



**Humboldt
Redwood™**

Peregrine Falcon Annual Report 2016

February 1, 2016



Cover photo: Scotia Bluffs nestlings (L. Morata, HSU).

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 2016 peregrine falcon breeding season we conducted surveys for peregrine falcon activity at two traditional eyries (nests) at Scotia Bluffs and Holmes Bluff, a third known nest in a large old-growth redwood snag at Tom Gulch, the relatively new nest at Shively Bluff that was confirmed in 2011, and the new nest that was discovered in 2013 along the Van Duzen River near Pamplin Grove (hereafter South Runenburg). In addition, a new tree nest was discovered in the Freshwater Creek watershed on McCready Ridge.

Surveys were to monitor the eyries for possible nesting activity, 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 Scotia and Holmes nests were occupied this year. The Shively Bluff and South Runenburg sites had peregrine presence, but no nesting activity. No peregrine activity was observed at the Tom Gulch site. The new site at McCready Ridge was occupied. There were three peregrine nestlings at the Holmes eyrie. The Scotia pair appeared to be nesting but may have failed. We were unable to determine reproductive outcome at the McCready site. The pair was detected at Shively but nesting activity was not observed. At South Runenburg we had audio contact only.

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 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. Survey locations and dates are in Table 1.

Table 1. 2016 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)	4/4/16	No	4/28/16	No	5/24/16	No	NA	NA
Scotia Bluffs	Monitor only	Monitored by HSU	PN	-	-	-	PNF?	NA	NA
Holmes Bluff	Monitor only	3/31/16	PN	4/2/16	PN	6/8/16	PN3J	NA	NA
Shively Bluff	Monitor only	4/5/16	NC	5/6/16	PU	-	-	NA	NA
South Runenburg	Westside (15-121)	3/31/16	NC	5/24/16	NC	6/2/16	Audio only	NA	NA
McCready Ridge	Lower Cloney (16-112)	6/24/16	PN	-	-	-	-	NA	NA

RESULTS

In 2016 the Scotia, Holmes, Shively, and S. Runenburg territories were all occupied by a pair of peregrine falcons, or a single peregrine (S. Runenburg). Nesting was confirmed at Scotia and Holmes, but the Scotia nest may have failed. Three nestlings were confirmed at the Holmes nest. No peregrine activity was observed at Tom Gulch, a single peregrine was heard at S. Runenburg, and nesting activity was not observed at Shively Bluff (Table 2). Brief notes on the individual sites and nest ledge locations are included below.

The percent of known territories occupied in 2016 was 83.3% (5 of 6), compared to a mean of 87% over the period 1999-2016 (Figure 1). The reproductive rate (measured as number of juveniles per occupied territory) was 0.6 in 2016, compared to a mean of 0.77 over the period 1999-2016 (Figure 2), and declined following a five-year period (i.e., 2011 – 2015) with much higher reproductive rates.

Table 2. Status of HRC peregrine falcon eyries by year (if known).

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

NC = no contact, U = unknown status, PN = pair nesting, PU = pair unknown, PF = pair failed, SA = subadult.

