
January 28, 2022

Charlie Traboulsi
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Re: California Tiger Salamander Assessment for the 8841 Old Redwood Highway Project, in Cotati, California

Dear Charlie,

The purpose of this letter is to describe the methods and results of a protocol-level California tiger salamander (CTS; *Ambystoma californiense*) site habitat assessment for the property located at 8841 Old Redwood Highway, in Cotati, California (APN 046-223-018-000; Project Site). This letter is being prepared for submittal to the City of Cotati for review under CEQA, regarding the status of CTS on the Project Site. For this purpose, this letter addresses the potential for impact to CTS, and recommended measures to ensure avoidance.

Methods

The site assessment described in this report was performed in accordance with the October 2003 USFWS Interim Guidance on Site Assessment and Field Surveys for Determining Presence or A Negative Finding of the California Tiger Salamander. I, Dana Riggs a Principal Biologist with a background in wildlife ecology and more than 20 years of experience performing habitat assessments and protocol surveys for CTS statewide and in Sonoma County, performed the site assessment on Friday January 14. She was accompanied by Sol Ecology Senior Biologist Drew Engstrom, who has extensive Bay Area CTS survey and handling experience, including work at comparable sites along urban-grassland interfaces.

Prior to the site visit, Sol Ecology reviewed available information and the CNDDDB database¹ for records on CTS sightings within 3.1 miles of the Project Site. Sol Ecology also analyzed available aerial photography to identify potential breeding/aquatic and upland habitats on the site and surrounding vicinity and whether barrier-free corridors are present to nearby suitable habitats and/or documented occurrences. During the site assessment, the Sol Ecology biologists conducted transects across the entire property to determine whether suitable habitat elements (e.g., suitable water bodies, small-mammal burrows, or other suitable refugia) are present to support CTS. Surrounding land uses located between the site and nearby suitable occupied habitats were also evaluated. A map of the property and surrounding land uses is provided in the attached Figure 1.

¹ California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch, Sacramento, CA.

Results

Element 1. Is the project site within the range of the CTS?

The project site is within the range of the CTS and is located within the Santa Rosa Plain Conservation Strategy Area. The site is located within an area designated as “may affect CTS, but no effect to listed plants” as shown Conservation Strategy Map².

Element 2. What are the known localities of CTS within the project site and within 3.1 miles (5 km) of the project boundaries?

There are 18 documented occurrences (or localities) of CTS within 3.1 miles of the project site, 6 of which are within 1.3 miles, which is the typical distance CTS are known to migrate. There are no occurrences on the site. Figure 2 (attached) shows the location of these known occurrences respective to the project site. Four of the occurrences are breeding sites, while the remaining two are adult occurrences. Dense residential development separates the project site from all but one of these occurrences.

The nearest occurrence is located slightly greater than 2,200 feet from the Project Site (occurrence #1109). This occurrence is a breeding occurrence and includes a vernal pool surrounded by residential development with limited/fragmented surrounding grassland and a narrow riparian corridor. This occurrence includes three (3) separate observations, in April of 2009 an abundance of larvae were observed, in January of 2011 two (2) larvae were observed, and in February of 2015 eight (8) larvae were observed. This occurrence is considered extant. This occurrence is surrounded by dense residential development and numerous barriers between the breeding pool and the project site. It is unlikely CTS are able to travel from this occurrence to the project site based on these barriers.

The next nearest documented occurrence (#687) is located approximately 2,230 feet to the east in a roadside open drainage along Eucalyptus Road, to the east of Old Redwood Highway. The occurrence includes three (3) separate observations, in March of 2002 over twenty (20) larvae were observed, in December of 2002 one (1) adult was observed on road, and in January of 2019 one adult was found dead on the road. This occurrence is surrounded by open grassland with sparse ruderal development. This occurrence is also considered extant. Old Redwood Highway is the only dispersal barrier. It is conceivable CTS could disperse onto the project site from this location. However, there is also ample upland habitat surrounding this occurrence to the east of Old Redwood Highway.

