Memorandum

Date: October 17, 2000 File #:

To: BUILDING AND LAND SERVICES - SAN FRANCISCO

From: TECHNICAL AND ECOLOGICAL SERVICES

Subject: Amphibian Habitat Assessments Associated with the Paradise Area Reinforcement Project

PG&E

STEVE STIELSTRA:

On April 12, 2000, habitat assessments were conducted for the following species at six aquatic sites along the proposed transmission route for the Paradise Reinforcement Project: the federally threatened California red-legged frog (*Rana aurora draytonii*) (CRLF), the federal candidate California tiger salamander (*Ambystoma californiensis*) (CTS), and western pond turtle (*Clemmys marmorata*) (WPT) and foothill yellow-legged frog (Rana boylii) (FYLF), both federal species of concern.

General Project Descriptions

The habitat assessments were conducted on April 12, 2000, between 0930 and 1330 hours by Craig Seltenrich (PG&E, Aquatic Biologist). A total of six aquatic habitats occurred along the proposed transmission route. These six habitats were evaluated for suitability for CRLF, CTS, WPT, and for FYLF. U.S. Fish and Wildlife Service (USFWS) habitat assessment procedures for CRLF and other amphibians were carefully followed.

A records search of the California Natural Diversity Data Base (CNDDB) for the surrounding area showed that spring-run chinook salmon (Butte Creek) was the only aquatic species occurrence within five miles of the project area (Figure 1). There were no records of any amphibians, aquatic reptiles, or freshwater shrimp, within the five-mile radius.

Existing Conditions

Site 1 (Figure 2, Photograph 1)

Site 1 is an ephemeral tributary (likely perennial in wet years) to Hamlin Creek. In the vicinity of the transmission line crossing this creek consists of a narrow, low to moderate gradient channel with low moderately sloping banks. The channel ranged from 3 to 8 feet wide, with an average water depth of about 4-5 inches and scattered small pools to 12 inches deep. At the time of the assessment, flow in the creek was approximately 0.2 cubic feet/sec (cfs). The substrate consisted primarily of small boulders and cobble with earthen banks. Some emergent (cattails, grasses, and aquatic plants) and submergent vegetation (primarily algae) occurred sporadically downstream of the proposed crossing. Upland areas immediately adjacent to the east bank have been

