



**Humboldt
Redwood™**

Peregrine Falcon Annual Report 2017

February 1, 2018



Cover photo: Scotia Bluffs fledgling 2013 (HRC Staff).

Project Description

Title: Peregrine Falcon HCP Monitoring

Purpose: Habitat Conservation Plan (HCP) monitoring

Date Initiated: March 1999

Projected End Date: Ongoing

Manager: Sal Chinnici, Manager, Forest Sciences

Executive Summary:

During the 2017 peregrine falcon breeding season we conducted surveys for peregrine falcon activity at four known eyries (nests) at Scotia Bluffs, Holmes Bluff, Tom Gulch, and Shively Bluff, the relatively new nest at South Runenburg that was confirmed in 2013, and the new tree nest that was discovered in 2016 in the Freshwater Creek watershed on McCready Ridge.

Surveys were to monitor the eyries for possible nesting activity, monitor the nests during timber operations, or to confirm fledging of juveniles prior to commencement of timber operations, or road work within 0.5-mile of a nesting area. The Tom Gulch snag has also been used by ospreys and northern spotted owls for nesting in the past, and so the snag was monitored for potential nesting activity by those species as well. The South Runenburg nest was occupied this year. The Scotia, Holmes, and McCready Ridge sites had peregrine presence, but no nesting activity was observed, or observations were inconclusive. No peregrine activity was observed at the Tom Gulch and Shively Bluff sites. There were three peregrine nestlings produced at the South Runenburg eyrie. The McCready Ridge pair appeared to be nesting but may have failed.

No changes in the HCP peregrine falcon monitoring strategy are recommended at this time.

Project Manager / Primary Author



Sal Chinnici

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INTRODUCTION

The American peregrine falcon (*Falco peregrinus anatum*) is a covered species under the HRC HCP. The species was formerly listed as endangered under the California State Endangered Species Act and also under the Federal Act, but has been found to be recovered and delisted pursuant to both the State and Federal Acts. It is also a Board of Forestry Sensitive Species, and a California Fully Protected Species. The objective of surveying for peregrine falcons on HRC lands is to survey traditional and potential nest sites and adjacent habitat if timber operations are to occur within 0.5 mile (conventional operations), or 1.0 mile (e.g., helicopter operations), and to apply HCP nest site protection measures when necessary to ensure a high probability of successful nesting.

METHODS

Surveys were conducted according to section 6.5.2.1 of HRC's HCP, the Mutually Agreed Upon Peregrine Falcon Survey Language (as modified, Appendix I) and followed guidelines in both the Protocol for Observing Known and Potential Peregrine Falcon Eyries in the Pacific Northwest (Pagel 1992), and the U.S. Fish and Wildlife Monitoring Protocol (USFWS 2003). Additional nest checks or surveys are sometimes done in an attempt to establish whether a site is active, occupied, or to assess nesting success.

Monitoring of nesting activity only was conducted at the Scotia, Holmes, and Shively Bluff sites as no timber operations were planned within the appropriate disturbance minimization buffers. Tom Gulch, South Runenburg, and McCready Ridge were surveyed to determine nesting status and to seasonally restrict any timber operations within the buffers as required. Survey locations, dates, associated THPs, and status results for 2017 surveys are shown in Table 1.

Table 1. 2017 Peregrine Falcon Surveys.

Known Eyrie Location	Associated THP (name, #)	Visit 1 Date	PEFA activity?	Visit 2 Date	PEFA activity?	Visit 3 Date	PEFA activity?	Visit 4 Date	PEFA activity?
Tom Gulch	McCloud Shaw (12-110)	3/30/17	NC	6/6/17	NC	7/6/17	NC	NA	NA
Scotia Bluffs	Monitor only	6/23/17	U	7/31/17	NC	-	NA	NA	NA
Holmes Bluff	Monitor only	5/18/17	PU	7/7/17	PU	-	NA	NA	NA
Shively Bluff	Monitor only	5/18/17	NC	7/24/17	NC	-	NA	NA	NA
South Runenburg	Westside (15-121)	4/20/17	PU	5/16/17	PN3J	-	NA	NA	NA
McCready Ridge	Lower Cloney (16-112)	1/24/17	PU	2/23/17	PU	3/23/17	PN?	4/27/17	PN?

NC = no contact, U = unknown status, PN = pair nesting, PNJ = pair with juvenile(s), PNN = pair not nesting, PU = pair unknown, PF = pair failed, SA = sub adult, NA = Not applicable.

RESULTS

In 2017 the Holmes, S. Runenburg, and McCready Ridge territories were all occupied by a pair of peregrine falcons, or a single peregrine (Scotia Bluffs). Nesting was confirmed at South Runenburg and was suspected at McCready Ridge, but at McCready Ridge we may have missed fledging or the nest may have failed. Three nestlings were confirmed at the South Runenburg nest. No peregrine activity was observed at Tom Gulch or at Shively Bluffs, and a single peregrine was heard at Scotia Bluffs (Table 2). Brief notes on the individual sites and nest ledge locations are included below.

The percent of known territories occupied in 2017 was 66.7% (4 of 6), compared to 83.3% in 2016, with a mean of 87% over the period 1999-2017 (Figure 1). The reproductive rate (measured as number of juveniles per occupied territory) was 0.75 in 2017, compared to 0.6 in 2016, with a mean of 0.77 over the period 1999 - 2017 (Figure 2). Reproductive rate is showing a slight increase over the last two years after the 2016 decline, following a five-year period (i.e., 2011 – 2015) with much higher reproductive rates.

Table 2. Status of HRC peregrine falcon eyries 1999 - 2017 (if known).

