ENDANGERED SPECIES ACT-LISTED AMPHIBIANS - CALIFORNIA RED-LEGGED FROG
STUDY REPORT
DON PEDRO PROJECT
FERC NO. 2299



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Modesto Irrigation District

Prepared for:
Turlock Irrigation District – Turlock, California
Modesto Irrigation District – Modesto, California

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Endangered Species Act-Listed Amphibians
California Red-Legged Frogs
Study Report

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List of Acronyms

ac .....acres

ACEC .....Area of Critical Environmental Concern

AF .....acre-feet

ACOE.....U.S. Army Corps of Engineers

ADA .....Americans with Disabilities Act

ALJ.....Administrative Law Judge

APE .....Area of Potential Effect

ARMR.....Archaeological Resource Management Report

BA .....Biological Assessment

BDCP .....Bay-Delta Conservation Plan

BLM .....U.S. Department of the Interior, Bureau of Land Management

BLM-S .....Bureau of Land Management – Sensitive Species

BMI .....Benthic macroinvertebrates

BMP .....Best Management Practices

BO .....Biological Opinion

CalEPPC .....California Exotic Pest Plant Council

CalSPA.....California Sports Fisherman Association

CAS.....California Academy of Sciences

CCC.....Criterion Continuous Concentrations

CCIC .....Central California Information Center

CCSF .....City and County of San Francisco

CCVHJV .....California Central Valley Habitat Joint Venture

CD .....Compact Disc

CDBW.....California Department of Boating and Waterways

CDEC .....California Data Exchange Center

CDFA .....California Department of Food and Agriculture

CDFG .....California Department of Fish and Game (as of January 2013, Department of Fish and Wildlife)

CDMG.....California Division of Mines and Geology

CDOF .....California Department of Finance

CDPH .....California Department of Public Health

CDPR .....California Department of Parks and Recreation
CDSOD .....California Division of Safety of Dams
CDWR.....California Department of Water Resources
CE .....California Endangered Species
CEII.....Critical Energy Infrastructure Information
CEQA.....California Environmental Quality Act
CESA .....California Endangered Species Act
CFR.....Code of Federal Regulations
cfs.....cubic feet per second
CGS.....California Geological Survey
CHU .....Critical Habitat Unit
CMAP .....California Monitoring and Assessment Program
CMC.....Criterion Maximum Concentrations
CNDDB.....California Natural Diversity Database
CNPS.....California Native Plant Society
CORP .....California Outdoor Recreation Plan
CPUE .....Catch Per Unit Effort
CRAM.....California Rapid Assessment Method
CRLF.....California Red-Legged Frog
CRRF .....California Rivers Restoration Fund
CSAS.....Central Sierra Audubon Society
CSBP.....California Stream Bioassessment Procedure
CT .....California Threatened Species
CTR.....California Toxics Rule
CTS .....California Tiger Salamander
CVRWQCB .....Central Valley Regional Water Quality Control Board
CWA .....Clean Water Act
CWHR.....California Wildlife Habitat Relationship
Districts.....Turlock Irrigation District and Modesto Irrigation District
DLA .....Draft License Application
DPRA.....Don Pedro Recreation Agency
DPS .....Distinct Population Segment
EA .....Environmental Assessment

EC .....Electrical Conductivity
EFH.....Essential Fish Habitat
EIR .....Environmental Impact Report
EIS.....Environmental Impact Statement
EPA .....U.S. Environmental Protection Agency
ESA .....Federal Endangered Species Act
ESRCD.....East Stanislaus Resource Conservation District
ESU .....Evolutionary Significant Unit
EWUA.....Effective Weighted Useable Area
FERC.....Federal Energy Regulatory Commission
FFS.....Foothills Fault System
FL.....Fork length
FMU .....Fire Management Unit
FOT .....Friends of the Tuolumne
FPC .....Federal Power Commission
ft/mi.....feet per mile
FWCA .....Fish and Wildlife Coordination Act
FYLF.....Foothill Yellow-Legged Frog
g.....grams
GIS .....Geographic Information System
GLO .....General Land Office
GPS .....Global Positioning System
HCP.....Habitat Conservation Plan
HHWP.....Hetch Hetchy Water and Power
HORB .....Head of Old River Barrier
HPMP.....Historic Properties Management Plan
ILP.....Integrated Licensing Process
ISR .....Initial Study Report
ITA.....Indian Trust Assets
kV.....kilovolt
m .....meters
M&I.....Municipal and Industrial
MCL.....Maximum Contaminant Level