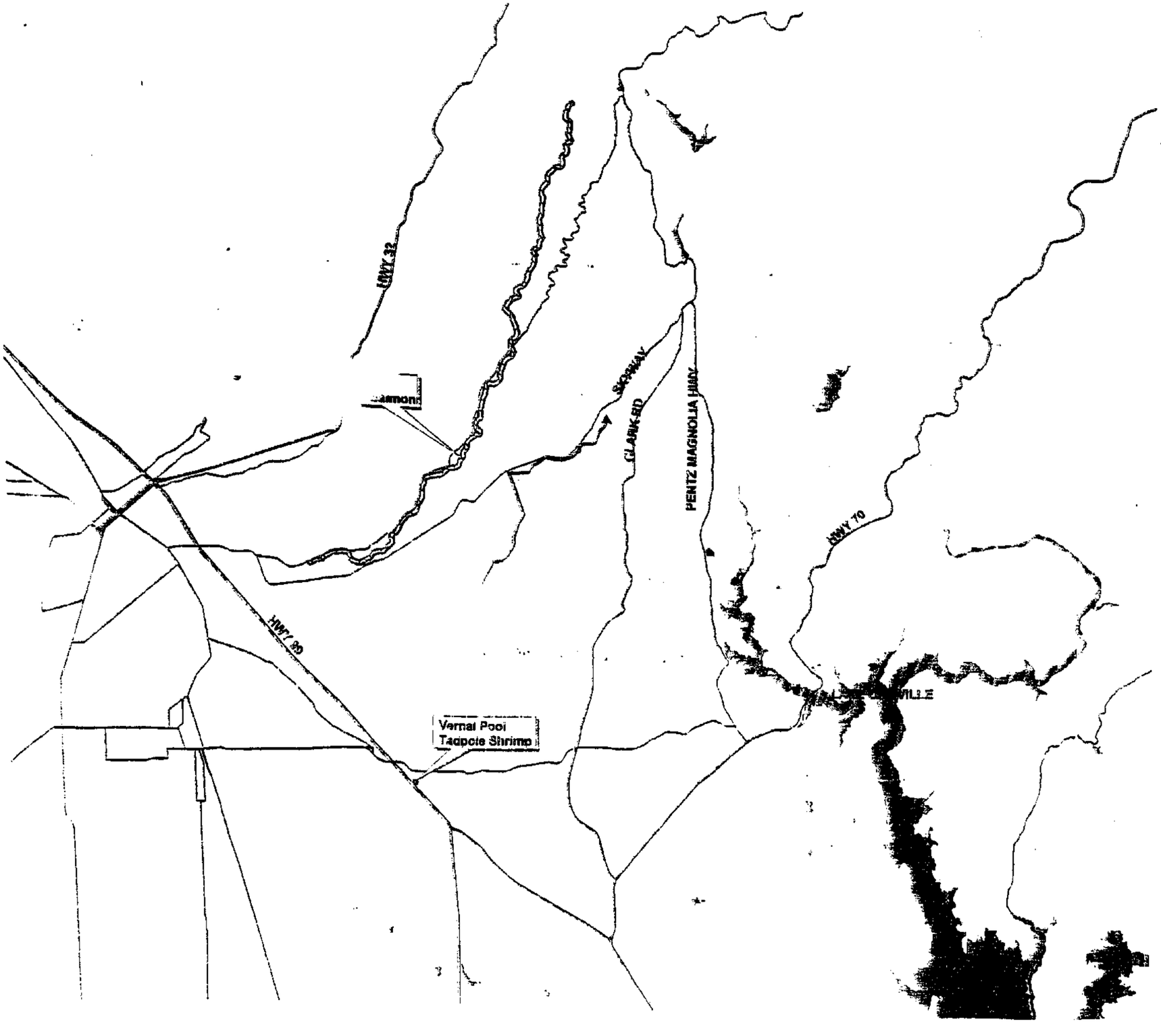


Figure 1
Historical Records of Aquatic Species Within Five Miles of the Proposed Route.

Source: CNDDB

▲ Paradise S/S

NORTHERN HARDPAN VERNAL POOL
SPRING-RUN CHINOOK SALMON
VERNAL POOL TADPOLE SHRIMP
Proposed Route

N
W E
S

0 3 6 Miles

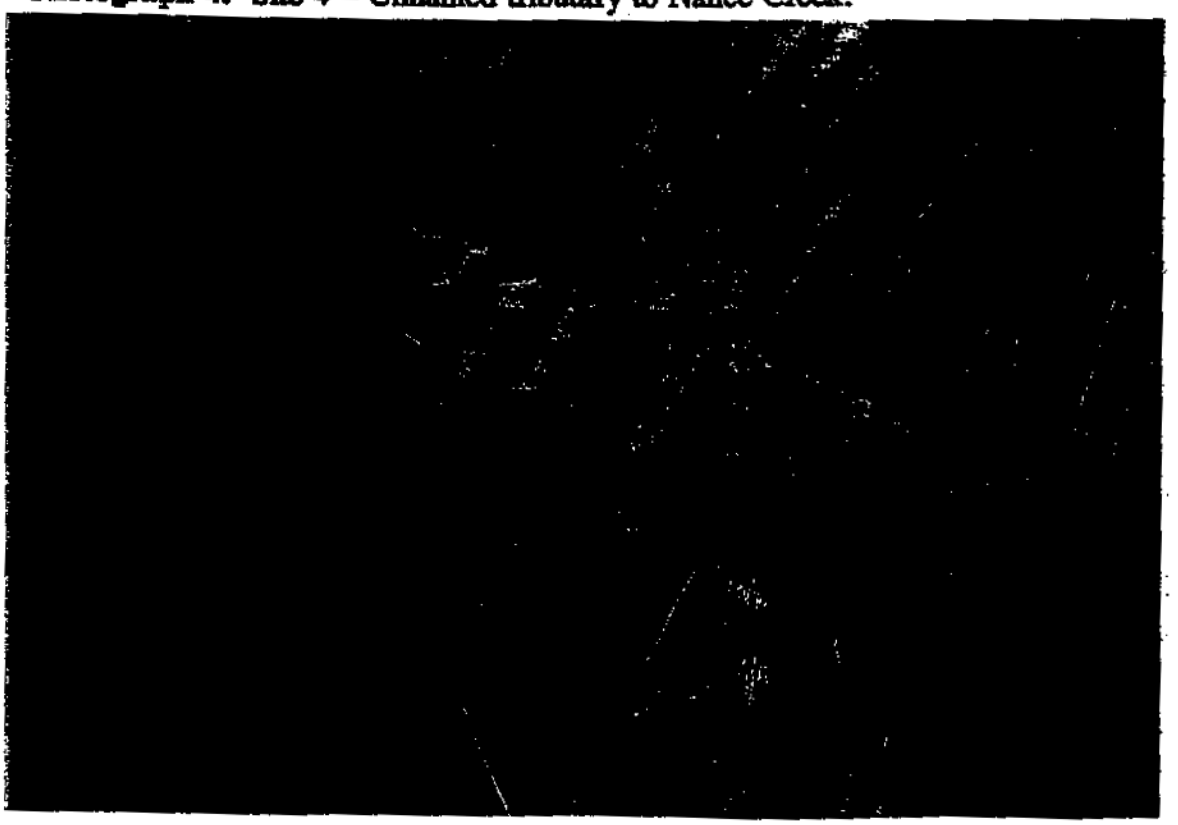
Figure 2. Location of aquatic sites along the proposed transmission line route.