Eyries	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Scotia Bluffs	NC	U	U	PN	PU	PN2J	PF	PN4J	PN	PNN	PU	PN2J	PN2J	PN1J	PN1J	PN2J	PN3J	PNF?	U
Holmes Bluff	U	U	U	PU	U	M	M	PU	M	U + SA	PU	PU	PN2J	PN2J	PN1J	PU	PN2J	PN3J	PU
Shively Bluff												PU	PN2J	PN3J	PN2J	PN3J	U	PU	NC
Tom Gulch									PN1J	PN2J	NC	NC	NC	NC	PU	NC	NC	NC	NC
South Runenburg															PN2J	NC	PN2J	U	PN3J
McCready Ridge																		PN	PU

NC = no contact, U = unknown status, PN = pair nesting, PNJ = pair with juvenile(s), PNN = pair not nesting, PU = pair unknown, PF = pair failed, SA = subadult.

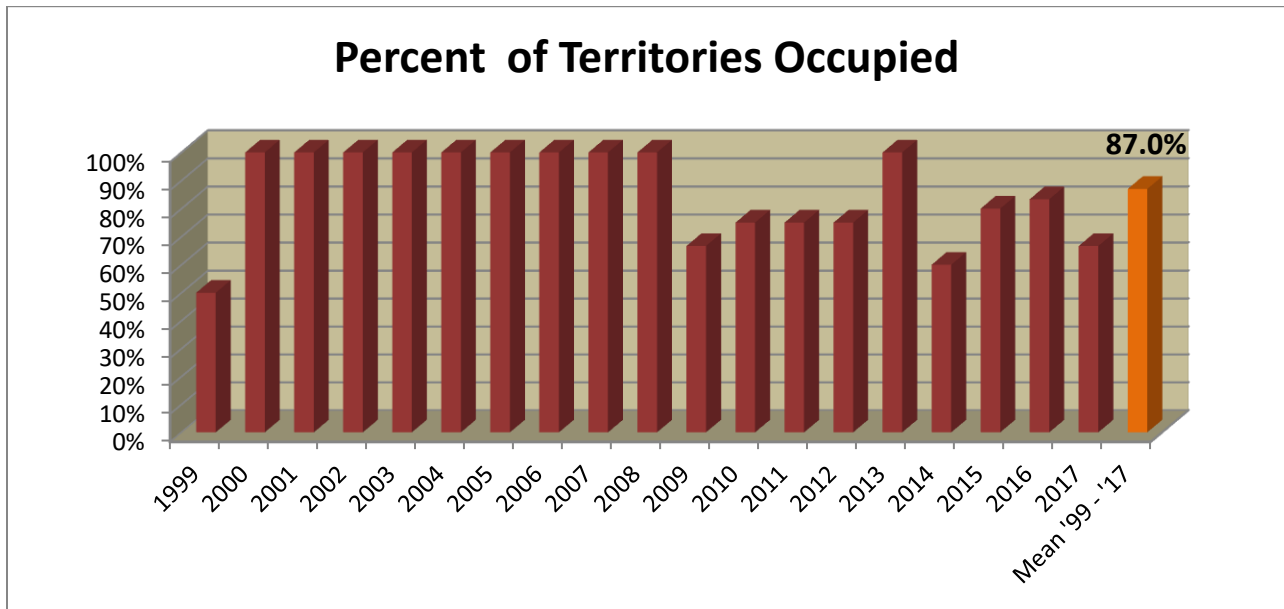


Figure 1. Percent of HRC territories occupied 1999 - 2017.

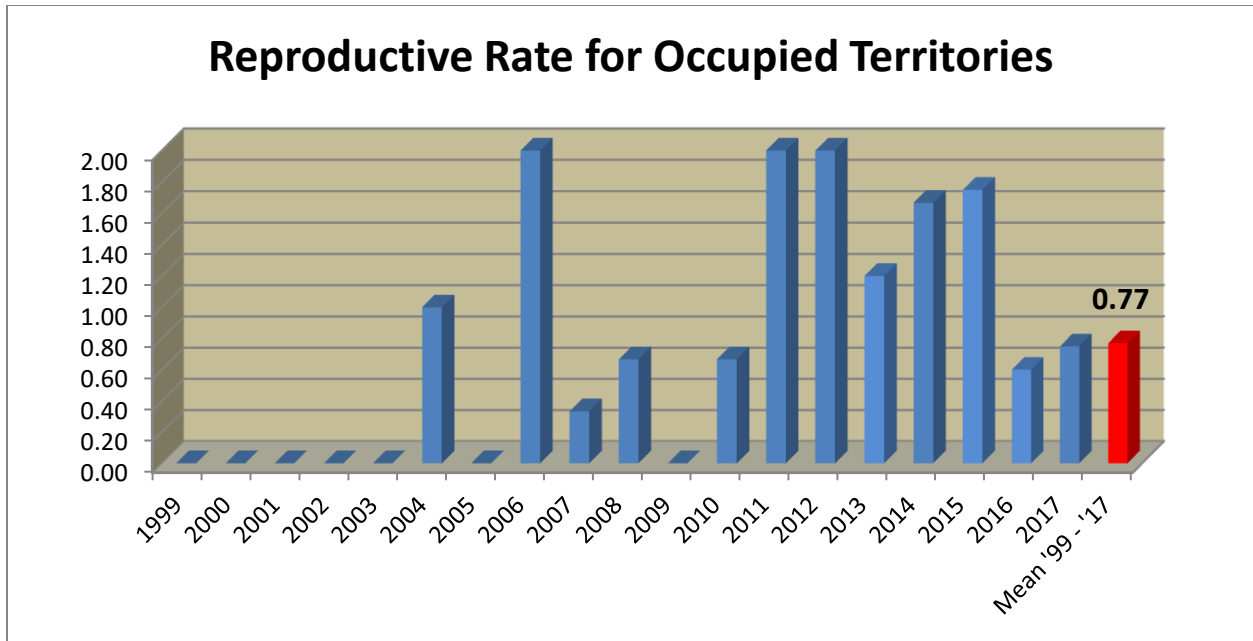


Figure 2. Reproductive rate for HRC occupied territories 1999 - 2017.