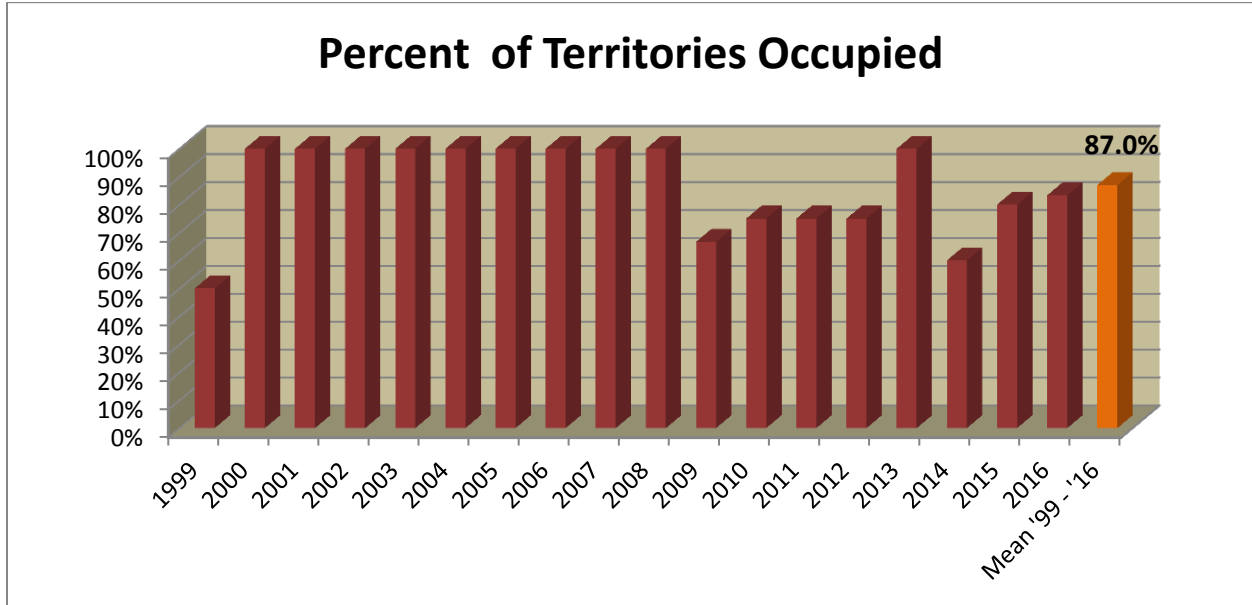


Figure 1. Percent of territories occupied.

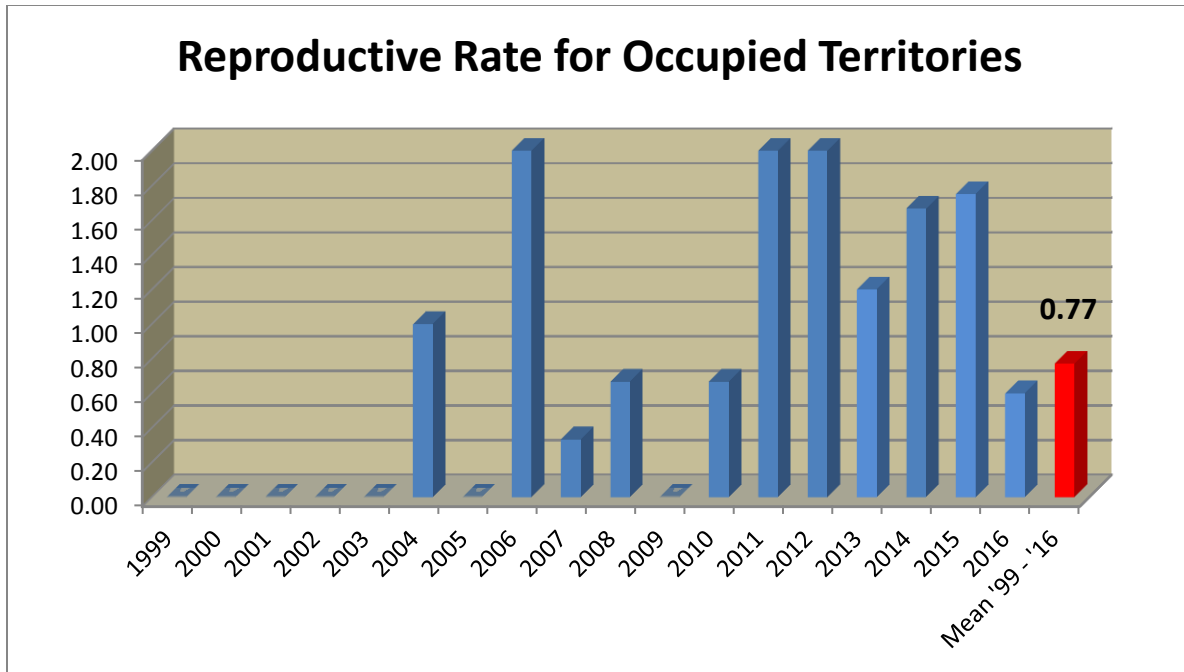


Figure 2. Reproductive rate for occupied territories.

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. From 2014 to 2016 no operations were planned near the site, but surveys were conducted in preparation for future operations on the McCloud-Shaw THP, as well as potential road and stream restoration projects. No peregrine activity was noted on three visits each in 2014, 2015, and 2016 (Table 1). No osprey activity was noted either from 2014 to 2016. Northern spotted owl (*Strix occidentalis caurina*) survey visits to activity site 331 for the 2014 - 2016 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

The Scotia Bluffs traditional cliff site was occupied by a pair of falcons again this year, with the female seeming to be incubating in the 2015 nest ledge (Morata, pers. comm.). 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 also 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 (see cover photo). However, Morata (pers. comm.) found that the male peregrine's transmitter had stopped transmitting. On a follow-up visit they 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 transmitted 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 continued to exhibit successful reproduction in 2016, with three nestlings produced. After three consecutive years of successful nesting from 2011- 2013, the nest did not appear to fledge any young in 2014. The most recent eyrie is higher on the bluff face and farther downriver than previous ledges (i.e. until 2011) (Figure 5). Three juveniles were seen on 8 June. An extremely unfortunate human drowning occurred at Holmes on 5 June, 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 the 8 June visit on which the female was observed feeding the three young, and the male was also observed on a nearby perch.



