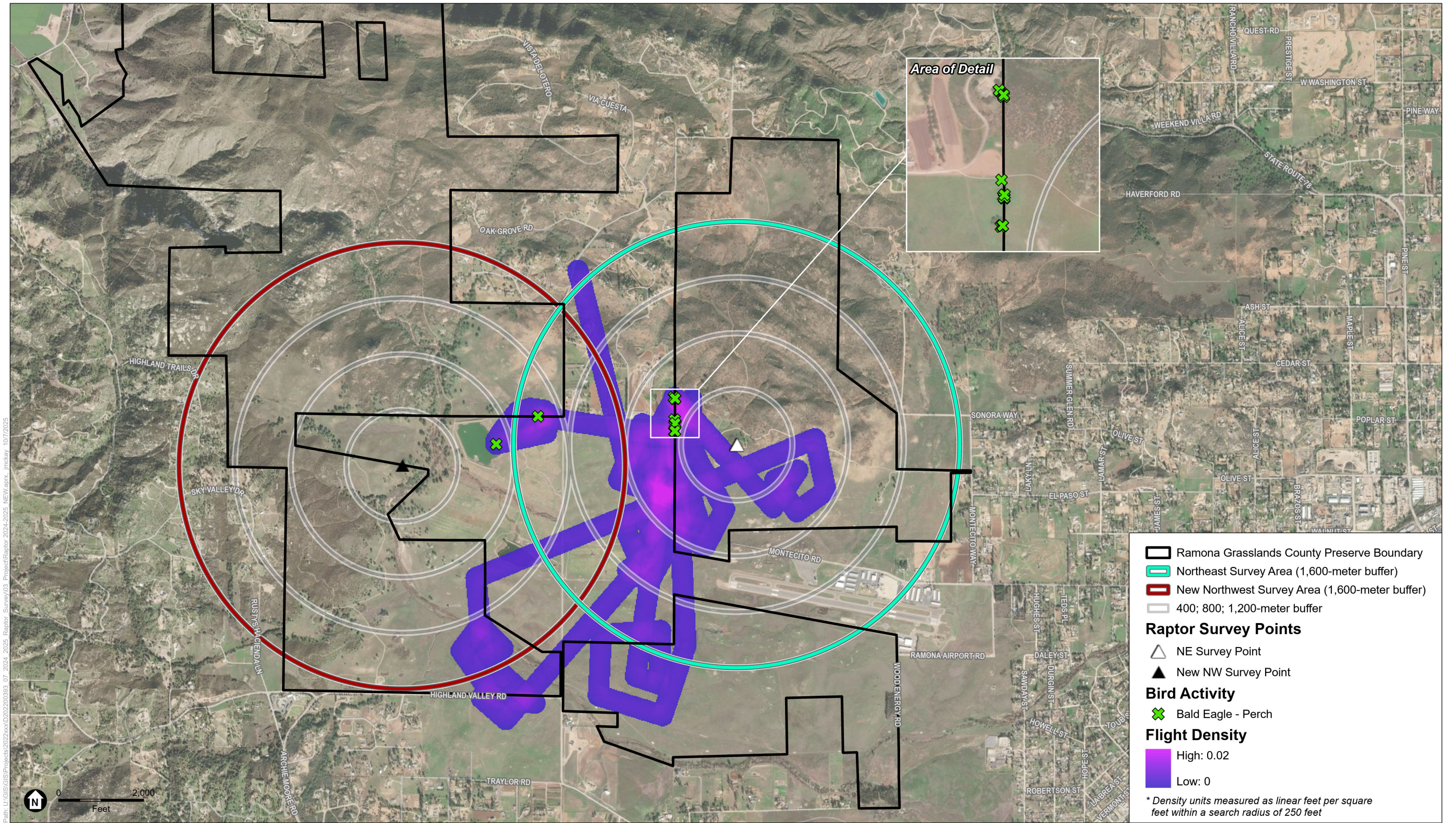


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 8c**  
Bald Eagle Spring Flight Path Density Map

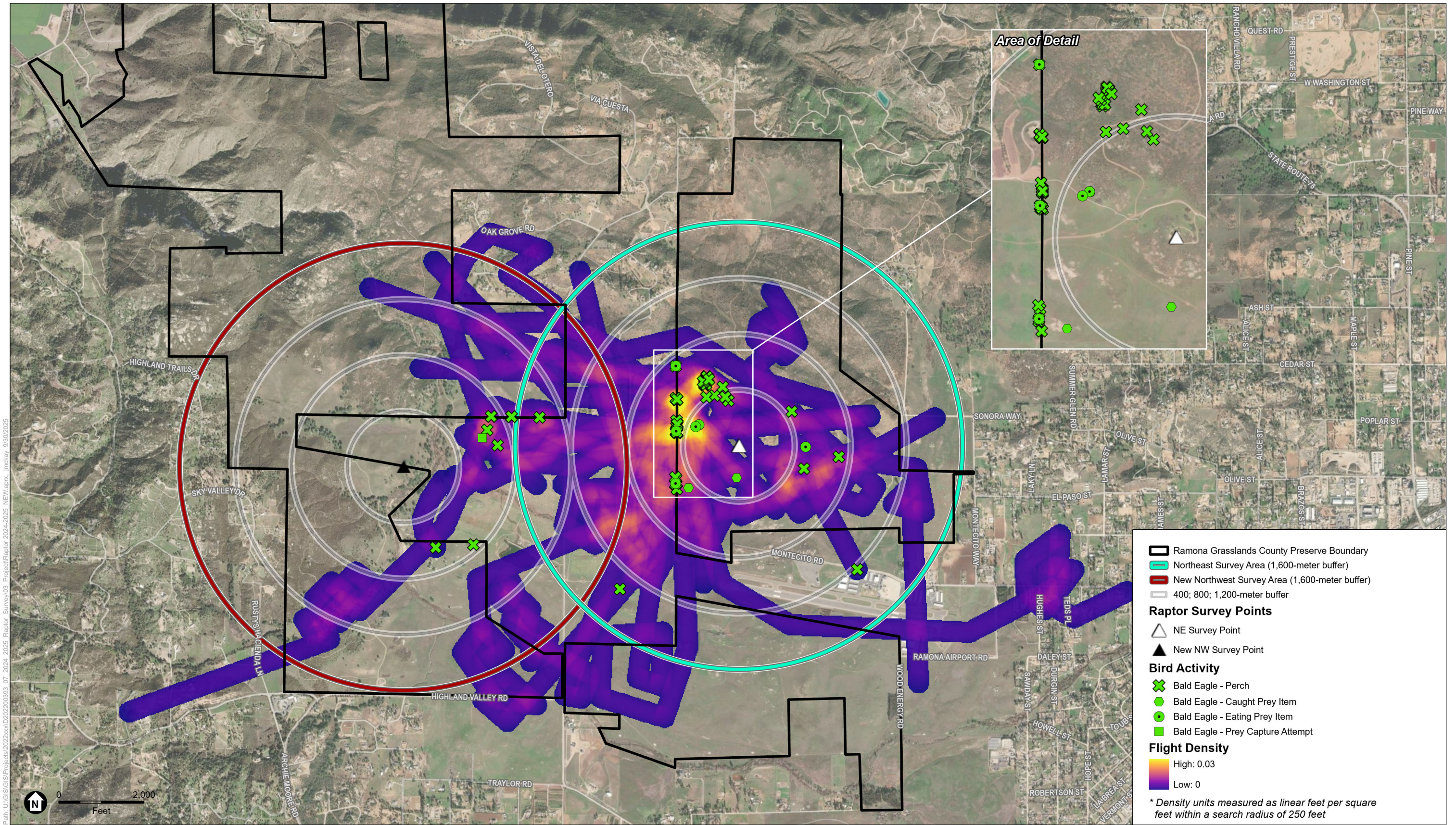




SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 8d**  
Bald Eagle Summer Flight Path Density Map



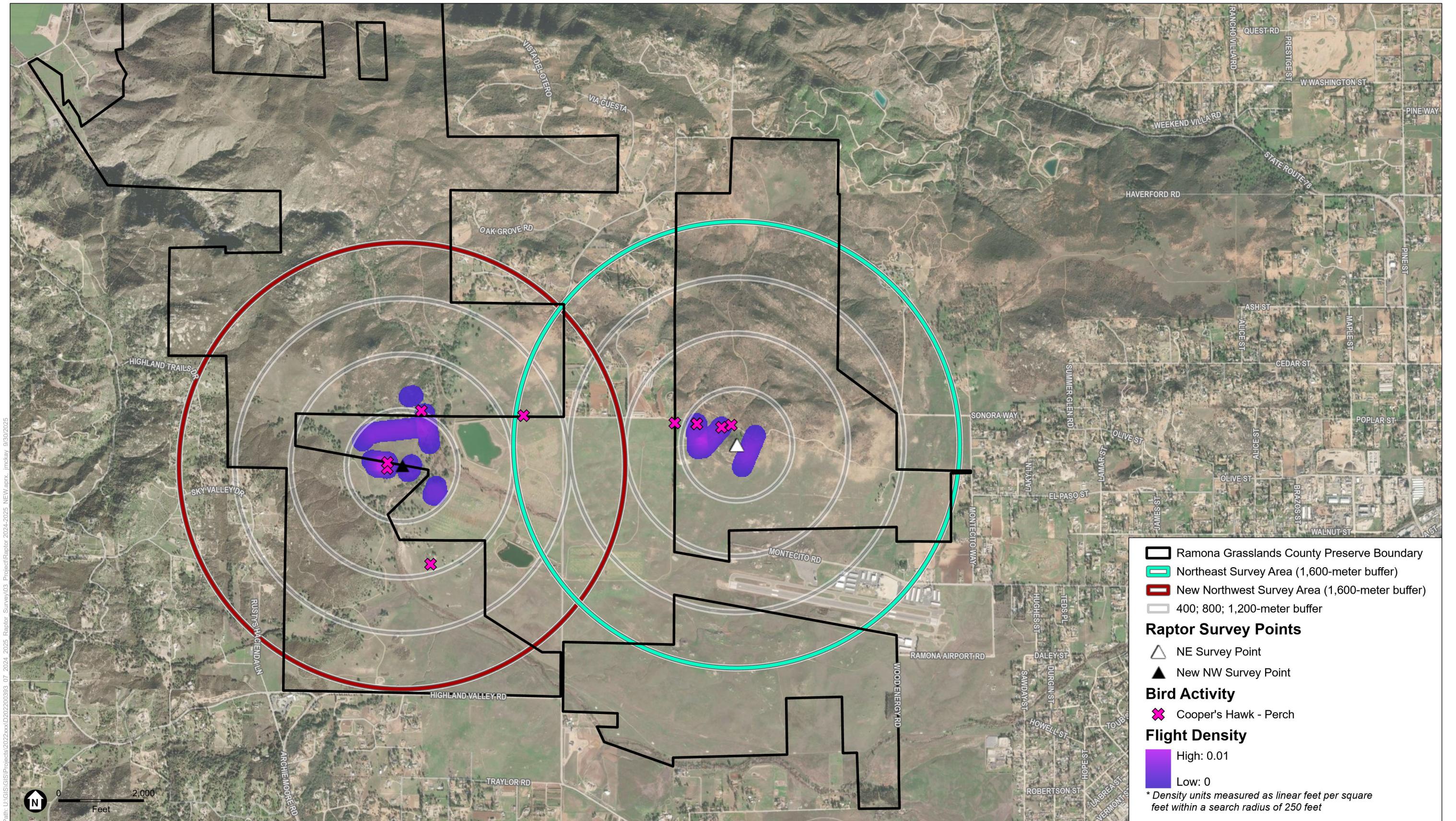
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SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 8e**  
Bald Eagle Annual Flight Path Density Map





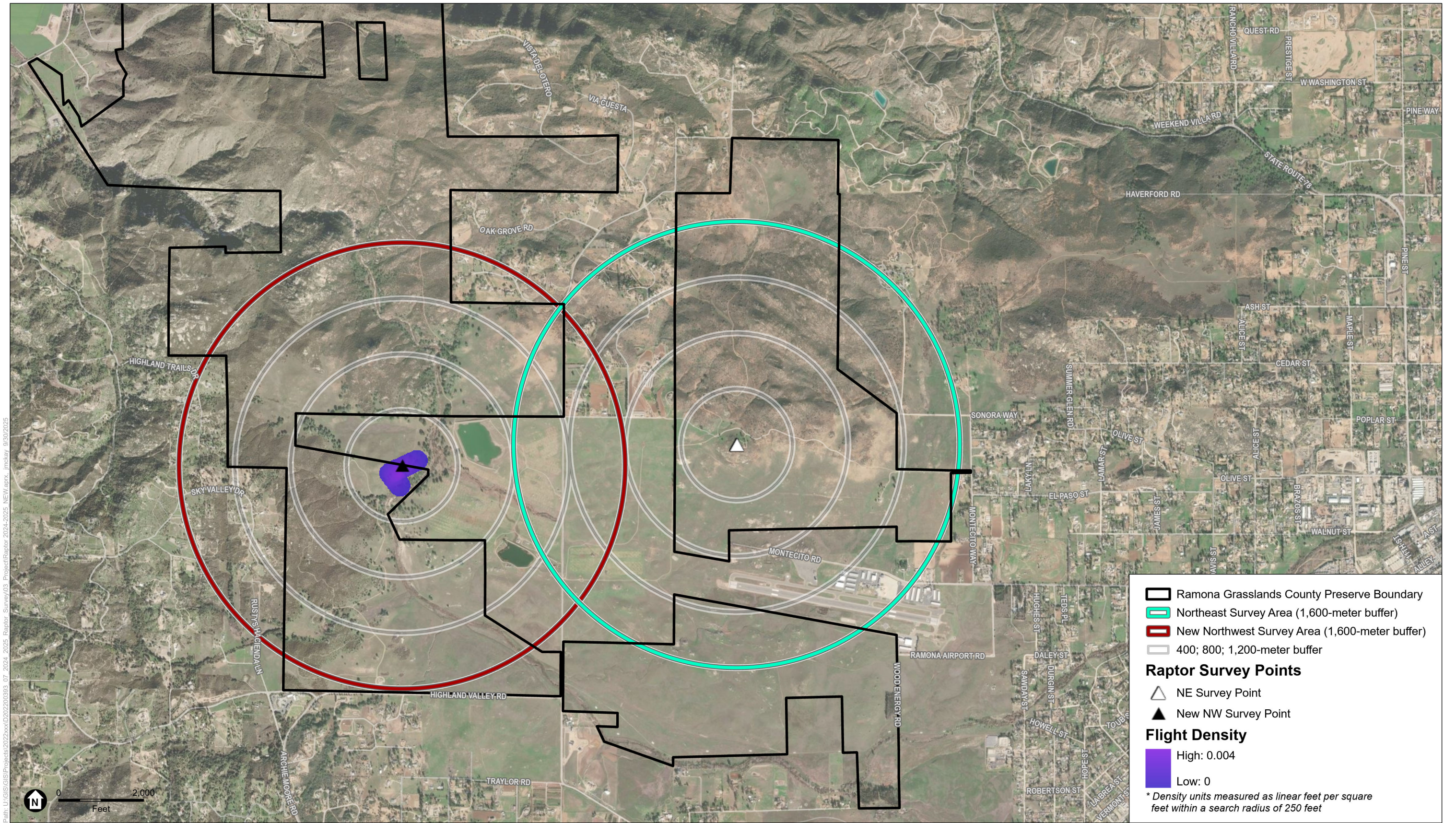
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SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 9a**  
Cooper's Hawk Fall Flight Path Density Map





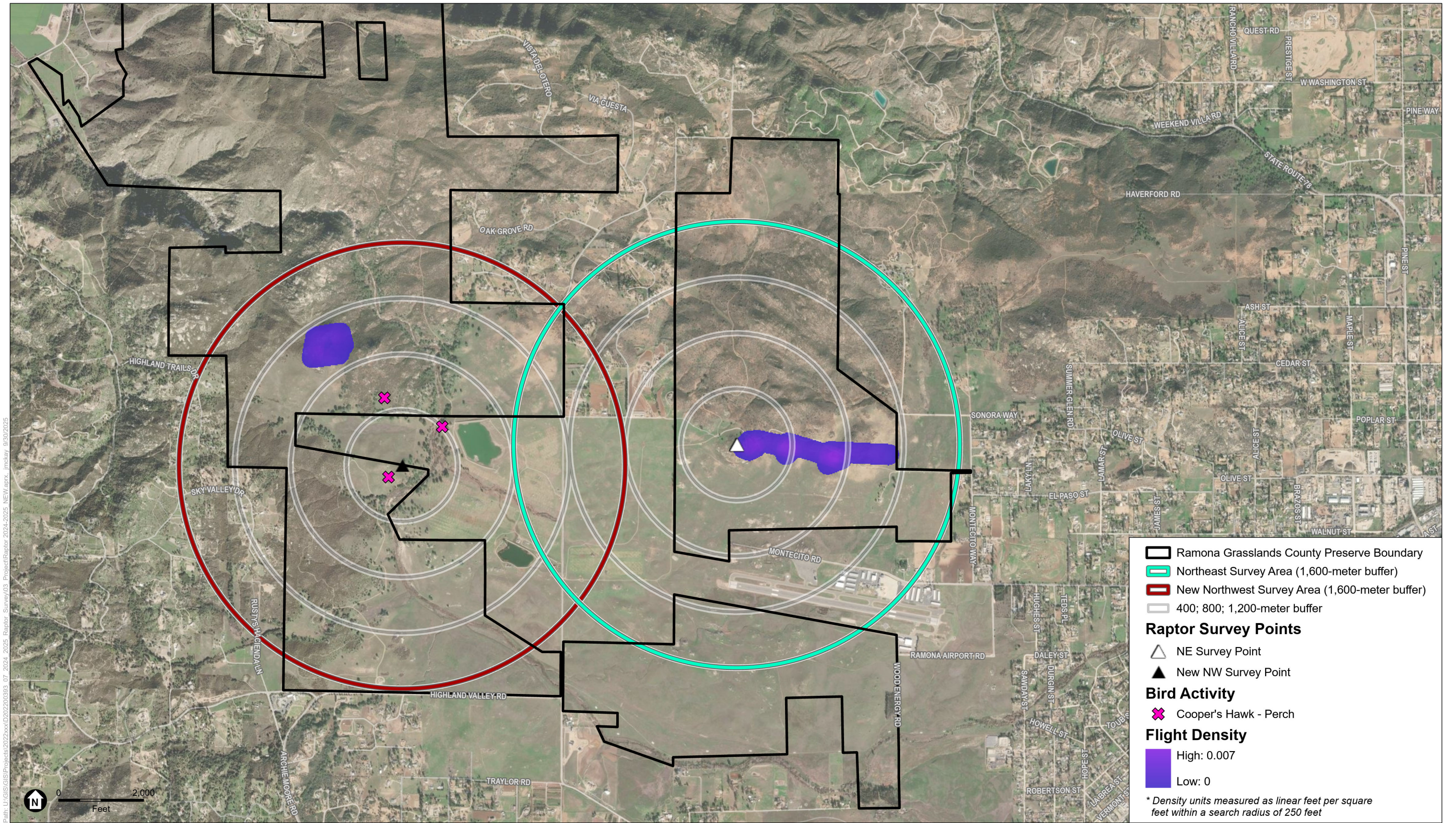
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SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 9b**  
Cooper's Hawk Winter Flight Path Density Map

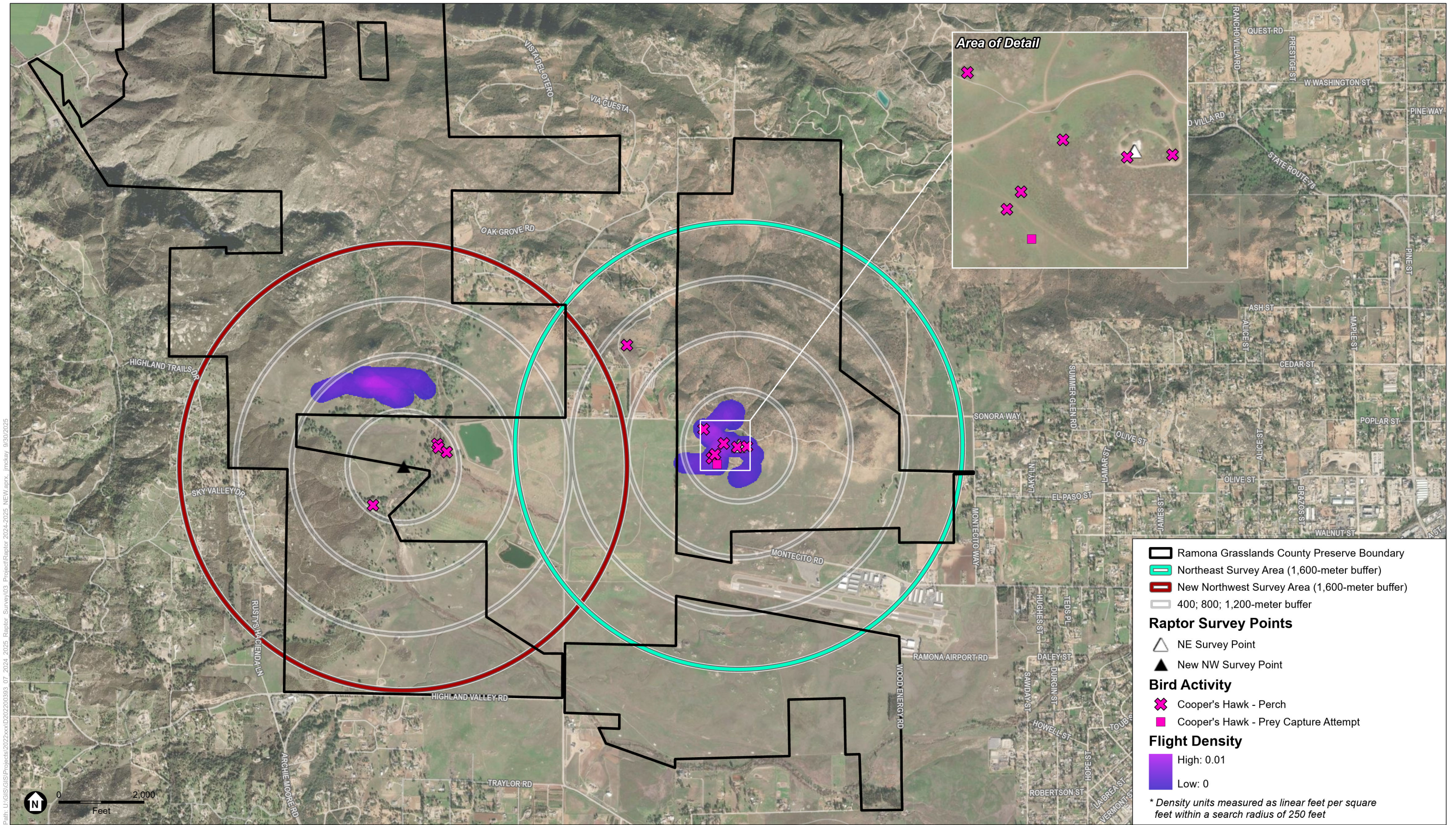




SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

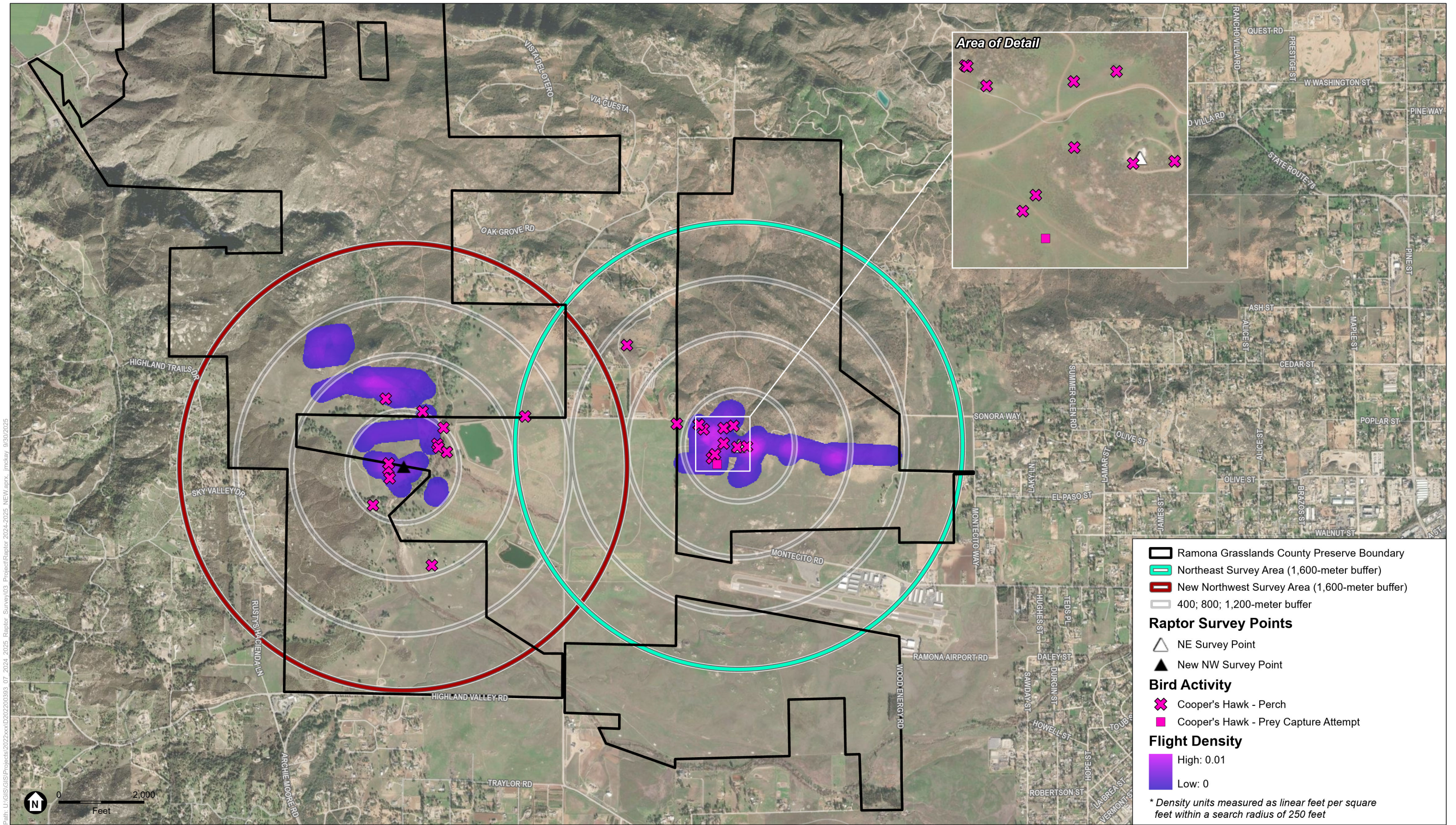
**Figure 9c**  
Cooper's Hawk Spring Flight Path Density Map



SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 9d**  
Cooper's Hawk Summer Flight Path Density Map



SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 9e**  
Cooper's Hawk Annual Flight Path Density Map

Most of the observations occurred during the fall season. Of the six observations, three observations were on the same day and likely of the same individual as it appeared and disappeared from a perch location in the new NW survey area. The other fall observations included a juvenile seen eating an unknown prey item within the NE survey area and two unknown-aged individuals perched and flying together within the NW survey area (**Figure 10a**). Two observations were documented during the winter season: one of an adult individual flying to a perch location outside of the NE survey area but within the Ramona Grasslands Preserve and one of the unknown-aged individuals was seen perched in the NW survey area (**Figure 10b**). Four observations occurred during the spring season, with all but one observation occurred within the NE survey area. Three observations were of perched individuals and the other observation was of an individual flying northwest through the Ramona Grasslands Preserve. This was the season when an adult pair was seen copulating and carrying nest material, but there were no subsequent observations to confirm a nesting attempt (**Figure 10c**). Three observations occurred during the summer season, all from the NW survey point. One observation was of an adult individual meandering west and the second was of an unknown-aged individual flying east. The third observation was of one adult and one unknown-aged individual seen together, but no nesting or foraging activity was observed (**Figure 10d**).