TOM GULCH

The Tom Gulch nest site is a large old growth redwood with its top half consisting of a massive, truncated dead snag (Figure 3). It was first discovered to be occupied by peregrine falcons in 2007 during a survey for osprey (*Pandion haliaeetus*). The snag was also occupied by peregrines in 2008, but was not active from 2009 to 2012. An adult pair of peregrines was observed at the Tom Gulch nest in 2013, following the four consecutive years that we had not observed peregrines there, but nesting did not occur that season. From 2014 to 2017 no operations were planned near the site, but surveys were conducted in preparation for future operations on the McCloud-Shaw THP (1-12-110 HUM), as well as potential road and stream restoration projects. No peregrine activity was noted on three visits each in 2014 through 2017 (Tables 1 and 2). No osprey activity was noted either from 2014 to 2017. Northern spotted owl (*Strix occidentalis caurina*) survey visits to activity site 331 for the 2014 - 2017 nesting seasons found that a pair of owls occupied the territory, but nesting behavior was not observed.

There are other peregrine falcon nests in trees in nearby watersheds (Buchanan et al., 2014, Hamm, pers. comm.). This now includes the new nest tree located in the Freshwater watershed. It is currently unknown if the pair that has previously nested in Tom Gulch is nesting in another

snag in the area, or in another watershed. Recent information indicates that tree nesting by peregrine falcons may not be as unusual as previously thought (Buchanan et al., 2014).



Figure 3. Tom Gulch Snag (arrow indicates approximate location of nest cavity).

SCOTIA BLUFFS

Two visits were conducted to the Scotia Bluffs traditional cliff site in 2017 in an attempt to determine status of the eyrie. No timber operations were planned within the disturbance minimization buffers. An adult peregrine was observed occupying the cliffs on the 23 June visit. The falcon landed on the nest ledge during the visit, but no other nesting behavior was observed. There was no PEFA contact on the 31 July visit.

The last confirmed nesting at this site occurred in 2015. The 2015 nest ledge is different from the one used from 2011-2014 (Figure 4), and is higher and further downriver on the bluff. Based on observations, the new ledge appears to be a broad, deep ledge created by erosion of the cliff face, as are many of the known and potential ledges at Scotia Bluffs and Holmes Bluff. In 2016, HSU Graduate Student Elizabeth Morata found that the male peregrine's transmitter had stopped transmitting (Morata pers. comm.). On a follow-up visit she observed an un-transmitted male with the transmitted female, sitting near the 2014 nest ledge, and later also saw a prey transfer between the two. The female was no longer incubating anything at the 2015 nest ledge. They

assumed that the transmittered male had died and was replaced by a new male, the result of which was an interrupted or failed nesting attempt for 2016.



Figure 4. Scotia Bluffs (arrow indicates approximate location of 2015 nest ledge).

HOLMES BLUFF

The Holmes Bluff eyrie was monitored for nesting activity with two visits in 2017. No timber operations were planned within disturbance minimization buffers. An adult pair of PEFA was observed at the site, but nesting behavior was not observed. This site had continued to exhibit successful reproduction in 2015 and 2016, with two and three nestlings produced respectively. The nest did not appear to fledge any young in 2014 after three consecutive years of successful nesting from 2011- 2013.

The most recent eyrie is higher on the bluff face and farther downriver than previous ledges (i.e. until 2011) (Figure 5). An extremely unfortunate human drowning occurred at Holmes on 5 June 2016, and rescue attempts reported in local news outlets included helicopters and fire trucks at the cliff and on the river bar. In response we conducted an 8 June 2016 visit on which the female was observed feeding three young, and the male was also observed on a nearby perch. Human activity continued to be relatively high at the Holmes location in 2017.



Figure 5. Holmes Bluff (arrow indicates approximate location of nest ledge).

SHIVELY BLUFF

Shively Bluff was monitored for nesting activity with two visits during the season. There were no timber operations planned within disturbance minimization buffers. There was no contact of peregrine falcons. A Canada goose (*Branta canadensis*) was observed sitting on the known nest ledge on the first visit to the site on 18 May. Although nesting was not observed in 2015 or 2016, this nest was highly productive from 2011 - 2014 in spite of consistent human disturbance near the nest cliff during the breeding season (e.g. presence of a summer bridge, off-road vehicle use, swimmers, etc.). In fact, on 18 May 2017 the HRC observer witnessed a Piper Cub aircraft conducting landings and takeoffs on the gravel bar adjacent to the nest bluff. Although the PEFA pair at this site has shown amazing tolerance of activity near the nest, this level of activity might represent excessive disturbance to an extent that nesting was not initiated in 2017.



Figure 6. Shively Bluff (arrow indicates approximate location of nest ledge).

SOUTH RUNENBURG

The South Runenburg eyrie location was monitored with two visits in 2017 in relation to the potential for timber operations within disturbance minimization buffers. However, during the spring of 2017 it was determined that the planned operations would not occur within the buffer. On the 16 May visit the adult female peregrine was noted with three nestlings. Following our discovery of this nest location in 2012, the pair has exhibited an every other year aspect to their nesting habits, with successful nesting in 2013, 2015, and 2017 (Table 2).



Figure 7. S. Runenburg bluff (the nest ledge is partially hidden by trees, lower right).

MC CREADY RIDGE

During the 2017 season the McCready Ridge PEFA nest tree was observed with four status visits from 24 January to 27 April that seemed to indicate that a pair was nesting at the site. No visits were conducted from 28 April to 22 June. Seven subsequent monitoring visits were conducted from 23 June to 2 August, with no conclusive indication that nesting had occurred. The monitoring was conducted due to planned operations on the Lower Cloney THP (1-16-112 HUM). A consultation with CDFW was conducted on-site on 22 May, with consultation completed via email the same day. The proposed operations and harvest mark were reviewed as per HCP requirements, and it was determined that limited operations could occur within the 0.5-mile buffer due to intervening topography and the distance to the nest.