mg/kg .....milligrams/kilogram
mg/L.....milligrams per liter
mgd .....million gallons per day
mi .....miles
mi^2 .....square miles
MID.....Modesto Irrigation District
MOU .....Memorandum of Understanding
MSCS.....Multi-Species Conservation Strategy
msl.....mean sea level
MVA .....Megavolt Ampere
MW .....megawatt
MWh .....megawatt hour
mya.....million years ago
NAE .....National Academy of Engineering
NAHC .....Native American Heritage Commission
NAS.....National Academy of Sciences
NAVD 88 .....North American Vertical Datum of 1988
NAWQA .....National Water Quality Assessment
NCCP .....Natural Community Conservation Plan
NEPA .....National Environmental Policy Act
ng/g .....nanograms per gram
NGOs .....Non-Governmental Organizations
NHI .....Natural Heritage Institute
NHPA.....National Historic Preservation Act
NISC .....National Invasive Species Council
NMFS.....National Marine Fisheries Service
NOAA.....National Oceanic and Atmospheric Administration
NOI .....Notice of Intent
NPS .....U.S. Department of the Interior, National Park Service
NRCS .....National Resource Conservation Service
NRHP.....National Register of Historic Places
NRI.....Nationwide Rivers Inventory
NTU .....Nephelometric Turbidity Unit

NWI.....National Wetland Inventory
NWIS .....National Water Information System
NWR .....National Wildlife Refuge
NGVD 29.....National Geodetic Vertical Datum of 1929
O&M.....operation and maintenance
OEHHA.....Office of Environmental Health Hazard Assessment
ORV .....Outstanding Remarkable Value
PAD.....Pre-Application Document
PDO.....Pacific Decadal Oscillation
PEIR.....Program Environmental Impact Report
PGA.....Peak Ground Acceleration
PHG.....Public Health Goal
PM&E .....Protection, Mitigation and Enhancement
PMF.....Probable Maximum Flood
POAOR.....Public Opinions and Attitudes in Outdoor Recreation
ppb.....parts per billion
ppm .....parts per million
PSP.....Proposed Study Plan
QA.....Quality Assurance
QC.....Quality Control
RA.....Recreation Area
RBP.....Rapid Bioassessment Protocol
Reclamation .....U.S. Department of the Interior, Bureau of Reclamation
RM .....River Mile
RMP .....Resource Management Plan
RP.....Relicensing Participant
RSP .....Revised Study Plan
RST .....Rotary Screw Trap
RWF .....Resource-Specific Work Groups
RWG .....Resource Work Group
RWQCB.....Regional Water Quality Control Board
SC.....State candidate for listing under CESA
SCD.....State candidate for delisting under CESA

SCE .....State candidate for listing as endangered under CESA

SCT .....State candidate for listing as threatened under CESA

SD1 .....Scoping Document 1

SD2 .....Scoping Document 2

SE.....State Endangered Species under the CESA

SFP.....State Fully Protected Species under CESA

SFPUC .....San Francisco Public Utilities Commission

SHPO .....State Historic Preservation Office

SJRA .....San Joaquin River Agreement

SJRGA .....San Joaquin River Group Authority

SJTA .....San Joaquin River Tributaries Authority

SPD .....Study Plan Determination

SRA.....State Recreation Area

SRMA .....Special Recreation Management Area or Sierra Resource Management Area (as per use)

SRMP.....Sierra Resource Management Plan

SRP .....Special Run Pools

SSC .....State species of special concern

ST.....California Threatened Species under the CESA

STORET .....Storage and Retrieval

SWAMP.....Surface Water Ambient Monitoring Program

SWE .....Snow-Water Equivalent

SWRCB.....State Water Resources Control Board

TAC.....Technical Advisory Committee

TAF .....thousand acre-feet

TCP .....Traditional Cultural Properties

TDS.....Total Dissolved Solids

TID.....Turlock Irrigation District

TMDL .....Total Maximum Daily Load

TOC.....Total Organic Carbon

TRT.....Tuolumne River Trust

TRTAC .....Tuolumne River Technical Advisory Committee

UC.....University of California

USDA.....U.S. Department of Agriculture
USDOC.....U.S. Department of Commerce
USDOI.....U.S. Department of the Interior
USFS.....U.S. Department of Agriculture, Forest Service
USFWS.....U.S. Department of the Interior, Fish and Wildlife Service
USGS.....U.S. Department of the Interior, Geological Survey
USR.....Updated Study Report
UTM.....Universal Transverse Mercator
VAMP.....Vernalis Adaptive Management Plan
VELB.....Valley Elderberry Longhorn Beetle
VRM.....Visual Resource Management
WPT.....Western Pond Turtle
WSA.....Wilderness Study Area
WSIP.....Water System Improvement Program
WWTP.....Wastewater Treatment Plant
WY.....water year
µS/cm.....microSeimens per centimeter