The seasonal spatial-use preferences of white-tailed kite usage of the Ramona Grasslands Preserve are depicted in **Figures 10a** through **10d**. The annual overview is depicted in **Figure 10e**. Because of the limited number and length of flight paths observed, no spatial-use preferences can be inferred for white-tailed kite on the Ramona Grasslands Preserve.

## 4.0 Golden Eagle Nest Monitoring Survey Results

### 4.1 Ramona Grasslands County Preserve

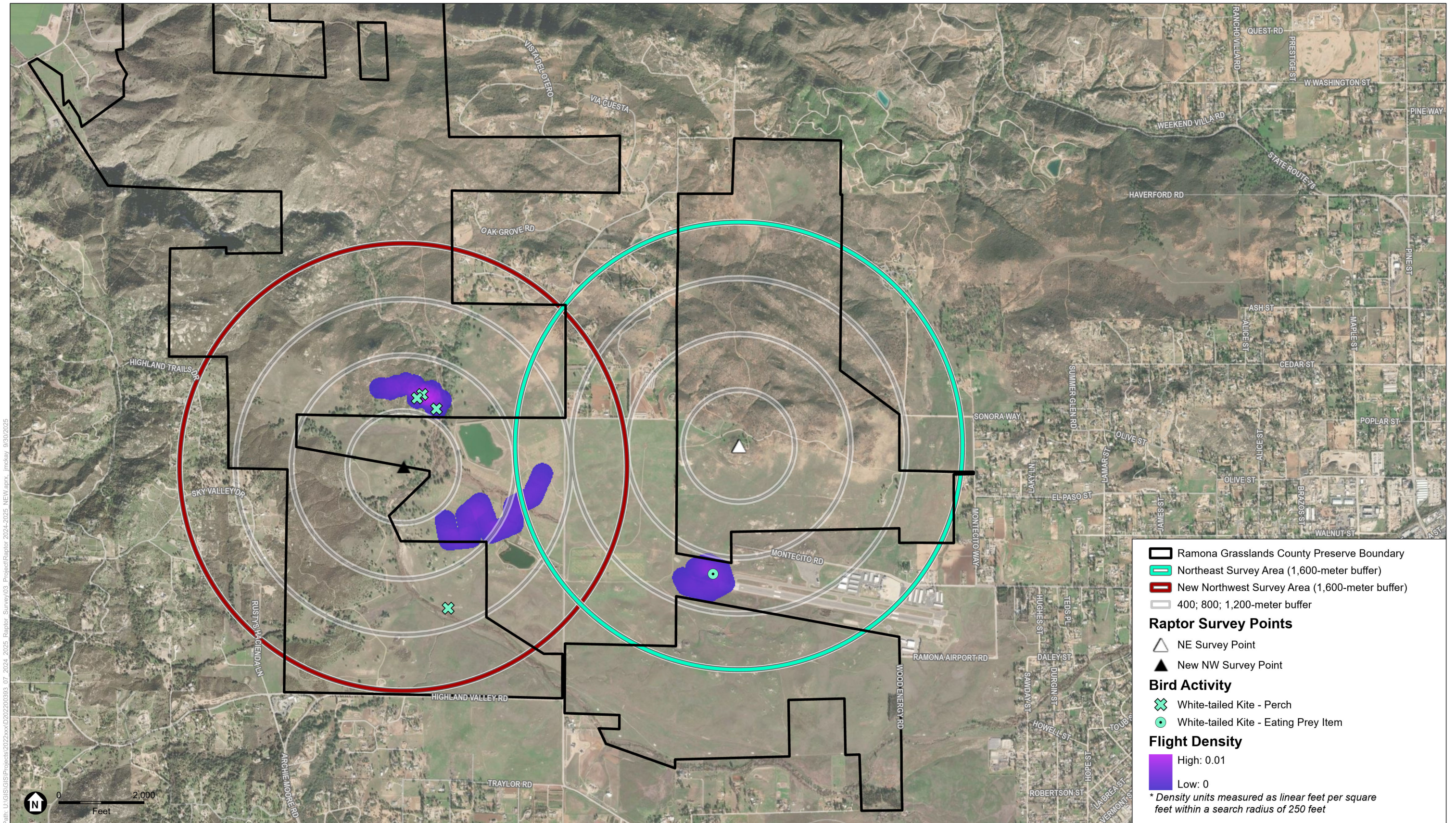
Three separate monitoring surveys were conducted by the ESA biologists to observe the golden eagle nest site located on the eastern-facing cliff of Bandy Canyon (**Table 1**). The first monitoring survey was conducted on February 11, 2025, from 7:40 a.m. to 10:53 a.m. from the adjusted observation point (**Figure 3**). A golden eagle pair was observed copulating on a ledge, but no nesting behavior such as nest building was observed. The inactive nest sites used in previous seasons were in good condition but with no signs of material being added to them (**Appendix D-1**). The second survey was conducted on March 17, 2025, from 7:03 a.m. to 10:44 a.m. and was conducted from both the adjusted observation point and the original observation point (**Figure 3**). The golden eagle pair was observed copulating and then flew off east. No other nesting behavior was observed. The third and final monitoring survey was conducted on April 18, 2025, from 6:41 a.m. to 10:27 a.m. and started with a hike up Bandy Canyon from Bandy Canyon Road to provide another vantage point. A potential nest location within an oak tree was documented near the cliff face. Halfway through the survey period, the biologists moved back to the adjusted observation point. The golden eagle pair was observed on the cliff face below the inactive nest site and remained the rest of the survey period. No other nesting behavior was observed. In conclusion, due to the observation of the eagle pair but the lack of nesting behavior and no observation of an incubating adult or chick in a nest, the territory was occupied but nest site was not active in 2025.

## 4.2 El Capitan County Preserve

Three separate monitoring surveys were conducted by the ESA biologists to locate and observe the golden eagle nest site on the south-facing cliff of El Cajon Mountain (**Table 1**). The first monitoring survey was conducted on February 11, 2025, from 6:53 a.m. to 11:00 a.m. from observation point #1 at El Monte County Park (**Figure 4**). One adult golden eagle was observed briefly flying south across the valley and out of sight. The nest site used in 2022 is located on the western side of a ravine, west of El Cajon Mountain, and situated on top of a cut-out rock (**Appendix E-1**). The second monitoring survey was conducted on March 17, 2025, from 7:20 a.m. to 11:20 a.m. and started at the observation point labeled #1 before moving to a second observation point #2 mid-survey to scan the opposite side of Cajon Mountain from a dirt pullout off of El Monte Road (**Figure 4**). No additional nests were observed, including the previously documented inactive nest sites shown in **Appendix E-2**. A single adult golden eagle was observed soaring over the ridge on two occasions, and both times it flew north out of view. The third and final monitoring survey was conducted on April 16, 2025, from 7:05 a.m. to 11:05 a.m. from observation point #2. One adult golden eagle was initially observed perched and was joined by a second adult golden eagle. They perched in the areas near the previous inactive nest sites, labeled as historic inactive nests in **Appendix E-2**, on Cajon Mountain. In conclusion, while the territory was occupied by golden eagles, there was no observed nesting behavior in 2025.

## 4.3 Hellhole Canyon County Preserve

Five separate monitoring surveys were conducted by the ESA biologists to locate and observe the golden eagle nest site within the Hellhole Canyon Preserve (**Table 1**). The first monitoring survey was conducted on January 16, 2025, from 7:45 a.m. to 11:45 a.m. at observation point #1, which allowed a full view of Rodriguez Mountain's west-facing cliffs and mature trees (**Figure 5**). One adult golden eagle was observed grabbing nesting material and a second adult golden eagle was observed perched on a rock above the nest. This nest site is located in a rock crevice slit that faces northwest on Rodriguez Mountain (**Appendix F-1**). This nest site is located on the Hellhole Canyon Preserve (**Appendix F-2**). The second monitoring survey was conducted on February 19, 2025, from 7:45 a.m. to 9:45 a.m. at observation point #2 to be at a higher elevation and more at eye level with the nest site (**Figure 5**). One adult golden eagle was observed flying to the nest and bringing in nest material. A second adult was observed perched on a separate rock along the same cliff face. The third monitoring survey was conducted on March 21, 2025, from 6:45 a.m. to 10:45 a.m. at observation point #3 to provide better lighting to the nest site (**Figure 5**). Two adult golden eagles were observed flying out of the nest site. Copulation was observed and one individual was seen eating an unknown prey item in the nest. The fourth monitoring survey was conducted on April 21, 2025, from 6:16 a.m. to 8:16 a.m. from observation point #4 to reduce the distance between the nest and the observation point (**Figure 5**). One medium-sized downy chick and one adult golden eagle was observed on the nest site during the observation. The second adult golden eagle was not observed. The fifth and final monitoring survey was conducted on May 22, 2025, from 7:32 a.m. to 9:22 a.m. also from observation point #4, which is the recommended observation point for surveyors moving forward. No adult golden eagles were observed. One juvenile was seen independently flying around the nest site area while a second large, feathered-out chick was observed in the nest. In conclusion, the golden eagle nest site at Hellhole Canyon Preserve was occupied and successfully fledged two chicks (determined through an observation of a mostly feathered-out chick in the nest and an independent flying juvenile) in 2025.

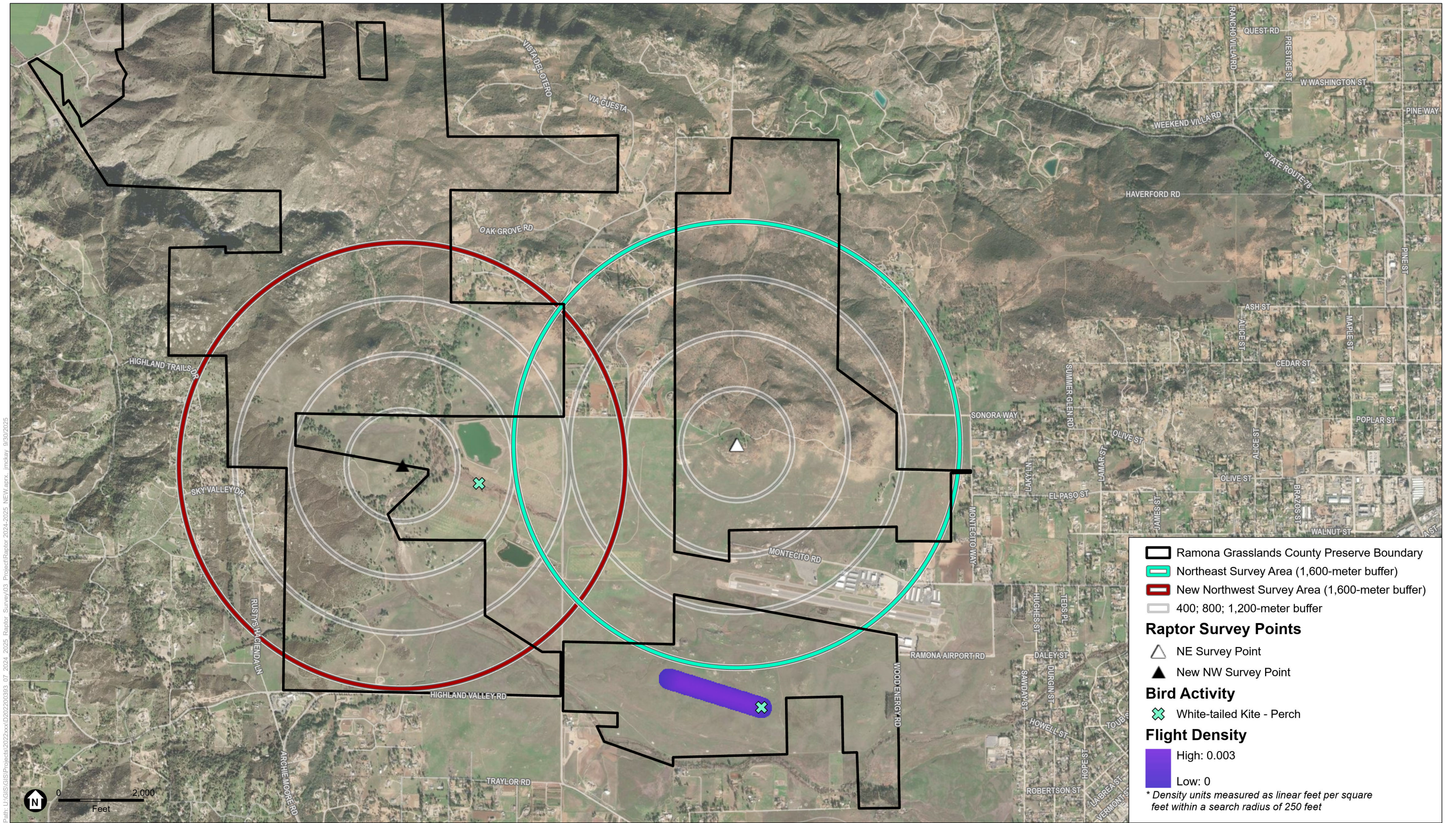


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 10a**  
White-tailed Kite Fall Flight Path Density Map



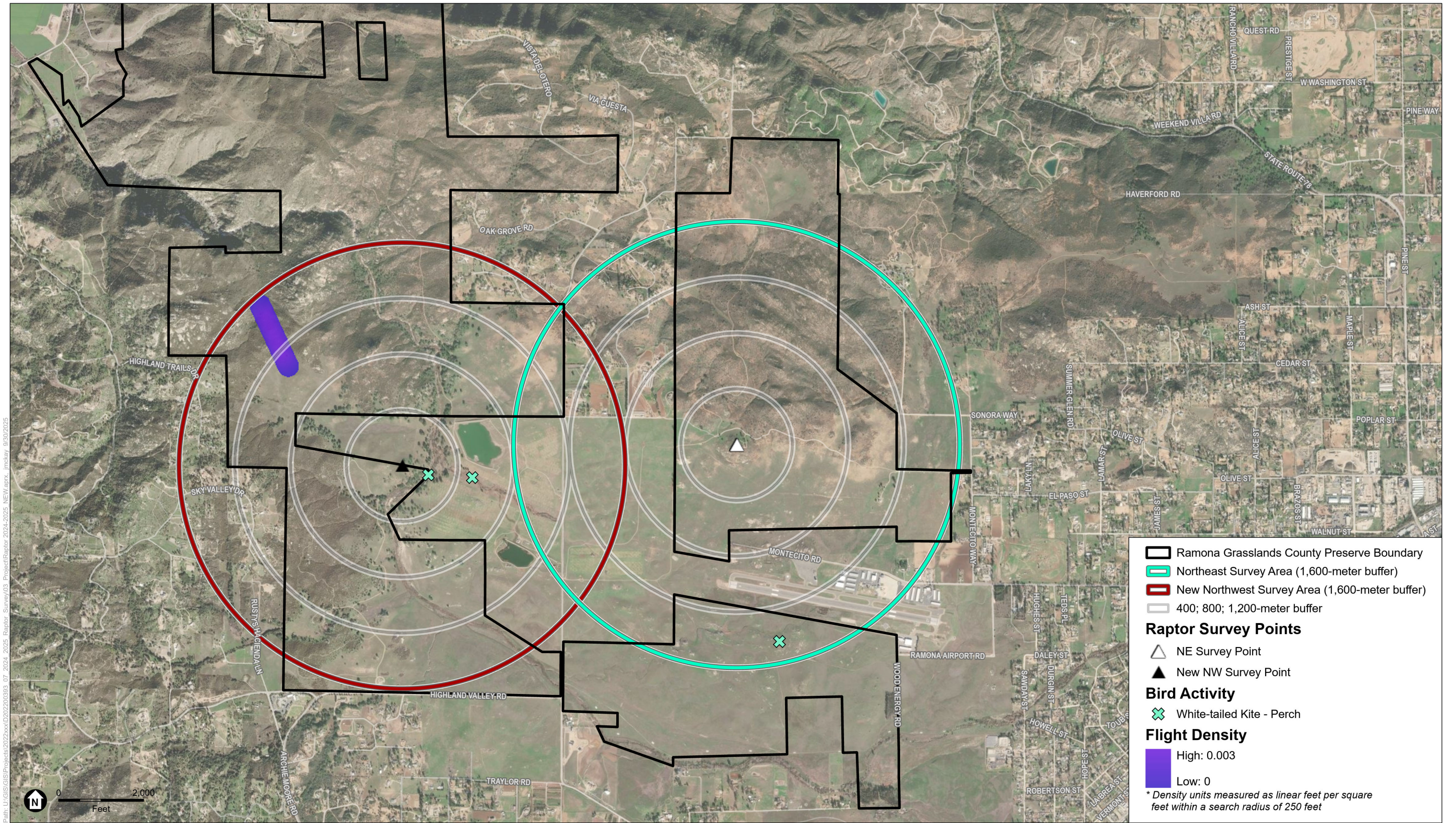


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 10b**  
White-tailed Kite Winter Flight Path Density Map





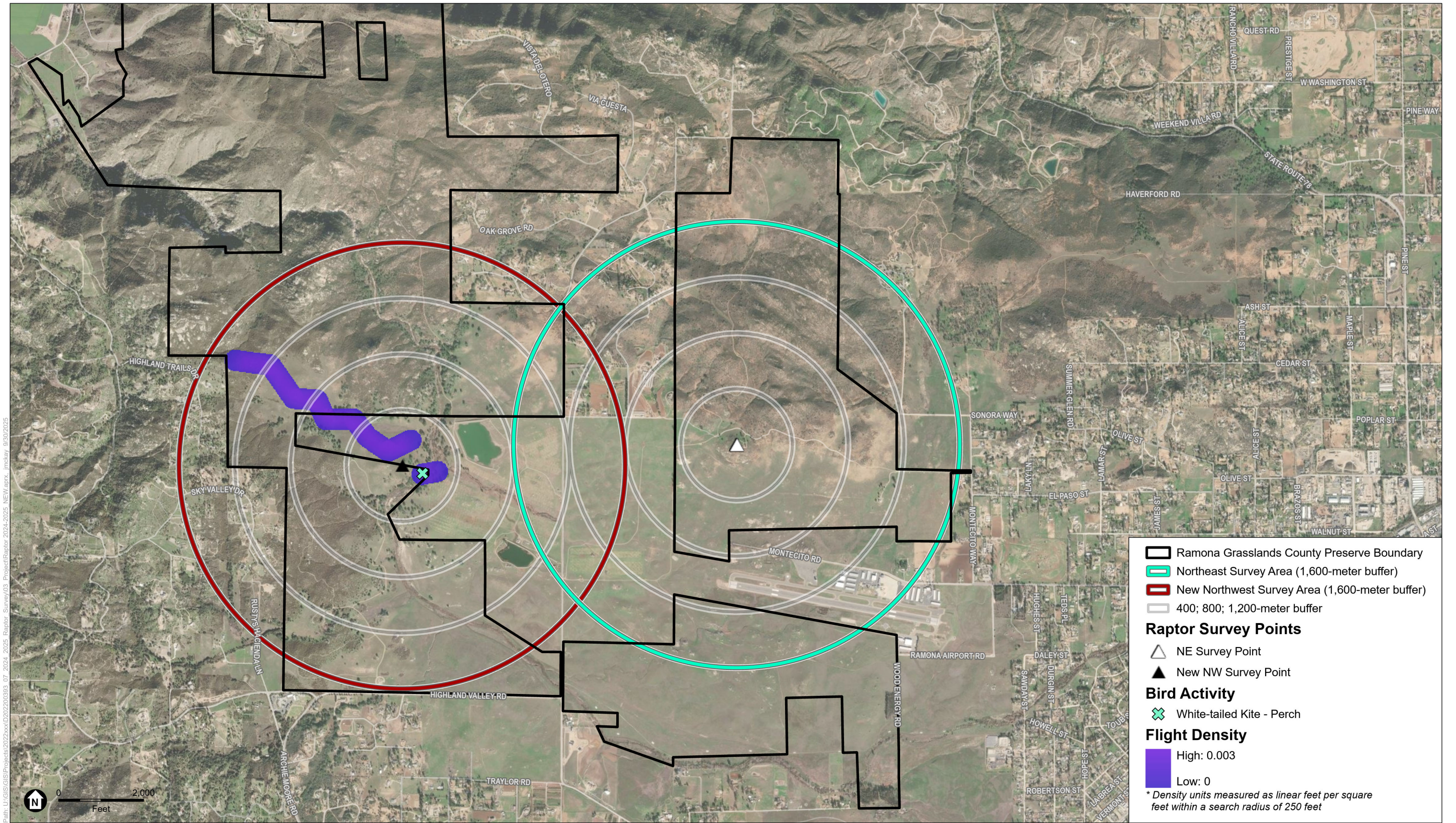
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SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 10c**  
White-tailed Kite Spring Flight Path Density Map





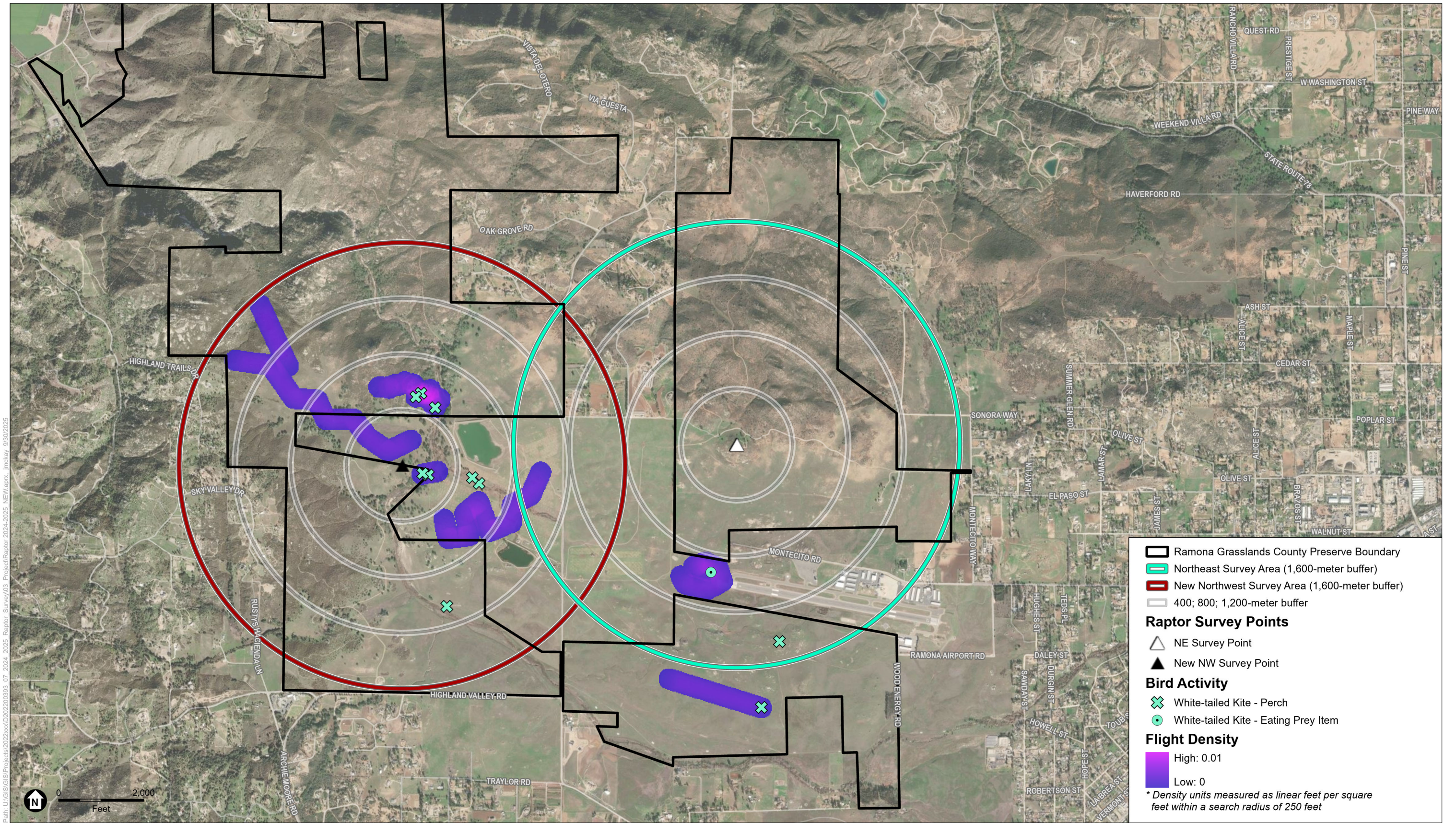
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SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 10d**  
White-tailed Kite Summer Flight Path Density Map





SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 10e**  
White-tailed Kite Annual Flight Path Density Map

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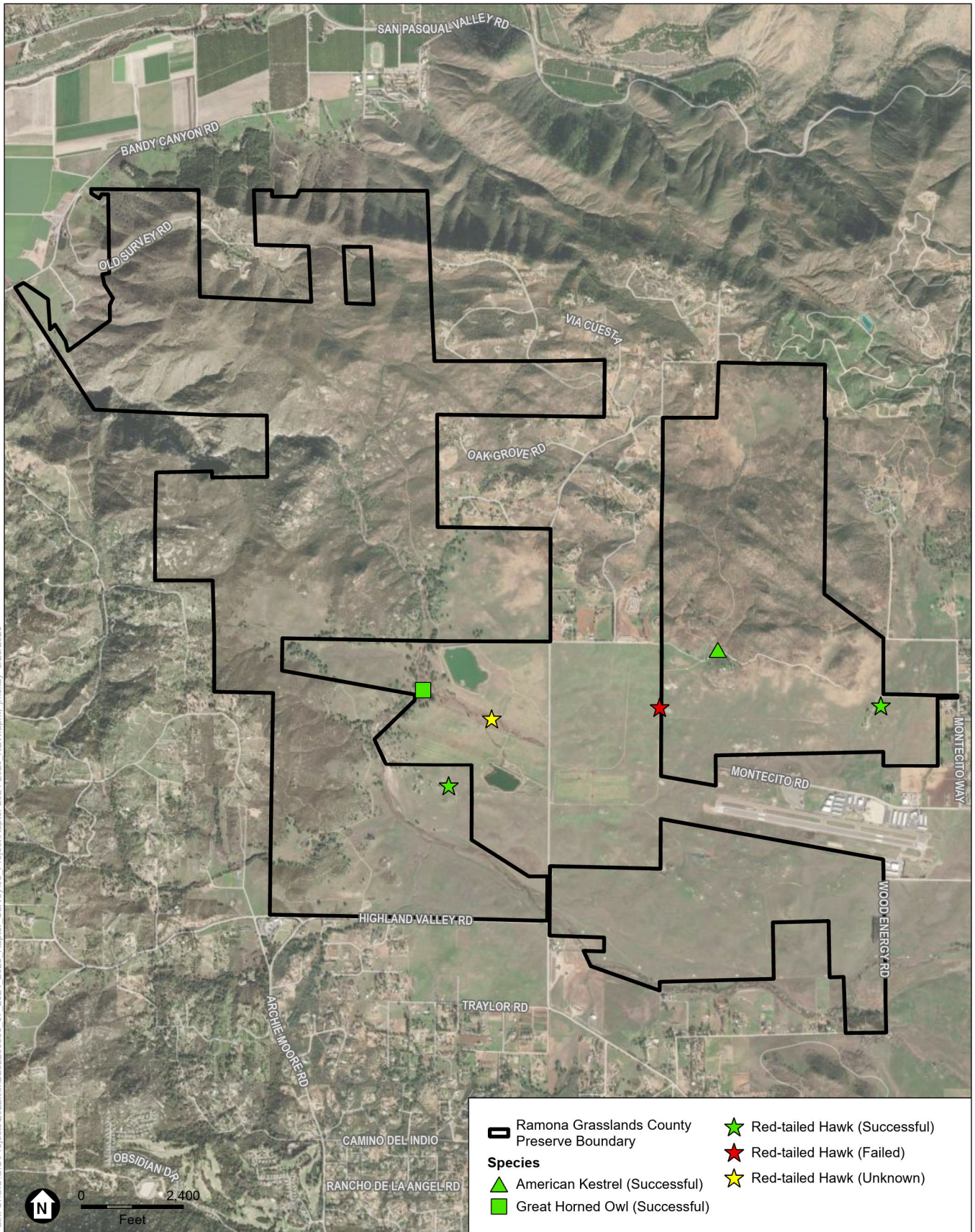
## 4.4 Incidental Raptor Nest Monitoring

During the off-site golden eagle nest monitoring and raptor foraging surveys, three other raptor species were observed nesting in the Ramona Grasslands Preserve: bald eagle, red-tailed hawk, American kestrel, and great horned owl (*Bubo virginianus*). Locations of all nests and which nests successfully fledged young are documented in **Figure 11** and **Appendix G-1** and are described in further detail below:

- *Bald eagle*. One bald eagle pair was observed nesting within the Ramona Grasslands Preserve in the same nest tree and eucalyptus grove from 2022–2025 (**Appendix G-2**). In previous years, the pair has nested in a different tree and eucalyptus grove (**Appendix G-1**). The adult pair were not successful; however, they did incubate eggs but failed (for unknown reasons) during this nesting phase.
- *Red-tailed hawk*. Four red-tailed hawk nests were observed. One nest site was in a eucalyptus tree adjacent to the access gate located on a dirt road within the northeast portion of the Ramona Grasslands Preserve off Montecito Way and was likely successful due to the presence of a chick seen in the nest. The second nest site was located on RMWD land within an oak tree near the northwest portion of the Ramona Grasslands Preserve and the outcome was unknown. The third nest site was located in the eucalyptus grove southwest of the NE survey point and was not successful. The fourth nest site was located south of the new NW survey point and adjacent to the southernmost RMWD pond. This nest was likely successfully due to the presence of chicks seen in the nest.
- *Great horned owl*. One great horned owl nest was detected near the new NW survey point within a cottonwood. This nest was likely successful due to the presence of chicks seen in the nest.
- *American kestrel*. One American kestrel nest was detected northwest of the NE survey point within a sycamore. This nest was successful due to the presence of adults feeding recently fledged chicks.

## 5.0 Comparison of Eagle Data Collected 2013–2016 and 2018–2025

To fulfill the monitoring goal for golden eagle and bald eagle within the TMP (ESA and ICF 2024), ESA compared raptor foraging data to provide a better understanding of species abundance and distribution, inform adaptive management decisions (e.g., trail feasibility, alignments, and seasonal closures), and provide a reference point for future studies or assessments pertaining to public use. From 2013 through July 2021, the survey methodology consisted of monitoring at the previously established southwest (SW) and NE survey areas. From August 2021 through July 2023, surveying that had been previously established at the SW survey area was moved to a newly established NW survey area to provide a better view of the grassland habitat within the northwest portion of the Ramona Grasslands Preserve. The NW survey area was subsequently revised in August 2023 to the new NW survey area to avoid disturbance to a potential golden eagle perch site. For data comparison purposes, the SW, NW, and new NW survey areas all represent the western portion of the Ramona Grasslands Preserve, while the NE survey area represents the eastern portion of the Ramona Grasslands Preserve.



SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 11**  
Incidental Raptor Nest Monitoring  
Ramona Grasslands County Preserve

No notable changes have occurred in occupancy by golden eagles and bald eagles within the Ramona Grasslands Preserve during the survey periods (2013–2016; 2018–2025), suggesting the Ramona Grasslands Preserve continues to provide suitable foraging and nesting habitat for the species. The Ramona Grasslands Preserve appears to consistently support territories for one golden eagle pair and one bald eagle pair, with infrequent usage by other individuals. Successful nesting has been observed by both pairs throughout the survey periods. A summary of occupancy, nest success, and usage by both species within the Ramona Grasslands Preserve is described below.

## 5.1 Summary of Golden Eagle and Bald Eagle Ramona Grasslands County Preserve Usage and Occupancy

### 5.1.1 Golden Eagle

Based on the survey results, it can be inferred that the Ramona Grasslands Preserve has consistently supported a minimum of one golden eagle territory throughout the survey periods (2013–2016; 2018–2025). Due to a lack of distinguishing features between adult birds, identification of individual birds was variable from year to year. It was difficult to determine whether the adults observed using the Ramona Grasslands Preserve consisted of just the resident pair known to occupy the off-site Bandy Canyon nest site or additional migratory individuals or resident adults. During some surveys, golden eagles could be distinguished by age characteristics, and thus fluctuations in the minimum number of individuals using the Ramona Grasslands Preserve were attributed to transient/migratory eagles and dispersing juveniles.

The minimum number of individual golden eagles using the two survey areas during the survey periods ranged between one and six individuals (**Table 5**). Three individual golden eagles were observed during the 2013–2014 and 2014–2015 survey periods, but it is unclear whether this third individual was a local dispersal from a nearby territory or a long-distance migrant. Later in 2015, two adult golden eagles were observed being harassed by a subadult golden eagle, and a juvenile individual was observed using the Ramona Grasslands Preserve. This occurred during the 2015 fall season when individual eagles are more likely to be dispersing due to seasonal changes (AECOM 2017).

During the 2020–2021 survey period, there were multiple incidents when three individual golden eagles were seen at once. In the fall of 2020, a family group (two adults and one juvenile) were seen together in the NE survey area, actively hunting together and perching on the rocky outcrops to the northeast of the NE survey point. This indicates the Ramona Grasslands Preserve is an important area for use by recently fledged young. During the winter season, two subadults and one adult were observed. Then, during the spring season, three subadult individuals were seen circling above the Ramona Grasslands Preserve (ESA 2021).

During the 2021–2022 survey period, there were multiple occasions when three individual golden eagles were observed, including uniquely identifiable/tagged eagles such as #0E and #65. Combining the number of individuals seen simultaneously and the individually identifiable tagged golden eagles, at least six distinct golden eagles were observed during this survey period, which is the highest number of individuals documented since surveys began in 2013.

With the NW survey point established during the 2021–2022 survey period and the new NW survey point established during the 2023–2024 survey period, golden eagles continued to be documented in a high

number of minutes during the 2022–2023 and 2023–2024 survey periods in the western portion of the Ramona Grasslands Preserve. This is likely due to the vantage point toward the western grasslands and the clear view of the resident pair’s preferred rock perch site in the NW survey area (**Appendix D-2**).

During the 2023–2024 survey period, the minimum number of individual golden eagles using the two survey areas was four and was due to the family group (two adults and one juvenile) seen together in the fall of 2025 as well as a subadult individual potentially roosted on the Ramona Grasslands Preserve. The individual was seen hunkered down in a rock crevice at the end of the day (**Appendix D-2**).

While the minutes of observations documented during the 2024–2025 survey period were lower than in previous survey periods, the minimum number of individual golden eagles using the two survey areas was still three. During the 2024–2025 survey period, golden eagles used the NE survey area more frequently, with the highest minutes of observations documented in all seasons, which was similar to previous survey periods except for the 2023–2024 survey period (**Table 6** and **Figure 12a**).

**Figure 12a** displays an increase in minutes of observations documented in the NE survey area beginning in the summer of 2015. Minutes of observations increased in the NW/new NW survey area as soon as it was established in the fall of 2021. The minutes of observations documented during the 2024–2025 survey period in both survey areas were similar to or slightly lower than those in previous survey periods. These inferences are limited to survey observations, which represent only 24 days or fewer out of the year (7 percent of the entire year) and may not be representative of total eagle usage. The NE survey area was used more due to more suitable perching locations and presence/abundance of prey availability; however, with the NW/new NW survey area, the western grasslands are also being documented as an important perching and foraging area for golden eagles.

The Ramona Grasslands Preserve continues to provide significant year-round foraging resources, particularly in the eastern grasslands, which provide an abundant food source (e.g., black-tailed jackrabbits [*Lepus californicus*] and California ground squirrels). Golden eagles used the Ramona Grasslands Preserve to forage and perch throughout the 2018–2025 survey period (**Figures 13a through 13d**). Seasonal patterns observed by survey area are as follows with other areas of slightly higher-density/spatial-use due to flight paths over the Ramona Grasslands Preserve and not areas of foraging:

- NE survey area. Each season shows significant use (noted in the figures in yellow) to some use (noted in the figures in light pink or faint yellow), specifically in the rocky outcrops northeast of the survey point and grasslands east of the survey point. The fall, winter, and spring seasons show denser use (noted in the figures in yellow) because of the increase in observations during those seasons (**Figures 13a, 13b, and 13c**).
- NW/new NW survey area. Each season shows some use (noted in the figures in light pink or faint yellow), specifically near the preferred perch location and the western grasslands located northwest of the survey point. The fall season shows significant use throughout the NW/new NW survey area, but the majority of use was for individuals flying back and forth from Bandy Canyon and not for foraging (**Figure 13a** and **Figure 13c**). During all seasons, the NW/new NW survey area was used for foraging.

**TABLE 5**  
**MINIMUM NUMBER OF INDIVIDUAL EAGLES OBSERVED AT EACH SURVEY AREA (SEPTEMBER 2013–AUGUST 2016, AUGUST 2018–JULY 2025)**

		Southwest Survey Area		Northwest/New Northwest Survey Area		Northeast Survey Area	
		Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )
<b>Fall – Minimum Number of Individuals<sup>1</sup></b>	2013	1	2	N/A	N/A	1	1
	2014	2	–	N/A	N/A	2	–
	2015	1	1	N/A	N/A	2	4
	2018	1	–	N/A	N/A	2	2
	2019	–	1	N/A	N/A	3	1
	2020	1	2	N/A	N/A	2	3
	2021	N/A	N/A	–	3	3	3
	2022	N/A	N/A	2	3	2	5
	2023	N/A	N/A	–	4	2	3
2024	N/A	N/A	2	3	3	4	
<b>Winter – Minimum Number of Individuals<sup>1</sup></b>	2013–2014	1	1	N/A	N/A	2	1
	2014–2015	1	3	N/A	N/A	2	2
	2015–2016	–	1	N/A	N/A	3	1
	2018–2019	1	1	N/A	N/A	4	2
	2019–2020	2	–	N/A	N/A	2	2
	2020–2021	3	1	N/A	N/A	2	4
	2021–2022	N/A	N/A	2	3	2	6
	2022–2023	N/A	N/A	2	3	3	4
	2023–2024	N/A	N/A	3	4	5	3
2024–2025	N/A	N/A	4	2	2	2	
<b>Spring – Minimum Number of Individuals<sup>1</sup></b>	2014	1	1	N/A	N/A	2	1
	2015	–	1	N/A	N/A	2	1
	2018	–	1	N/A	N/A	3	2
	2019	–	1	N/A	N/A	2	2
	2020	1	–	N/A	N/A	3	1
	2021	2	–	N/A	N/A	2	3
	2022	N/A	N/A	3	1	2	3
	2023	N/A	N/A	3	2	4	3
	2024	N/A	N/A	2	2	3	2
2025	N/A	N/A	3	2	2	2	
<b>Summer – Minimum Number of Individuals<sup>1</sup></b>	2014	–	1	N/A	N/A	3	1
	2015	–	1	N/A	N/A	1	2
	2018	1	1	N/A	N/A	3	–
	2019	2	1	N/A	N/A	2	–
	2020	2	–	N/A	N/A	–	2
	2021	–	1	N/A	N/A	2	3
	2022	N/A	N/A	–	3	2	2
	2023	N/A	N/A	2	2	3	2
	2024	N/A	N/A	2	3	2	1
2025	N/A	N/A	1	3	2	2	

		Southwest Survey Area		Northwest/New Northwest Survey Area		Northeast Survey Area	
		Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )
<b>All Seasons – Minimum Number of Individuals<sup>1</sup></b>	2013–2014	1	2	N/A	N/A	3	1
	2014–2015	2	3	N/A	N/A	3 <sup>2</sup>	2
	2015–2016	1	1	N/A	N/A	4 <sup>2</sup>	4
	2018–2019	2	1	N/A	N/A	5	2
	2019–2020	2	1	N/A	N/A	3	3
	2020–2021	3	3	N/A	N/A	2	5
	2021–2022	N/A	N/A	3	3	3	6
	2022–2023	N/A	N/A	4	3	5	6
	2023–2024	N/A	N/A	3	4	5	3
	2024–2025	N/A	N/A	4	3	3	4

Notes:

1. Minimum number of individuals known to occur or use the area.
  2. These numbers have been updated to reflect the number of individuals based on the species discussions in each survey summary report.
- Sources: AECOM 2014; AECOM 2015; AECOM 2017; ESA 2019; ESA 2020; ESA 2021; ESA 2022; ESA 2023; ESA 2024

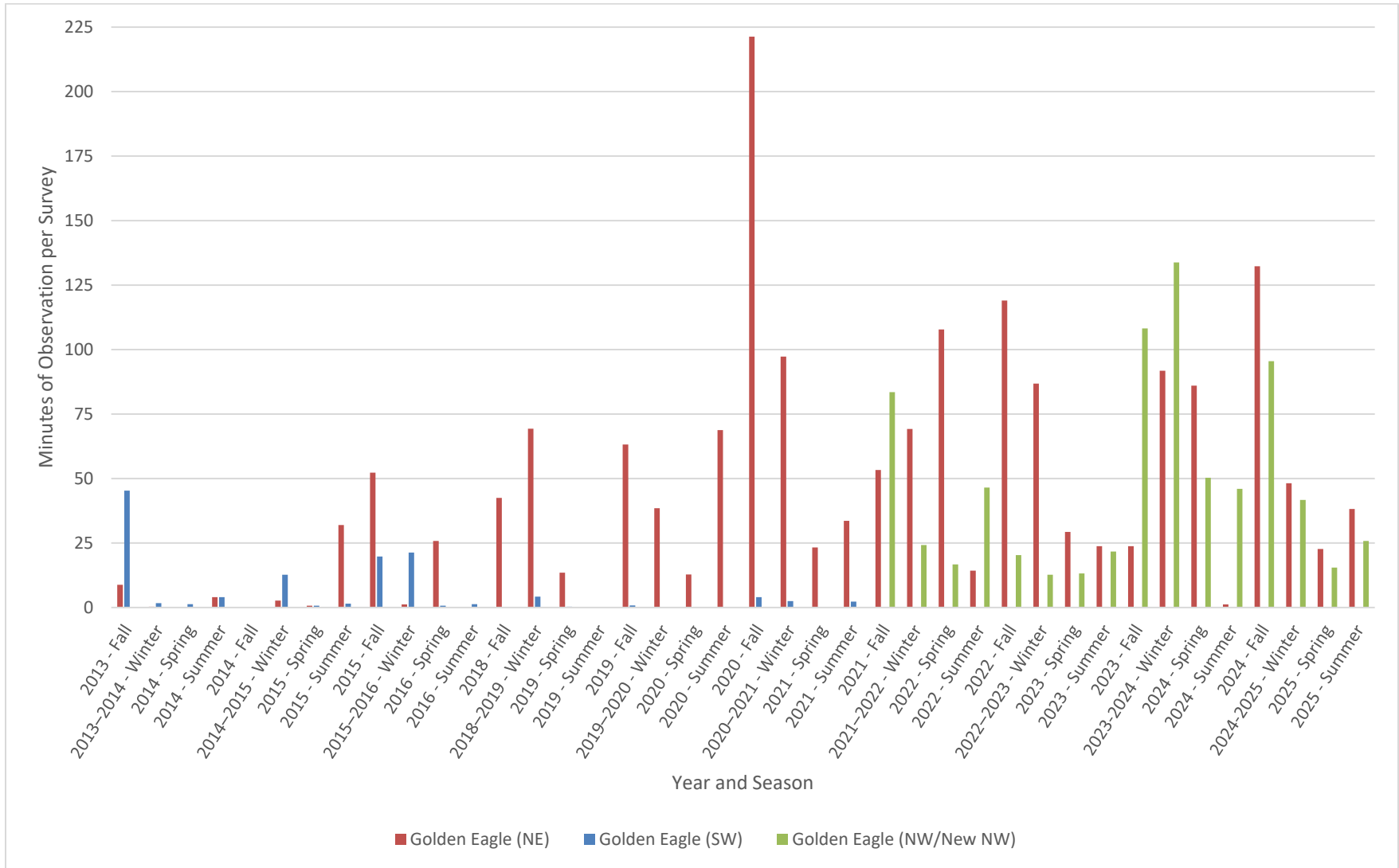
**TABLE 6**  
**NUMBER OF MINUTES EAGLES WERE OBSERVED AT EACH SURVEY AREA (SEPTEMBER 2013–AUGUST 2016, AUGUST 2018–JULY 2025)**

		Southwest Survey Area		Northwest/New Northwest Survey Area		Northeast Survey Area	
		Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )
<b>Fall – Minimum Number of Individuals<sup>1</sup></b>	2013	3.8	45.3	N/A	N/A	66.0	8.8
	2014	1.7	–	N/A	N/A	146.7	–
	2015	1.5	19.8	N/A	N/A	111.7	52.3
	2018	6.5	–	N/A	N/A	83.2	42.5
	2019	–	0.8	N/A	N/A	77.5	63.2
	2020	2.7	4.0	N/A	N/A	134.7	221.3
	2021	N/A	N/A	–	83.5	58.0	53.3
	2022	N/A	N/A	4.3	20.3	104.0	119.0
	2023	N/A	N/A	–	108.2	131.0	23.8
	2024	N/A	N/A	97.0	95.5	113.2	132.3
<b>Winter – Minimum Number of Individuals<sup>1</sup></b>	2013–2014	17.2	1.7	N/A	N/A	116.0	0.3
	2014–2015	5.0	12.7	N/A	N/A	166.7	2.7
	2015–2016	–	21.3	N/A	N/A	223.8	1.2
	2018–2019	0.8	4.2	N/A	N/A	234.7	69.3
	2019–2020	10.0	–	N/A	N/A	273.3	38.5
	2020–2021	12.2	2.5	N/A	N/A	258.7	97.3
	2021–2022	N/A	N/A	38.8	24.2	311.8	69.2
	2022–2023	N/A	N/A	10.5	12.7	217.0	86.8
	2023–2024	N/A	N/A	85.5	133.8	291.8	91.8
	2024–2025	N/A	N/A	201.7	41.7	224.2	48.2
<b>Spring – Minimum Number of Individuals<sup>1</sup></b>	2014	18.3	1.3	N/A	N/A	128.0	0.2
	2015	–	0.7	N/A	N/A	376.3	0.7
	2018	–	0.7	N/A	N/A	278.8	25.8
	2019	–	0.3	N/A	N/A	244.2	13.5
	2020	11.8	–	N/A	N/A	246.3	12.8
	2021	1.0	–	N/A	N/A	247.0	23.3
	2022	N/A	N/A	47.2	16.7	155.5	107.8
	2023	N/A	N/A	87.3	13.2	278.5	29.3
	2024	N/A	N/A	38.8	50.3	147.5	86.0
	2025	N/A	N/A	102.5	15.5	232.0	22.7
<b>Summer – Minimum Number of Individuals<sup>1</sup></b>	2014	–	4	N/A	N/A	209.6	4.0
	2015	–	1.5	N/A	N/A	3.7	32.0
	2018	1.3	1.3	N/A	N/A	361.3	–
	2019	11.0	0.2	N/A	N/A	53.2	–
	2020	2.3	–	N/A	N/A	–	68.8
	2021	–	2.3	N/A	N/A	182.8	33.6
	2022	N/A	N/A	–	46.5	200.7	14.3
	2023	N/A	N/A	0.7	21.7	140.2	23.8
	2024	N/A	N/A	42.2	46.0	196.0	1.2
	2025	N/A	N/A	119.7	25.8	150.8	38.2

		Southwest Survey Area		Northwest/New Northwest Survey Area		Northeast Survey Area	
		Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )	Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Golden Eagle ( <i>Aquila chrysaetos</i> )
<b>All Seasons – Minimum Number of Individuals<sup>1</sup></b>	2013–2014	12.00	10.40	N/A	N/A	132.20	2.80
	2014–2015	1.70	3.70	N/A	N/A	169.50	9.0
	2015–2016	0.70	11.00	N/A	N/A	243.90	19.80
	2018–2019	4.58	1.17	N/A	N/A	123.79	31.33
	2019–2020	6.04	0.21	N/A	N/A	149.29	45.83
	2020–2021	3.96	2.21	N/A	N/A	203.88	93.54
	2021–2022	N/A	N/A	21.73	43.16	179.42	61.0
	2022–2023	N/A	N/A	26.83	17.70	183.46	64.50
	2023–2024	N/A	N/A	43.50	85.27	194.14	54.18
	2024–2025	N/A	N/A	130.21	44.63	180.04	60.33

Notes:

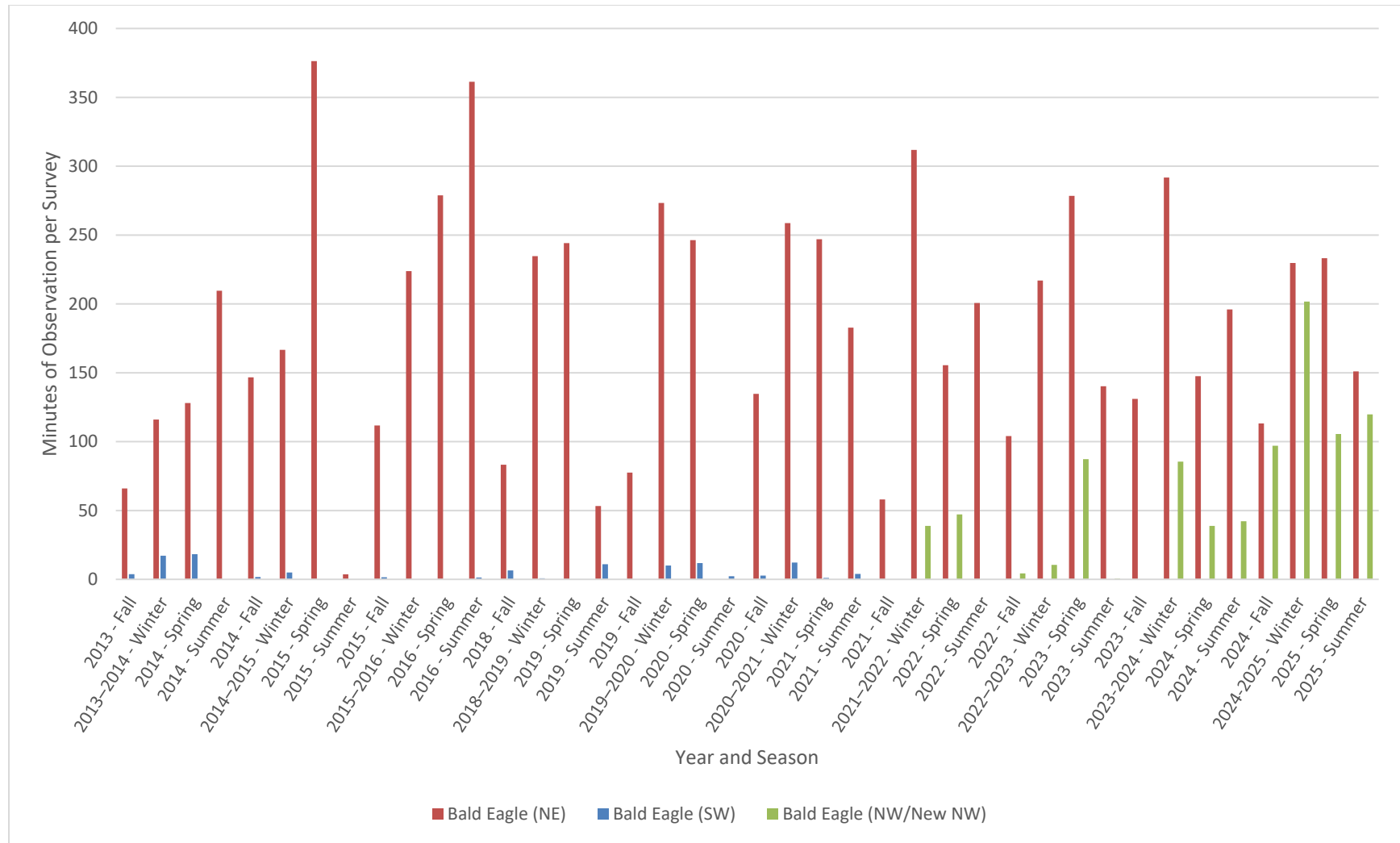
1. Minimum number of individuals known to occur or use the area
  2. These numbers have been updated to reflect the number of individuals based on the species discussions in each survey summary report
- Source: AECOM 2014; AECOM 2015; AECOM 2017; ESA 2019; ESA 2020; ESA 2021; ESA 2022; ESA 2023; ESA 2024



SOURCE: Data collected by ESA

Raptor Foraging Surveys & Nest Monitoring 2024–2025 Summary Report

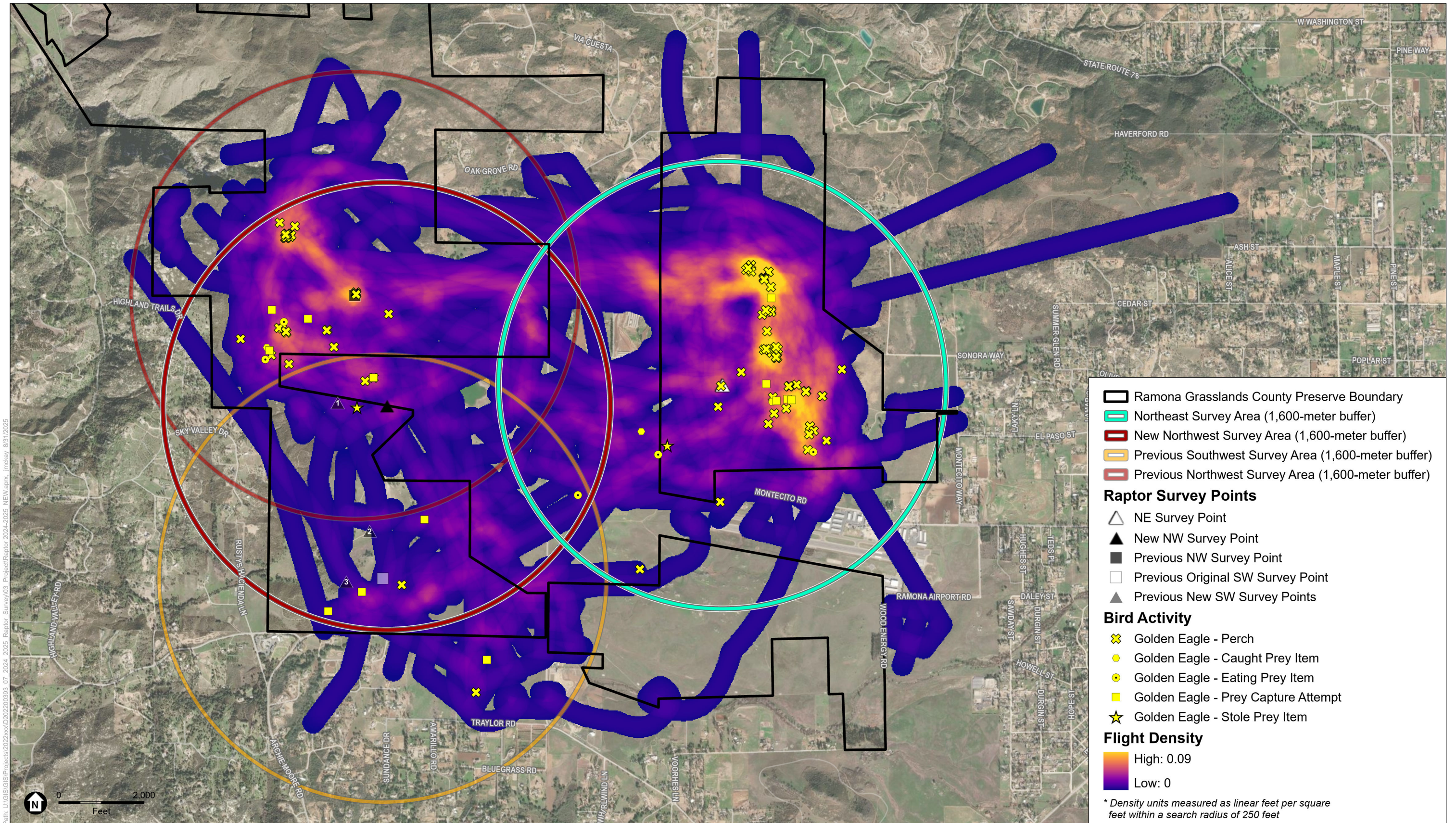
**Figure 12a**  
Golden Eagle Activity within the Vicinity of Each Survey Area (September 2013–July 2025)



SOURCE: Data collected by ESA

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**Figure 12b**  
Bald Eagle Activity within the Vicinity of Each Survey Area (September 2013–July 2025)

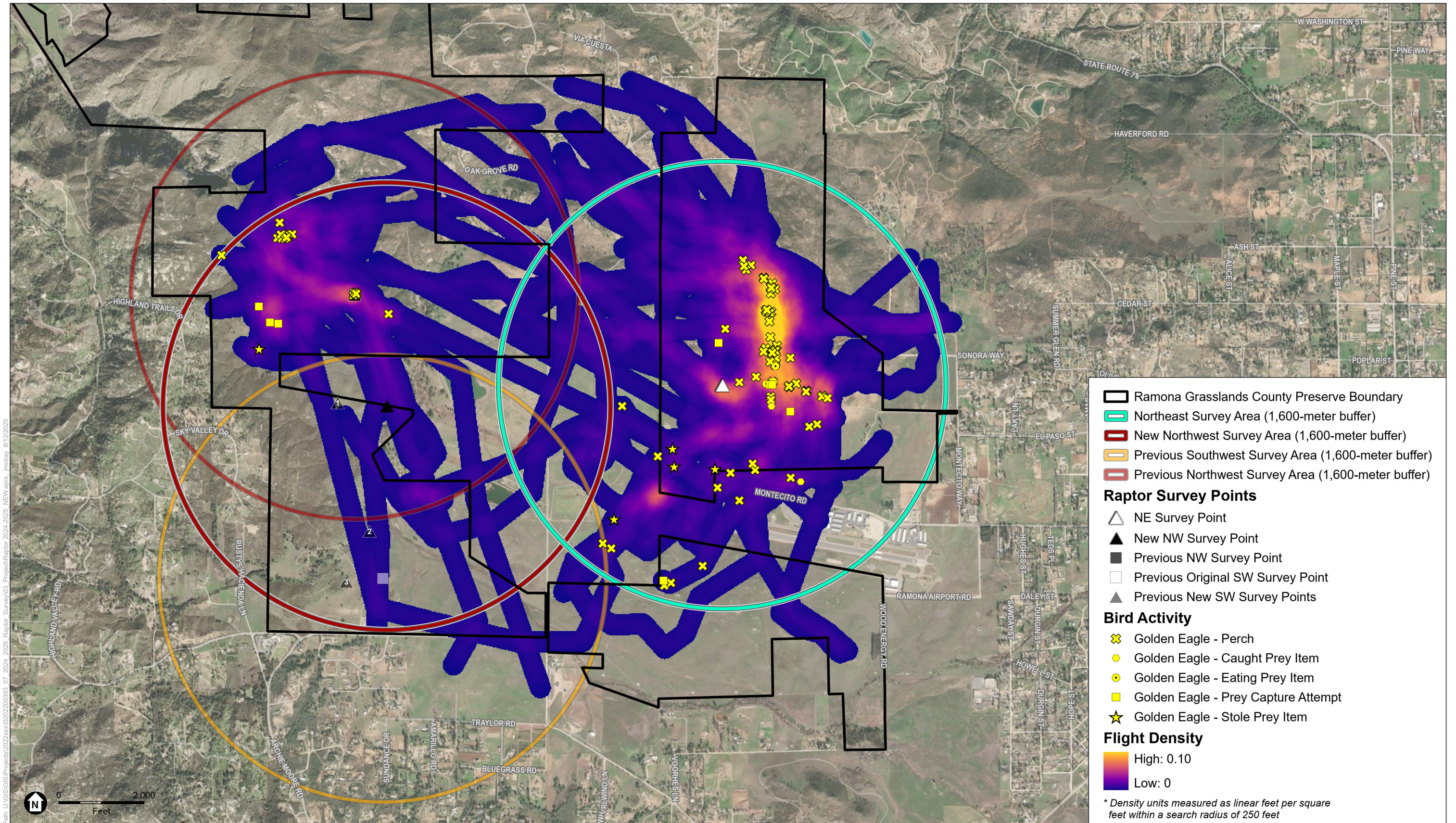


SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 13a**  
Seasonal Use by Golden Eagles 2018–2024 (Fall Seasons) Flight Path Density Map



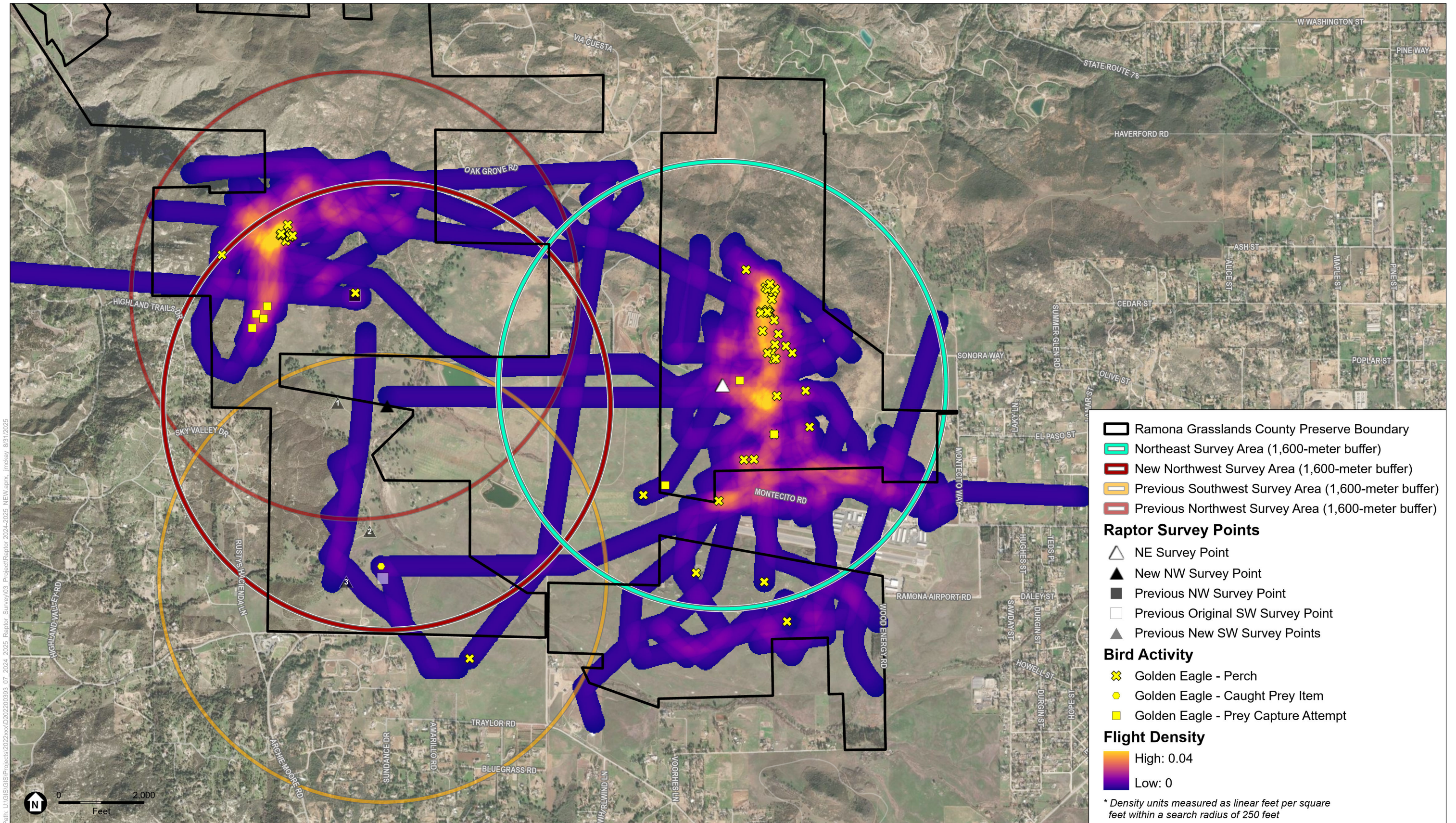


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 13b**  
Seasonal Use by Golden Eagles 2018–2025 (Winter Seasons) Flight Path Density Map



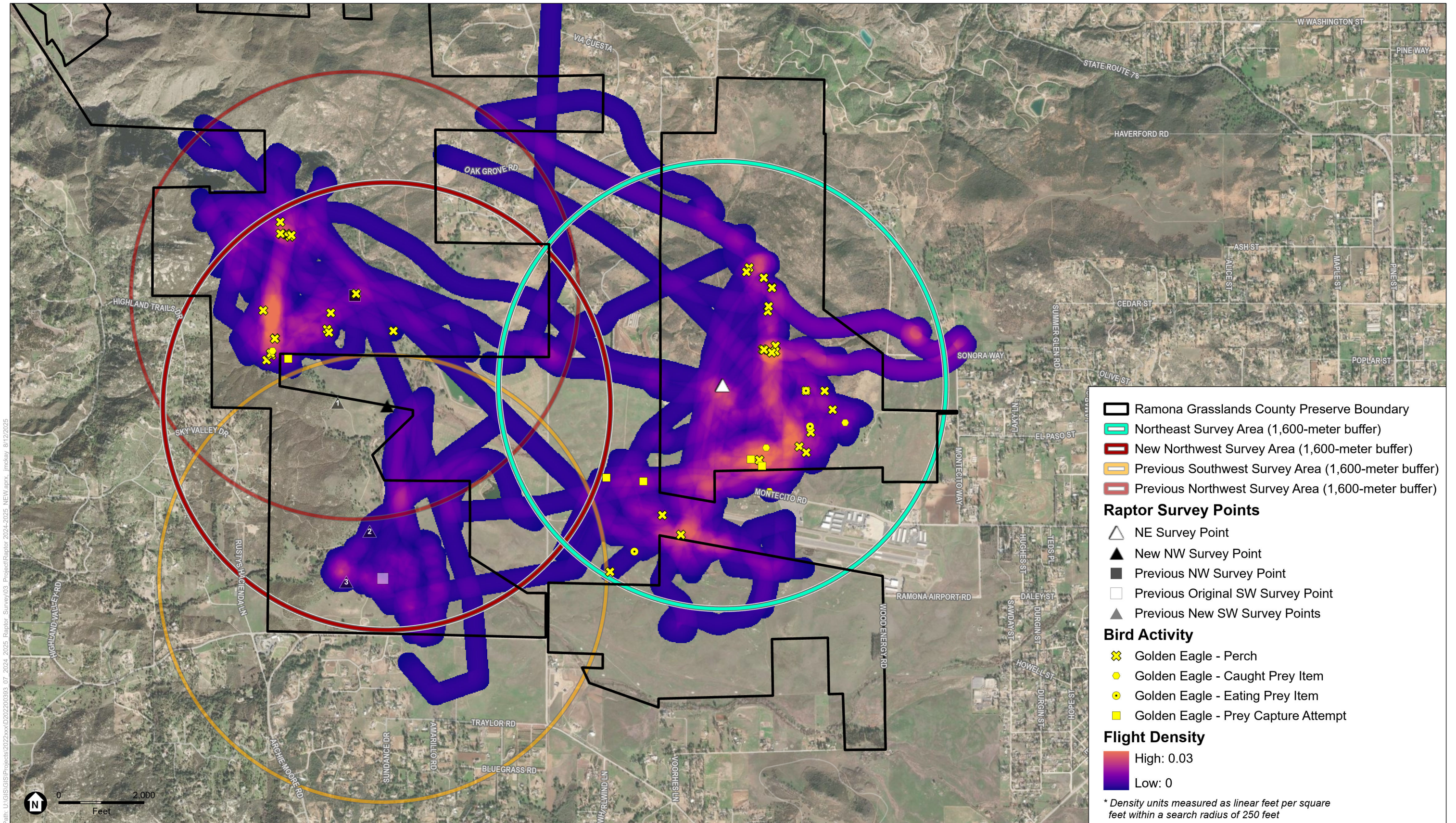


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 13c**  
Seasonal Use by Golden Eagles 2018–2025 (Spring Seasons) Flight Path Density Map





SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 13d**  
Seasonal Use by Golden Eagles 2018–2025 (Summer Seasons) Flight Path Density Map



## 5.1.2 Bald Eagle

Most of the bald eagle activity during the 2013–2016 and 2018–2025 survey periods was observed within the NE survey area where the nest site is located (**Table 6** and **Figure 12b**). This observation of use is consistent across all survey periods. Individuals were observed perched in the eucalyptus trees, on a dead snag, or on wooden utility poles adjacent to RMWD effluent ponds or the nest tree. Foraging activities included hunting waterfowl (American wigeon [*Mareca americana*] and American coot [*Fulica americana*]) and California ground squirrels as well as stealing prey items from other raptor species (ferruginous hawk and red-tailed hawk). As demonstrated by these activities, this area of the Ramona Grasslands Preserve continues to provide optimal habitat for both nesting and foraging for this species. While bald eagles used the Ramona Grasslands Preserve to forage and perch throughout the year, there was no consistent pattern observed from season to season during the survey periods, as depicted in **Figures 14a** through **14d**.

All seasons show some significant use within the NE survey area adjacent to the nest sites; however, these uses are mainly due to flyovers—individuals flying to and from the nest site. The initial nest site was along the Ramona Grasslands Preserve boundary in the NE portion of the Ramona Grasslands Preserve, and the second nest site (established in 2022) is located northeast of the original nest site still in the NE portion of the Ramona Grasslands Preserve. During the fall season of the 2018–2024 survey period, a slightly higher-density/spatial-use around the smaller southern RMWD effluent pond was noted (**Figure 14a**). During the winter season of the 2018–2025 survey period, however, a slightly higher-density/spatial-use was noted around the larger, northern RMWD effluent pond (**Figure 14b**). In this same area, the higher-density/spatial-use was significant at the larger, northern RMWD effluent pond during the spring season of the 2018–2025 survey period (**Figure 14c**). There was a slightly higher-density/spatial-use around the same RMWD effluent pond during the summer season of the 2018–2025 survey period (**Figure 14d**). While each seasonal map depicts general use, there are no distinctive patterns. Other areas of slightly higher-density/spatial-use are due to flight paths over the Ramona Grasslands Preserve and not areas of foraging.

## 5.2 Summary of Eagle Nest Monitoring

### 5.2.1 Golden Eagle

DPR monitored the off-site golden eagle nest in Bandy Canyon from 2014 through 2016 and again from 2019 through 2025 (**Appendix D-2**). **Table 7** summarizes the nest success within the Bandy Canyon territory. In 2014 and 2015, one adult and one subadult occupied the territory, but no nesting attempt such as nest building or incubation was observed. In 2016, one adult and one unknown-aged individual were observed occupying the territory. One individual was carrying nesting material during the first survey, and incubation was observed during the second survey. It is unknown how many young fledged or if the nest failed during the incubation stage in 2016. In 2019, the pair successfully fledged two young, and in 2020 and 2021, the pair successfully fledged one young. In 2022, the pair was observed in an incubating position, but no chicks were observed. Therefore, the nest was not successful in 2022. In 2023, the nest site with observed use (whitewash) was the same nest used in 2022. One fledgling was observed flying and calling in the canyon, indicating that the pair successfully fledged one young. In 2024, the pair again successfully fledged one young. In 2025, no nesting behavior (nest building or incubation activity) was observed. Therefore, no nesting attempt was confirmed in 2025. Based on this analysis and past survey data, it appears

that the territory remained occupied throughout the survey periods, with documented nest success in 5 of 10 survey periods.