However, operations did not commence in the buffer until after 23 June, when the first monitoring visit was conducted which resulted in no observations of activity at the nest and no PEFA contact. Subsequent monitoring visits resulted in some audio and visual observations of PEFA, but no observations of nesting behavior or young. It is possible that with the almost two month gap in monitoring visits (28 April to 22 June) that nesting observations were missed, or that nesting failed.

The McCready Ridge tree nest was initially found in 2016. The tree is a large residual old growth tree that stands alone in a larger stand of young growth (Figure 8).



Figure 8. McCready Ridge nest tree (arrow indicates approximate location of nest).

DISCUSSION AND RECOMMENDATIONS

Occupancy and reproduction for the (as of 2017) six known peregrine falcon sites on or adjacent to HRC lands continues to be relatively high over the past seven seasons. Of the six known peregrine falcon eyries monitored during the 2017 season, four sites were occupied (67% occupancy). Shively Bluff and Tom Gulch were not occupied and no nesting occurred there. At least three juvenile peregrines were produced (South Runenburg) for a reproductive rate of 0.75 young per occupied territory.

There were no operations within 0.5 mile of any of the occupied eyries, with the exception of McCready Ridge (as per the CDFW consultation), and use of the Shively Road, as discussed in the CDFW property-wide consultation language. The property-wide language was revised to account for the new eyrie at Shively Bluff on 14 July 2011, with the concurrence of the Wildlife Agencies on 26 July (Appendix I). There were no HRC operations within 1.0 mile such as helicopter yarding, blasting, or pile driving at any eyrie location during the breeding season. Operations were scheduled to occur either before or after the breeding season in other buffer locations.

With the exception of the Tom Gulch site and the McCready Ridge site, all of the other sites (Scotia, Holmes, Shively, and S. Runenburg) are on bluff faces above either the Eel or Van Duzen Rivers at what are very popular recreation sites in the spring and summer months. The S. Runenburg nest cliff is more obscured than the others, and occurs south of the river and the Highway 36 corridor. At the Eel River sites, HRC personnel commonly observe swimmers, boaters, recreational vehicle riders, and even rock climbers near the falcon eyries. In addition there was an unfortunate accident (drowning) at the Holmes hole, which necessitated helicopter and fire rescue attempts there in June 2016. This season, aircraft activity was observed adjacent to the cliff at Shively Bluff.

2018 SURVEYS

Surveys in 2018 will again include monitoring of traditional and known sites (i.e., Tom Gulch, Scotia Bluffs, Holmes Bluffs, Shively Bluff, S. Runenburg, and McCready Ridge). All forestry

and science staff will continue to report incidental peregrine sightings to the wildlife staff, and follow-up surveys will be conducted when necessary.

No change in the HCP monitoring strategy for peregrine falcons is recommended at this time.

REFERENCES

- Buchanan, J.B., K.A. Hamm, L.J. Salzer, L.V. Diller, and S.J. Chinnici. 2014. Tree-nesting by Peregrine Falcons in North America: Historical and Additional Records. *J. Raptor Res.* 48(1): 61-67.
- Hamm, K. 2014. Personal communication. Senior Biologist and HCP Coordinator for Green Diamond Resource Co.
- Morata, E. 2016. Personal Communication. Graduate student at Humboldt State University.
- Pagel, J.E. 1992. Protocol for observing known and potential peregrine falcon eyries the Pacific Northwest. Pp. 83-96 *In Proceedings: Symposium on peregrine falcons in the Pacific Northwest.* J.E. Pagel, ed. Rogue River National Forest, Medford, OR 97501.
- U.S. Fish and Wildlife Service. 2003. Monitoring Plan for the American Peregrine Falcon, A Species Recovered Under the Endangered Species Act. U.S. Fish and Wildlife Service, Divisions of Endangered Species and Migratory Birds and State Programs, Pacific Region, Portland, OR. 53 pp.

APPENDIX 1

PEREGRINE FALCON SURVEY LANGUAGE

Final DFG, USFWS and HRC Mutually Agreed Upon Peregrine Falcon Survey Language (3/30/00) as modified (1/8/07) and 7/14/11.

Surveys shall be conducted at traditional and potential nest sites if operations occur between January 15 and August 15. If operations occur after August 15 and before January 15, no surveys are required. Survey visits shall be scheduled based on the estimated duration of operations. The area of influence will be 0.5 mile for conventional operations and 1.0 mile for helicopter operations. All surveys shall follow Pagel (1992), *Protocol for Observing Known and Potential Peregrine Falcon Eyries in the Pacific Northwest*, with respect to placement of observation posts, duration of surveys, time of day of surveys, observer preparation and equipment, and weather conditions. Helicopter surveys for peregrine falcon should not be conducted without prior consultation and concurrence with both the USFWS and DFG.

1. Surveys at traditional sites shall be conducted according to the following guidelines:
 - a. If operations commence after January 14:
 - i. One survey shall be conducted prior to operations, but no more than five days prior to operations.
 - ii. Conduct two additional surveys spaced at least 25 days apart but no more than 30 days. If due to the estimated duration of operations, two additional surveys cannot be spaced by at least 25 days, conduct two additional surveys well distributed throughout the operational period of the project prior to June 30 and prior to completion of operations.
 - b. If timber operations commence before January 15 (beginning at least two weeks prior to January 15), those survey requirements as specified above for operations that commence after January 14 shall be applied, except that all three surveys would occur concurrently with operations.
 - c. Surveys shall not be required for hauling on the Shively Road within the 0.5 mile disturbance minimization buffer for the Holmes and Shively eyries as per the 8 January 2007 and 14 July 2011 consultations.
2. Surveys of potential sites shall be conducted according to the following:
 - a. If timber operations commence after January 14:
 - i. One survey shall be conducted prior to operations, but no more than five days prior to operations.
 - ii. In addition, if the estimated duration of operations allows, conduct one survey prior to the completion of operations spaced at least 25 days after the first survey but no more than 30 days. If the operational period is estimated to end in less than 25 days, conduct the additional survey half-way through the estimated operational period.