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

SHIVELY BLUFF

At Shively Bluff this season a pair of peregrines with unknown status, probably not nesting, was observed on two visits to the site. No peregrine observations were obtained on the 5 April visit. A subsequent visit on 6 May resulted in observations of the adult pair exhibiting territorial behavior, however no nesting behavior was observed. 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.).



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

SOUTH RUNENBURG

In late August of the 2012 breeding season a daytime spotted owl field visit resulted in the observation of a peregrine falcon flying and vocalizing near a bluff along the Van Duzen River east of Carlotta in an area referred to as Runenburg Camp. During 2013 surveys, an adult female peregrine and two nestlings were observed at the ledge, which is relatively low on the cliff but well obscured by vegetative cover (Figure 7). Monitoring conducted in 2014 had negative results. In 2015 a nesting pair with two nestlings was confirmed on 24 April. Fledging was not confirmed. One spot check, and two full survey visits were conducted at the site in 2016, which resulted in an audio contact only of a peregrine at this location.



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

MCCREADY RIDGE

On 23 June a biologist conducting a daytime spotted owl visit in the Freshwater watershed had a peregrine falcon observation. We conducted a follow-up visit to this observation on 24 June and located an occupied nest tree, as determined by a prey exchange and observation of the female flying to a nest cavity/ledge. The tree is a large residual old growth tree that stands alone in a larger stand of young growth (Figure 8). Reproductive success was not determined.



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

DISCUSSION AND RECOMMENDATIONS

Occupancy and reproduction for the (as of 2016) six known peregrine falcon sites on or adjacent to HRC lands continues to be relatively high over the past six seasons, although there was a

decline in 2016. Of the six known peregrine falcon eyries monitored during the 2016 season, five sites were occupied (83% occupancy). Tom Gulch was not occupied and no nesting occurred there. At least three juvenile peregrines were produced (Holmes Bluff) for a reproductive rate of 0.77 young per occupied territory.

There were no operations within 0.5 mile of any of the occupied eyries, with the exception of S. Runenburg (following nest monitoring), and use of the Shively Road, as discussed in the property-wide 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 new 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. As exhibited with the Holmes situation this season, it may be that nesting activities are often well along (e.g. young are hatched) by the time that significant disturbance by the public or agencies begins near the bluffs.