1.0 INTRODUCTION

1.1 General Description of the Don Pedro Project

Turlock Irrigation District (TID) and Modesto Irrigation District (MID) (collectively, the Districts) are the co-licensees of the 168-megawatt (MW) Don Pedro Project (Project) located on the Tuolumne River in western Tuolumne County in the Central Valley region of California. The Don Pedro Dam is located at river mile (RM) 54.8 and the Don Pedro Reservoir formed by the dam extends 24-miles upstream at the normal maximum water surface elevation of 830 ft above mean sea level (msl; NGVD 29). At elevation 830 ft, the reservoir stores over 2,000,000 acre-feet (AF) of water and has a surface area slightly less than 13,000 acres (ac). The watershed above Don Pedro Dam is approximately 1,533 square miles (mi^2).

Both TID and MID are local public agencies authorized under the laws of the State of California to provide water supply for irrigation and municipal and industrial (M&I) uses and to provide retail electric service. The Project serves many purposes including providing water storage for the beneficial use of irrigation of over 200,000 ac of prime Central Valley farmland and for the use of M&I customers in the City of Modesto (population 210,000). Consistent with the requirements of the Raker Act passed by Congress in 1913 and agreements between the Districts and City and County of San Francisco (CCSF), the Project reservoir also includes a "water bank" of up to 570,000 AF of storage. CCSF may use the water bank to more efficiently manage the water supply from its Hetch Hetchy water system while meeting the senior water rights of the Districts. CCSF's "water bank" within Don Pedro Reservoir provides significant benefits for its 2.6 million customers in the San Francisco Bay Area.

The Project also provides storage for flood management purposes in the Tuolumne and San Joaquin rivers in coordination with the U.S. Army Corps of Engineers (ACOE). Other important uses supported by the Project are recreation, protection of the anadromous fisheries in the lower Tuolumne River, and hydropower generation.

The Project Boundary extends from approximately one mile downstream of the dam to approximately RM 79 upstream of the dam. Upstream of the dam, the Project Boundary runs generally along the 855 ft contour interval which corresponds to the top of the Don Pedro Dam. The Project Boundary encompasses approximately 18,370 ac with 78 percent of the lands owned jointly by the Districts and the remaining 22 percent (approximately 4,000 ac) is owned by the United States and managed as a part of the U.S. Bureau of Land Management (BLM) Sierra Resource Management Area.

The primary Project facilities include the 580-foot-high Don Pedro Dam and Reservoir completed in 1971; a four-unit powerhouse situated at the base of the dam; related facilities including the Project spillway, outlet works, and switchyard; four dikes (Gasburg Creek Dike and Dikes A, B, and C); and three developed recreational facilities (Fleming Meadows, Blue Oaks, and Moccasin Point Recreation Areas). The location of the Project and its primary facilities is shown in Figure 1.1-1.