The next nearest documented occurrence (#731) is located approximately 0.80 mile to the northwest, is a possibly extirpated occurrence where several individuals (CNDDDB occurrence data did not specify life stage) were found in the fall of 2000 near a pond surrounded by grass

² U.S. Fish and Wildlife Service. 2014. Draft Recovery Plan for the Santa Rosa Plain: *Blennosperma bakeri* (Sonoma sunshine); *Lasthenia burkei* (Burke’s goldfields); *Limnanthes vinculans* (Sebastopol meadowfoam); Sonoma County Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. vi + 132 pp

uplands near an apartment complex. This pond is bordered by residential development to the south and east and Highway 101 to the west with a fragmented grassland to the north. This site is also surrounded by dense residential to the south.

Occurrence (#21) is documented approximately one mile to the east off of Railroad Avenue where 2 adult males were found trapped in a ditch following a significant rain event in October of 2004. The site is surrounded by office development to the north, residential and vineyard to the west, equestrian facilities to the south, and hay production to the east; land use on-site consists of occasional hay production and is proposed for development. The only other occurrence in this area is considered extirpated. There are no known breeding habitats east of occurrence #687.

Two final occurrences (#57 and #12) were documented to the northeast of the site and are also separated by dense residential housing. Occurrence #57 was recorded in December of 2003 and is approximately 1.05 miles and #12 was recorded in April of 1995 and is approximately 1.25 miles from the Project Site. One adult was observed in a grassy swale (#57) near the west bound onramp of Highway 101. Three larvae were found in vernal pools on the northwest side of the Highway 101. Both occurrences are considered extant.

All 6 documented occurrence records of CTS located within 1.3 miles of the project site are in areas designated as “developed”, agricultural, “Semiagricultural” and “Native Vegetation” as shown on the Conservation Strategy Potential Effects Map. There are no known extant occurrences to the south or west of the project site within 1.3 miles.

Element 3. What are the habitats within the project site and within 1.24 miles (2 km) of the project boundaries?

The Project Site is located on a 7.15-acre parcel, located to the east of Highway 101, on the west side of Old Redwood Highway in south Cotati. The Project Site is situated on a gradual sloping grassland hill with signs of previous agriculture operations (chicken coops and orchard trees). Two small homes are located on the parcel along the eastern portion immediately adjacent to Old Redwood Highway. Aerial imagery shows old chicken coops along the south boundary, extending to the center of the parcel. The chicken coops were removed prior to the site assessment in the fall of 2021; evidence of previous foundations, compacted gravel driveways, and sparse debris were observed by the biologists. Several nonnative landscape trees are intermittently scattered in the Project Site and a recently removed strand of eucalyptus along the western boundary. The site contains approximately one (1.0) acre of impervious surfaces as mapped in 2013 by Sonoma County lidar data [includes some areas of gravel roads as observed on aerial images] as shown in Figure 1 (attached).³

³ Sonoma County Vegetation Mapping & LiDAR Program (Sonoma Veg Project). 2014. Vegetation, Habitat, and LiDAR Data for Sonoma County. Available at: <http://sonomavegmap.org/data-downloads/>. Most recently accessed: December 2022.

An earthen roadside drainage ditch runs along the west side of Old Redwood Highway, parallel along the eastern boundary of the parcel, traversing through approximately 900 SF of the Project Site. The ditch has been identified as subject to U.S. Army Corps of Engineers jurisdiction. The ditch exhibits some seasonal wetland habitat to the south beyond the Project Site that may potentially provide suitable breeding habitat for CTS. However, the section that runs along the east side of the Project Site lacks suitable water depth and inundation periods for CTS breeding habitat. There is no evidence of suitable breeding habitat within the Project Site, and aside from the roadside ditch to the south of the parcel, no evidence of breeding habitat was found. There are no ponds or areas of pooling water on the site, likely due to the sloped topography and previous land uses (chicken farming). Underlying soils include Zamora silty clay loam series, commonly found on the Santa Rosa Plain. Vegetation communities at the site are dominated by ruderal grassland habitat.