APPENDIX 2

MAPS OF PEREGRINE FALCON EYRIES

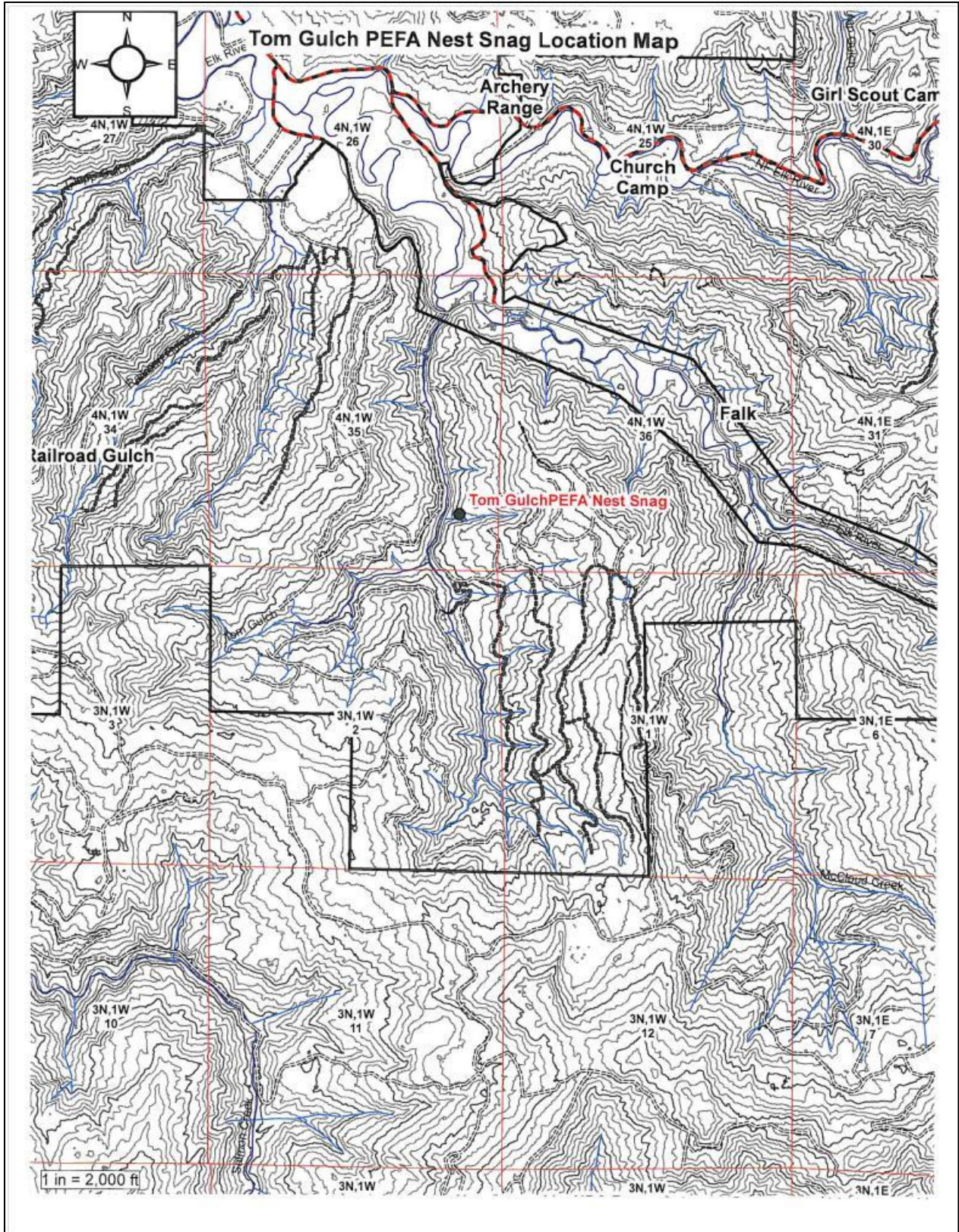


Figure 8. Tom Gulch Peregrine Falcon Nest Snag Location Map.