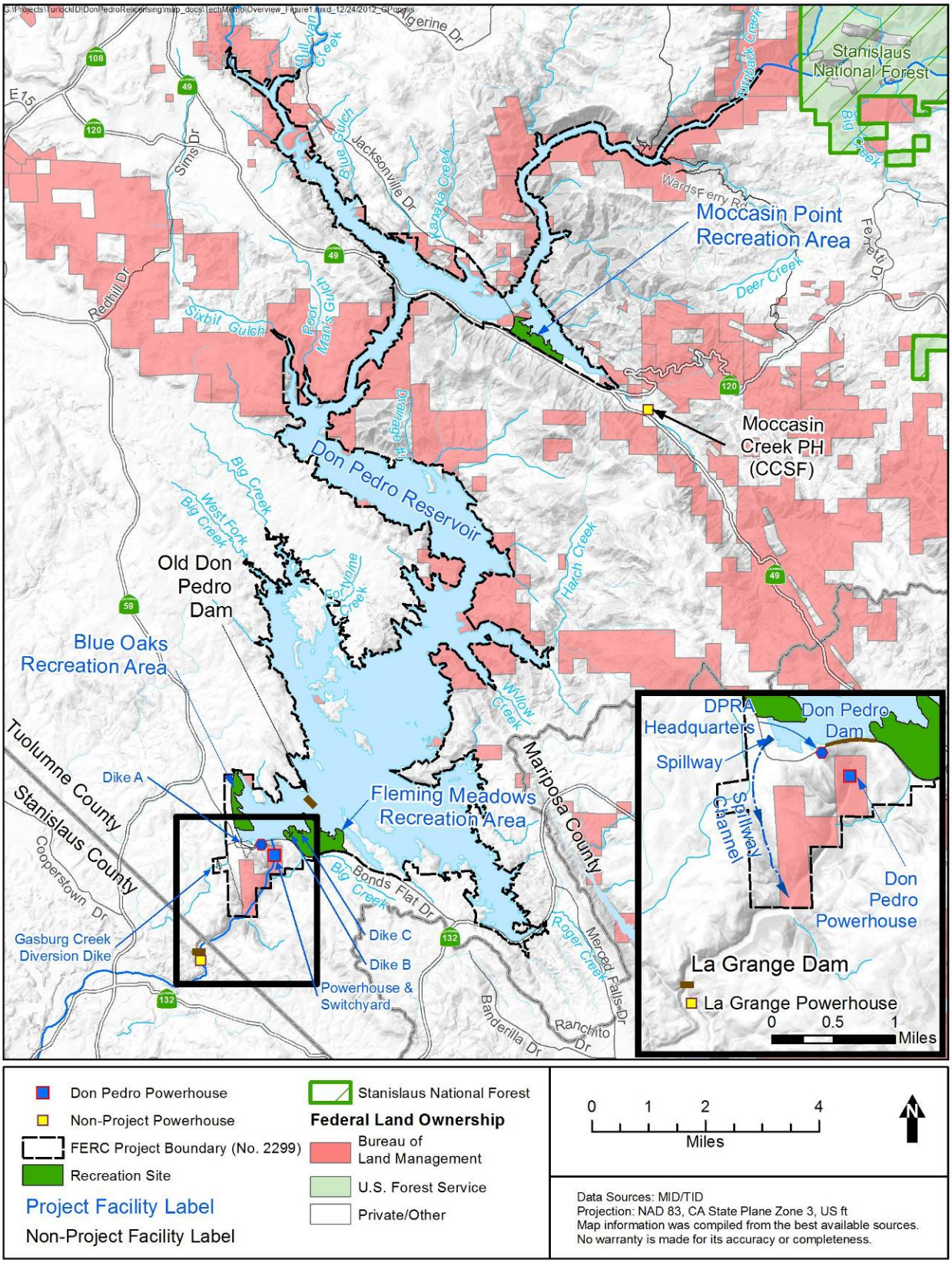

Figure 1.1-1. Don Pedro Project location.

1.2 Relicensing Process

The current FERC license for the Project expires on April 30, 2016, and the Districts will apply for a new license no later than April 30, 2014. The Districts began the relicensing process by filing a Notice of Intent and Pre-Application Document (PAD) with FERC on February 10, 2011, following the regulations governing the Integrated Licensing Process (ILP). The Districts' PAD included descriptions of the Project facilities, operations, license requirements, and Project lands as well as a summary of the extensive existing information available on Project area resources. The PAD also included ten draft study plans describing a subset of the Districts' proposed relicensing studies. The Districts then convened a series of Resource Work Group meetings, engaging agencies and other relicensing participants in a collaborative study plan development process culminating in the Districts' Proposed Study Plan (PSP) and Revised Study Plan (RSP) filings to FERC on July 25, 2011 and November 22, 2011, respectively.

On December 22, 2011, FERC issued its Study Plan Determination (SPD) for the Project, approving, or approving with modifications, 34 studies proposed in the RSP that addressed Cultural and Historical Resources, Recreational Resources, Terrestrial Resources, and Water and Aquatic Resources. In addition, as required by the SPD, the Districts filed three new study plans (W&AR-18, W&AR-19, and W&AR-20) on February 28, 2012 and one modified study plan (W&AR-12) on April 6, 2012. Prior to filing these plans with FERC, the Districts consulted with relicensing participants on drafts of the plans. FERC approved or approved with modifications these four studies on July 25, 2012.

Following the SPD, a total of seven studies (and associated study elements) that were either not adopted in the SPD, or were adopted with modifications, formed the basis of Study Dispute proceedings. In accordance with the ILP, FERC convened a Dispute Resolution Panel on April 17, 2012 and the Panel issued its findings on May 4, 2012. On May 24, 2012, the Director of FERC issued his Formal Study Dispute Determination, with additional clarifications related to the Formal Study Dispute Determination issued on August 17, 2012.

This study report describes the objectives, methods, and results of the ESA-Listed Amphibians California Red-Legged Frog Study (TR-07) as implemented by the Districts in accordance with FERC's SPD and subsequent study modifications and clarifications. Documents relating to the Project relicensing are publicly available on the Districts' relicensing website at www.donpedro-relicensing.com.

1.3 Study Plan

Modesto Irrigation District and Turlock Irrigation District's (the Districts) continued operation and maintenance (O&M) of the Don Pedro Project (Project) have a potential to affect the California red-legged frog (CRLF; *Rana draytonii*), a federally threatened species listed under the Endangered Species Act (ESA). Don Pedro Project O&M includes normal operations within the currently licensed elevation range (up to 830 feet), as well as operation of three formal recreation areas (Moccasin Point, Blue Oaks, and Fleming Meadows), vegetation management within these recreation areas and Project facilities, and ongoing reservoir debris removal and

disposal near Deer Creek and Harney Lane. These effects could involve activities related to Project O&M or to Project-related recreation activities that impact CRLF suitable habitat.

