

**HABITAT ASSESSMENTS
FOR THE FOOTHILL YELLOW-LEGGED FROG,
CALIFORNIA RED-LEGGED FROG,
WESTERN POND TURTLE,
AND AMERICAN BADGER
AT THE PROPOSED YAN CUI PROJECT SITE,
POINT REYES STATION, MARIN COUNTY, CALIFORNIA**

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TABLE OF CONTENTS

SUMMARY	1
1.0 INTRODUCTION.....	1
2.0 PROJECT DESCRIPTION AND SETTING.....	2
3.0 METHODS	3
4.0 RESULTS AND DISCUSSION	3
5.0 CONCLUSIONS	6
6.0 REFERENCES.....	6
7.0 APPENDIX	8
California Red-Legged Frog Habitat Assessment Form.....	9

FIGURES

Figure 1. Location of 82-acre Yan Cui Project site next to Point Reyes Station.....	2
Figure 2. Locations of CRLF and WPT observed on the Yan Cui Project site.....	4
Figure 3. Locations of FYLF, CRLF, WPT, and AB within 5.0 miles of the Project site.....	6

SUMMARY

This report describes habitat assessments for the federally threatened California red-legged frog (*Rana draytonii*, hereafter CRLF), proposed federally-threatened western pond turtle (*Actinemys marmorata*, WPT), and California species of special concern foothill yellow-legged frog (*R. boylei*, FYLF) and American badger (*Taxidea taxus*, hereafter AB) at the location of the approximately 82-acre Yan Cui Project site just to the east Point Reyes Station, Marin County California.

The Project site consists largely of rolling hills and grasslands with a mosaic of non-native grasses. There are 5 small drainages on site with patches of associated woodlands and shrubs. The largest one is to the north, drains to Tomasini Canyon, and contains 2 perennial ponds. The other 4 smaller ones are on the south side of the site, one of which contains an intermittent pond, and are connected hydrologically to Lagunitas Creek, which lies about 0.25 miles to south of the property on Point Reyes Petaluma Road. Introduced and native trees have been recently planted in some of the open fields. The area has an elevational range of approximately 80-320 feet.

In the upper pond on the tributary to the north, an adult CRLF was observed on May 21, 2024 and an adult and subadult WPT were additionally observed there on June 27, 2024. These records confirm that CRLF and WPT are present on site, something that is to be expected since there are multiple additional records for these species in the California Natural Diversity Data Base from within 1.25 miles to the southwest, west, and northwest of the Project site. The habitat is suitable for the reproduction of both species, despite the presence of introduced bullfrogs (*Lithobates catesbeianus*) and western mosquitofish (*Gambusia affinis*).

The closest records for FYLF lies 2.25 miles to the east in the Nicasio Creek drainage. The closest records for AB lie 2.75 miles to the north and 2 miles to the southwest. The lack of any suitable stream habitats (for FYLF) and the paucity of burrowing small mammals (for AB) precludes the presence of these species on site.

1.0 INTRODUCTION

A proposed lot division for the 82-acre Yan Cui Project site adjacent to Point Reyes Station in Marin County, California has been filed (Figure 1). Since the site lies within the historic range for the federally threatened California red-legged frog (*Rana draytonii*, hereafter CRLF), proposed federally-threatened western pond turtle (*Actinemys marmorata*, WPT), and California species of special concern foothill yellow-legged frog (*R. boylei*, FYLF) and American badger (*Taxidea taxus*, hereafter AB) [Stebbins 2003, Jameson and Peeters 1988], and is near occupied Critical Habitat for CRLF (USFWS 2010), habitat assessments were conducted for these species.

2.0 PROJECT DESCRIPTION AND SETTING

The 82-acre project site is located just east of Hwy 1 and north of the Point Reyes Petaluma Road, immediately adjacent to Point Reyes Station, Marin County, California (Figure 1). The only structures on site are the corrals for Point Reyes Arabian Adventures, a horse riding enterprise that grazes horses (*Equus ferus caballus*) on the property.