**TABLE 7**  
**SUMMARY OF GOLDEN EAGLE NEST MONITORING**

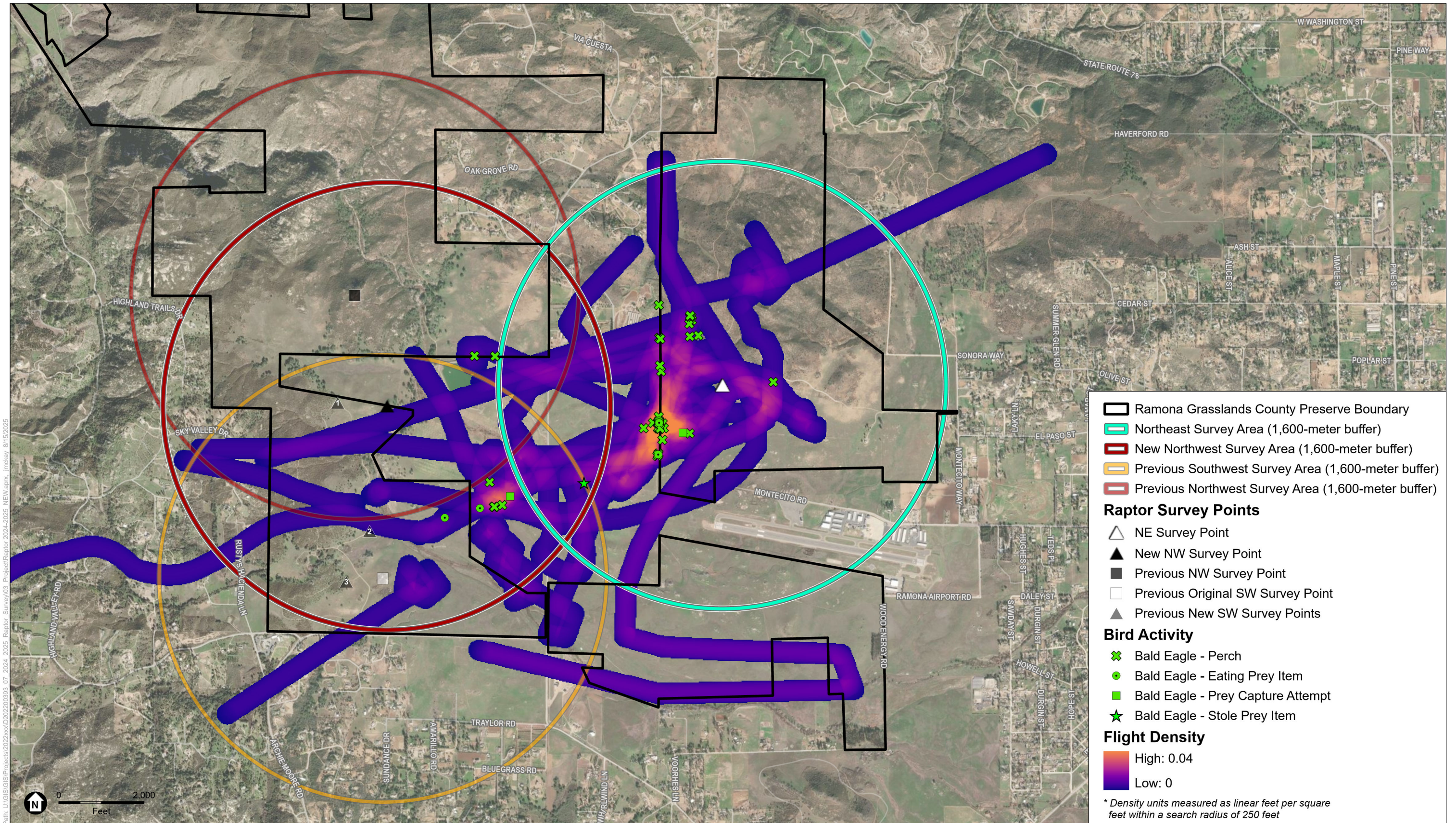
Year	Number of Surveys	Nesting Attempt Confirmed	Number of Fledglings
2014 <sup>1</sup>	2	No	0
2015 <sup>1</sup>	2	No	0
2016 <sup>1</sup>	2	Yes	Unknown
2019 <sup>1</sup>	4	Yes	2
2020 <sup>1</sup>	5	Yes	1
2021 <sup>1</sup>	5	Yes	1
2022 <sup>1</sup>	4	Yes	0
2023 <sup>1</sup>	6	Yes	1
2024 <sup>1</sup>	6	Yes	1
2025	3	No	0

Note:

1. Source: AECOM 2014; AECOM 2015; AECOM 2017; ESA 2019; ESA 2020; ESA 2021, ESA 2022, ESA 2023, ESA 2024.

## 5.2.2 Bald Eagle

Throughout the survey period (2013–2016; 2018–2024), the Ramona Grasslands Preserve consistently supported one bald eagle territory. This territory successfully fledged young in 2014 through 2016 and was also successful in 2023. The nest was not successful in 2024. The nest was in a eucalyptus grove from 2014 through 2021 along the boundary of the northeast portion of the Ramona Grasslands Preserve and the RMWD property (**Appendix E-2**). In 2022, the nest location moved to a different eucalyptus grove wholly within the northeast portion of the Ramona Grasslands Preserve, where the pair nested in 2023 and 2024. In 2023, the nest was successful the first time since nest monitoring by ESA began in 2019 (**Table 8**). The lack of successful fledging in 2020 may be attributed to the lack of food deliveries between the newly established adult pair. The lack of food deliveries could be related to inexperience (first-year nesting attempt or lack of successful prey capture attempts). While the pair did lay eggs in 2021, 2022, 2024, and 2025, the nest failed for unknown reasons. Generally, the minimum number of bald eagles observed using the two survey areas ranged between one and five individuals (**Table 5**). These fluctuations were attributed to immature birds observed within the Ramona Grasslands Preserve from 2014 through 2016. It is unknown whether these immature birds observed during the survey period are local dispersals from a nearby territory or long-distance migrants. During the 2018–2019 survey period, the increase in the number of individual bald eagles was attributed to the partially vacant territory related to the disappearance (reason unknown) of one of the adult birds (ESA 2019). While there was a “turnover” of at least one individual during the 2020 and 2021 breeding seasons, the 2019–2021 survey periods did not capture as many individuals in the Ramona Grasslands Preserve as in previous years. There was one observation during the 2022–2023 survey period of a third adult bald eagle actively being chased out of the territory by the adult pair. In June 2023, surveyors were made aware of an adult bald eagle acting peculiar, looking ragged, and eventually flying into an adjacent landowner’s barn. The eagle was captured and taken to a rehabilitation center where the eagle did not survive. It was assumed to be one of the adult individuals out of three occupying the Ramona Grasslands Preserve territory, which may have created a “turnover” of at least one individual during the 2024 breeding season.

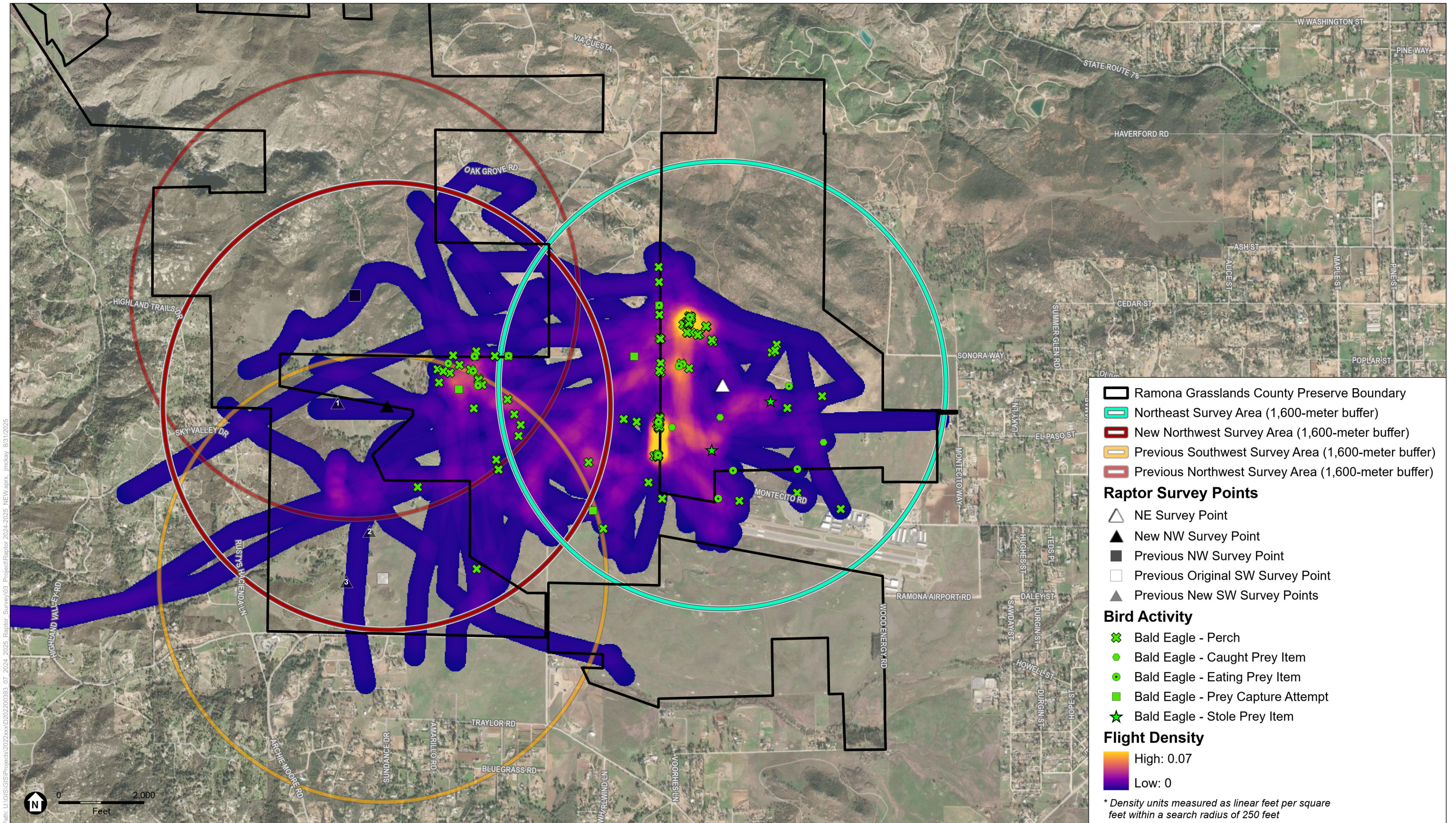


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 14a**  
Seasonal Use by Bald Eagles 2018–2024 (Fall Seasons) Flight Path Density Map



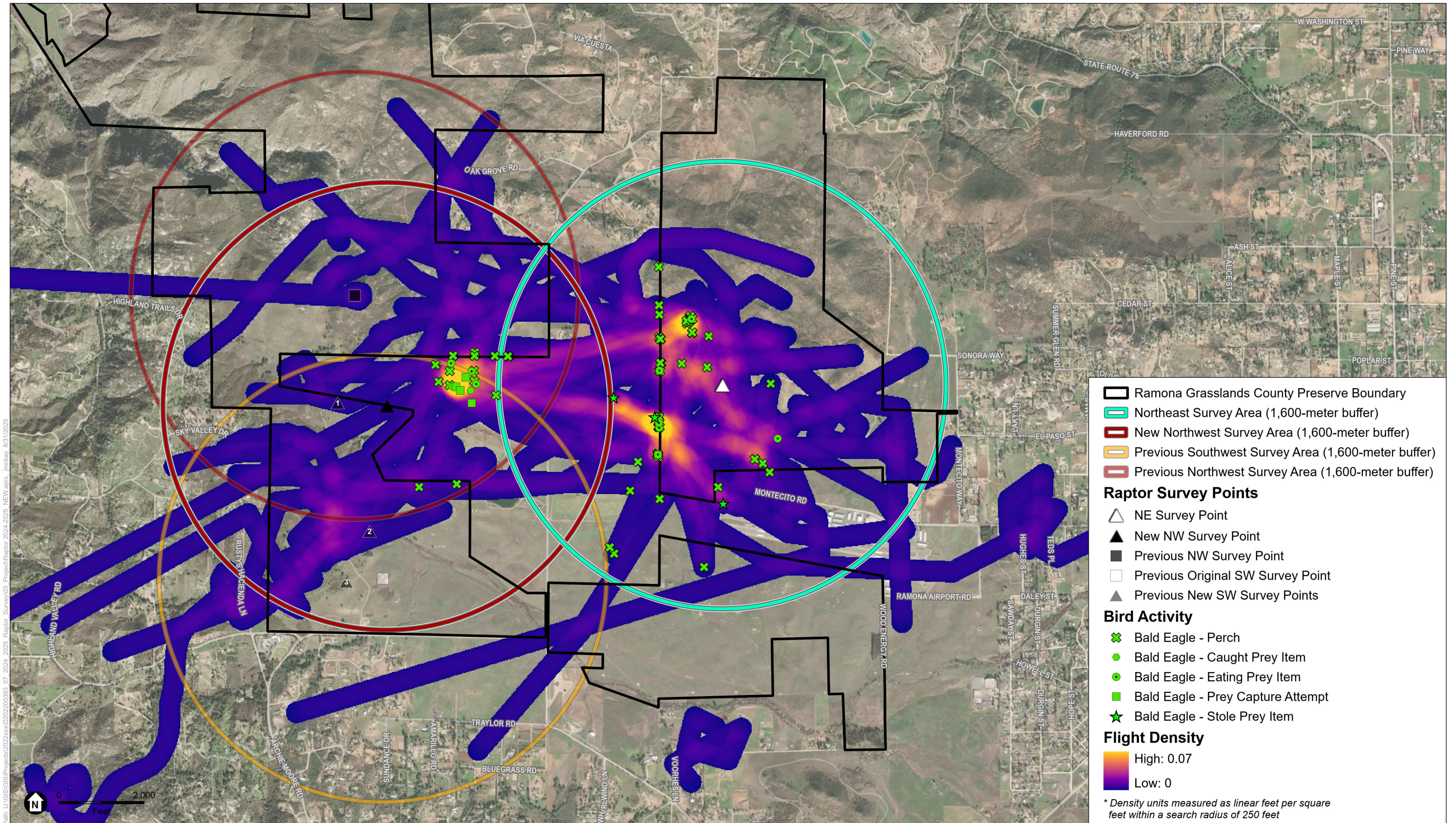


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 14b**  
Seasonal Use by Bald Eagles 2018–2025 (Winter Seasons) Flight Path Density Map



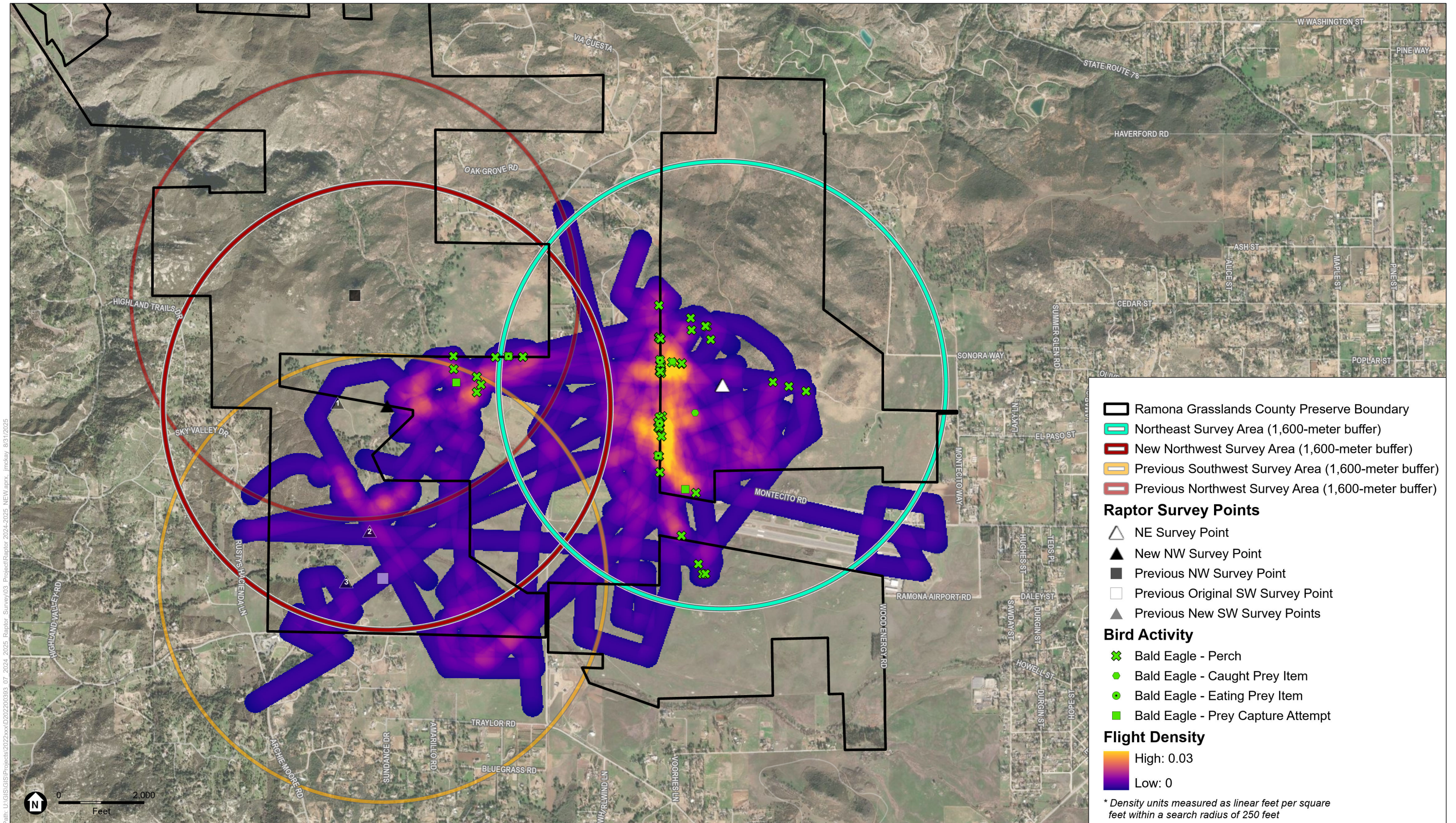


SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 14c**  
Seasonal Use by Bald Eagles 2018–2025 (Spring Seasons) Flight Path Density Map





SOURCE: ESRI, 2025; ESA, 2025.

Raptor Foraging Surveys and Nest Monitoring 2024–2025 Summary Report

**Figure 14d**  
Seasonal Use by Bald Eagles 2018–2025 (Summer Seasons) Flight Path Density Map



**TABLE 8**  
**SUMMARY OF BALD EAGLE NESTING OBSERVATIONS**

Year	Nesting Attempt Confirmed	Number of Fledglings
2014 <sup>1</sup>	Yes	1
2015 <sup>1</sup>	Yes	2
2016 <sup>1</sup>	Yes	1
2019 <sup>1</sup>	Yes	0
2020 <sup>1</sup>	Yes	0
2021 <sup>1</sup>	Yes	0
2022 <sup>1</sup>	Yes	0
2023 <sup>1</sup>	Yes	1
2024 <sup>1</sup>	Yes	0
2025	Yes	0

Note:

1. Source: AECOM 2014; AECOM 2015; AECOM 2017; ESA 2019; ESA 2020; ESA 2021, ESA 2022, ESA 2023, ESA 2024.

## 6.0 Recommendation for Future Studies

The survey methodology conducted was successful in meeting the goal of this study, which is to collect information on raptor species abundance and distribution within the Ramona Grasslands Preserve and golden eagle nest success within Bandy Canyon and on El Cajon Mountain and Rodriguez Mountain. This study continues to document the status and trends on the Ramona Grasslands Preserve. The data are useful in determining eagle occupancy and nest success, as well as determining general patterns on Ramona Grasslands Preserve; however, additional studies are necessary to infer seasonal and spatial-use from all survey periods. The following additions are recommended:

- Obtain and analyze spatial-use data and bird activity points from 2013–2016 survey periods.** Although the minutes of observation per season provide general overviews of eagle use, spatial-use from the flight path data could provide a clearer picture of seasonal eagle use within each survey area. If the spatial-use data, including bird activity points (perch locations, etc.) from the survey periods between 2013–2016, could be provided, additional analyses could be conducted and potentially show changes in eagle use within each survey area per season over the past –10 years. Another option would be to digitize the flight path data and bird activity points to complete this analysis.
- Conduct a viewshed analysis from perch points.** A viewshed study could also be conducted based on perch points collected during the 2018–2025 to demonstrate the line of sight (or lack thereof) of these perch locations to recently opened or future trails within the Ramona Grasslands Preserve or off-site uses.
- Conduct a prey distribution and abundance survey.** A baseline prey distribution and abundance survey focusing on California ground squirrels and black-tailed jackrabbits within the Ramona Grasslands Preserve would provide information regarding locations and availability of prey throughout the Ramona Grasslands Preserve. Results could inform management recommendations

and/or indicate the effectiveness of current management. Follow-up surveys could track changes over time.

- **Obtain and analyze species detection from the 2013–2016 survey periods.** The average detection/total minutes observed analysis depicts when eagle species are more likely to be observed and in which survey area. Inclusion of the raptor data from 2013–2016 survey periods would improve the rigor of the analysis and allow for the detection of changes in use over time.
- **Conduct a more robust statistical analysis on spatial-use, abundance, and detection.** The current study takes a simple approach, using the data collected from the 2018–2025 survey periods. Additional statistical analysis could be conducted on the current data to determine statistical significance; however, the results may not change. This approach is likely to only supplement our current results and is unlikely to provide any additional information not already included in this report.

All of these optional studies could be used to inform management and operations within the Ramona Grasslands Preserve.

## 7.0 References

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Appendix A  
**Survey Area Site Photographs**





Photograph 1: Northeast Survey Point, facing west.



Photograph 2: Northeast Survey Point, facing north.

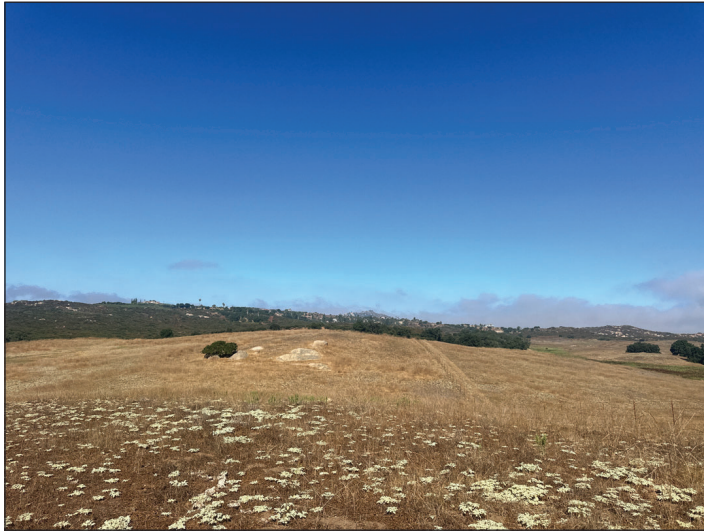


Photograph 3: Northeast Survey Point, facing east.



Photograph 4: Northeast Survey Point, facing south.

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Photograph 5: New Northwest Survey Point, facing west.



Photograph 6: New Northwest Survey Point, facing north.



Photograph 7: New Northwest Survey Point, facing east.



Photograph 8: New Northwest Survey Point, facing south.

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Appendix B  
**Raptor Foraging Survey Dates,  
Personnel, and Weather Conditions**



Survey Personnel	Date	Survey Area ID	Time	Weather Conditions
Brennan Mulrooney, Amy Orduño-Baez	08/17/2024	NE	11:15	Temp: 78 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8.5 mph, Wind Direction: SW
Brennan Mulrooney, Amy Orduño-Baez	08/17/2024	NE	15:15	Temp: 83 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 12 mph, Wind Direction: SW
Brennan Mulrooney, Amy Orduño-Baez	08/17/2024	NW	06:26	Temp: 62 °F, 100% Cloud Cover, Visibility: Poor, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: NW
Brennan Mulrooney, Amy Orduño-Baez	08/17/2024	NW	10:26	Temp: 74 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 7.5 mph, Wind Direction: W
Jaclyn Catino-Davenport, Natasha Kabala	08/31/2024	NW	11:16	Temp: 81.8 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6.4 mph, Wind Direction: NW
Jaclyn Catino-Davenport, Natasha Kabala	08/31/2024	NW	15:16	Temp: 91.2 °F, 20% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.1 mph, Wind Direction: W
Jaclyn Catino-Davenport, Natasha Kabala	08/31/2024	NE	06:08	Temp: 65.1 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.1 mph, Wind Direction: SE
Jaclyn Catino-Davenport, Natasha Kabala	08/31/2024	NE	10:08	Temp: 78.5 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: NW
Jaclyn Catino-Davenport, Bailey Setzler	09/15/2024	NE	12:07	Temp: 71 °F, 75% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.4 mph, Wind Direction: W
Jaclyn Catino-Davenport, Bailey Setzler	09/15/2024	NE	16:07	Temp: 73 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 0.7 mph, Wind Direction: W
Jaclyn Catino-Davenport, Bailey Setzler	09/15/2024	NW	07:07	Temp: 67 °F, 98% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.5 mph, Wind Direction: SE
Jaclyn Catino-Davenport, Bailey Setzler	09/15/2024	NW	11:07	Temp: 75 °F, 75% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: W
Jaclyn Catino-Davenport, Karla Alcaraz	09/28/2024	NW	11:38	Temp: 84.1 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8.4 mph, Wind Direction: W
Jaclyn Catino-Davenport, Karla Alcaraz	09/28/2024	NW	15:38	Temp: 90.7 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.3 mph, Wind Direction: W
Jaclyn Catino-Davenport, Karla Alcaraz	09/28/2024	NE	06:37	Temp: 60.4 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.4 mph, Wind Direction: NE
Jaclyn Catino-Davenport, Karla Alcaraz	09/28/2024	NE	10:37	Temp: 90.4 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	10/06/2024	NE	11:24	Temp: 91 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: W

Survey Personnel	Date	Survey Area ID	Time	Weather Conditions
Brennan Mulrooney, Karla Alcaraz	10/06/2024	NE	15:24	Temp: 92 °F, 3% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	10/06/2024	NW	06:31	Temp: 67 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	10/06/2024	NW	10:31	Temp: 86 °F, 1% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: W
Brennan Mulrooney, Bailey Setzler	10/20/2024	NW	11:54	Temp: 84 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: NW
Brennan Mulrooney, Bailey Setzler	10/20/2024	NW	15:54	Temp: 80 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8 mph, Wind Direction: W
Brennan Mulrooney, Bailey Setzler	10/20/2024	NE	06:58	Temp: 55.5 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: NE
Brennan Mulrooney, Bailey Setzler	10/20/2024	NE	10:58	Temp: 82 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1.3 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	11/02/2024	NE	11:58	Temp: 62 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: SW
Brennan Mulrooney, Karla Alcaraz	11/02/2024	NE	15:58	Temp: 63 °F, 80% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	11/02/2024	NW	07:01	Temp: 49 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: E
Brennan Mulrooney, Karla Alcaraz	11/02/2024	NW	11:01	Temp: 60 °F, 75% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: SW
Brennan Mulrooney, Karla Alcaraz	11/20/2024	NW	11:43	Temp: 75 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	11/20/2024	NW	15:43	Temp: 70 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	11/20/2024	NE	06:39	Temp: 45 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	11/20/2024	NE	10:39	Temp: 73 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: SW
Brennan Mulrooney, Karla Alcaraz	12/04/2024	NE	11:50	Temp: 66 °F, 0% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	12/04/2024	NE	15:50	Temp: 64 °F, 0% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: NW