FERC's SPD approved the Districts' red-legged frog study plan as provided in the RSP filing. The study was conducted consistent with the study plan.

2.0 STUDY GOALS AND OBJECTIVES

The goal of this study is to provide FERC with information supporting consultation with the US Fish and Wildlife Service (USFWS) regarding the effects of Project licensing on CRLF. The objectives of this study are to:

- Identify, compile, and map known occurrences of CRLF and the distribution of suitable habitats for CRLF.
- Evaluate the likelihood that CRLF currently exists in the Project Boundary using site assessments of habitat suitability and information from historical records.
- Compile incidental observations of CRLF observations from other aquatic studies.
- Through incidental observations, document the presence and provide estimates of number of exotic species (e.g., American bullfrogs [*Lithobates catesbeianus*], non-native crayfish, bass, catfish, or mosquito fish), which may limit the occurrence of CRLF in otherwise suitable habitats (USFWS 2002).
- Provide information on Project-affected tributary streams to the Don Pedro Reservoir for evaluation of potential Project-related effects on CRLF.
- Provide information to FERC that can be used to develop a Biological Assessment regarding the effects of Project licensing on CRLF.

3.0 STUDY AREA

As specified in the FERC-approved study plan, the study area for this effort consisted of all suitable aquatic habitats within the Project Boundary and lands within 1 mile of the Project Boundary. Consistent with USFWS guidelines (USFWS, 2005), for defining a "project action area," the study area includes all lands potentially affected by Project O&M.

Land ownership within 1-mile of the Project Boundary is principally MID, TID, and BLM, with some private and other publicly owned land. Existing land uses include ranching, limited residential development and recreation. Uplands in the study area consist of blue and live oak woodland, oak-foothill pine, scrub-shrub chaparral, and annual grassland.

4.0 METHODOLOGY

The study plan approved by FERC in their December 22, 2011 Study Plan Determination outlined five steps for performing the CRLF study. Those steps were as follows:

(1) Site Assessment.
(2) Prepare, Format, and Quality Assurance/Quality Control Data.
(3) Consult with the Districts' Project O&M Staff.
(4) Prepare Report.
(5) Consult with USFWS.

The following methods described for site assessment and habitat characterization were conducted in compliance with Steps 1 - 3 of the FERC-approved ESA-listed Amphibian California Red-Legged Frog Study (TR-07). This document was created to comply with Step 4 and will be submitted to USFWS in compliance with Step 5.

4.1 Site Assessment and Habitat Characterization

CRLF is typically associated with low-gradient streams (Hayes and Jennings 1988), backwaters, and lentic habitat with emergent vegetation, although habitats lacking vegetation are sometimes used. Suitable CRLF breeding habitat is defined as:

> *Low-gradient fresh water bodies, including natural and manmade (e.g., stock) ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds….To be considered essential breeding habitat, the aquatic feature must have the capability to hold water for a minimum of 20 weeks in all but the driest of years (USFWS 2010).*

Existing aerial photography and National Wetlands Inventory (NWI) digital map data (USFWS 1987) were used to identify and map locations within the study area that are potentially suitable for CRLF breeding, or aquatic sites that hold water for a minimum of 20 weeks during the CRLF breeding season. Other aquatic habitats potentially affected by the Project that could be utilized by CRLF for dispersal, foraging, or predator avoidance were also identified and mapped through review of available data and reconnaissance level field assessments. Following habitat mapping, potentially suitable aquatic habitats sufficient for field visits were selected based on review of historical data and additional habitat characterization.

4.1.1 Review of Historical Data

Known CRLF records in the study area were compiled from a review of the following sources:

- California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB) (CDFG 2012);
- University of California, Berkeley's Museum of Vertebrate Zoology (MVZ) Data Access (MVZ 2012);
- California Academy of Sciences (CAS) online records (CAS 2012);

- California Red-Legged Frog Recovery Plan (USFWS 2002);
- Geographic Information System (GIS) shapefile of the Final Critical Habitat for the California Red-Legged Frog (USFWS 2009); and
- Peggy Cranston from the Mother Lode Field Office of the BLM on 3/18/2012 (Cranston 2012).