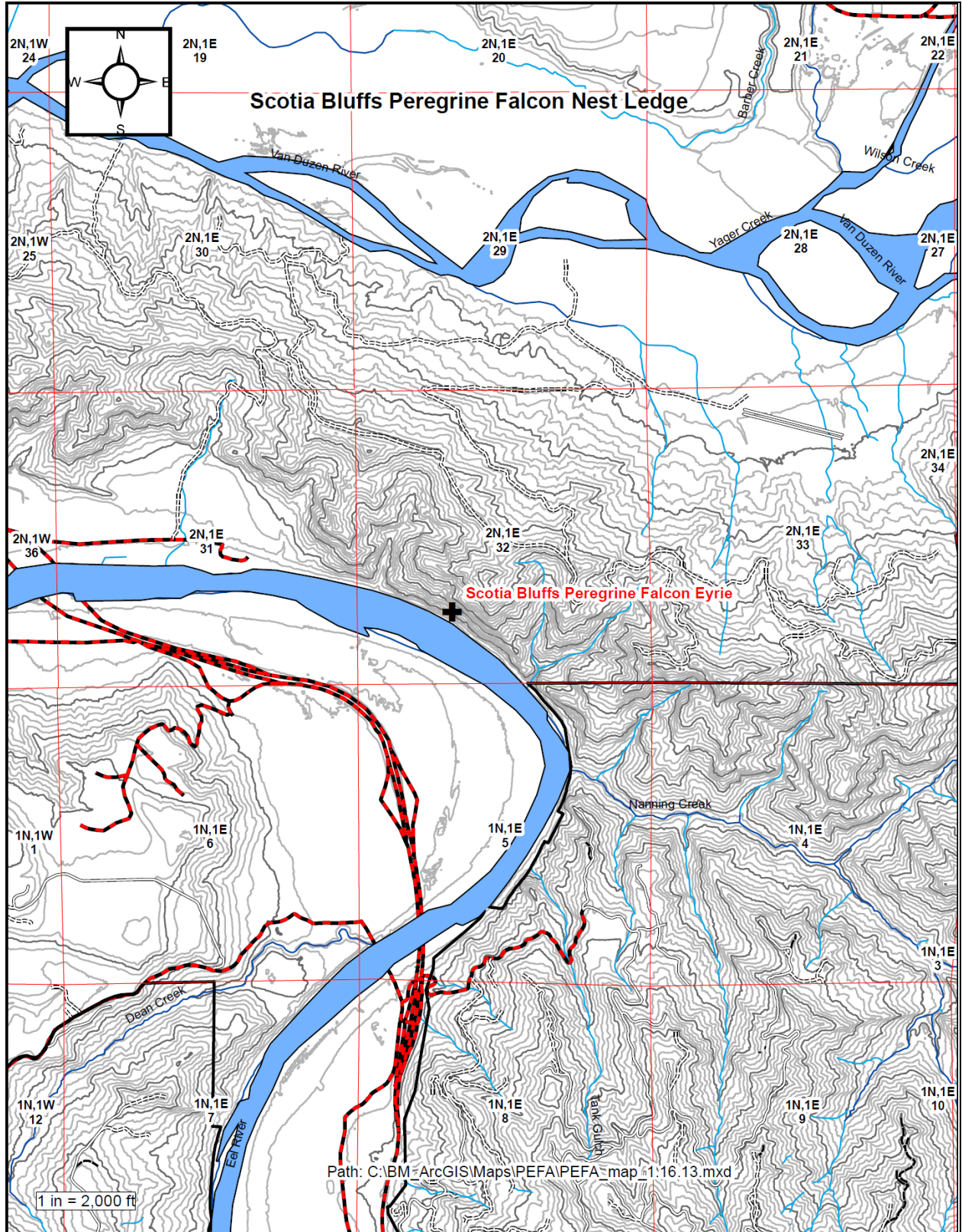


Figure 9. Scotia Bluffs Peregrine Falcon Nest Ledge.

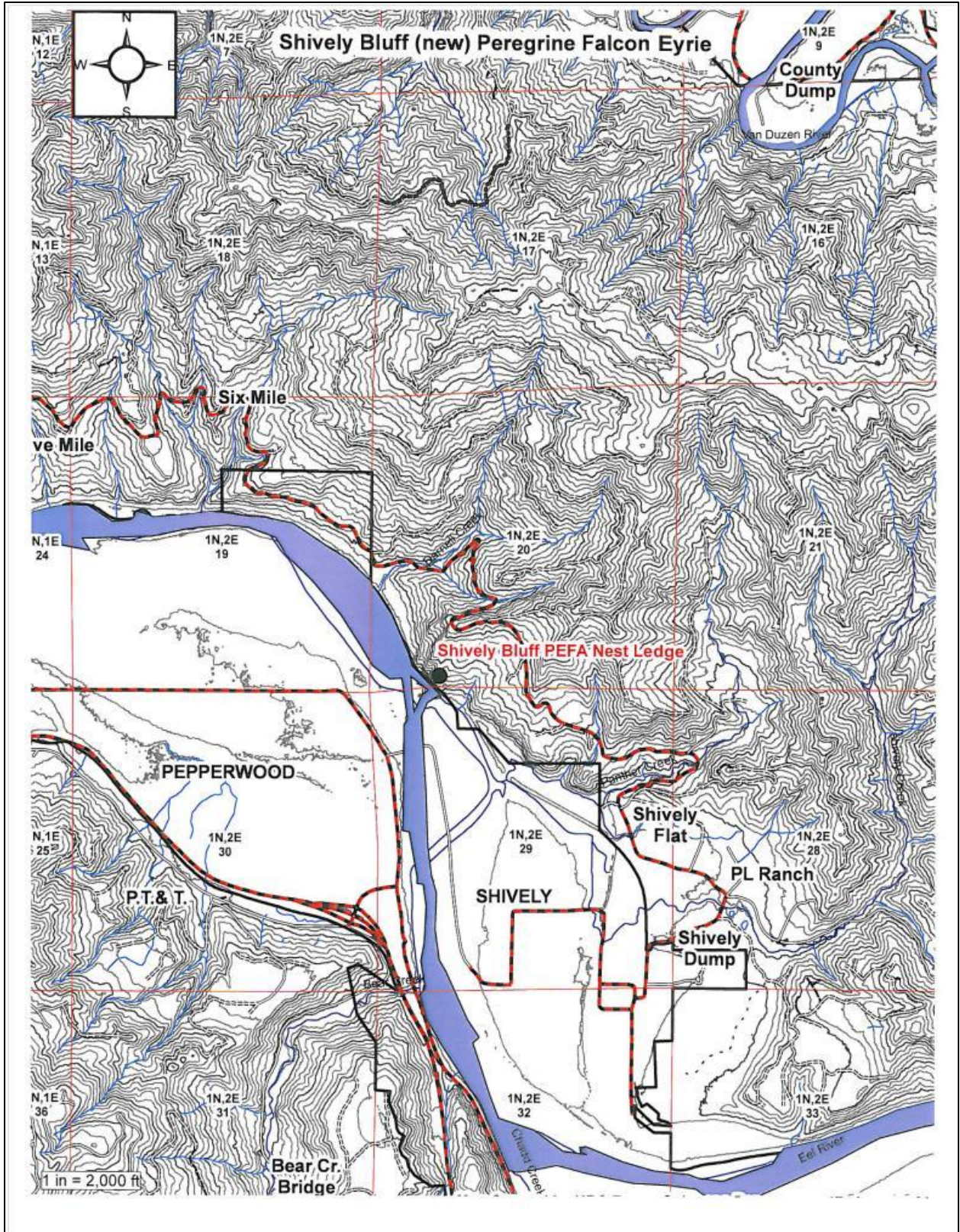


Figure 10. Shively Bluff Peregrine Falcon Eyrie.