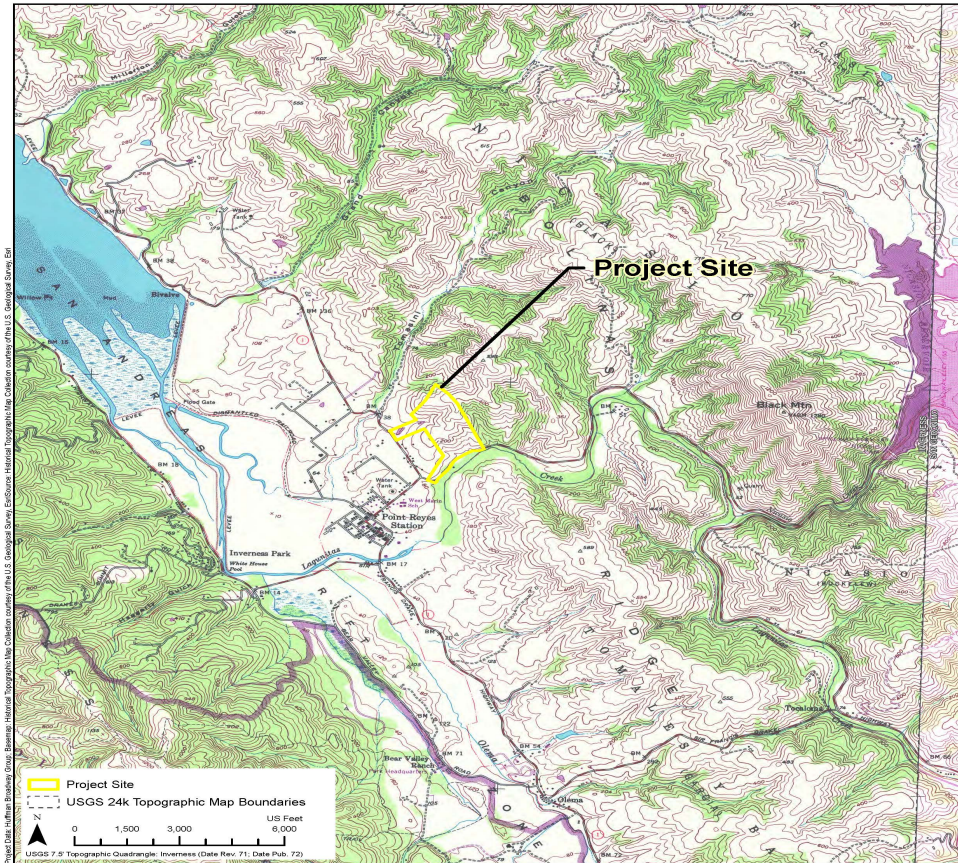


Figure 1. Location of the 82-acre Yan Cui Project near Point Reyes Station
PRS Vacant Lots Subdivision by Cui
Point Reyes Station, Marin County, California

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Figure 1. Location of the 82-acre Yan Cui Project near Point Reyes Station.

The Project site consists largely of rolling hills and grasslands with a mosaic of non-native grasses that has historically been used for cattle (*Bos taurus*) grazing. There are 5 small drainages on site with patches of associated woodlands (especially willows (*Salix* sp.)) and shrubs. The largest one is to the north, drains to Tomasini Canyon, and contains 2 perennial ponds. The ponds apparently date from about 1971 based on published topographic maps of the area for 1972 (Inverness, CA 1972).

The other 4 smaller drainages are on the south side of the site, one of which contains an intermittent pond, and are connected hydrologically to Lagunitas Creek, which lies about 0.25

miles to south of the property on Point Reyes Petaluma Road. Introduced and native trees have been recently planted in some of the open fields. The area has an elevational range of approximately 80-320 feet.

The Project site has apparently not been previously surveyed for sensitive species. Botta pocket gopher (*Thomomys bottae*) and California vole (*Microtus californicus*) burrows are scattered throughout the more upland areas.