Survey Personnel	Date	Survey Area ID	Time	Weather Conditions
Brennan Mulrooney, Karla Alcaraz	12/04/2024	NW	06:58	Temp: 47 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: E
Brennan Mulrooney, Karla Alcaraz	12/04/2024	NW	10:58	Temp: 64 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: W
Brennan Mulrooney, Natasha Kabala	12/18/2024	NW	11:41	Temp: 81 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 12 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	12/18/2024	NW	15:41	Temp: 77 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: E
Brennan Mulrooney, Natasha Kabala	12/18/2024	NE	06:46	Temp: 55 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 0 mph, Wind Direction: N/A
Brennan Mulrooney, Natasha Kabala	12/18/2024	NE	10:46	Temp: 78 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 10 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	01/09/2025	NE	11:54	Temp: 67 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	01/09/2025	NE	15:54	Temp: 67 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8.5 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	01/09/2025	NW	07:04	Temp: 40 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: SE
Brennan Mulrooney, Karla Alcaraz	01/09/2025	NW	11:04	Temp: 66 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 7.5 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	01/24/2025	NW	11:40	Temp: 70 °F, 35% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	01/24/2025	NW	15:40	Temp: 67 °F, 25% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	01/24/2025	NE	06:55	Temp: 48 °F, 30% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	01/24/2025	NE	10:55	Temp: 68 °F, 35% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	02/06/2025	NE	11:52	Temp: 61 °F, 75% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	02/06/2025	NE	15:52	Temp: 62 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: SW
Brennan Mulrooney, Karla Alcaraz	02/06/2025	NW	07:02	Temp: 52 °F, 95% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: SE

Survey Personnel	Date	Survey Area ID	Time	Weather Conditions
Brennan Mulrooney, Karla Alcaraz	02/06/2025	NW	11:02	Temp: 59 °F, 93% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: SW
Brennan Mulrooney, Natasha Kabala	02/19/2025	NW	11:29	Temp: 73 °F, 40% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	02/19/2025	NW	15:29	Temp: 71 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 7 mph, Wind Direction: W
Brennan Mulrooney, Natasha Kabala	02/19/2025	NE	06:37	Temp: 43 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1 mph, Wind Direction: NE
Brennan Mulrooney, Natasha Kabala	02/19/2025	NE	10:37	Temp: 70 °F, 30% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: S
Brennan Mulrooney, Karla Alcaraz	03/07/2025	NE	11:07	Temp: 51 °F, 80% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	03/07/2025	NE	15:07	Temp: 54 °F, 65% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: SW
Brennan Mulrooney, Karla Alcaraz	03/07/2025	NW	06:20	Temp: 40 °F, 5% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: SE
Brennan Mulrooney, Karla Alcaraz	03/07/2025	NW	10:20	Temp: 48 °F, 80% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: SW
Brennan Mulrooney, Natasha Kabala	03/25/2025	NW	11:40	Temp: 75 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	03/25/2025	NW	15:40	Temp: 75 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Brennan Mulrooney, Natasha Kabala	03/25/2025	NE	06:54	Temp: 49 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1 mph, Wind Direction: E
Brennan Mulrooney, Natasha Kabala	03/25/2025	NE	10:54	Temp: 75 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	04/09/2025	NE	11:14	Temp: 78 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	04/09/2025	NE	15:14	Temp: 83 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	04/09/2025	NW	06:29	Temp: 55 °F, 0% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: NE
Brennan Mulrooney, Karla Alcaraz	04/09/2025	NW	10:29	Temp: 75 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: NW

Survey Personnel	Date	Survey Area ID	Time	Weather Conditions
Brennan Mulrooney, Amy Orduño-Baez	04/23/2025	NW	10:54	Temp: 62 °F, 90% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 7 mph, Wind Direction: W
Brennan Mulrooney, Amy Orduño-Baez	04/23/2025	NW	14:54	Temp: 66 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W
Brennan Mulrooney, Amy Orduño-Baez	04/23/2025	NE	06:04	Temp: 50 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: NW
Brennan Mulrooney, Amy Orduño-Baez	04/23/2025	NE	10:04	Temp: 59 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: W
Brennan Mulrooney, Natasha Kabala	05/07/2025	NE	11:17	Temp: 63 °F, 10% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	05/07/2025	NE	15:17	Temp: 72 °F, 10% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 10 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	05/07/2025	NW	06:31	Temp: 53 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 0 mph, Wind Direction: N/A
Brennan Mulrooney, Natasha Kabala	05/07/2025	NW	10:31	Temp: 60 °F, 25% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1 mph, Wind Direction: NW
Brennan Mulrooney, Amy Orduño-Baez	05/21/2025	NW	10:27	Temp: 81 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 6.5 mph, Wind Direction: W
Brennan Mulrooney, Amy Orduño-Baez	05/21/2025	NW	14:27	Temp: 85 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 13 mph, Wind Direction: SW
Brennan Mulrooney, Amy Orduño-Baez	05/21/2025	NE	05:35	Temp: 59 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2.5 mph, Wind Direction: NE
Brennan Mulrooney, Amy Orduño-Baez	05/21/2025	NE	09:35	Temp: 77 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4.5 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	06/04/2025	NE	10:58	Temp: 64 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	06/04/2025	NE	14:58	Temp: 70°F, 55% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	06/04/2025	NW	06:15	Temp: 55 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	06/04/2025	NW	10:15	Temp: 61 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	06/18/2025	NW	10:14	Temp: 83 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 4 mph, Wind Direction: NW

<b>Survey Personnel</b>	<b>Date</b>	<b>Survey Area ID</b>	<b>Time</b>	<b>Weather Conditions</b>
Brennan Mulrooney, Natasha Kabala	06/18/2025	NW	14:14	Temp: 88 °F, 15% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 8 mph, Wind Direction: NW
Brennan Mulrooney, Natasha Kabala	06/18/2025	NE	05:26	Temp: 54 °F, 10% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 1 mph, Wind Direction: E
Brennan Mulrooney, Natasha Kabala	06/18/2025	NE	09:26	Temp: 81 °F, 10% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	07/02/2025	NE	10:45	Temp: 72 °F, 5% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3.5 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	07/02/2025	NE	14:45	Temp: 76 °F, 10% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5.5 mph, Wind Direction: W
Brennan Mulrooney, Karla Alcaraz	07/02/2025	NW	05:58	Temp: 55 °F, 100% Cloud Cover, Visibility: Fair, Precipitation: Misting, Avg. Wind Speed: 1.5 mph, Wind Direction: NW
Brennan Mulrooney, Karla Alcaraz	07/02/2025	NW	09:58	Temp: 70 °F, 10% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 3 mph, Wind Direction: NW
Brennan Mulrooney, Valeria Parra-Santoro	07/23/2025	NW	10:34	Temp: 73 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: W
Brennan Mulrooney, Valeria Parra-Santoro	07/23/2025	NW	14:34	Temp: 87 °F, 0% Cloud Cover, Visibility: Fair, Precipitation: None, Avg. Wind Speed: 10 mph, Wind Direction: W
Brennan Mulrooney, Valeria Parra-Santoro	07/23/2025	NE	05:59	Temp: 65 °F, 100% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 2 mph, Wind Direction: NE
Brennan Mulrooney, Valeria Parra-Santoro	07/23/2025	NE	09:59	Temp: 73 °F, 0% Cloud Cover, Visibility: Good, Precipitation: None, Avg. Wind Speed: 5 mph, Wind Direction: NW

# Appendix C

## **Raptor Detection Field Data**



Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Circle Soaring	2	
NE	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Meandering	1	
NE	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Circle Soaring	13	Was joined by juvenile GOEA near nest site.
NE	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	17	
NE	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	27	
NE	2024-08-17	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	96	
NE	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	212	
NE	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	177	Perched on old NW survey point.
NE	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	233	
NE	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	240	
NW	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	3	Circle Soaring	14	
NW	2024-08-17	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Meandering	3	
NW	2024-08-17	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	14	
NW	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Direct Flight	1	
NW	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Perched	40	GOEA landed on perch next to 2 adult GOEAs. 1021 juvenile GOEA took brief flight to the meadow and returned to perch.
NW	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Circle Soaring	47	GOEA circle soared and at 0945 landed on perch next to adult GOEA.
NW	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	60	GOEA perched on rock. 0929 took flight heading west and dropped out of sight. 0939 returned to perch.
NW	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult and Juvenile	2	Circle Soaring	12	
NW	2024-08-17	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Circle Soaring	3	
NW	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Direct Flight	1	
NW	2024-08-17	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	2	Perched	111	
NW	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-17	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-17	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-17	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile and Unknown	2	Meandering	4	1 juvenile unknown sex, 1 unknown age/sex.
NW	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Circle Soaring	4	Initially circling and soaring east, then traveled west circling and soaring and then started traveling east again.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult and Juvenile	2	Circle Soaring	2	1 juvenile unknown sex, 1 adult unknown sex.
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	2	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Circle Soaring	3	Seen swooping briefly to west. Last seen flying east.
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	7	Feeding on grasshopper whilst perched.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult and Unknown	2	Meandering	2	1 unknown age/sex, 1 adult unknown sex. Went to oak perch and then flew into Santa Maria creek.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-31	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	2	Flying north until it disappeared behind hill.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	1	
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	2	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	5	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	2	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	10	Meandering before swooping down to trees before returning back to meandering. Then perched in oak tree. Flew out of perch again. Swooped down out of sight.
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	1	
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	2	Circle Soaring	3	1 individual flew to join a 2nd individual whilst circling in SW direction. One swooped down.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult and Juvenile	2	Circle Soaring	4	1 juvenile and 1 adult of unknown sex. Juvenile flew west whilst adult circled in east direction.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	1	
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	2	Meandering	56	2nd separate AMKE individual observed.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Stooping/Prey Diving	1	Failed capture attempt of CGS.
NW	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult and Juvenile	3	Circle Soaring	5	2 juvenile and 1 adult soaring. 3 new RTHA individuals observed.
NW	2024-08-31	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult and Unknown	2	Perched	2	Initially perched when starting survey period. Unknown aged bird flew off northwest. 2nd adult aged bird followed shortly after.
NW	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	6	1st AMKE individual observed. Initially meandering northwest then perched in a tree.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	15	Perched on wire. 10th RTHA individual observed. RTHA moved to perch on pole.
NE	2024-08-31	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	23	GOEA perched on rock at old NW survey point.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	1	9th RTHA individual observed.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Meandering	2	Flew at AMKE and then was chased by a second AMKE. Last seen 0932.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	17	Perched on pole/wire. Female flew off south. Pair chased off COHA when it came into area. Both AMKE flew off in unknown directions.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	34	Perched on rock. 8th RTHA observed. Last seen circle soaring east.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Perched	4	Joined another juvenile COHA in eucalyptus tree before flying away southeast with other individual and returned. Flew off again in unknown direction.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Direct Flight	2	COHA flew east and perched in eucalyptus tree with another juvenile COHA in tree before flying away southeast.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	1	
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Direct Flight	1	
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	8	Perched on a rock. 7th RTHA individual observed.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Stooping/Prey Diving	1	AMKE swooping at COHA. 5th AMKE individual observed.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Perched	11	Flew to perch on dead tree wood. Being dive bombed by AMKE when first observed. Flew south to different perch on rock. Potentially foraging. Flew off in southeast direction.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	38	Perched on irrigation pipe, 4th separate AMKE seen. Seen together with male also on pipe.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female and Male	Unknown	2	Perched	122	Last seen 1000.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	27	Perched on irrigation pipe.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	2	2nd AMKE observed.
NE	2024-08-31	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	11	1st AMKE observed. Perched on a rock.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Meandering	1	Short observation, not seen flying out from behind tree.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2024-08-31	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	159	Pair appeared together perched on pole.
NE	2024-08-31	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Unknown	1	Perched	1	Heard from eucalyptus tree.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	2	6th RTHA observed. Perched in eucalyptus tree.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	33	6th RTHA observed. Initially seen flying S at 0715, and then perched on a rock. Flew west to perch on a eucalyptus tree at 0719. Moved perches at 0748.
NE	2024-08-31	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Perched	1	Perched on wooden pole.
NE	2024-08-31	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Unknown	1	Perched	1	Heard from eucalyptus tree.
NE	2024-08-31	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Unknown	1	Perched	1	Heard from eucalyptus tree.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	20	Perched on wire. 5th RTHA observed.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	84	Dark morph RTHA. Perched in dead snag. 4th RTHA observed. Flew to eucalyptus tree. Seen chasing juvenile RTHA at 0720.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	37	Perched in eucalyptus tree. 3rd RTHA observed. RTHA seen flying SE then returned to perch. Flew off in unknown direction.
NE	2024-08-31	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	10	Perched in eucalyptus tree. Flew off in unknown direction.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	27	Perched on pole. 1st RTHA observed. Flew from pole to sycamore tree at 0622. Flew from tree to the SE at 0635.
NE	2024-08-31	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	44	Perched on pole. 2nd RTHA observed.
NE	2024-09-15	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	8	Undulating flight.
NE	2024-09-15	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Subadult	1	Perched	8	Flew off of perch at 0402. Last seen circling/soaring over the preserve.
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	2	
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	25	
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	2	
NE	2024-09-15	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Direct Flight	2	Initially seen being harassed by CORA. At high elevation. Flew directly NW.
NE	2024-09-15	Jaclyn Catino-Davenport	Osprey	<i>Pandion haliaetus</i>	Unknown	Unknown	1	Circle Soaring	3	Circled up and then direct flight southeast.
NE	2024-09-15	Jaclyn Catino-Davenport	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Meandering	3	
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Direct Flight	1	
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	35	Dark morph. Flew to eucalyptus tree at 0317.
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	52	Light morph. Perched in eucalyptus grove below road.
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	3	Seen flying over ridge towards the southern end of the preserve. Then, after circling a few times, headed back in the direction it came from (headed north).
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Kiting	2	
NE	2024-09-15	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Subadult	1	Perched	49	Preening. Perched on wooden pole. Flew off of pole at 1502. Windows in wings aren't distinctive enough to be a juvenile. Initially circling up south of perch point, then directly flew southwest.
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	3	
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	38	Initially seen flying into eucalyptus tree. Moved to other eucalyptus tree at 1431.
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Stooping/Prey Diving	50	Seen pestering RTHA.
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	4	
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	93	4th and 5th individuals of the survey period. Initially seen swooping, then perched in tree.
NE	2024-09-15	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Meandering	5	Missing primary feather right wing. No tags. Initially seen circling above airport, before flying NW towards Bandy Canyon.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	29	Dark morph. Perched on dead snag. Seen flying at 0128.
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	3	
NE	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	4	
NE	2024-09-15	Jaclyn Catino-Davenport	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	15	
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	93	Near airport.
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	22	Perched on pole. Dark morph. Flew off towards dead snag at 1215.
NE	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	166	Perched on pole. Observed flying at 1216. Seen flying at 1252. Perched in eucalyptus at 1254. Seen flying at 1322. Back on pole at 1335.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	10	
NW	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Adult	1	Meandering	1	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	2	
NW	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	10	At 1039 hunted and then perched on fence.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	2	Meandering	3	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Circle Soaring	4	Swooped into woodland.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	1	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Juvenile	1	Perched	2	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	10	Seen on wooden pole.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	5	Heard only.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	4	
NW	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Circle Soaring	25	Carrying unknown prey item. Seen at perched 1009.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Circle Soaring	10	Last heard 0953.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Juvenile	1	Direct Flight	1	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Direct Flight	22	Perched by dead snag where WTKI was.
NW	2024-09-15	Jaclyn Catino-Davenport	Osprey	<i>Pandion haliaetus</i>	Unknown	Unknown	1	Direct Flight	2	
NW	2024-09-15	Jaclyn Catino-Davenport	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	2	Perched	115	One was perched and the other circle soared to the west. One out at 0917. Observed at new perch at 0929. Moved perch points. At 1017, two individuals observed. Still there 1028. Observed flying at approximately 1040.
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Direct Flight	1	
NW	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Stooping/Prey Diving	1	Swooping on RSHA.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Adult	1	Perched	12	Initially seen flying, then perched in oak.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	25	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	Only heard.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Juvenile	1	Perched	11	
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	2	
NW	2024-09-15	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	2	Heard only.
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Direct Flight	1	Seen flying through scope while observing RSHA.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Direct Flight	9	Initially seen in direct flight east. Seen being chased by RSHA. Then observed perching on dead shrub.
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Meandering	2	Actively foraging.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	2	Perched	14	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Perched	14	Perched.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	30	Perched in oak. Flew off at 0820 to chase RSHA.
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Meandering	2	Actively flushing bird flocks in grassland.
NW	2024-09-15	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Direct Flight	1	Flushed MODOs.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	11	Heard calling at start of survey 0708.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	41	Perched on dead snag.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	81	On wooden pole. Perched by RMWD facility.
NW	2024-09-15	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	2	Perched	122	On pole. Pair flew off at 0733, one flew into a tree. Other flew off in an unknown direction. Flew to oak.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	12	
NW	2024-09-28	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	2	Perched	15	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female, Male, and Unknown	Adult and Juvenile	3	Meandering	27	Perched on pole at 1518.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female, Male, and Unknown	Adult and Juvenile	3	Meandering	5	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	4	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	2	
NW	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	3	
NW	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	12	
NW	2024-09-28	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Meandering	1	Initially seen perched before swooped/flushed from oak tree perch. Last seen flying over the ridge at 1413.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	14	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Stooping/Prey Diving	52	Perched in oak grove at 1416.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Circle Soaring	3	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	4	
NW	2024-09-28	Jaclyn Catino-Davenport	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Unknown	Unknown	1	Circle Soaring	4	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	15	1 adult flew off in unknown direction at 1245. 2nd adult flew off east, lost behind hillside.
NW	2024-09-28	Jaclyn Catino-Davenport	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	64	Initially seen harassed by CORA at 1245. Flew south at 1345, stole unknown prey from pair of RTHA. Last seen flying NW into oak grove.
NW	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	2	Flew west to forage in grassland.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	3	
NW	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	11	Initially flying west.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	19	Initially flying north to dead snag perch.
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	1	
NW	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Meandering	55	
NE	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	37	
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	3	Circle Soaring	32	
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	8	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	50	Initially seen perched on pole. Then seen circle soaring northeast. Perched on pole at 0947.
NE	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	22	Same female as before.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	25	Dark morph. Flew off to a new perch at 0927. Same adult as before. Flew off at 0936.
NE	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	1	Flew off in unknown direction.
NE	2024-09-28	Jaclyn Catino-Davenport	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Perched	1	Flew off at 0756.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	154	
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	1	Perched on sycamore tree. Flew off at 0735. Last seen briefly hidden behind sycamore tree.
NE	2024-09-28	Jaclyn Catino-Davenport	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	17	Perched on pole. Flew to shrub at 0750 and then flew off in unknown direction.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	2	Perched on pole. Observed again flying at 0733.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	2	Perched on pole.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	10	Seen flying off at 0649.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	20	Intermediate morph.
NE	2024-09-28	Jaclyn Catino-Davenport	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	112	Dark morph. Flew off in unknown direction at 0830.
NE	2024-09-28	Jaclyn Catino-Davenport	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	240	Pair observed on the nest. One adult flew off at 0646. One initially seen flying to nest, 2nd adult already in nest. Arranging nesting material. 0711 Both observed on the nest again at 0727. One adult left the nest at 0756. One adult flew off to a new perch at 0844. Moved to lower branch at 1000. Adult moved from tree perch to pole perch at 1013.
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Meandering	26	
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NE	2024-10-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	67	Observed perched then got up and flew off again. Harassed by RTHA. Perched again at 1619.
NE	2024-10-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	11	Perched on eagle rock. Flew off in unknown direction at 1354.
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	103	
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	122	
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	2	
NE	2024-10-06	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Male	Adult	1	Direct Flight	3	
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	4	
NE	2024-10-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	186	
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	64	Flew off at 1146. Seen again at 1313. Seen circle soaring again at 1414.
NE	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	210	Initially seen perched.
NE	2024-10-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	239	2nd individual appeared (460 m, 290 degrees) at 1143, both perched together. Both adults flying off at 1152. Harassed RTHA and stole unknown prey item and returned to their perch. One adult flew off at 1416 and headed over to the pond, 2nd individual remained on tree perch.
NW	2024-10-06	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Direct Flight	17	
NW	2024-10-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	18	
NW	2024-10-06	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Female	Adult	1	Meandering	3	
NW	2024-10-06	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	2	Meandering	6	2nd individual appeared at 0939.
NW	2024-10-06	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	33	Flew off at 0911. Seen again at 1014.
NW	2024-10-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	4	

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NW	2024-10-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	103	Seen flying in from the nest area (1900 m, 320 degrees) and perched on eagle rock at 0750. Flew off at 0933.
NW	2024-10-06	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	10	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	74	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	76	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	189	
NW	2024-10-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	126	Flew off at 0722. Seen again at 0726.
NW	2024-10-06	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Perched	64	Flew off at 0749. Seen again at 0800.
NW	2024-10-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	66	Perched on pole.
NW	2024-10-06	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Perched	9	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	55	Moved to pole perch at 0709.
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	95	
NW	2024-10-06	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Juvenile	1	Direct Flight	2	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	6	Initially seen on rock perch then flew to tree perch. Flew off at 0650.
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	116	
NW	2024-10-06	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	17	
NW	2024-10-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	1	Initially seen perched.
NW	2024-10-20	Brennan Mulrooney	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Unknown	Unknown	1	Direct Flight	1	
NW	2024-10-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Hovering	1	
NW	2024-10-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	5	
NW	2024-10-20	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Unknown	Juvenile	1	Meandering	2	
NW	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	36	On preferred eagle rock.
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	1	
NW	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	15	On preferred eagle rock.
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	2	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NW	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Meandering	12	
NW	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Stooping/Prey Diving	2	Could not see where the bird landed after diving. Unknown whether prey attempt was successful.
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	7	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	2	Meandering	3	
NW	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	8	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	27	Calling.
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	3	
NW	2024-10-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	190	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	1	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	3	
NW	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	1	
NW	2024-10-20	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	15	

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NE	2024-10-20	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Unknown	Juvenile	1	Direct Flight	1	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	9	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	24	
NE	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	43	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	7	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	41	
NE	2024-10-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	56	On preferred eagle rock.
NE	2024-10-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	54	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	15	
NE	2024-10-20	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Male	Adult	1	Perched	17	
NE	2024-10-20	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Juvenile	1	Perched	54	First seen foraging. Then seen catching and eating prey item.
NE	2024-10-20	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	113	Eating a prey item.
NE	2024-10-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	49	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	231	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	182	Last seen 0813.
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	17	
NE	2024-10-20	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	13	
NE	2024-10-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	35	Still perched at 0722.
NE	2024-10-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	37	Bringing nest material to nest. At 0721, one individual moved and perched on nearby pole.
NE	2024-11-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Subadult	1	Meandering	6	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	11	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	17	
NE	2024-11-02	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	5	Moved to second perch at 1539. Flew off at 1541.
NE	2024-11-02	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Unknown	Juvenile	1	Direct Flight	4	
NE	2024-11-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	36	Flushed from perch by RTHA at 1522 and moved to lower branch but remained on the same tree.
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	43	
NE	2024-11-02	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	4	Perched on rock at 1456.
NE	2024-11-02	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	16	Perched on rock at 1456. Flew off at 1512.
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NE	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Meandering	2	Flew from perch spot at 1436. No longer visible at 1438.
NE	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	1	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	1	
NE	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	104	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	2	Perched	90	Perched on a pole.
NE	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	6	Adult perched next to juvenile on rock at 1352.
NE	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Perched	50	Initially seen flying and then perched on rock at 1344.
NE	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Meandering	2	

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NE	2024-11-02	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Male	Adult	1	Meandering	4	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	121	
NE	2024-11-02	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	17	
NE	2024-11-02	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	9	
NE	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Direct Flight	1	
NE	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Hovering	25	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	176	
NE	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	207	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	3	
NE	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	77	Flew off in unknown direction at 1320.
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NE	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	89	Seen again at 1341.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	3	Meandering	3	
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	10	Dark morph.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	10	Light morph.
NW	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Circle Soaring	3	Still seen flying at 1014. No longer visible at 1018. Both adults were seen soaring together for about a minute, then they split.
NW	2024-11-02	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	16	Courtship display at 1004. Second individual flew off in unknown direction at 1009. Other individual flew southeast at 1009.
NW	2024-11-02	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Female	Adult	1	Stooping/Prey Diving	3	Initially seen perched on oak tree at 0757. Flew west at 0758. Chasing MODO at 0800.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	73	Seen again at 1012.
NW	2024-11-02	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Perched	23	Seen again at 1038.
NW	2024-11-02	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Perched	7	Seen again at 0830 on the same perch. Flew off in unknown direction at 0837.
NW	2024-11-02	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Perched	16	Flew off in unknown direction at 0753.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	212	
NW	2024-11-02	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Juvenile	1	Perched	69	Heard only.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	1	
NW	2024-11-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	203	Observed by old nest at 0718. One adult breaking branches, presumably to take to the nest. One adult is taking more branches to the nest at 0834. No longer visible at 1041.
NW	2024-11-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	81	Seen again at 0939.
NW	2024-11-02	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	2	Auditory only.
NW	2024-11-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	39	Initially seen at 0935.
NW	2024-11-20	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Unknown	Juvenile	1	Meandering	3	
NW	2024-11-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	21	Moved from the old perch at 1522.
NW	2024-11-20	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Direct Flight	1	
NW	2024-11-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	29	Observed on new perch at 1442. Moved to old perch at 1511.
NW	2024-11-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	67	Perched on utility pole. Moved to a new perch at 1442. Returned to old perch at 1511. Moved to a new perch at 1522.
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	3	
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	50	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	137	
NW	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	142	Two individuals were seen on preferred perch at 1313. No longer visible at 1411. Visible again at 1429. One flew off in unknown direction.
NW	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	151	Two individuals were seen on preferred perch at 1313. No longer visible at 1411. Visible again at 1429.
NW	2024-11-20	Brennan Mulrooney	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Female	Adult	1	Circle Soaring	1	
NW	2024-11-20	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Circle Soaring	6	Initially seen flying with GOEA at 1257. Perched at 1303.
NW	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Circle Soaring	5	Observed flying at 1256. Joined by a BAEA at 1257. No longer visible at 1301.
NW	2024-11-20	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	1	
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	76	
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	77	
NW	2024-11-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	104	
NW	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	1	
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Meandering	9	Perched on rock. Seen flying at 1030 towards Ramona Airport.
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Perched	4	Perched on rock. Seen flying at 1030 towards Ramona Airport.
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	43	Perched on old observation point at 0956.
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Perched	84	Perched on a utility pole. Flew off in unknown direction.
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	125	
NE	2024-11-20	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	1	Perched briefly. Chased off by a RTHA at 0834.
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	134	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	173	
NE	2024-11-20	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Perched	133	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	180	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	192	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	195	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	42	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	197	
NE	2024-11-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	45	
NE	2024-11-20	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	142	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Male	Adult	1	Perched	203	Dark morph.
NE	2024-11-20	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Juvenile	1	Direct Flight	3	
NE	2024-11-20	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	211	
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	63	2 individuals perched together on old observation point at 0702. Flew off in unknown direction at 0745. Returned to the same perch at 0805. Individual flew off in unknown direction at 0825.
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	130	2 individuals perched together on old observation point at 0702. One individual flew off in unknown direction, one individual remained. 2nd individual flew off in unknown direction at 0912.
NE	2024-11-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	43	Flew off in unknown direction.