2017 SURVEYS

Surveys in 2017 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

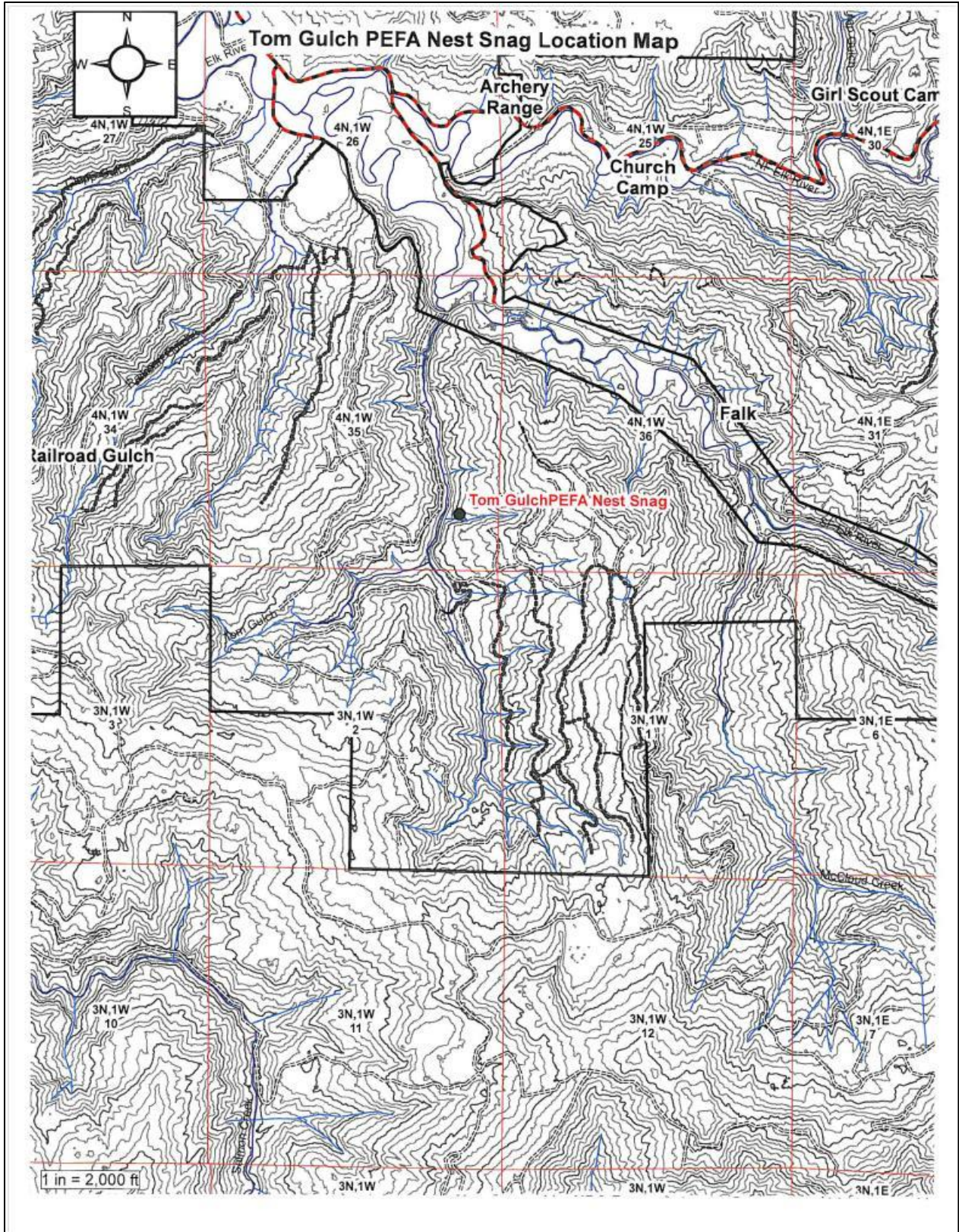


Figure 8. Tom Gulch Peregrine Falcon Nest Snag Location Map.