3.0 METHODS

The methods employed to produce this report include evaluating the suitability of habitat for CRLF, WPT, FYLF, and AB on site by conducting a reconnaissance-level site visit during the day by me on May 21, 2024. I followed the U.S. Fish and Wildlife Service protocol for the CRLF habitat assessment (USFWS 2005) and made observations regarding any amphibians, reptiles, and mammals observed, or potentially inhabiting the vicinity. Additionally, CRLF, WPT, FYLF, and AB occurrence records within 5.0 miles of the Project site (CNDDDB 2024) were mapped. Finally, I examined 7.5' USGS quadrangles and aerial photographs for potentially suitable aquatic and terrestrial habitats within a 5.0-mile radius of the site and connectivity of these habitats with the Project site.

4.0 RESULTS AND DISCUSSION

An adult CRLF was observed during my day visit of the Project site on May 21, 2024 (Figure 2; see Appendix). I did not observe any other amphibian species other than some Pacific treefrog (*Hyla regilla*) egg masses, larvae, juveniles, and adults.

Suitable breeding and rearing habitat for CRLF is generally characterized by dense, shrubby riparian vegetation associated with deep (>2.3 feet), still or slow-moving water (see Jennings and Hayes 1994, Jennings 1988, Hayes and Jennings 1988). Both of the inundated perennial ponds that I observed on site were sufficient to support a breeding population of CRLF.

Additionally, a juvenile and adult WPT were observed on site on June 27, 2024 by Robert F. Perrera of The Huffman-Broadway Group, Inc., (Figure 2). The turtles were photographed and verified by me.

As with CRLF, suitable breeding and rearing habitat for WPT is generally characterized by freshwater aquatic environments with some slack- or slow water (Jennings and Hayes 1994). Deep water pools are essential to allow WPT to escape from potential predators such as raccoons (*Procyon lotor*). Both of the inundated perennial ponds that I observed on site were sufficient to support a breeding population of WPT.

I observed western mosquitofish (*Gambusia affinis*) during my visit, and Robert F. Perrera photographed a bullfrog (*Lithobates catesbeianus*) in the upper pond on June 27, 2024.