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NE	2024-11-20	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Male	Juvenile	1	Perched	6	Observed making MODO prey attempt at 0656.
NE	2024-11-20	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Male	Juvenile	1	Perched	3	
NE	2024-11-20	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	5	Observed on the same perch again at 0740. Returned to perch at 0858.
NE	2024-11-20	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	47	Flew off in unknown direction. Seen flying away from perch and returned to same perch at 0840.
NE	2024-11-20	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Juvenile	1	Perched	142	Perched on utility pole. No tag visible. Flew off at 0835 and landed on a new perch.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	4	2nd BAEA.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	15	1 adult flew off near pond and perched on a pole. Flew off in unknown direction 1543.
NE	2024-12-04	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	28	Seen on preferred perch at 1523. Still perched at the end of the survey period.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	36	2nd BAEA. Appeared next to 1st BAEA. Both BAEA flushed by a coyote at 1517 but remained by pond.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	5	1st BAEA. Flew off towards northern pond area. Both BAEA flushed by a coyote at 1517.
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Direct Flight	1	
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	38	Prey capture attempts on CAGS at 1438 (attempt successful). Moved and perched on a different pole.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	10	1st BAEA. Returned to same utility pole.
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	3	1st BAEA.
NE	2024-12-04	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	80	Flew off at 1428. Seen again at 1436. Flew off in unknown direction at 1530. Seen again at 1536 and flew off at 1547.
NE	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	109	
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	22	
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	107	
NE	2024-12-04	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	173	
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	176	
NE	2024-12-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	87	Initially seen perched on pole at 1246. Five CORA sitting by BAEA at 1301. CORA left at 1305. Flew off at 1412. 1st BAEA.
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	31	Flew off at 1254. Seen again at 1258. Flew off at 1300. Seen again at 1310. Flew off at 1315.
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	37	No longer visible at 1306. Seen again at 1310. No longer visible at 1312. Seen again at 1358. Flew off at 1402.
NE	2024-12-04	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	177	Dark morph. 2nd FEHA.
NE	2024-12-04	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Meandering	6	Dark morph. 2nd FEHA. Perched at 1223.
NE	2024-12-04	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Meandering	18	No longer visible at 1217. 1st FEHA. Seen again at 1255. Flew off at 1310.
NE	2024-12-04	Brennan Mulrooney	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Female	Adult	1	Circle Soaring	2	
NE	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	202	
NW	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	2	
NW	2024-12-04	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	2	Seen perched on old NW survey area at 1019. Second adult flew off at 1028. No longer visible at 1030.
NW	2024-12-04	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	3	Seen perched on old NW survey area at 1019. One adult flew off at 1024. No longer visible at 1027.
NW	2024-12-04	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	4	Seen perched on old NW survey area at 1019. One adult flew off at 1024. No longer visible at 1027. Second adult flew off at 1028. No longer visible at 1030.

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NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	5	10th RTHA.
NW	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	9	
NW	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	31	Initially seen perched then direct flight to another perch.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Circle Soaring	3	9th RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	52	8th RTHA.
NW	2024-12-04	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Male	Adult	1	Direct Flight	1	
NW	2024-12-04	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Adult	1	Perched	20	
NW	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	91	
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	118	7th RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	119	6th RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	144	Heard only.
NW	2024-12-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	41	
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	130	5th RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	142	4th RTHA.
NW	2024-12-04	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Male	Adult	1	Stooping/Prey Diving	2	Initially seen perched. Prey attempt at 0715.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	136	3rd RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	143	2nd RTHA.
NW	2024-12-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	70	1st RTHA.
NW	2024-12-04	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Meandering	2	
NW	2024-12-18	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	15	GOEA pair observed at preferred perch. At 1527, one individual flew away from perch out of sight.
NW	2024-12-18	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	51	
NW	2024-12-18	Brennan Mulrooney	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Unknown	Juvenile	1	Circle Soaring	4	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	4	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	6	
NW	2024-12-18	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	11	Pair seen circle soaring together.
NW	2024-12-18	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	14	GOEA on preferred perch. Individual joined by 2nd GOEA at 1322. Both individuals flew off perch out of sight.
NW	2024-12-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	166	BAEA pair perched in tree together.
NW	2024-12-18	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Unknown	1	Perched	2	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	62	
NW	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	7	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	48	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	64	
NW	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	10	
NW	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Hovering	18	
NW	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	218	At 1530, flew in north direction away from perch.
NW	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	151	
NE	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	38	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2024-12-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	46	BAEA perched in tree.
NE	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	48	
NE	2024-12-18	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	91	MERL flew off in unknown direction.
NE	2024-12-18	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	96	
NE	2024-12-18	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	142	
NE	2024-12-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	133	BAEA pair perched on rock. At 0855, one BAEA individual had flown off in unknown direction but came back at 0919. 1st BAEA flew off in unknown direction at 0957. 2nd BAEA sunning self, observed at 0924. At 1036, 2nd BAEA flew away from perch in unknown direction.
NE	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	145	
NE	2024-12-18	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Perched	19	Same WTKI individual as previous observation. Perched in tree. WTKI flew off in unknown direction by 0827.
NE	2024-12-18	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Direct Flight	1	WTKI flew to perch. Started new observation.
NE	2024-12-18	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Direct Flight	1	
NE	2024-12-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	27	
NE	2024-12-18	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	211	
NE	2024-12-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	68	2nd BAEA perched in tree. 2nd individual flew off in unknown direction at 0818.
NE	2024-12-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	71	BAEA perched in tree. 0818 individual flew off in unknown direction.
NE	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	230	
NE	2024-12-18	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	232	
NE	2024-12-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	234	
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	23	
NE	2025-01-09	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Unknown	1	Perched	6	
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	3	
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	93	
NE	2025-01-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	100	Perched on eucalyptus, southwest of the nest. 2nd adult flew northwest at 1523.
NE	2025-01-09	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	43	
NE	2025-01-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	89	
NE	2025-01-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	1	
NE	2025-01-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	153	
NE	2025-01-09	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Meandering	5	Light morph.
NE	2025-01-09	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Meandering	4	Dark morph.
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	16	No longer visible at 1220. Seen again at 1428. Seen again at 1531.
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	146	
NE	2025-01-09	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	145	
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	140	
NE	2025-01-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	62	Flew off in unknown direction at 1305.
NE	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	1	1st and 2nd RTHA. Started circle soaring at 1240.
NE	2025-01-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	26	Perched on utility pole. Flew off in unknown direction and was replaced by RTHA.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	5	No longer visible at 1056.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	8	No longer visible at 1056.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	23	
NW	2025-01-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	53	Perched on their old nest tree at 1011. 2nd and 3rd BAEA.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	33	Perched on pole at 0954. Flew off in unknown direction at 1027.
NW	2025-01-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	81	2nd GOEA? Perched on old NW survey point. No longer visible; moved to back of rock at 0831. No longer visible at 0950.
NW	2025-01-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	4	1st GOEA. Perched on old NW survey point. Flew off at 0813, heading SE. No longer visible at 0817.
NW	2025-01-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	40	1st GOEA. Perched on old NW survey point. Flew off at 0813, heading southeast. No longer visible at 0817.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	100	4th RTHA.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	26	3rd RTHA.
NW	2025-01-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	147	1st BAEA. Barely visible due to heat haze. Moved to a utility pole at 0900.
NW	2025-01-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	176	1st and 2nd RTHA.
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	45	
NW	2025-01-24	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Circle Soaring	3	1st of 2 GOEA. One flew east circle soaring at 1413. Returned to perch at 1416.
NW	2025-01-24	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	53	2 adult GOEA observed on preferred perch. One flew off circle soaring at 1413. Returned to perch at 1416. Both GOEA flew off at 1505.
NW	2025-01-24	Brennan Mulrooney	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Unknown	Subadult	1	Circle Soaring	1	
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	8	
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	1	
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Circle Soaring	4	
NW	2025-01-24	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	3	
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	36	
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	52	No longer visible at 1221. Seen again at 1310.
NW	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	36	
NW	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	239	Initially seen on the nest at 1141. 2nd BAEA seen in the nest at 1300 then perched on a eucalyptus tree nearby.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	14	Perched on the ground within the grassland, flew over towards Ramona Airport where it perched on utility pole.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	14	Perched on utility pole.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Meandering	5	1 individual perched on the ground within the grassland and the other perched on a utility pole.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	11	Likely 1st BAEA. Perched on rock.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	10	2nd BAEA. Initially observed flying at 0946. Landed in the eucalyptus trees at 0953, not visible. Switched incubating at 0956.
NE	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	43	
NE	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	78	4th and 5th RTHA.
NE	2025-01-24	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	80	1st BAEA. Seen on the nest at 0854. Only visible when it stands in the nest, presumably incubating. Switched incubating at 0956. Perched on utility pole at 1000. Flew off in an unknown direction at 1014.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-01-24	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	27	1 GOEA moved to preferred perch and other GOEA flew off in an unknown direction at 0823. Flew off in unknown direction at 0850.
NE	2025-01-24	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	35	2nd GOEA appeared at 0748. Likely a pair.
NE	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	104	3rd RTHA.
NE	2025-01-24	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	14	3rd FEHA.
NE	2025-01-24	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	82	Flew off in unknown direction at 0746. Seen again at 0832. 2nd FEHA.
NE	2025-01-24	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	31	1st GOEA. On preferred perch at 0717. Moved to old NW survey point at 0728.
NE	2025-01-24	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	65	1st FEHA. Flew off in unknown direction at 0746. Seen again at 0917.
NE	2025-01-24	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	121	1st and 2nd RTHA. No longer visible at 0853. Seen again at 0934.
NE	2025-01-24	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	1	3rd AMKE.
NE	2025-01-24	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	139	Flew off in unknown direction at 0805. Returned with mate at 0828. 1st and 2nd AMKE.
NE	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	6	Initially seen flying with CGS. Perched on distribution pole (310 m, 300 degrees) to eat it.
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	5	
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	8	
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NE	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	34	Perched on eucalyptus tree near the nest. Flew off east at 1500. Returned to a different perch (495 m, 330 degrees) at 1518. Dropped out of sight at 1527.
NE	2025-02-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	13	Initially seen flying at 1433. Perched at 1434.
NE	2025-02-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Meandering	1	Initially seen flying at 1433.
NE	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Subadult	1	Perched	90	
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	85	
NE	2025-02-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	5	
NE	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	37	Perched in eucalyptus tree adjacent to the nest. Flew off in unknown direction at 1402.
NE	2025-02-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	31	Seen on preferred perch at 1325.
NE	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	24	
NE	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	65	Flew off in unknown direction at 1311. Seen again at 1335.
NE	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Subadult	1	Meandering	2	
NE	2025-02-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	140	
NE	2025-02-06	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	3	Circle soared together up into the clouds and out of sight at 1208.
NE	2025-02-06	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Circle Soaring	4	
NE	2025-02-06	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Circle Soaring	5	
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	232	
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	134	Flew off in unknown direction at 1302. Seen again at 1408.
NE	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	235	
NE	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	240	On the nest at 1152. Stayed on the nest throughout the survey period.
NW	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Subadult	1	Perched	3	Perched in utility pole and appears to be eating an unknown prey item at 1036. Flew off in unknown direction at 1039.
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	38	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	3	

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NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	2	
NW	2025-02-06	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	55	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Direct Flight	2	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NW	2025-02-06	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	1	Perched	106	
NW	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	7	
NW	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	24	Seen perched on eucalyptus tree adjacent to the nest at 0753. Flew off in unknown direction at 0816.
NW	2025-02-06	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	52	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	176	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	177	
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	46	
NW	2025-02-06	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	224	On the nest incubating at 0718.
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	56	Flew off in unknown direction at 0716. Seen again at 0855.
NW	2025-02-06	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	105	Flew off in unknown direction at 0817. Seen again at 1032.
NW	2025-02-19	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	1	Both GOEA perched on old survey point.
NW	2025-02-19	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Direct Flight	3	Both GOEA directly flew then perched.
NW	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Circle Soaring	13	Adult BAEA joined subadult BAEA after it was circle soaring. Likely same adult as the one initially perched.
NW	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Subadult	1	Meandering	22	Initially perched at pond before taking off in meandering flight. Joined by BAEA adult.
NW	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Subadult	1	Direct Flight	1	
NW	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	67	
NW	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	100	
NW	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	78	At 1457, BAEA was out of view.
NW	2025-02-19	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Direct Flight	2	One GOEA individual of pair was carrying prey item.
NW	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	4	
NW	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	3	Circle Soaring	3	
NW	2025-02-19	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	13	
NW	2025-02-19	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	1	GOEA was seen perched before it disappeared.
NW	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	25	
NW	2025-02-19	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	1	
NW	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	240	BAEA in incubation position on nest.
NE	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	40	Second BAEA observed on nest at 0957. Presumed has been on nest since survey start but wasn't observed until 0957.
NE	2025-02-19	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Direct Flight	1	
NE	2025-02-19	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	14	
NE	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	94	BAEA individual perched in tree. Likely same individual as previous record (ending at 0825). Seen carrying CGS at 0904 to new perch site to eat (720 m, 320 degrees). Unknown if caught or stole item. At 0937 BAEA flew to nest. At 0943 moved to different perch after bringing in grassy material to nest. At 1005, flew off in unknown direction.

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-02-19	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Male	Adult	1	Meandering	1	
NE	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	169	
NE	2025-02-19	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	19	
NE	2025-02-19	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Adult	1	Perched	39	
NE	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	201	
NE	2025-02-19	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	203	FEHA moved in unknown direction at 0743, came back into view at 0809.
NE	2025-02-19	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Subadult	1	Perched	204	
NE	2025-02-19	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	206	
NE	2025-02-19	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	209	
NE	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	211	
NE	2025-02-19	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	82	BAEA individual perched on utility pole at 0703. At 0815 BAEA flew south, caught prey and then flew back north and landed on a different utility pole (320 m, 290 degrees). Individual flew off perch in unknown direction at 0825.
NE	2025-02-19	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	111	
NE	2025-02-19	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	114	
NE	2025-02-19	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	67	
NE	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	230	
NE	2025-02-19	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	232	
NE	2025-03-07	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Female	Unknown	1	Meandering	3	
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	10	
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	10	
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	10	
NE	2025-03-07	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Male	Adult	1	Perched	14	
NE	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	64	Landed in eucalyptus grove, flew out of sight at 1404.
NE	2025-03-07	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	2	Carrying food out of site into ditch.
NE	2025-03-07	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Direct Flight	1	
NE	2025-03-07	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	14	
NE	2025-03-07	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Direct Flight	14	Successful prey capture of a CAGS at 1347.
NE	2025-03-07	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Unknown	1	Perched	92	
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	49	
NE	2025-03-07	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Circle Soaring	2	Observed copulating at 1157, male fell off rock and flew away. Female has white on her tail. Both began flying at 1158 and then circled back and landed on the rocks at 1159. Male flew away at 1200. Both began flying together at 1202. Displaying presumably courtship flights. Began flying NE until no longer visible.
NE	2025-03-07	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	20	Observed copulating at 1157, male fell off rock and flew away. Female has white on her tail. Both began flying at 1158 and then circled back and landed on the rocks at 1159. Male flew away at 1200. Both began flying together at 1202. Displaying presumably courtship flights. Began flying NE until no longer visible.
NE	2025-03-07	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	1	Perched	155	
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	69	
NE	2025-03-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	1	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-03-07	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	73	
NE	2025-03-07	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	137	Flew off at 1327. Seen again at 1423. No longer visible at 1501.
NE	2025-03-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Unknown	2	Perched	49	Female flew off in unknown direction at 1252.
NE	2025-03-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	20	Male flew onto the same perch area, carrying a lizard at 1310. Flew off at 1330.
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	225	
NE	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	82	In the nest at 1118. 2nd BAEA. Flew off at 1228 was divebombed by a RTHA until perched next to nest (530 m, 330 degrees), then meandered SE until out of sight at 1240.
NE	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	92	
NE	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	234	1 BAEA. Flew off at 1223 and went to the nest where it remained until the end of the survey period.
NE	2025-03-07	Brennan Mulrooney	Northern Harrier	<i>Circus hudsonius</i>	Male	Adult	1	Meandering	2	
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	1	
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	3	Circle Soaring	10	
NW	2025-03-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	2	
NW	2025-03-07	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Adult	1	Perched	50	
NW	2025-03-07	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Subadult	1	Circle Soaring	2	
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	2	
NW	2025-03-07	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Subadult	1	Circle Soaring	11	
NW	2025-03-07	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Subadult	1	Circle Soaring	14	
NW	2025-03-07	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Adult	1	Perched	24	
NW	2025-03-07	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Subadult	1	Perched	3	
NW	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	35	Perched on utility pole at 0815, on the NE survey area.
NW	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	144	On the nest at 0750. Flew off in unknown direction.
NW	2025-03-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	3	Carrying food at 0746. Flew to nest at 0749. Hard to tell if there was another bird in the nest.
NW	2025-03-07	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Direct Flight	1	
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	29	
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	60	Flew off in unknown direction.
NW	2025-03-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	43	
NW	2025-03-07	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Adult	1	Perched	43	Flew off in unknown direction.
NW	2025-03-07	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	24	Flew off in unknown direction at 0713. Returned to perch at 0808. Last seen at 0828.
NW	2025-03-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	129	
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	23	
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Meandering	3	
NW	2025-03-25	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Circle Soaring	1	
NW	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Meandering	11	GOEA flew towards GOEA rock and flew down behind the old survey point out of sight.
NW	2025-03-25	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Perched	1	
NW	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	17	GOEA pair perched on rocks. Pair flew out of sight in unknown direction at 1345.
NW	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	7	

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NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	4	Circle Soaring	4	
NW	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	4	GOEA individual that was perched left preferred perch and was observed in meandering flight with other GOEA. Then one individual returned to preferred perch and other individual flew off in unknown direction.
NW	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	27	GOEA on preferred perch. Took off from perch at 1301. Pair seen together in meandering flight (separate observation) then GOEA individual returned to perch at 1305. At 1314, 2nd GOEA joined 1st on preferred perch. Observation was changed to pair at this time to include second GOEA in observation. At 1320, pair were observed in meandering flight together.
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	68	
NW	2025-03-25	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	15	
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NW	2025-03-25	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	149	BAEA individual observed on nest. Not seen on nest at 1451, unknown if BAEA flew off or was just out of view.
NW	2025-03-25	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Perched	2	
NW	2025-03-25	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	44	BAEA flew from perch at 1235 and directly flew west.
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	24	
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	192	RTHA pair observed in nest. Flew out of sight at 1459.
NW	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	60	
NE	2025-03-25	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	22	BAEA flew directly to nest. Other BAEA individual joined the second at 1032 from different perch point.
NE	2025-03-25	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	10	BAEA flew up to perch in tree. Consuming prey of unknown species. Flew from perch to nest and was joined by 2nd BAEA.
NE	2025-03-25	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Adult	1	Meandering	4	
NE	2025-03-25	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	50	GOEA perched on old survey point.
NE	2025-03-25	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Adult	1	Perched	35	
NE	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	188	
NE	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	190	
NE	2025-03-25	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	1	Direct Flight	1	
NE	2025-03-25	Brennan Mulrooney	Prairie Falcon	<i>Falco mexicanus</i>	Unknown	Unknown	1	Perched	75	
NE	2025-03-25	Brennan Mulrooney	Ferruginous Hawk	<i>Buteo regalis</i>	Unknown	Subadult	1	Perched	198	
NE	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	209	
NE	2025-03-25	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	212	
NE	2025-03-25	Brennan Mulrooney	Merlin	<i>Falco columbarius</i>	Unknown	Unknown	1	Perched	19	
NE	2025-03-25	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	215	
NE	2025-03-25	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	203	At 1031, BAEA flew from perch towards nest location.
NE	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	240	
NE	2025-03-25	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	240	
NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	109	1st RTHA.
NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	36	2nd RTHA.
NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	105	3rd/4th RTHA.
NE	2025-04-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	38	1st/2nd AMKE. Flew off in unknown direction at 1224. Seen again at 1452.