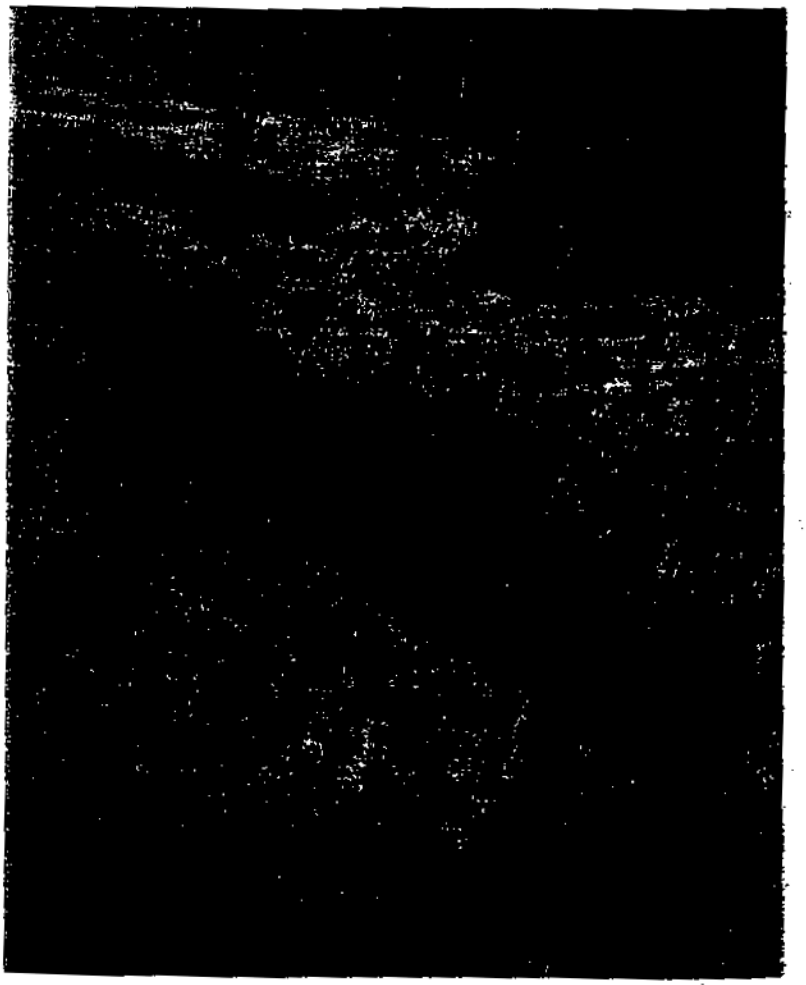
Photograph 1 (above).
Site 1 - Unnamed tributary to Hamlin Creek.

Photograph 2 (right).
Site 2 – Unnamed tributary to Nance Creek.

Photograph 3. Site 3 – Unnamed tributary to Nance Creek.

Photograph 4. Site 4 – Unnamed tributary to Nance Creek.





Photograph 5 (right).
Site 5 – Seasonal pools.