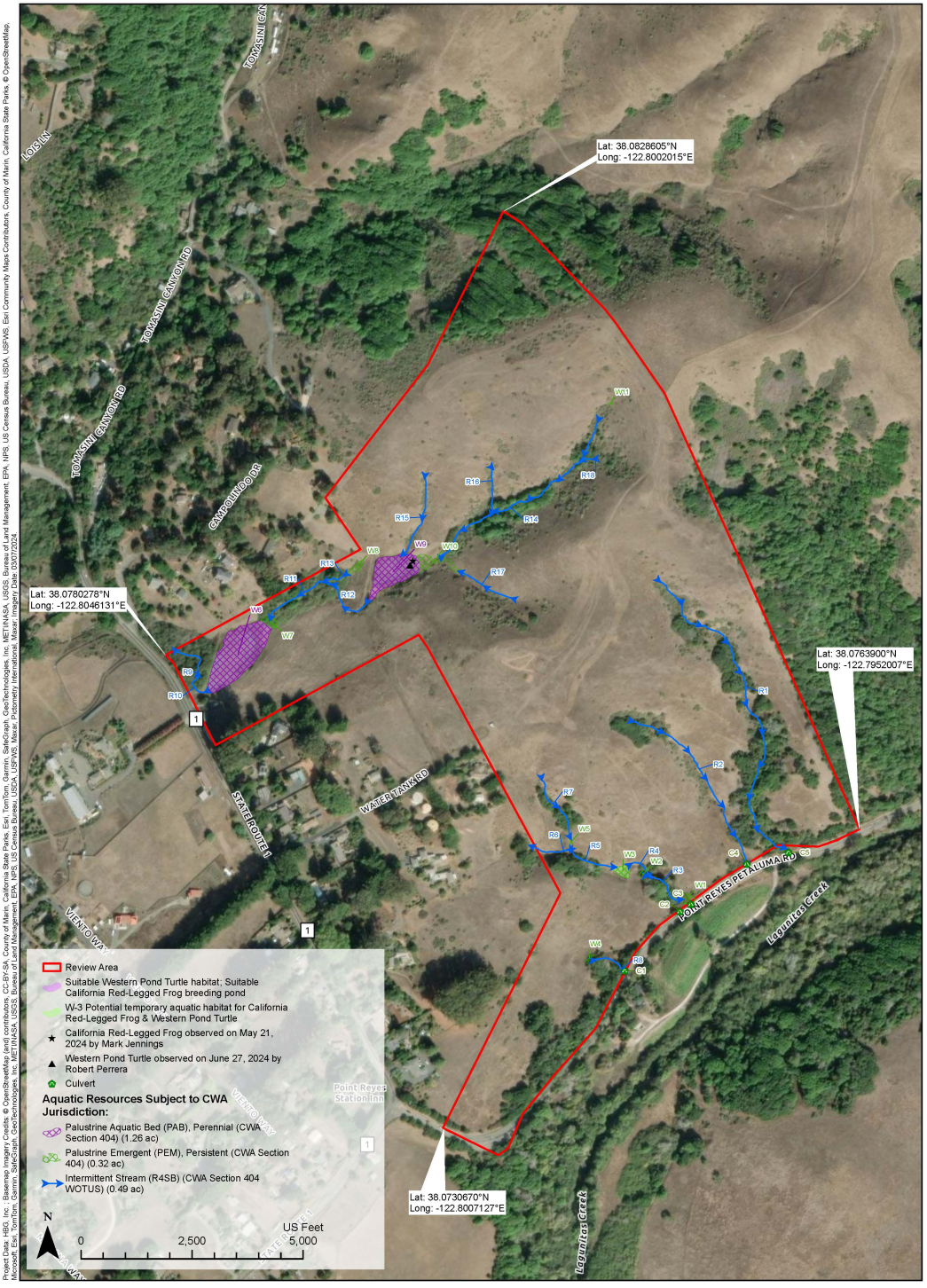


Figure 2. Locations of CRLF and WPT Observed on the Yan Cui Project Site
 PRS Vacant Lots Subdivision by Cui
 Point Reyes Station, Marin County, California

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Spatial Reference:
 Name: NAD 1983 2011 StatePlane California III FIPS 0403 FT US
 Scale: 1:25,169
 Date Map Created: 7/31/2024
 HBG GIS Analyst: Alga Gilmore & Daland Wing
 HBG PM: Robert Perrera

Figure 2. Locations of CRLF and WPT observed on the Yan Cui Project site.

Although both of these introduced species are known to have a negative effect on CRLF and WPT, I have observed them coexisting together at many pond locations on Point Reyes National Seashore over the past 25 years (Jennings, unpubl. data). Populations of CRLF and WPT likely are able to survive because the coastal locations of Marin County are covered in fog for much of the year. This lowers environmental temperatures that favor CRLF reproduction and limit bullfrog reproduction. Thus, bullfrogs cannot rapidly build up a large enough population to eliminate the local CRLF and WPT populations (as they do in more inland areas that are much warmer throughout the spring, summer, and fall months).

Introduced western mosquitofish have a negative effect on WPT by directly competing for some of the same food resources (aquatic invertebrates) [Jennings and Hayes 1994]. This is especially true for hatchling and small turtles.

The other intermittent streams and intermittent pond, labeled as W3 on Figure 2, on site were unsuitable habitat for FYLFs because of their small size, lack of gravel or rock substrate, and extensive cover of streamside vegetation. The small intermittent pond was completely dry by the time of my visit in early May 2024. It therefore probably only contains water during the wet winter months and dries by the early spring.

A review of the most recent California Natural Diversity Database files (CNDDDB 2024) revealed that there are multiple additional records for CRLF and WPT in the California Natural Diversity Data Base from within 1.25 miles to the southwest, west, and northwest of the Project site. Thus, it seems logical that the CRLF and WPT on the Project site are part of a larger population of these animals in the local area.

The closest records for FYLF lies 2.25 miles to the east in the Nicasio Creek drainage. The closest records for AB lie 2.75 miles to the north and 2 miles to the southwest. The lack of any suitable stream habitats (for FYLF) and the paucity of burrowing small mammals (for AB) precludes the presence of these species on site. Additionally, I did not see any AB burrows or evidence of AB foraging for small mammals on site. No California ground squirrels (*Otospermophilus beecheyi*) or their burrows were observed during my visit.

