

APPENDIX E

SIERRA NEVADA YELLOW LEGGED FROG SITE ASSESSMENT

August 26, 2019

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Subject: June and July 2019 Sierra Nevada Yellow-Legged Frog Survey Results

Introduction

This letter reports the background, methodology, and results of a Sierra Nevada yellow-legged frog (*Rana sierrae*) survey for the San Bernardino Class 1 Bike Path Project (Project) in Meyers, California. This survey is required in support of the environmental document, possible permit applications, and the Nevada Fish and Wildlife Office has requested projects within the Lake Tahoe Basin and its tributaries to survey for SNYLF. This letter report is complementary to a Natural Environmental Study (NCE 2019a) and a Biological Assessment (NCE 2019b) that are being prepared concurrently to this report.

The Project is located in El Dorado County and can be found within Section 27, Township 13 North, Range 18 East of the Mount Diablo Meridian of the U.S. Geological Survey, South Lake Tahoe quadrangle. Meyers is located on the south side of Lake Tahoe at an elevation of approximately 6,400 feet. The community of Meyers is urbanized. The Project is composed of Jeffrey pine forest, lodgepole pine forest, Sierran mixed conifer, sagebrush alliance, and urban areas.

Background

The U.S. Fish and Wildlife Service (USFWS) has designated critical habitat for Sierra Nevada yellow-legged frog (SNYLF), which was listed in 2014 as threatened under the federal Endangered Species Act. In addition, the US Forest Service Lake Tahoe Basin Management Unit has developed a SNYLF Suitable habitat layer. These data are presented within the context of the Project Action Area in Appendix A **Figure 1**. The Project Action Area is outside of the USFWS designated critical habitat for SNYLF; however, the Project Action Area does overlap the USFS Suitable habitat layer.

Methodology

The survey was conducted by NCE Scientist Quinn Radford on June 11 and July 10, 2019. The surveys occurred between 9:00 am and 10:00 am. During both surveys the skies were clear with a temperatures of 59 degrees Fahrenheit (F) in June and 64 F in July with calm to light winds both days. Survey equipment consisted of a dip net and binoculars. The field survey involved walking to scan the entirety of the survey area. The survey followed the USFWS-provided Visual Encounter Survey (VES) protocol (Appendix B) which is used to determine occupancy.

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The protocol involved visually scanning the search area, searching in a zigzag fashion where appropriate, searching microhabitats, waving dip nets over grass and bank vegetation to flush frogs and periodically dip netting where appropriate. The time of day and seasonality was consistent with protocol timing. During the VES, the biologist approached the area where the proposed bridge is being installed and used binoculars from a distance so as not to startle any potential individuals to gain positive identification. The biologist scanned each shoreline of the river 100 feet on either side of the proposed bridge crossing. The biologist also scanned the river and shallow areas for any individuals.

Results

No signs or detections of SNYLF were observed. Pictures of amphibian habitat and existing conditions can be found in Appendix C (Photographs 1-3).

Should you have any questions, please do not hesitate to contact me at 510-215-3620.

Sincerely,

A handwritten signature in black ink, appearing to read "Quinn Radford".

Quinn Radford
Project Scientist

A handwritten signature in blue ink, appearing to read "Dave Rios".

Dave Rios
Associate Scientist

Attachment A

FIGURES



Legend

- Action Area
- Federally Designated "Critical Habitat"
- USFS Suitable Habitat



San Bernardino Class 1 Bike Path Project
SNYLF Suitable and Critical Habitat

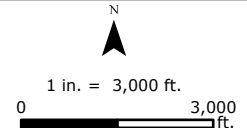


FIGURE
1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; USFWS Critical Habitat; USFS SNYLF Suitable Habitat	501.34.25	sbryan	8/26/2019	9/6/2019	drios

Document Path: P:\Active Projects\El Dorado County - A501\501_34.25 - San Bernardino Trail\GIS\AKSP\San Bernardino - sbryan v03.aprx

Attachment B

VISUAL ENCOUNTER SURVEY PROTOCOL

GENERAL NOTES ABOUT HANDLING AMPHIBIANS

Avoid use of sunscreen and insect repellent on your hands and forearms prior to conducting surveys. Wash your hands thoroughly after application.

GENERAL FIELD PROCEDURES

1. Approach the site quietly. Organize and prepare for the survey away from the shore to avoid flushing the frogs.
2. Note weather conditions.
3. Take beginning air temperature. Do the VES survey.
4. After the VES survey is complete, record the habitat dimensions.
5. If animals are observed during the habitat survey or any time outside the visual encounter survey, record the observation and note that it was an incidental sighting.
6. Take photos of the site and note the picture numbers. At least one picture should show the character of the site. If the frogs were found in specific locations at the site, take photos of these locations.
7. Double check data for completion.
8. Clean equipment if needed.
9. Move to the next site.

SNYLF VES procedures

Surveys (Thoms et al. 97, Fellers and Freel 1995) are used to determine occupancy (presence/not found). Tadpoles and frogs can be patchily located within a site, so all wadeable aquatic habitat in a site is surveyed. This includes all standing water in meadows, shallow lakes, perimeters of deeper lakes, and the length of stream channels. Specific procedures for each habitat type are described below.

Surveys are conducted **ONLY** between 0930 and 1700 hrs. Times should also accommodate for local conditions. Surveys are not conducted during heavy rain, hail or snow as this can affect observations.