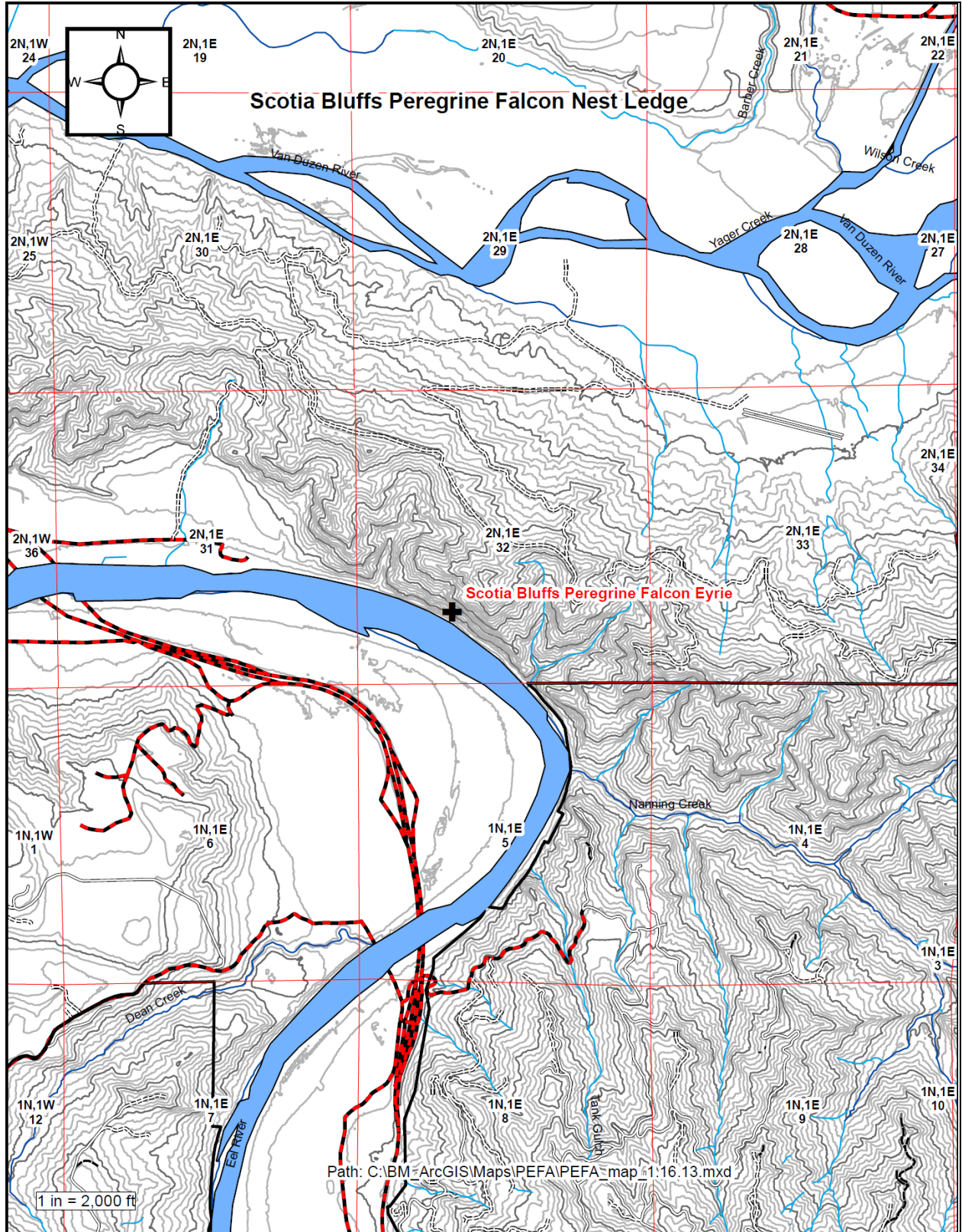


Figure 9. Scotia Bluffs Peregrine Falcon Nest Ledge.