Photograph 6 (below).
Site 6 – Stock pond.

modified as part of a residential development. Most of the area is planted in grass (lawn) from the road to the edge of the creek. Willow, blackberry vines, scotch broom (which is fairly dense in places), scattered oaks, and several grasses occur along much of the west bank and adjacent upland habitat.

This creek does not provide breeding habitat for CRLF, CTS, or WPT. This creek may have provided suitable habitat for FYLF prior to the development of residential housing and the large lawn. However, it is unlikely that breeding could occur here now due to the close proximity of homes, children and animals. At the time of the assessment, bullfrogs and tree frogs were observed in several locations in the creek downstream of the proposed crossing. The drainage may provide dispersal habitat for amphibians, at least during wet years, since the creek likely has water through at least early summer.

Site 2 (Figure 2, Photograph 2)

Site 2 is an ephemeral tributary to Nance Creek that was already dry at the time of the assessment. The channel is small (2-5' wide) and likely only flows for short periods following substantial rains. In the vicinity of the transmission line crossing, the drainage channel is overgrown with willow trees, blackberry vines, and grasses. The channel itself is covered with grasses.

This creek does not provide suitable breeding habitat for CRLF, CTS, WPT, or FYLF and is likely of minimal value as dispersal habitat. In most years, this creek would not be flowing for long enough periods to provide an avenue to other aquatic habitats.

Site 3 (Figure 2, Photograph 3)

Site 3 is another small ephemeral tributary to Nance Creek. In the vicinity of the transmission line crossing, the channel ranges from 4 to 10 feet wide, with an average water depth of about 6-8 inches, and scattered small pools to 2 feet deep. At the time of the assessment, flow in the creek was approximately 0.4 cfs. This ephemeral creek (likely perennial in wet years) consists of a narrow, moderate gradient channel with low to moderately sloping banks. The substrate is highly variable, consisting of a mixture of bedrock, boulder, cobble, gravel, sand, and mud. Streamside vegetation consists primarily of blackberry vines, willow trees, and scattered rushes. Most of the creek channel was completely overgrown with this vegetation. Upland habitat adjacent to the creek was a mixture of open grasslands with mixed oak woodland and gray pine.

There is no suitable breeding habitat for CTS, WPT, or FYLF, and only low quality breeding habitat for CRLF in the general area of the transmission line crossing. Bullfrog tadpoles were observed in several small, shallow pools, near the proposed crossing. No CRLF adults or tadpoles were observed. There are no known occurrences of CRLF within five-miles of the project area. The drainage does provide dispersal habitat, at least during wet years, since the creek likely has water at least into the early summer.

Site 4 (Figure 2, Photograph 4)

Site 4 is also a tributary to Nance Creek. In the vicinity of the transmission line crossing, the channel ranges from 2 to 6 feet wide, with an average water depth of about 4-6 inches, and occasional small pools up to 12 inches deep. At the time of the assessment, flow in the creek was approximately 0.1+ cfs. It is likely that much of this creek is dry by May or June. This ephemeral creek has a narrow, low to moderate

gradient channel with low to moderately sloping banks. The substrate is highly variable, consisting of a mixture of bedrock, boulder, cobble, gravel, sand, and mud. Streamside vegetation consists primarily of blackberry wines, willow, with some scattered sedges, rushes, and cattails. About 50 percent or greater of the creek channel was overgrown with this vegetation. Upland habitat adjacent to the creek was a mixture of open grasslands with mixed oak woodland and gray pine.

There is no suitable breeding habitat for CTS, WPT, or FYLF, and only low quality breeding habitat (at best) for CRLF, in the general area of the transmission line crossing. This creek would likely become dry long before successful breeding could occur. Tree frogs were observed along the creek in several locations; however, no CRLF adults or tadpoles were observed. There are no known occurrences of CRLF within five-miles of the project area. The drainage does provide dispersal habitat, at least during wet years, since the creek likely has water at least into the early summer.

Site 5 (Figure 2, Photograph 5)

Site 5 is a small group of seasonal pools in the gas-line right-of-way (ROW) at the southern end of the proposed transmission line route. The pools form in the tire ruts of a dirt road that crosses a small drainage along the ROW. The drainage itself was dry at the time of the assessment; however, the pools had obviously been filled with water for an extended period of time. The seasonal pools occur in an area approximately 15 feet long and 8 feet wide. Annual grasses were the only vegetation observed in the pools. The bottom substrate is primarily clay, with some sand and gravel. The upland habitat was grassland and mixed oak woodland.