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NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	172	5th/6th RTHA.
NE	2025-04-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Circle Soaring	6	1st/2nd BAEA. Observed flying east until no longer visible at 1231.
NE	2025-04-09	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Adult	1	Direct Flight	1	
NE	2025-04-09	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Subadult	1	Circle Soaring	1	
NE	2025-04-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	32	Initially seen circle soaring with another BAEA at 1312. Likely same pair seen earlier. Flew over to eucalyptus grove and perched adjacent to the nest at 1315 (510 m, 330 degrees). Flew off in unknown direction at 1344.
NE	2025-04-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Perched	5	Seen on preferred perch at 1328. Flew off in unknown direction at 1333.
NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	24	7th RTHA.
NE	2025-04-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	102	Initially seen circle soaring together at 1312. Likely same pair seen earlier. Flew west towards the northern pond area. Stopped on ducks and then perched on a utility pole (1600 m, 275 degrees). Did not see BAEA fly to the nest during the survey period.
NE	2025-04-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Perched	6	One of the adults landed across the street of highland road, dive bombed by RTHA at 1448. The second GOEA was no longer visible.
NE	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	34	8th/9th RTHA.
NE	2025-04-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	19	One of the adults landed across the street of highland road, dive bombed by RTHA at 1448. The second GOEA was no longer visible.
NE	2025-04-09	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Adult	1	Meandering	10	
NE	2025-04-09	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Meandering	4	Flying low to the ground along the wildflower loop trail.
NW	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	160	Flew off in unknown direction at 0841. Seen again at 0856. Flew off in unknown direction at 0928.
NW	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	109	
NW	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	146	
NW	2025-04-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Subadult	1	Perched	8	Initially seen flying directly S, and perched at 0758 (620 m, 160 degrees). Flew off in an unknown direction at 0804.
NW	2025-04-09	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	11	
NW	2025-04-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	86	
NW	2025-04-09	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	14	
NW	2025-04-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	6	
NW	2025-04-09	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Circle Soaring	5	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	36	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	32	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	48	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	38	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	13	
NW	2025-04-23	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	9	Soaring around together and dove down to nest canyon.
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Circle Soaring	5	
NW	2025-04-23	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Female and Male	Adult	2	Meandering	18	
NW	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	3	
NW	2025-04-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	1	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	236	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	229	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	228	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	223	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	221	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	216	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	214	
NE	2025-04-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	84	0632 on utility pole. At 0756 flew to nest.
NE	2025-04-23	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Adult	1	Perched	204	
NE	2025-04-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	12	
NE	2025-04-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Perched	41	
NE	2025-04-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	128	BAEA flew in carrying food. Both perched on nest. BAEA did not appear to feed anything in the nest. 0817 lost sight of one BAEA.
NE	2025-04-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	1	Seen flying to nest with unknown prey item.
NE	2025-04-23	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Female and Male	Adult	2	Perched	30	0937 copulation observed. 0938 carrying nest material.
NE	2025-04-23	Brennan Mulrooney	Swainson's Hawk	<i>Buteo swainsoni</i>	Unknown	Unknown	1	Perched	20	0952 SWHA started circle soaring towards the east.
NE	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	236	
NE	2025-05-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	111	BAEA individual perched in tree. At 1143, it was joined by other BAEA individual. Record changed to pair. At 1256, the 2nd BAEA landed in tree was out of sight or flown off in unknown direction. At 1309, 2nd BAEA flew from perch southeast until it was out of sight.
NE	2025-05-07	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	218	AMKE pair at nest. Chicks can be heard.
NE	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	195	
NE	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Direct Flight	1	
NE	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Subadult	1	Perched	17	
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	224	
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	224	
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	222	
NW	2025-05-07	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	221	BAEA pair perched in eucalyptus tree. At 0937, one BAEA moved to different perch (730 m, 60 degrees), then flew off of new perch at 0947. Circle soared in a general southwest direction before flying out of sight at 0956.
"										
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	100	
NW	2025-05-07	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult	1	Perched	111	WTKI in general area where previously seen nest building. WTKI went out of sight in unknown direction.
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	88	
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	85	
NW	2025-05-07	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	8	
NW	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	6	
NW	2025-05-21	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Adult	1	Perched	3	
NW	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Meandering	4	
NW	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	149	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NW	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Meandering	1	
NW	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Meandering	1	
NE	2025-05-21	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	107	1st BAEA.
NE	2025-05-21	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	229	
NE	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	222	
NE	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	220	
NE	2025-05-21	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	83	2nd BAEA.
NE	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	191	
NE	2025-05-21	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	190	
NE	2025-05-21	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Female and Male	Adult	2	Perched	123	At 0732, 1st BAEA joined 2nd BAEA.
NE	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	122	1st and 2nd RTHA.
NE	2025-06-04	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	226	
NE	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	71	3rd RTHA.
NE	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	70	4th and 5th RTHA.
NE	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	9	6th and 7th RTHA.
NE	2025-06-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	23	1st BAEA. Perched on utility pole. Divebombed by CORA at 1356. Flew off in unknown direction at 1358.
NE	2025-06-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	40	1st BAEA. Seeing flying at 1400 and then perched on utility pole.
NE	2025-06-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	7	1st BAEA. Lost for a minute before seen being divebombed by CORA then returned to northern pond area where is perched along the shoreline.
NW	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	189	1st and 2nd RTHA. Flew off in unknown direction at 0736. Seen again at 0825. Still present until end of survey period.
NW	2025-06-04	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Perched	21	Heard again at 0926. Heard again at 1000.
NW	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	71	3rd RTHA.
NW	2025-06-04	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	74	
NW	2025-06-04	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Subadult	1	Perched	15	
NW	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	71	4th RTHA.
NW	2025-06-04	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	51	5th RTHA.
NW	2025-06-18	Brennan Mulrooney	Red-shouldered Hawk	<i>Buteo lineatus</i>	Unknown	Adult	1	Circle Soaring	3	
NW	2025-06-18	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Perched	14	
NW	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	116	
NW	2025-06-18	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Unknown	1	Direct Flight	1	Heading straight for Bandy Canyon, in a steep descent.
NW	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	11	
NW	2025-06-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	127	By 1240, BAEA had moved out of sight in unknown direction.
NW	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	2	
NE	2025-06-18	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult, Juvenile	4	Perched	200	Family group of AMKE.
NE	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	204	
NE	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	223	
NE	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	227	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-06-18	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	232	Individual BAEA heard calling throughout period.
NE	2025-06-18	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Perched	127	
NE	2025-07-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Direct Flight	18	Initially seen directly flying before perching on utility pole (565 m, 305 degrees).
NE	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female, Male, and Unknown	Adult, Juvenile	3	Perched	32	
NE	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Circle Soaring	1	Dark morph.
NE	2025-07-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Circle Soaring	8	Circle soared over grasslands and then glided off northwest.
NE	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	103	
NE	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female and Male	Adult	2	Perched	129	
NE	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Juvenile	1	Perched	139	Flew over us briefly at 1347.
NE	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	2	
NW	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Meandering	1	
NW	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Juvenile	1	Meandering	2	
NW	2025-07-02	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Unknown	1	Direct Flight	1	
NW	2025-07-02	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Unknown	1	Perched	1	
NW	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Perched	82	Circle soared at 0913.
NW	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Meandering	1	
NW	2025-07-02	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	96	
NW	2025-07-02	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	1	
NW	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	117	
NW	2025-07-02	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	47	
NW	2025-07-23	Brennan Mulrooney	White-tailed Kite	<i>Elanus leucurus</i>	Unknown	Adult, Unknown	2	Perched	37	The birds briefly flushed and circled low, then went back down into the trees. Not visible when perched. But their calls can be heard intermittently.
NW	2025-07-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	200	2nd BAEA.
NW	2025-07-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	207	1st BAEA perched, flew off at 1405, meandered north before coming back to another perch site (2000 m, 75 degrees).
NW	2025-07-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult, Juvenile	2	Circle Soaring	5	
NW	2025-07-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Unknown	Unknown	1	Hovering	2	
NE	2025-07-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Female and Male	Adult	2	Circle Soaring	2	
NE	2025-07-23	Brennan Mulrooney	Golden Eagle	<i>Aquila chrysaetos</i>	Unknown	Adult	1	Perched	15	
NE	2025-07-23	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Juvenile	1	Circle Soaring	2	Presumably the bird that had been perched all morning.
NE	2025-07-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	101	Initially seen meandering north to perch site (560 m, 305 degrees). Flew south at 0855 and came back to different perch site (470 m, 290 degrees). Flew off in unknown direction at 0958.
NE	2025-07-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Unknown	1	Perched	110	
NE	2025-07-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	113	
NE	2025-07-23	Brennan Mulrooney	Red-tailed Hawk	<i>Buteo jamaicensis</i>	Unknown	Adult	1	Perched	113	
NE	2025-07-23	Brennan Mulrooney	Cooper's Hawk	<i>Astur cooperii</i>	Unknown	Juvenile	1	Direct Flight	2	Attempted to ambush CAQU.
NE	2025-07-23	Brennan Mulrooney	American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Unknown	Juvenile	1	Perched	131	
NE	2025-07-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	29	

Survey Area ID	Date	Lead Surveyor	Common Name	Scientific Name	Sex	Age	Number of Individuals	Main Raptor Behavior	Minutes Observed	Notes
NE	2025-07-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Adult	1	Perched	178	
NE	2025-07-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Female	Unknown	1	Direct Flight	1	
NE	2025-07-23	Brennan Mulrooney	American Kestrel	<i>Falco sparverius</i>	Male	Unknown	1	Perched	202	
NE	2025-07-23	Brennan Mulrooney	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Unknown	Adult	1	Perched	208	On pole.

Appendix H  
**Wildlife Compendium**



Scientific Name	Common Name	Status (Federal/State/Local) <sup>1</sup>
<b>INVERTEBRATES</b>		
<b>Arachnida (Order Araneae)</b>	<b>Spiders</b>	
<i>Agelenopsis aperta</i>	desert grass spider	None/None/None
<i>Habronattus</i> sp.	paradise spider	None/None/None
<b>Insecta (Order Blattodea)</b>	<b>Cockroaches and Termites</b>	
<i>Gnathamitermes</i> sp.	termite	None/None/None
<b>Insecta (Order Coleoptera)</b>	<b>Beetles</b>	
<i>Coccinella septempunctata</i>	seven-spotted ladybug	None/None/None
<i>Coniontis</i> sp.	darkling beetle	None/None/None
<i>Eleodes acuticauda</i>	desert stink beetle	None/None/None
<i>Eleodes osculans</i>	wooly darkling beetle	None/None/None
<i>Eleodes</i> sp.	desert stink beetle	None/None/None
<b>Insecta (Order Diptera)</b>	<b>Flies</b>	
<i>Lestomyia</i> sp.	robber fly	None/None/None
<b>Insecta (Order Hymenoptera)</b>	<b>Ants, Bees, and Wasps</b>	
<i>Apis mellifera</i>	western honey bee	None/None/None
<i>Dasymutilla californica</i>	California velvet ant	None/None/None
<i>Dasymutilla sackenii</i>	Sacken's velvet ant	None/None/None
<i>Pepsis</i> sp.	tarantula hawk	None/None/None
<i>Vespa pensylvanica</i>	western yellowjacket	None/None/None
<b>Insecta (Order Lepidoptera)</b>	<b>Butterflies and Moths</b>	
<i>Anthocharis sara</i>	Pacific orangetip	None/None/None
<i>Danaus plexippus</i>	monarch	FC/None/Group 2
<i>Junonia coenia</i>	common buckeye	None/None/None
<b>REPTILES</b>		
<b>SQUAMATA</b>	<b>LIZARDS</b>	
<b>Phrynosomatidae</b>	<b>Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards</b>	
<i>Sceloporus occidentalis</i>	western fence lizard	None/None/None
<i>Sceloporus orcutti</i>	granite spiny lizard	None/None/None
<i>Uta stansburiana</i>	common side-blotched lizard	None/None/None
<b>Teiidae</b>	<b>Whiptails and Racerunners</b>	
<i>Aspidoscelis tigris stejnegeri</i>	coastal western whiptail	None/SSC/Group 2
<b>SERPENTES</b>	<b>SNAKES</b>	
<b>Colubridae</b>	<b>Colubrid Snakes</b>	
<i>Masticophis flagellum</i>	coachwhip	None/None/None

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<b>AMPHIBIANS</b>		
<b>ANURA</b>		
<b>FROGS</b>		
<b>Bufonidae</b>		
<b>True Toads</b>		
<i>Pseudacris hypochondriaca</i>	Baja California tree frog	None/None/None
<b>BIRDS</b>		
<b>ANSERIFORMES</b>		
<b>Anatidae</b>		
<b>Waterfowl</b>		
<i>Branta canadensis</i>	Canada goose	None/None/MSCP, Group 2
<i>Aix sponsa</i>	wood duck	None/None/None
<i>Spatula cyanoptera</i>	cinnamon teal	None/None/None
<i>Spatula clypeata</i>	northern shoveler	None/None/None
<i>Mareca strepera</i>	gadwall	None/None/None
<i>Mareca americana</i>	American wigeon	None/None/None
<i>Anas platyrhynchos</i>	mallard	None/None/None
<i>Anas acuta</i>	northern pintail	None/None/None
<i>Anas crecca</i>	green-winged teal	None/None/None
<i>Aythya valisineria</i>	canvasback	None/None/None
<i>Aythya collaris</i>	ring-necked duck	None/None/None
<i>Bucephala albeola</i>	bufflehead	None/None/None
<i>Oxyura jamaicensis</i>	ruddy duck	None/None/None
<b>GALLIFORMES</b>		
<b>Odontophoridae</b>		
<b>New World Quail</b>		
<i>Callipepla californica</i>	California quail	None/None/None
<i>Oreortyx pictus</i>	mountain quail	None/None/None
<b>Phasianidae</b>		
<b>Pheasants and Turkeys</b>		
<i>Meleagris gallopavo</i>	wild turkey	None/None/None
<b>PODICIPEDIFORMES</b>		
<b>Podicipedidae</b>		
<b>Grebes</b>		
<i>Podilymbus podiceps</i>	pied-billed grebe	None/None/None
<i>Podiceps nigricollis</i>	eared grebe	None/None/None
<b>COLUMBIFORMES</b>		
<b>Columbidae</b>		
<b>Pigeons and Doves</b>		
* <i>Columba livia</i>	rock pigeon	None/None/None
* <i>Streptopelia decaocto</i>	Eurasian collared-dove	None/None/None
<i>Zenaida asiatica</i>	white-winged dove	None/None/None
<i>Zenaida macroura</i>	mourning dove	None/None/None

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<b>CUCULIFORMES</b>		
<b>Cuculidae</b>	<b>Cuckoos and Roadrunners</b>	
<i>Geococcyx californianus</i>	greater roadrunner	None/None/None
<b>CAPRIMULGIFORMES</b>		
<b>Apodidae</b>	<b>Swifts</b>	
<i>Chaetura vauxi</i>	Vaux's swift	None/SSC/None
<i>Aeronautes saxatalis</i>	white-throated swift	None/None/None
<b>Trochilidae</b>	<b>Hummingbirds</b>	
<i>Calypte anna</i>	Anna's hummingbird	None/None/None
<i>Calypte costae</i>	Costa's hummingbird	None/None/None
<b>GRUIFORMES</b>		
<b>Rallidae</b>	<b>Rails and Allies</b>	
<i>Fulica americana</i>	American coot	None/None/None
<b>CHARADRIIFORMES</b>		
<b>Recurvirostridae</b>	<b>Avocets and Stilts</b>	
<i>Himantopus mexicanus</i>	black-necked stilt	None/None/None
<i>Recurvirostra americana</i>	American avocet	None/None/None
<b>Charadriidae</b>	<b>Plovers, Dotterels, and Lapwings</b>	
<i>Charadrius vociferus</i>	killdeer	None/None/None
<b>Scolopacidae</b>	<b>Sandpipers</b>	
<i>Numenius phaeopus</i>	whimbrel	None/None/None
<i>Actitis macularius</i>	spotted sandpiper	None/None/None
<i>Tringa melanoleuca</i>	greater yellowlegs	None/None/None
<b>SULIFORMES</b>		
<b>Phalacrocoracidae</b>	<b>Cormorants and Shags</b>	
<i>Phalacrocorax auritus</i>	double-crested cormorant	None/None/Group 2
<b>PELECANIFORMES</b>		
<b>Ardeidae</b>	<b>Hérons and Egrets</b>	
<i>Ardea herodias</i>	great blue heron	None/None/Group 2
<i>Ardea alba</i>	great egret	None/None/None
<i>Bubulcus ibis</i>	western cattle egret	None/None/None
<i>Egretta thula</i>	snowy egret	None/None/None
<b>Threskiornithidae</b>	<b>Ibises and Spoonbills</b>	
<i>Plegadis chihi</i>	white-faced ibis	None/WL/MSCP, Group 1

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<b>ACCIPITRIFORMES</b>		
<b>Cathartidae</b>	<b>New World Vultures</b>	
<i>Cathartes aura</i>	turkey vulture	None/None/Group 1
<b>Pandionidae</b>	<b>Ospreys</b>	
<i>Pandion haliaetus</i>	osprey	None/WL/Group 1
<b>Accipitridae</b>	<b>Hawks</b>	
<i>Elanus leucurus</i>	white-tailed kite	None/FP/NCMSCP, Group 1
<i>Aquila chrysaetos</i>	golden eagle	BGEPA/WL, FP/MSCP, NE**, NCMSCP, Group 1
<i>Circus hudsonius</i>	northern harrier	None/SSC/MSCP, NCMSCP, Group 1
<i>Accipiter striatus</i>	sharp-shinned hawk	None/WL/Group 1
<i>Astur [Accipiter] cooperii</i>	Cooper's hawk	None/WL/MSCP, Group 1
<i>Haliaeetus leucocephalus</i>	bald eagle	BGEPA/SE, FP/MSCP, NCMSCP, Group 1
<i>Buteo lineatus</i>	red-shouldered hawk	None/None/Group 1
<i>Buteo swainsoni</i>	Swainson's hawk	None/ST/MSCP, Group 1
<i>Buteo jamaicensis</i>	red-tailed hawk	None/None/None
<i>Buteo regalis</i>	ferruginous hawk	None/WL/MSCP, Group 1
<b>STRIGIFORMES</b>		
<b>Strigidae</b>	<b>True Owls</b>	
<i>Bubo virginianus</i>	great horned owl	None/None/None
<b>Tytonidae</b>	<b>Barn Owls</b>	
<i>Tyto furcata [alba]</i>	American barn owl	None/None/Group 2
<b>CORACIIFORMES</b>		
<b>Alcedinidae</b>	<b>Kingfishers</b>	
<i>Megasceryle alcyon</i>	belted kingfisher	None/None/None
<b>PICIFORMES</b>		
<b>Picidae</b>	<b>Woodpeckers</b>	
<i>Melanerpes formicivorus</i>	acorn woodpecker	None/None/None
<i>Dryobates pubescens</i>	downy woodpecker	None/None/None
<i>Dryobates nuttallii</i>	Nuttall's woodpecker	None/None/None
<i>Colaptes auratus</i>	northern flicker	None/None/None
<b>FALCONIFORMES</b>		
<b>Falconidae</b>	<b>Falcons and Caracaras</b>	
<i>Falco sparverius</i>	American kestrel	None/None/None
<i>Falco columbarius</i>	merlin	None/WL/Group 2
<i>Falco peregrinus anatum</i>	American peregrine falcon	None/None/MSCP, NE, Group 1
<i>Falco mexicanus</i>	prairie falcon	None/WL/Group 1
<b>PSITTACIFORMES</b>		
<b>Psittacidae</b>	<b>Parrots</b>	
* <i>Amazona finschi</i>	lilac-crowned parrot	None/None/None

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<b>PASSERIFORMES</b>		
<b>Tyrannidae</b>	<b>Tyrant Flycatchers</b>	
<i>Contopus sordidulus</i>	western wood-pewee	None/None/None
<i>Empidonax traillii</i>	willow flycatcher	None/SE/None
<i>Empidonax wrightii</i>	gray flycatcher	None/None/None
<i>Empidonax difficilis</i>	western flycatcher	None/None/None
<i>Sayornis nigricans</i>	black phoebe	None/None/None
<i>Sayornis phoebe</i>	eastern phoebe	None/None/None
<i>Sayornis saya</i>	Say's phoebe	None/None/None
<i>Pyrocephalus rubinus</i>	vermillion flycatcher	None/SSC/Group 1
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	None/None/None
<i>Tyrannus vociferans</i>	Cassin's kingbird	None/None/None
<i>Tyrannus verticalis</i>	western kingbird	None/None/None
<b>Vireonidae</b>	<b>Vireos</b>	
<i>Vireo huttoni</i>	Hutton's vireo	None/None/None
<i>Vireo gilvus</i>	warbling vireo	None/None/None
<b>Laniidae</b>	<b>Shrikes</b>	
<i>Lanius ludovicianus</i>	loggerhead shrike	None/SSC/NCMSCP, Group 1
<b>Corvidae</b>	<b>Jays and Crows</b>	
<i>Aphelocoma californica</i>	California scrub-jay	None/None/None
<i>Corvus brachyrhynchos</i>	American crow	None/None/None
<i>Corvus corax</i>	common raven	None/None/None
<b>Paridae</b>	<b>Titmice and Chickadees</b>	
<i>Baeolophus inornatus</i>	oak titmouse	None/None/None
<b>Alaudidae</b>	<b>Larks</b>	
<i>Eremophila alpestris actia</i>	California horned lark	None/WL/Group 2
<b>Hirundinidae</b>	<b>Swallows and Martins</b>	
<i>Tachycineta bicolor</i>	tree swallow	None/None/None
<i>Tachycineta thalassina</i>	violet-green swallow	None/None/None
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	None/None/None
<i>Hirundo rustica</i>	barn swallow	None/None/None
<i>Petrochelidon pyrrhonota</i>	cliff swallow	None/None/None
<b>Aegithalidae</b>	<b>Bushtits</b>	
<i>Psaltriparus minimus</i>	bushtit	None/None/None
<b>Sylviidae</b>	<b>Wrentits</b>	
<i>Chamaea fasciata</i>	wrentit	None/None/None
<b>Regulidae</b>	<b>Kinglets</b>	
<i>Regulus calendula</i>	ruby-crowned kinglet	None/None/None
<b>Sittidae</b>	<b>Nuthatches</b>	
<i>Sitta carolinensis</i>	white-breasted nuthatch	None/None/None

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<b>Poliptilidae</b>	<b>Gnatcatchers</b>	
<i>Poliptila caerulea</i>	blue-gray gnatcatcher	None/None/None
<i>Poliptila californica californica</i>	coastal California gnatcatcher	FT/SSC/MSCP, NCMSCP, Group 1
<b>Troglodytidae</b>	<b>Wrens</b>	
<i>Salpinctes obsoletus</i>	rock wren	None/None/None
<i>Catherpes mexicanus</i>	canyon wren	None/None/None
<i>Troglodytes aedon</i>	house wren	None/None/None
<i>Thryomanes bewickii</i>	Bewick's wren	None/None/None
<b>Sturnidae</b>	<b>Starlings and Mynas</b>	
* <i>Sturnus vulgaris</i>	European starling	None/None/None
<b>Mimidae</b>	<b>Thrashers</b>	
<i>Toxostoma redivivum</i>	California thrasher	None/None/None
<i>Mimus polyglottos</i>	northern mockingbird	None/None/None
<b>Turdidae</b>	<b>Thrushes</b>	
<i>Sialia mexicana</i>	western bluebird	None/None/MSCP, Group 2
<i>Sialia currucoides</i>	mountain bluebird	None/None/None
<i>Catharus ustulatus</i>	Swainson's thrush	None/None/None
<i>Catharus guttatus</i>	hermit thrush	None/None/None
<i>Turdus migratorius</i>	American robin	None/None/None
<b>Ptiliognatidae</b>	<b>Silky Flycatchers</b>	
<i>Phainopepla nitens</i>	phainopepla	None/None/None
<b>Motacillidae</b>	<b>Wagtails and Pipits</b>	
<i>Anthus rubescens</i>	American pipit	None/None/None
<b>Fringillidae</b>	<b>Finches</b>	
<i>Haemorhous mexicanus</i>	house finch	None/None/None
<i>Spinus psaltria</i>	lesser goldfinch	None/None/None
<i>Spinus lawrencei</i>	Lawrence's goldfinch	None/None/None
<b>Passerellidae</b>	<b>New World Sparrows</b>	
<i>Ammodramus savannarum</i>	grasshopper sparrow	None/SSC/NCMSCP, Group 1
<i>Spizella passerina</i>	chipping sparrow	None/None/None
<i>Spizella atrogularis</i>	black-chinned sparrow	None/None/None
<i>Chondestes grammacus</i>	lark sparrow	None/None/None
<i>Junco hyemalis</i>	dark-eyed junco	None/None/None
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	None/None/None
<i>Artemisiospiza belli belli</i>	Bell's sparrow	None/WL/NCMSCP, Group 1
<i>Poocetes gramineus</i>	vesper sparrow	None/None/None
<i>Passerculus sandwichensis</i>	savannah sparrow	None/None/None
<i>Melospiza melodia</i>	song sparrow	None/None/None
<i>Melospiza crissalis</i>	California towhee	None/None/None

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<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	None/WL/MSCP, Group 1
<i>Pipilo maculatus</i>	spotted towhee	None/None/None
<b>Icteridae</b>	<b>Orioles, Grackles, and Cowbirds</b>	
<i>Sturnella neglecta</i>	western meadowlark	None/None/None
<i>Icterus cucullatus</i>	hooded oriole	None/None/None
<i>Icterus bullockii</i>	Bullock's oriole	None/None/None
<i>Agelaius phoeniceus</i>	red-winged blackbird	None/None/None
<i>Agelaius tricolor</i>	tricolored blackbird	None/ST, SSC/MSCP, NCMSCP, Group 1
<i>Molothrus ater</i>	brown-headed cowbird	None/None/None
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	None/None/None
<i>Quiscalus mexicanus</i>	great-tailed grackle	None/None/None
<b>Parulidae</b>	<b>Wood Warblers</b>	
<i>Leiothlypis celata</i>	orange-crowned warbler	None/None/None
<i>Geothlypis tolmiei</i>	MacGillivray's warbler	None/None/None
<i>Geothlypis trichas</i>	common yellowthroat	None/None/None
<i>Setophaga petechia</i>	yellow warbler	None/SSC/Group 2
<i>Setophaga coronata</i>	yellow-rumped warbler	None/None/None
<i>Setophaga townsendi</i>	black-throated gray warbler	None/None/None
<i>Setophaga nigrescens</i>	Townsend's warbler	None/None/None
<i>Cardellina pusilla</i>	Wilson's warbler	None/None/None
<b>Cardinalidae</b>	<b>Buntings, Grosbeaks, and Tanagers</b>	
<i>Piranga ludoviciana</i>	western tanager	None/None/None
<i>Pheucticus melanocephalus</i>	black-headed grosbeak	None/None/None
<i>Passerina caerulea</i>	blue grosbeak	None/None/None
<i>Passerina amoena</i>	Lazuli bunting	None/None/None

## MAMMALS

<b>Canidae</b>	<b>Foxes, Wolves, and Coyotes</b>	
<i>Canis latrans</i>	coyote	None/None/None
<b>Cervidae</b>	<b>Deer, Elk, and Moose</b>	
<i>Odocoileus hemionus fuliginata</i>	southern mule deer	None/None/MSCP, NCMSCP, Group 2
<b>Bovidae</b>	<b>Cattle, Sheep and Allies</b>	
* <i>Bos taurus</i>	feral cattle	None/None/None
<b>Mephitidae</b>	<b>Skunks and Stink-Badgers</b>	
<i>Mephitis mephitis</i>	striped skunk	None/None/None
<i>Mustela frenata</i>	long-tailed weasel	None/None/None
<b>Geomyidae</b>	<b>Gophers</b>	
<i>Thomomys bottae</i>	Botta's pocket gopher	None/None/None

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<b>Leporidae</b>	<b>Rabbits and Hares</b>	
<i>Sylvilagus audubonii</i>	desert cottontail	None/None/None
<i>Sylvilagus bachmani</i>	brush rabbit	None/None/None
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/None/NCMSCP, Group 2
<b>Sciuridae</b>	<b>Squirrels, Marmots, and Prairie Dogs</b>	
<i>Otospermophilus beecheyi</i>	California ground squirrel	None/None/None
<i>Tamias merriami</i>	Merriam's chipmunk	None/None/None

## NOTES:

- <sup>1</sup> BGEPA = Bald and Golden Eagle Protection Act  
 FT: Federally Threatened  
 FC: Candidate for Federal Listing  
 SE: State Endangered  
 ST: State Threatened  
 WL: California Department of Fish and Wildlife Watch List  
 FP: California Department of Fish and Wildlife Fully Protected  
 SSC: California Department of Fish and Wildlife Species of Special Concern  
 MSCP: Covered under the South County MSCP Subarea Plan  
 NE: MSCP Narrow Endemic Species  
 NCMSCP: Covered under the Draft North County MSCP  
 Group 1: Animals of high sensitivity (listed or specific natural history requirements) (County of San Diego)  
 Group 2: Animals declining but not in immediate threat of extinction or extirpation (County of San Diego)
- \* Non-native species  
 \*\* Only for nesting golden eagles