Walk the perimeter of the water body visually scanning the search area. Where appropriate, such as in shallow lakes and meadows, systematically survey the search area in a zigzag fashion. Include shallow, warm water areas such as standing water, potholes and gradually sloping shorelines. For shallow lakes or flooded areas in meadows, if no animals are seen, wade in the water when it can be done safely. Search all microhabitats: over and under banks, rocks, lake bottom, in-stream habitat and vegetation. Wave dip net over grass and bank vegetation to flush frogs. Periodically dip net where appropriate; it is less effective in meadows. Dip into the bottom substrate and check net contents after each pass. Take care not to injure animals. This is especially important for Yosemite toads as they are often in very shallow meadow water and hide under root masses (D. Martin pers. com.). Smaller aquarium nets may be more useful in this type of habitat. In general, observers spend approximately 15 min per 100m walked; meadows may take more effort. All amphibian and reptile species seen or heard are recorded.

Lakes:

The search area generally includes from the water's edge to 3m above the shoreline, the water's edge, and all wadeable water (modified from Thoms et al. 1997). The search area should accommodate local conditions.

Streams:

Survey by walking the stream banks. The two-member crew walks parallel along each bank. Each person searches in stream habitat and under over-hanging banks on the opposite shore. Search the mouths of tributaries, secondary channels and backwater pools.

Meadows:

In meadows, both intensive and extensive amphibian surveys are conducted. The primary population surveys are intensive surveys performed in lentic water (including ponds, potholes and flooded areas). Upon finding an area of lentic water, it is thoroughly surveyed for amphibians using the search methods outlined above for lakes. The extensive search effort is conducted on the rest of the meadow and involves zigzagging the meadow using the general search methods outlined above looking for amphibians in grassy areas, stream channels, and areas of flowing water.

Life history stage

For Anurans:

E = egg mass

When possible, assign the stage as follows

E1 = not close to hatching	visible as small round egg
E2 = close to hatching	uncurled embryos with a discernable tadpole inside the jelly egg; the small tadpole may be moving within the jelly egg
E3 = newly hatched	larvae generally <10mm in total length and usually remain on or near the jelly mass after hatching and consume the jelly before dispersing; these are not yet swimming.

T = tadpoles for *Bufo canorus*, *Pseudacris regilla*

For *Rana sierrae*, when possible, note the size class

T1 = first year	< 2cm total length with no legs
T2 = second year	> 2cm total length with no legs
T3 = third year or more	with rear legs and/or front legs, include metamorphs with any amount of tail still present

All stages from metamorphs to adults (SVL)

A1 = 0 to 14mm

A2 = 15 to 29mm

A3 = 30 to 44mm

A4 = 45 to 64mm

A5 = > 65mm

A = could not see well enough to estimate the size

For Salamanders:

E = Eggs

L = Larvae

A = Adults

For Fish:

J = Juvenile = < 50mm

A = Adults = > 50mm

CLEANING EQUIPMENT PROCEDURES

There is mounting evidence that the occurrence of amphibian disease, specifically chytrid fungus, is increasing in the Sierra Nevada. When surveys are performed over a broad area encompassing many amphibian populations, there is a risk that field crews will contribute to the spread of pathogens. Therefore, crews will follow these protocols to clean equipment:

Surveys will begin at the top of the basin and crews work their way down.

Equipment will be cleaned:

- immediately after visiting a site where frogs appear to be infected or if the site has a known history of infection
- when moving to a new basin.

Exception: Survey site is either directly connected to or is within 100 m downstream of the site you just surveyed and is connected to it by a stream.

Safe Handling of Quat-128 (Adapted from CDFG's "Disinfectant Safety and Use" Form)

All persons handling concentrated Quat-128 must wear rubber or latex gloves and eye protection. The area where handling occurs should be well ventilated. Although Quat-128 is low in toxicity, prolonged skin contact can be

irritating. If skin contact is made, wash off with soap and water. If Quat-128 gets in eyes, flush with water for 15 minutes. Do not ingest Quat-128 liquid or inhale fumes.

Cleaning Procedures (in the field)

1. All equipment that has been in contact with water must be cleaned using Quat-128 (e.g., dip nets, shoes, socks, etc).
2. Thoroughly remove all wet or dried mud, vegetation, and other debris from boots, nets, and other equipment.
3. Mix a solution (1:1000) of 7ml (capfull on 2 oz nalgene) of Quat-128 in 7 L of water (fill line on collapsible bucket: ~2/3). Soak the equipment for 5 minutes. Shake off the excess.
4. **Dispose** of the disinfection solution **>100 m from water**. Quat 128 breaks down when it comes into contact with organic material. Therefore, the best disposal sites are those containing disturbed organic soil (e.g., trail tread in a forested area).
5. Upon arriving to the new site or basin rinse equipment with fresh water well away from water bodies (use collapsible bucket or garbage bag to transport water).

Cleaning Procedures (at the office)

1. Thoroughly remove all wet or dried mud, vegetation, and other debris from boots, nets, and other equipment with scrubbing brushes or power washer next to the vehicle maintenance bay.
2. Mix a solution (1:1000) by using the round, green garbage bucket marked QUAT and follow instructions on it; or using a green crew bin, fill to the indentation near top (60L) and add 60 ml (1/2 a 4oz quat bottle). Soak the equipment for 5 minutes.
3. Rinse all equipment thoroughly near the drain at the wash bay and hang to dry in the office storage room.

Attachment C

REPRESENTATIVE PICTURES OF AMPHIBIAN HABITAT AND EXISTING CONDITIONS



Photo 1: Location of proposed bridge crossing looking west.



Photo 2: View looking down river from proposed bridge crossing (looking north).



Photo 3: Typical riverbank near proposed bridge crossing (looking south).