4.1.2 Habitat Characterization Methods

Study sites that were suspected to hold water for at least 20 weeks during the CRLF breeding season were identified through initial review of aerial imagery and NWI digital map data (USFWS 1987). Following the selection of study sites with potentially suitable habitat, site assessments of aquatic habitat were performed in accordance with Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (USFWS 2005). Locations within the Project Boundary and a representative set of locations that were publically accessible outside of the Project Boundary were examined in the field. The Districts selected locations in the study area for site evaluations in order to further characterize habitats based on the following criteria:

- All potential breeding locations within the existing Project Boundary.
- Representative breeding locations on publicly accessible lands (and private lands where permission to enter could be obtained) within 1 mile of the Project Boundary.

All data specified and required by USFWS guidelines (Appendix D of USFWS 2005) were collected at each site where reconnaissance level examination was performed, along with photographs depicting habitat and other notable findings. These data are presented in Attachment A. Potential habitats were evaluated using aerial images and then assessed in the field. Field assessed habitats were photographed from opposite directions, both up and down drainage, where possible, in order to document seasonal cover and foraging habitat adjacent to aquatic habitat. Areas that did not appear to represent suitable habitat were not field examined but were instead characterized from aerial imagery, existing site photographs, and U.S. Geological Service (USGS) topographic mapping and other existing descriptive information.

Based on the site assessments, aquatic habitats were mapped and characterized by habitat type (e.g., stream or depressional emergent wetland), apparent seasonality, dominant vegetation type (e.g., emergent or overhanging shrubs), water depth at the time of the site assessment, bank-full depth, stream gradient (i.e., percent slope), substrate, and description of bank. The field crew was also cognizant of and prepared to note the presence of fish, non-native crayfish, American bullfrog, and other incidental observations of amphibians, reptiles, and turtles. A map of upland vegetation types was created from available CalVeg data (USFS, 2009). CalVeg is a two-level hierarchical classification system of actual vegetation designed to assess broad scale resources throughout California. Upland habitats were further characterized based on adjacent land uses, and any potential barriers to CRLF movement.

4.2 Data Management and Consultation with Districts

Standard data QA/QC procedures were performed, including: daily QA/QC of field data sheets, spot-checks of transcription during data compilation, and comparison of Geographic Information System (GIS) maps with field notes and field maps to verify locations. Data were entered into a database and crosschecked by a second scientist to ensure data were properly recorded. GIS maps, depicting the CRLF occurrences, and Project facilities and features, were generated to display field collected GPS information and used as a second method to verify that all special-status plant occurrence locations matched the information on the data sheets.

After all potentially suitable CRLF breeding habitats and historical occurrences were mapped, Project operations staff was consulted to identify Project O&M, recreation and other Project-related activities that typically occur near potentially suitable CRLF breeding habitat that have a potential to adversely affect CRLF.

5.0 RESULTS

5.1 CRLF Life History Information

CRLF is primarily associated with perennial ponds or pools and perennial or seasonal streams where water remains for a minimum of 20 weeks beginning in the spring (i.e., sufficiently long for breeding to occur and larvae to complete development) (Jennings and Hayes 1994; USFWS 2006). Locations with the highest densities of CRLF exhibit dense emergent or shoreline riparian vegetation closely associated with moderately deep (greater than 2.3 ft), still, or slow-moving water. Vegetation that provide the most suitable structure are willows, cattails, and bulrushes at or close to the water level, which shade a substantial area of the water (Hayes and Jennings 1988). Another correlation to CRLF occurrence is the absence or near-absence of introduced predators such as American bullfrog and predatory fish—particularly centrarchids (i.e., freshwater sunfishes), which feed on the larvae at higher rates than native predatory species (Hayes and Jennings 1988)—and mosquitofish. Hiding cover from predators may be provided by emergent vegetation, undercut banks, and semi-submerged root wads (USFWS 2005). Some habitats that are not suitable for breeding (e.g., shallow or short-seasonal wetlands, pools in intermittent streams, seeps, and springs) may constitute habitats for aestivation, shelter, foraging, predator avoidance, and juvenile dispersal.

Depending on elevation and climate, CRLF may breed from late November to late April. Egg masses attach to emergent vegetation such as cattails or bulrush in natural ponds, stock ponds, marshes, or in deep pools and stream backwaters. Larvae typically metamorphose between July and September (Jennings and Hayes 1994).

Adult dispersal outside the breeding season may be directed upstream, downstream, or upslope of breeding habitat, and may be associated with foraging and pursuit of hiding cover or aestivation habitat. Telemetry and other detection methods indicate that CRLF utilize small-mammal burrows, leaf litter, and other moist sites as much as 200 ft from riparian areas (Jennings and Hayes 1994; USFWS 2006). Long-distance dispersal has been documented at distances of up to a mile and probably occurs only during wet periods (USFWS 2006).