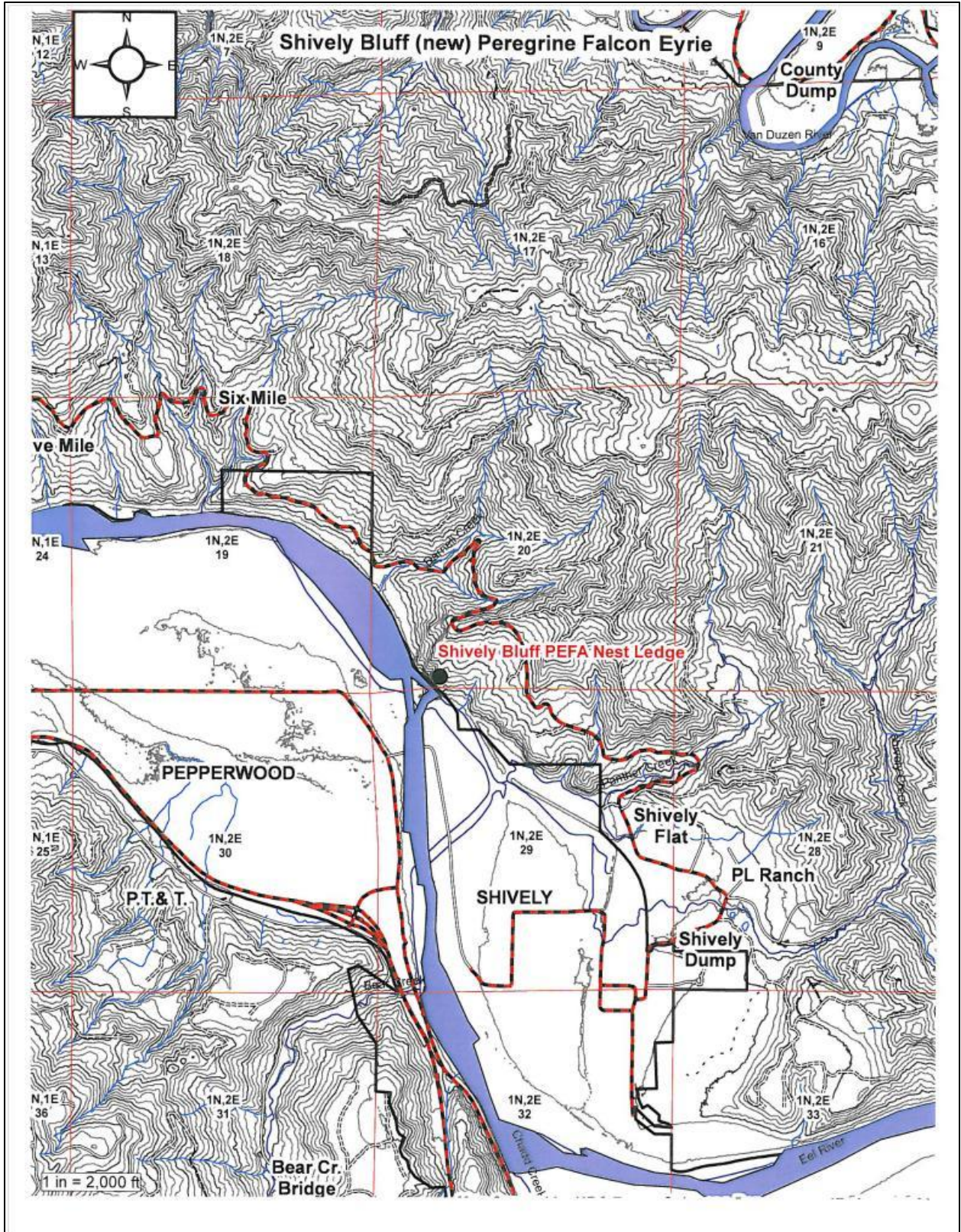


Figure 10. Shively Bluff Peregrine Falcon Eyrie.