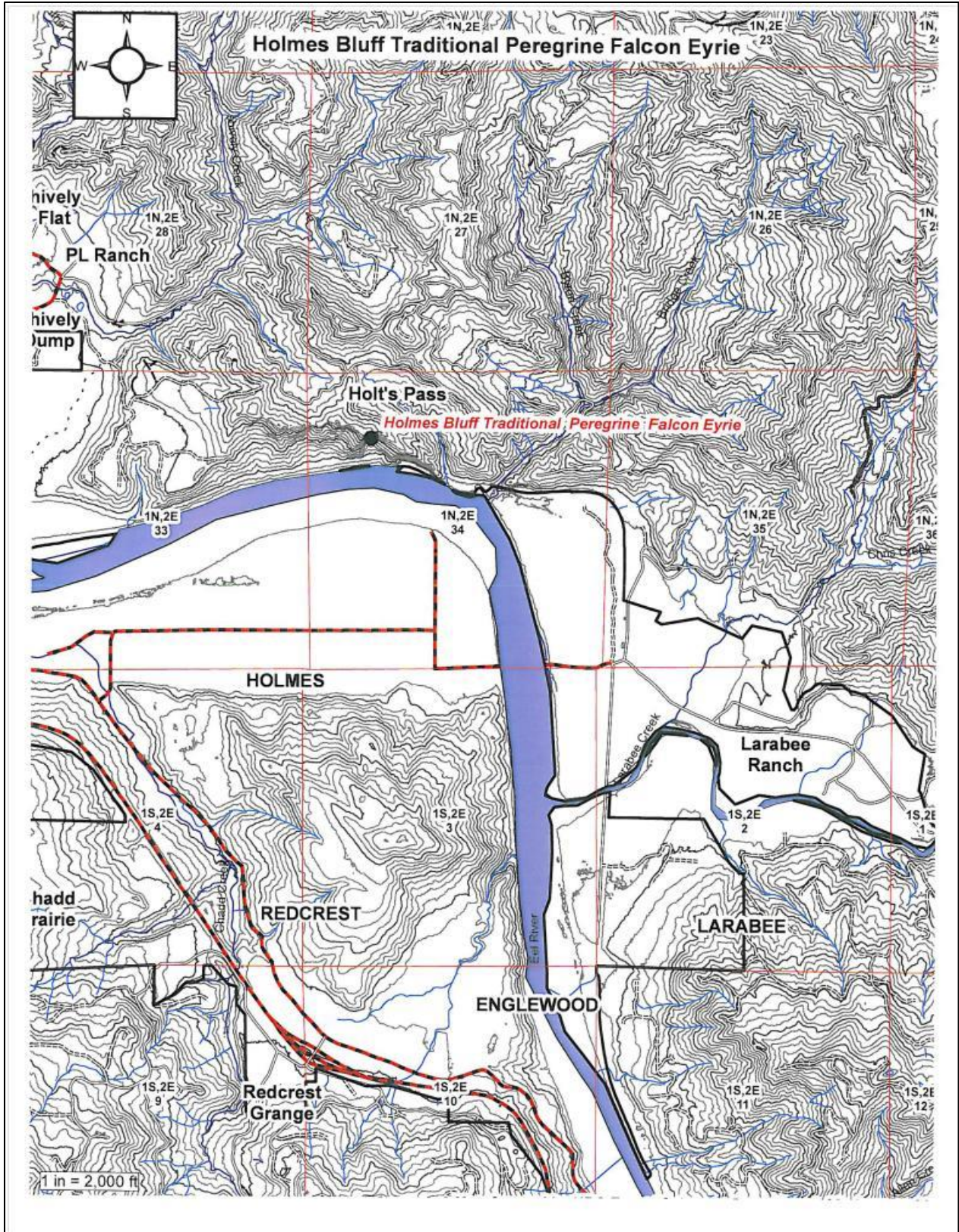


Figure 11. Holmes Bluff Traditional Peregrine Falcon Eyrrie.