5.2 Historical and Current Occurrence of CRLF in the Project Vicinity

Known historical and current CRLF occurrences near the Project are summarized in Table 5.2-1 and depicted on Figure 5.4-1. There are 5 known historical CRLF occurrences within 10 miles of the Don Pedro Project (Basey 2010; Jennings 2010; CDFG 2012; Fellers 2010). There are no recent or extant occurrences of CRLF near the Project. The nearest extant occurrence is 29miles northwest of the Project within Critical Habitat Unit CAL-1 (Calaveras County) (CAS 2012).

There are two known historical CRLF occurrences within 1 mile of the Don Pedro Reservoir study area, on Piney Creek prior to 1984. Piney Creek is a tributary to Lake McClure, located east of Don Pedro Reservoir. These occurrences were located in a ravine with a deep pool upstream of Highway 132 (Basey 2010), and at another pool further upstream (USFWS 2010; Jennings 2010). American bullfrogs were also found in two other pools on Piney Creek at the

time of the CRLF observations. The Piney Creek occurrence is generally presumed extirpated, based on field investigations conducted by the USFWS (2002).

Table 5.2-1. Recorded occurrences of CRLF in Tuolumne, Mariposa, Merced, and Stanislaus counties.

Occurrence[1]	Distance from the Project and Status of the Occurrence
Piney Creek upstream of Highway 132, Mariposa Co. (3 adults, 1972-1984[2])	1.0 mile E of Don Pedro Reservoir. Presumed extirpated.
Piney Creek at Gusano Way, Mariposa Co. (unknown number of individuals, 1972 and 1974[3])	1.1 miles E of Don Pedro Reservoir. Presumed extirpated.
Woods Creek, near Columbia and Sonora, Tuolumne Co. (4 adults or juveniles, 1950 collection[4])	8.5 miles NW of Don Pedro Reservoir. Possibly extirpated population in a nonspecific area.
Maxwell Creek near Coulterville, Mariposa Co. (1 tadpole, 1992[5])	8.3 miles E of Don Pedro Reservoir. Presumed extirpated.
Parrotts Ferry Road, near Columbia, Tuolumne Co. (1 adult or juvenile, 1975 collection[4])	9.7 miles N of Don Pedro Reservoir. Occurrence "presumed extant" by CNDDB; however no wildlife professionals consulted could confirm the accuracy of the record or its status if accurate.
Snelling, Merced Co. (adult or juvenile, 1915 collection[6])	12.5 miles S of Don Pedro Reservoir. Presumed extirpated.
"Merced River Bridge, Highway Crossing," Merced Co. (1 adult or juvenile, 1922 collection[7])	Unknown distance. Presumed extirpated.
Jordan Creek, 2 miles N of Greeley Hill Rd., Tuolumne Co. (1 adult female, 1967[3])	14.4 miles E of Don Pedro Reservoir. Presumed extirpated.
Mather, near Tuolumne River, Tuolumne Co. (1 unknown life stage, 1922 collection[4])	22.4 miles E of Don Pedro Reservoir. Possibly extirpated population.
Swamp Lake, near Miguel Meadow, Tuolumne Co. (1 unknown life stage, 1940 collection[4])	23.9 miles E of Don Pedro Reservoir. Possibly extirpated population.

[1] Records and critical habitat units in western Stanislaus County and Merced County are not included.
Sources: [2]H.E. Basey, pers. comm., 2010; [3]Dr. M.R. Jennings, pers. comm., 2010; [4]CDFG 2012; [5]Dr. G.M. Fellers, USGS, pers. comm., 2010; [6]MVZ 2012; [7]CAS 2012.

5.3 Site Assessment and Habitat Characterization

All habitat and site assessment data required by USFWS guidelines (Appendix D of USFWS 2005) are presented in Attachment A. Attachment B presents maps showing locations of aquatic habitats within the study area and maps showing the geographical extent of the upland study area. Table 5.3-1 summarizes information associated with sites potentially affected by Project O&M, including land ownership, assessment results at the study site, and fish known to occur.

A total of 337 sites were assessed in the Don Pedro Reservoir study area, including 73 sites within the FERC Project Boundary. Of the sites within the FERC Project Boundary, 20 sites are considered potentially affected by Project O&M. Of the 337 sites, 85 were assessed in the field, including 66 that occur within the FERC Project Boundary. One site was assessed from a distance due to safety concerns. The remaining 252 sites were not accessible for on-site assessment or were not within the FERC Project Boundary, and were therefore assessed from aerial imagery. Sites were evaluated to determine if water was present for at least 20 weeks

during the CRLF breeding season, the key component of CRLF breeding habitat according to the USFWS (2010).