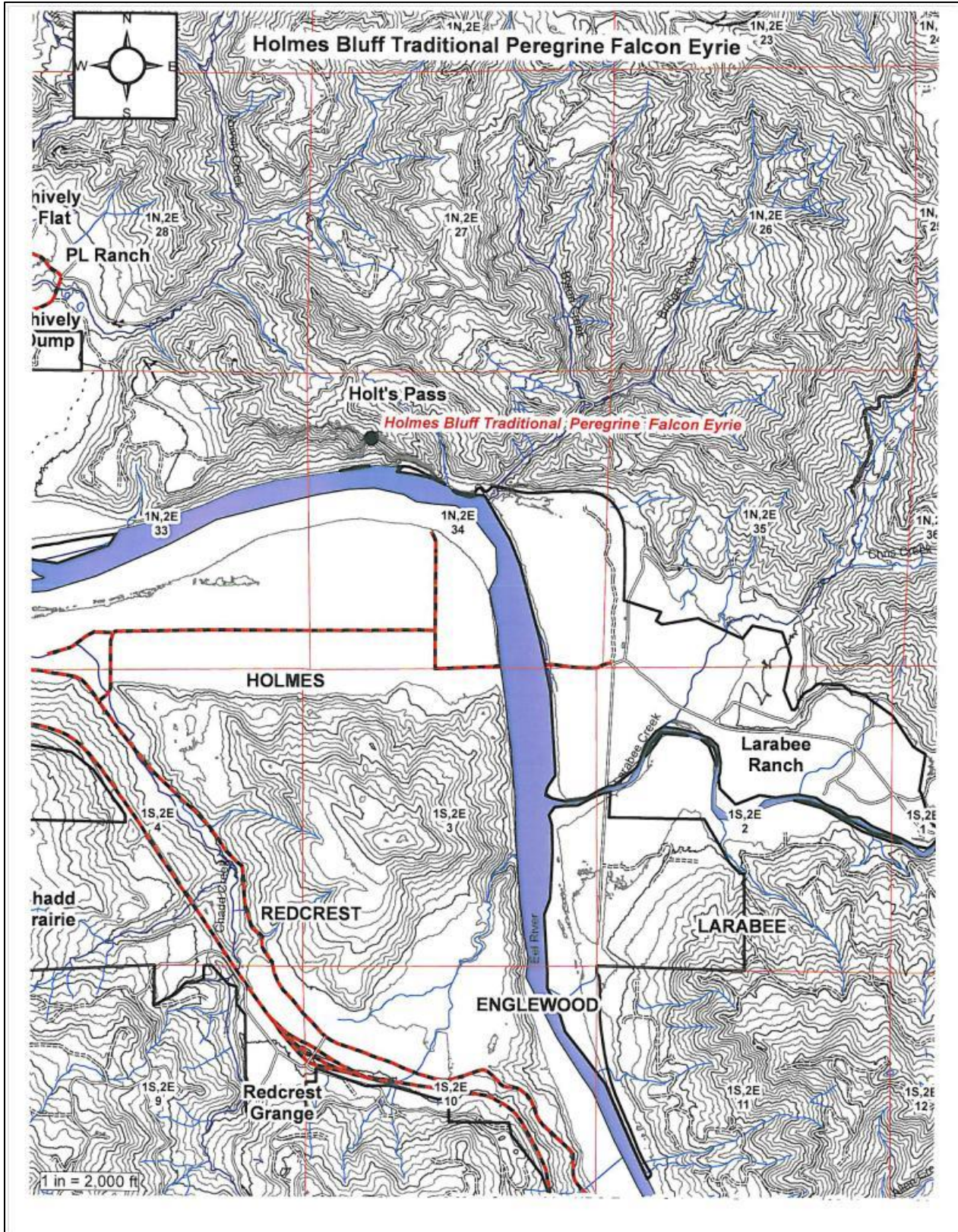


Figure 11. Holmes Bluff Traditional Peregrine Falcon Eyrrie.