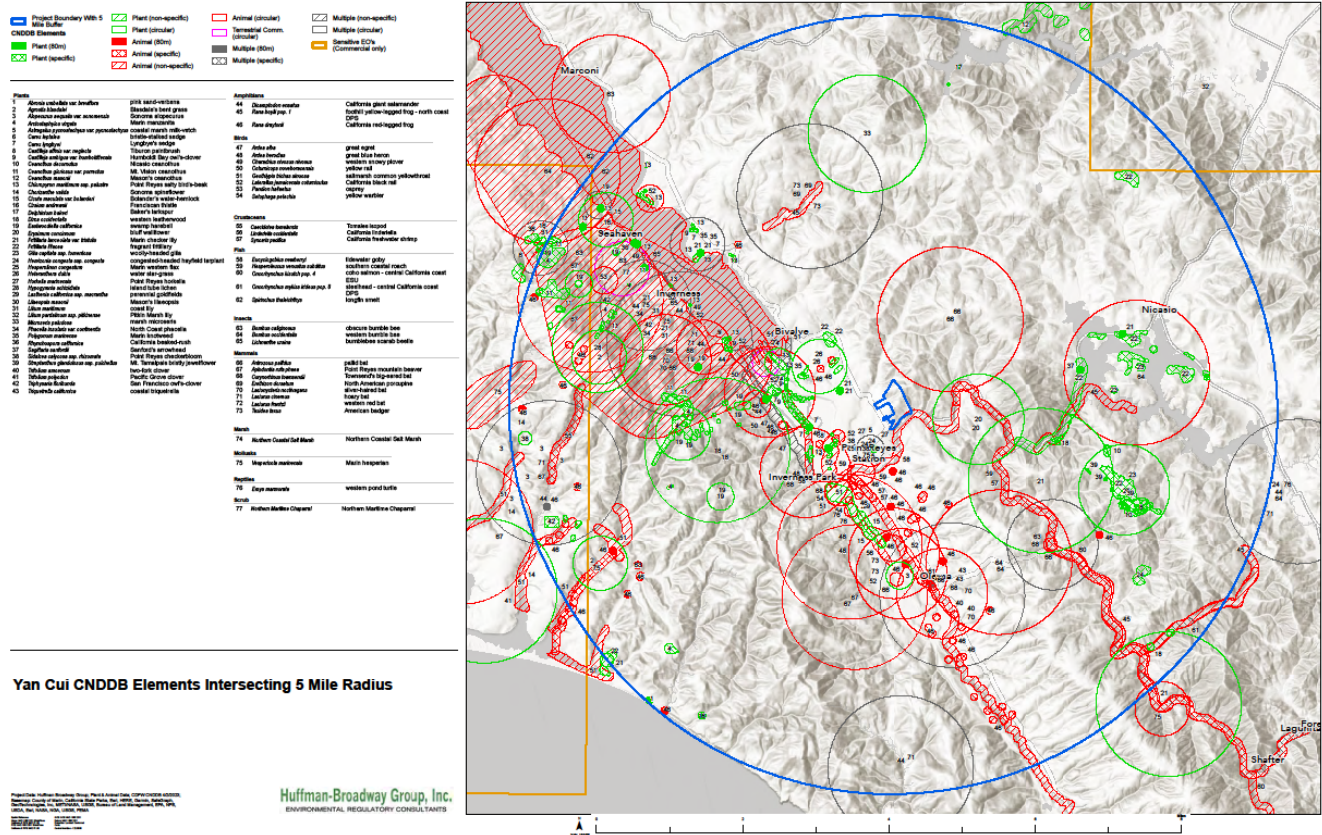


Figure 3. Locations of FYLF, CRLF, WPT, and AB within 5.0 miles of the Project site.

5.0 CONCLUSIONS

CRLF and WPT were observed on site along with introduced bullfrogs and western mosquitofish. The native species are presumed to part of a larger breeding population in the area. No suitable habitats were found for FYLF and AB and they are not expected to be on the Project site or on adjacent properties within 2.0 miles. Therefore, it is my professional opinion that issues regarding the presence of breeding populations of CRLF and WPT on site need to be addressed as part of any proposed development plans.