There is no suitable breeding habitat for CRLF, WPT, or FYLF; however, the pools may provide low quality breeding habitat for CTS and possibly freshwater shrimp. During the site assessment, the only aquatic organisms observed in the pools were numerous tree frog tadpoles. No other aquatic species were found. It is highly unlikely that this drainage provides dispersal habitat for any aquatic species, since surface flows appear to occur only during and immediately after rain events.

Site 6 (Figure 2, Photograph 6)

Site 6 is an old stock pond, located near the head of Nance Canyon about 1,100 feet southeast of the proposed transmission line route. The pond is about 100 feet wide by 125 feet long, with an estimated depth of 6 to 10 feet. The bank steepness varies from gently sloping to steeply sloping. Blackberry vines and willow dominate the perimeter of the pond. The shoreline lacks any emergent vegetation (cattail, rushes, sedges, etc.), but submergent vegetation (primarily green algae) covers about 30 percent of the pond. Upland habitat is primarily open grasslands with mixed oak woodland and gray pine.

No aquatic species were observed in the pond during the site visit. However, the pond appears to contain fish, since fishing gear was observed in several places around the pond. Bullfrogs were not observed in the pond, but there presence is likely. There is no suitable breeding habitat for CTS or FYLF. There are no known occurrences of CTS within five-miles of the project area. Due to the lack of emergent vegetation or any other in-water cover, it is unlikely that this pond provides suitable breeding habitat for CRLF. There are no known occurrences of CRLF within five-miles of the project area. The pond does provide some suitable habitat for WPT, though basking sites were limited.

Results

Site 1. Unnamed ephemeral tributary to Hamlin Creek

This creek does not provide breeding habitat for CRLF, CTS, WPT, or FYLF. The drainage may provide dispersal habitat for amphibians (such as CRLF), at least during wet years, since the creek likely has water through early summer in most years.

Site 2. Unnamed ephemeral tributary to Nance Creek

This creek was dry in April and does not provide breeding habitat for CRLF, CTS, WPT, or FYLF, and is likely of minimal value as dispersal habitat for any aquatic species, since surface flows appear to occur only during and immediately after rain events.

Site 3. Unnamed tributary to Nance Creek

There is no suitable breeding habitat for CTS, WPT, or FYLF, and only low quality breeding habitat for CRLF. The drainage may provide dispersal habitat for amphibians, at least during wet years.

Site 4. Unnamed tributary to Nance Creek

There is no suitable breeding habitat for CTS, WPT, or FYLF, and only low quality breeding habitat for CRLF. The drainage may provide dispersal habitat for amphibians, at least during wet years.

Site 5. Seasonal pools

There is no suitable breeding habitat for CRLF, WPT, or FYLF; however, the pools may provide low quality breeding habitat for CTS and possibly freshwater shrimp. It is highly unlikely that this drainage provides dispersal habitat for any aquatic species, since surface flows appear to occur only during and immediately after rain events.

Site 6. Stock pond

There is no suitable breeding habitat for CRLF, CTS, or FYLF, at this site; however, the pond does provide some suitable habitat for WPT.

Conclusions

- Site 1: No further aquatic species or habitat evaluation is necessary.
- Site 2: No further aquatic species or habitat evaluation is necessary.
- Site 3: It is unlikely that CRLF occur at this site, even though some low quality breeding habitat is present. In addition, there are no known occurrences of this species within five miles. The nearest location is the population near French Creek in the Feather River drainage.

  Prior to construction, a biologist should conduct a site survey to ensure that this species is not present.

- Site 4: It is unlikely that CRLF occur at this site, even though some low quality breeding habitat is present. In addition, there are no known occurrences of this species within five miles. The nearest location is the population near French Creek in the Feather River drainage.

  Prior to construction, a biologist should conduct a site survey to ensure that this species is not present.

- Site 5: Potential breeding habitat for CTS or freshwater shrimp is present in these seasonal pools, even though neither was observed during the site visit. Construction activities should avoid impacting these pools, if possible.

  Prior to construction, a biologist should conduct a site survey to ensure that CTS or listed shrimp species are not present.

- Site 6: Due to the distance of this pond from the proposed transmission line route, no further aquatic species or habitat evaluation is necessary.

If you have any questions regarding the site assessments or this report, please phone me at 925-866-5846.

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SdeBecker