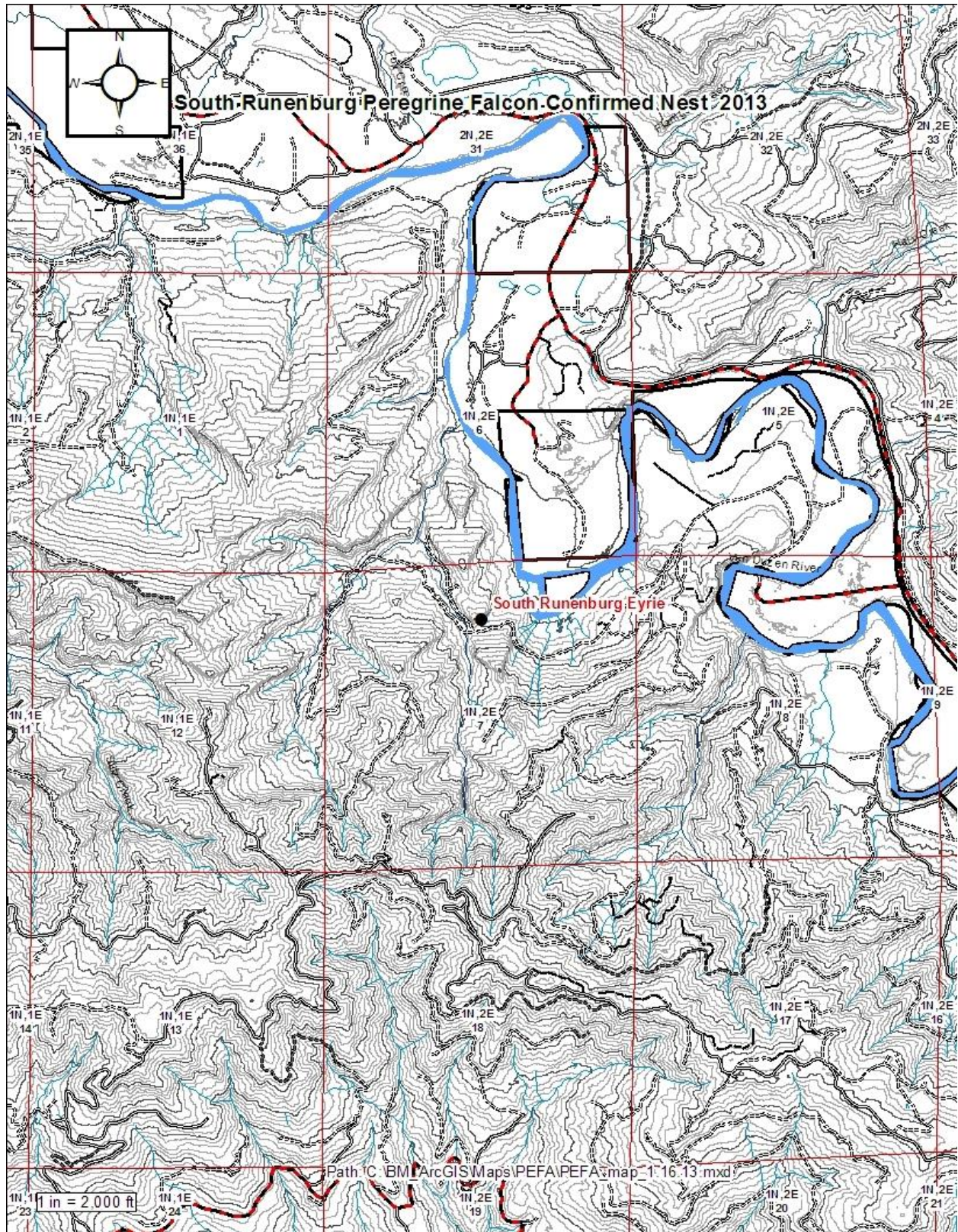


Figure 12. South Runenburg Peregrine Falcon Eyrie.

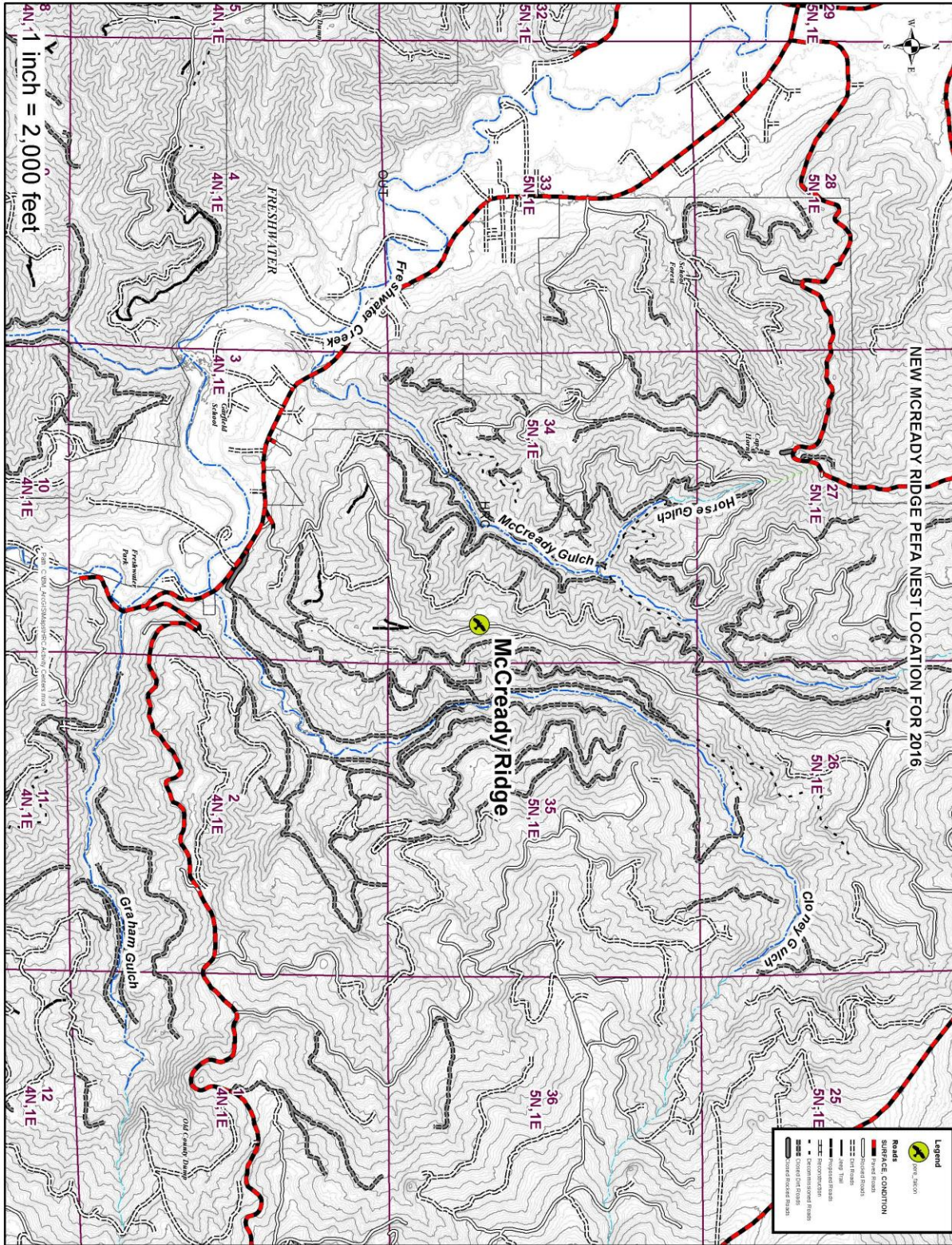


Figure 13. McCready Ridge Peregrine Falcon Eyrie.