6.0 REFERENCES

California Natural Diversity Database (CNDDDB). 2024. Database printout for the Inverness, CA and San Geronimo, CA 7.5' USGS quadrangle.

Hayes, M. P., and M. R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylei*):

implications for management. Pages 144-158 In: R. C. Szaro, K. E. Severson, and D. R. Patton (technical coordinators). Management of Amphibians, Reptiles and Small Mammals in North America. Proceedings of the Symposium, July 19-21, 1988, Flagstaff, Arizona. U. S. Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. General Technical Report (RM-166):1-458.

Jameson, E. W., Jr., and H. J. Peeters. 1988. California mammals. University of California Press, Berkeley, Los Angeles, and London. California Natural History Guides (52):xi+403 p.

Jennings, M. R. 1988. Natural history and decline of native ranids in California. Pages 61-72 In: H. F. DeLisle, P. R. Brown, B. Kaufman and B. M. McGurty (editors). Proceedings of the conference on California herpetology. Southwestern Herpetologists Society, Special Publication (4):1-143.

Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. iii+255 p.

Stebbins, R. C. 2003. A field guide to western reptiles and amphibians. Third edition. Houghton Mifflin Company, Boston, Massachusetts. xiii+533 p.

USFWS (U.S. Fish and Wildlife Service). 2005. Revised guidance on site assessments and field surveys for the California red-legged frog [dated August, 2005]. 26 p. (typewritten).

USFWS (U.S. Fish and Wildlife Service). 2010. Endangered and threatened wildlife and plants; revised designation of critical habitat for the California red-legged frog. Federal Register, 75(51):12816-12959. [Wednesday, March 17, 2010].

7.0 APPENDIX

Data Sheet from Appendix D of the *Revised guidance on site assessment and field surveys for the California red-legged frog* (USFWS 2005) completed on May 21, 2024.

California Red-Legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____ (FWS Field Office) (date) (biologist)
--

Date of Site Assessment: 05/21/2024
(mm/dd/yyyy)

Site Assessment Biologists: Jennings, Mark _____
(Last name) (first name) (Last name) (first name)

_____ _____
(Last name) (first name) (Last name) (first name)

Site Location: Marin, Point Reyes Station @ 11925 Hwy 1
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S)

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: <u>Yan Cui Project site</u>
Brief description of proposed action: <u>To split up the 82 acre site into a number of smaller parcels for development.</u>

- 1) Is this site within the current or historic range of the CRF (circle one)? YES NO
- 2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

2 PONDS:

Size: 1.26 acres total Maximum depth: ~5 feet

Vegetation: emergent, overhanging, dominant species: Ponds covered with duckweed. Emergents include tules, cattails, and sedges. Upper banks with willows, Himalayan blackberries, and coyote bush.

Substrate: mud, sand, and small rocks.

Perennial or Ephemeral (circle one). If ephemeral, date it goes dry: _____

California Red-Legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 3 ft.
Depth at bank full: 1 ft.
Stream gradient: 4%

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: One small stock pond 0.32 acres in size
Maximum Depth of stream Pools: 2 feet

Characterize non-pool habitat: run, riffle, glide, other: Streams on sides dry during visit.

Vegetation: emergent, overhanging, dominant species: Grasses, Overstory of willows, coyote bush, Himalayan blackberries, and western poison oak

Substrate: Rock and cobble.

Bank description: Ruderal grasslands

Perennial or Ephemeral (circle one). If ephemeral, date it goes dry: Probably in April of each year.

Other aquatic habitat characteristics, species observations, drawings, or comments:
Western mosquitofish observed in perennial ponds. Later, on June 27, 2024, Robert F. Ferrera of The Huffman-Broadway Group, Inc., photographed a subadult and adult western pond turtles in the same upper pond. He also photographed a bullfrog at the same location.
Site used for grazing horses and other livestock. Owner has been planting native and introduced trees in some of the open fields.
One adult California red-legged frog observed in the upper pond by new CNDDB form filled out and submitted to the California Department of Fish and Wildlife.

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs.
3. Maps with important habitat features and species locations