The Project Site is surrounded by ruderal residential development to the north and east with limited/fragmented surrounding grassland. Open and relatively undisturbed grassland habitat is present to the southeast. The current land use is (abandoned) agricultural with the two small single-family residences along old Redwood Highway. Several detached sheds (without foundations) and two gravel-base driveways are also present.

BRG: 203°S (T) LAT: 38.318412 LON: -122.700648 ±55ft ALT: 129ft



Photo 1 Looking West, grassy terrain with landscape trees and compacted disturbed surface

BRG: 214°SW (T) LAT: 38.318484 LON: -122.700349 ±26ft ALT: 129ft



Photo 2 Looking West from residential yard

BRG: 130°SE (T) LAT: 38.318817 LON: -122.699950 ±16ft ALT: 125ft



Photo 3 Looking South at shallow portion of roadside ditch that traverses the property along Old Redwood Hwy.

BRG: 40°NE (T) LAT: 38.318769 LON: -122.700250 ±147ft ALT: 152ft



Photo 4 Looking Northeast, hard compacted soils from previous land uses

Conclusion and Recommendations

Although there are documented occurrence records of CTS within 1.3 miles of the project site, nearly all these occurrences are fragmented with no direct corridor for migrating CTS to the project site. Further, the project site is surrounded by dense residential development to the north and east. The only potentially viable dispersal corridor occurs across Old Redwood Highway Road to occurrence #687 located to the east. Additionally, the roadside ditch located along the eastern boundary does not provide breeding habitat, but may provide suitable breeding habitat further south of the site.

Upon completion of the January 14th survey, Sol Ecology biologists found few small mammal burrows on the site likely the result of historic land uses including a large chicken farm. Given the lack of high quality habitat (burrows), distance to nearby documented occurrences, and relatively small amount of potential breeding habitat in the area, we conclude the project site provides marginal upland aestivation habitat for nearby CTS populations. Based on the existing surrounding development and known barriers between the nearest known breeding site, we feel that the project overall has a minimal likelihood to affect CTS. Nonetheless, because there is potential for direct impacts to CTS, a Section 2081 Incidental Take Permit (ITP) from the California Department of Fish and Wildlife (CDFW) is required, along with avoidance measures prescribed in the 2020 Programmatic Biological Opinion (PBO) for CTS⁴. Should impacts to the ditch be necessary, formal consultation through the 2020 PBO would also be required. If no federal nexus exists, the Applicant may pursue a concurrence determination from USFWS with the 2081 ITP.

In accordance with the PBO, impacts must be mitigated at a 1:1 ratio for projects that are greater than 2,200 feet and within 1.3 miles of a known breeding site. Also per the PBO, mitigation for projects on parcels with existing hardscape (including structural foundations, compacted gravel surfaces, buildings, or other structures) shall be removed from the mitigation calculation. Based on this, a total of 6.2 acres of CTS upland habitat would need to be mitigated for at either an approved CDFW conservation bank or through the acquisition of CDFW approved permitted-responsible mitigation (PRM) lands elsewhere on the Santa Rosa Plain.

Please do not hesitate to contact me with questions.

Respectfully,



Dana Riggs, Principal Biologist

Attachments: Project Figures (2)

⁴ Programmatic Biological Opinion (Programmatic) for U.S. Army Corps of Engineers (Corps) Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California (Corps File Number 223420N)

Figure 1: Project Location and Hardscape/Developed Area

8841 Old Redwood Highway, Cotati, CA



- Project Study Area
- Parcel Boundary
- Hardscape/Developed Area (0.95 ac)
- Annual Grassland (6.2 ac)

Figure 2: CTS Occurrences within 500', 2,200', 1.3 Miles & 3.1 Miles of the Project Site
 8841 Old Redwood Highway, Cotati, CA