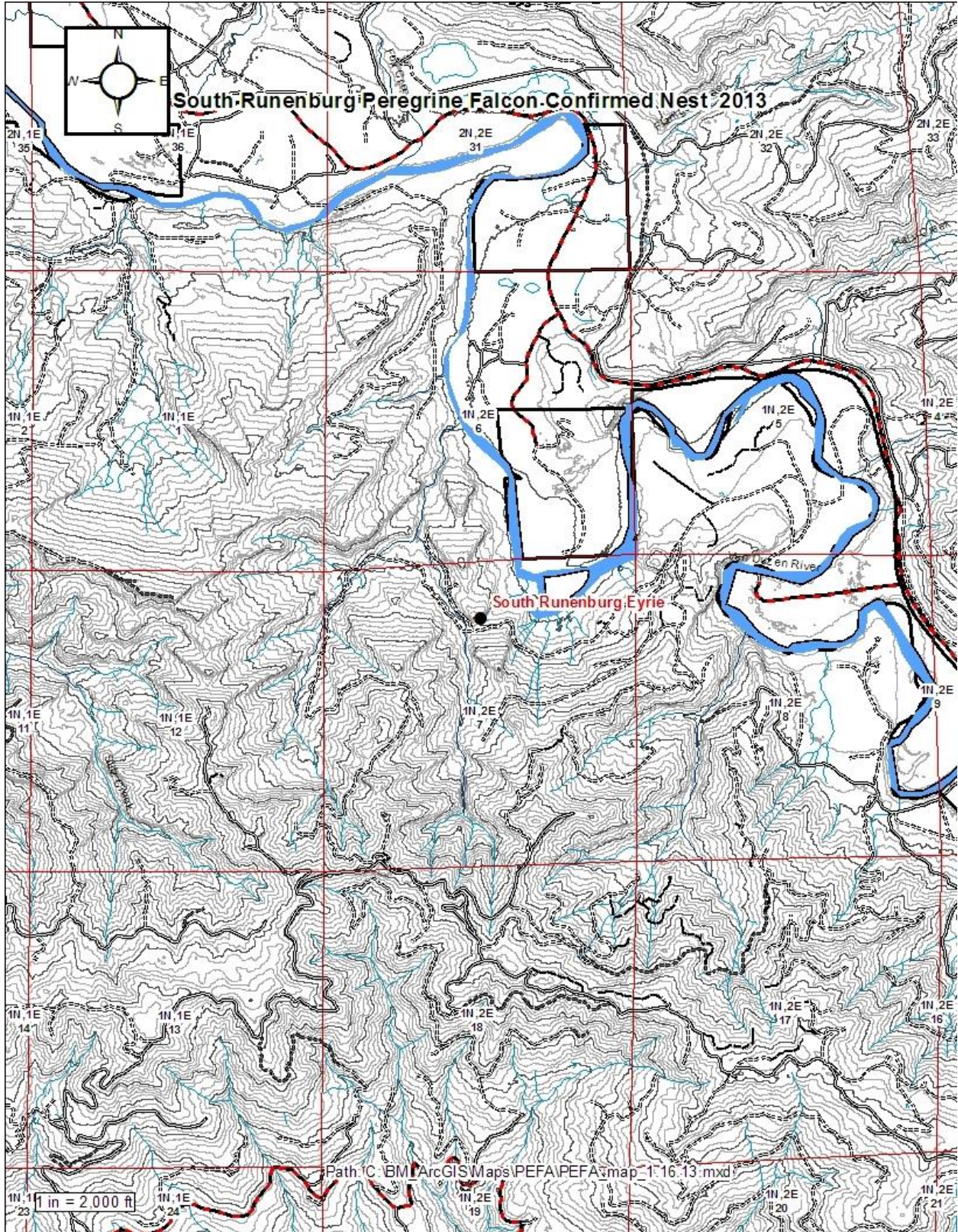


Figure 12. South Runenburg Peregrine Falcon Eyrrie

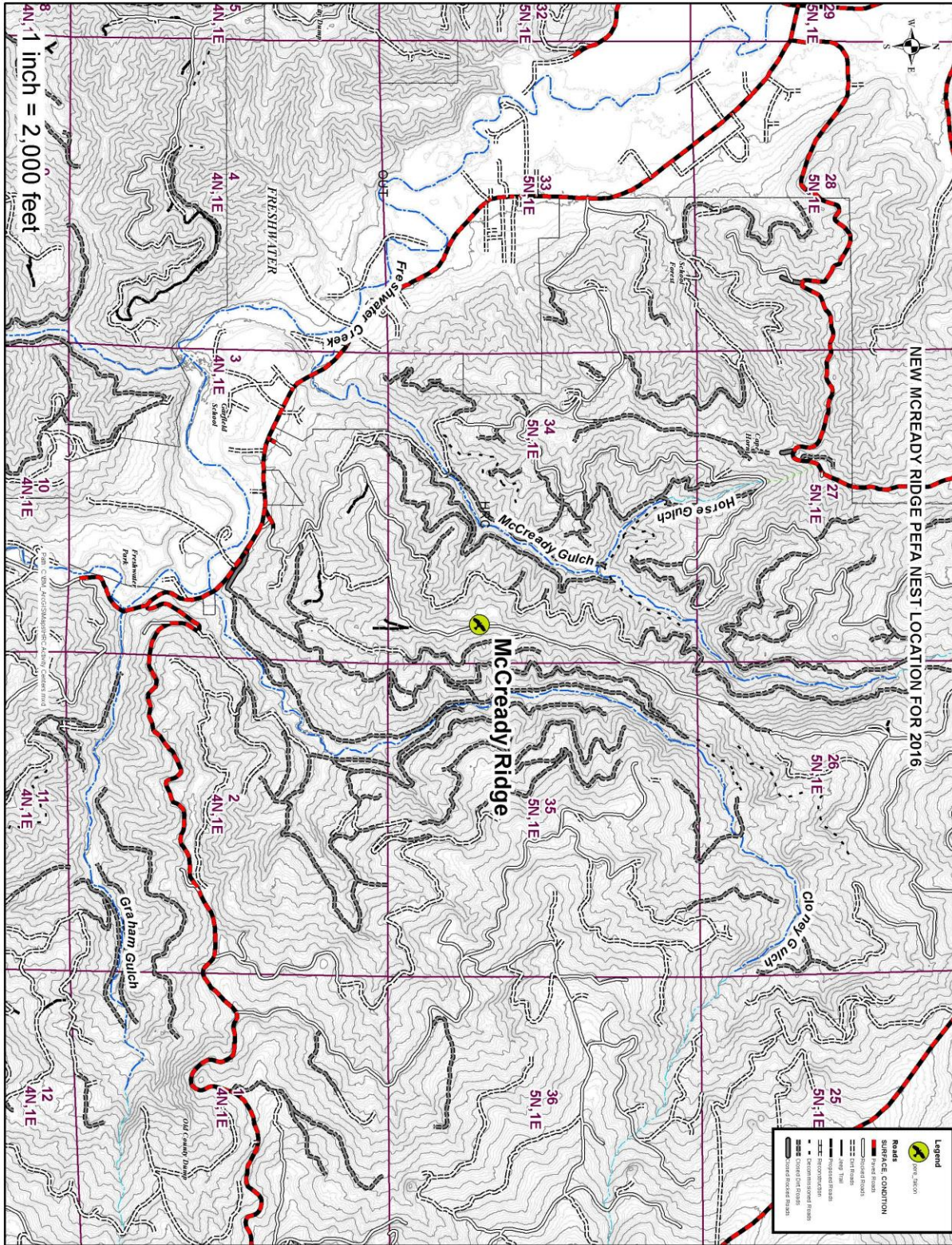


Figure 13. McCready Ridge Peregrine Falcon Eyrie