Sites within the study area consisted of 111 sections of streams or pools in streams; 137 natural ponds; 18 stock, irrigation, or treatment ponds; 62 other wetlands; 6 uplands, or constructed areas. A total of 77 stream sites, 110 natural ponds, 16 stock/irrigation/treatment ponds, six emergent wetlands; a constructed public swimming lagoon, a constructed swimming pool, and a constructed reservoir appear to meet the minimum criterion of 20 weeks of standing or slow-moving water. It was unknown if two seasonal streams and one manually filled stock pond met the 20-week criterion. Many of the surveyed sites that met the 20 week criterion were considered marginal habitat based on the presence of predators such as fish and bullfrogs or the lack of emergent or aquatic vegetation. Based on these factors, 42 of the 52 field assessed sites that met (or were undetermined to meet) the 20 week criterion represent marginal or unsuitable habitat for CRLF breeding. The remaining 10 sites (F17, F30, F43, F53, F81, N60, N75, N133, N143, and N179) appear to represent suitable breeding habitat for CRLF due to the presence of suitable vegetation and lack of fish or other predatory species. None of these sites will be potentially affected by Project O&M due to proximity to project facilities or Don Pedro Reservoir.

BLM (2009, 1980) reports that fish known to occur in the Project area include the green sunfish, largemouth bass, Sacramento sucker, and the mosquito fish, roach, Sacramento pikeminnow, rainbow trout, largemouth bass, and blue gill. The presence of predatory fish can severely limit the survival of CRLF in otherwise suitable breeding habitat (Jennings and Hayes 1994), and was considered an important factor in characterizing field assessed habitat.

Based on a review of aerial videography, stream habitat mapping photographs, and results of habitat assessments performed as part of the Special Status Amphibians and Aquatic Reptiles Study (TID/MID 2013). Stream reaches potentially affected by the Project generally lack the essential components of CRLF breeding habitat.

5.3.1 Sites Potentially Affected by Project O&M

Based on their proximity to project facilities or Don Pedro Reservoir, 20 sites were considered potentially affected by Project O&M, Of these 20 sites, the essential components of CRLF breeding habitat were identified at 17 locations, with one site unknown. Lack of emergent or overhanging vegetation or the presence of bullfrogs diminishes the potential suitability of most of the sites (Table 5.3-1). Sites F31 and F73, streams in the Moccasin Point Recreation Area, do not meet the 20 week criterion.

Table 5.3-1. Summary of sites potentially affected by Project O&M.

Site Number	Habitat Description	Area (acres)	Ownership	Meets 20-Week Criterion	Fish Known to Occur at Site
F31	Stream in Moccasin Point Recreation Area	0.39	MID/TID	N	None
F45	Sewage Treatment Pond near Fleming Meadows Recreation Area	1.51	MID/TID	Y	None
F46	Sewage Treatment Pond near Blue Oaks Recreation Area	1.53	MID/TID	Y	None

Site Number	Habitat Description	Area (acres)	Ownership	Meets 20-Week Criterion	Fish Known to Occur at Site
F47	Swimming lagoon at Fleming Meadows Recreation Area	2.16	MID/TID	Y	None
F49	Sewage Treatment Pond near Fleming Meadows Recreation Area	0.12	MID/TID	Y	None
F50	Sewage Treatment Pond near Blue Oaks Recreation Area	0.71	MID/TID	Y	None
F51	Sewage Treatment Pond near Moccasin Point Recreation Area	0.68	BLM	Y	None
F52	Sewage Treatment Pond near Moccasin Point Recreation Area	0.02	BLM	Y	None
F73	Stream in Moccasin Point Recreation Area	0.22	MID/TID	N	None
F77	Pool in spillway channel	0.14	MID/TID	Y	Not likely
F78	Pool in spillway channel	0.06	MID/TID	Y	Not likely
F80	Pool in spillway channel	1.61	MID/TID	Y	Not likely
F81	Pond at base of Gasburg Creek Dike, adjacent spillway channel.	0.88	MID/TID	Unknown	None
F82	Pool in spillway channel	0.33	MID/TID	Y	Not likely
F83	Pool in spillway channel	0.45	MID/TID	Y	Not likely
F85	Pool in spillway channel	0.33	MID/TID	Y	Not likely
F86	Pool in spillway channel	0.80	MID/TID	Y	Not likely
F87	Pool in spillway channel	0.32	MID/TID	Y	Not likely
F88	Pool in spillway channel	0.33	MID/TID	Unknown	Not likely
F89	Pool in spillway channel	0.06	BLM	Y	Not likely

Most of the sites potentially affected by Project O&M with the essential components of CRLF breeding habitat were relatively small water bodies (i.e., 0.06 – 2.17 acres), that were either man made sewage treatment ponds or pools in the spillway channel. Sewage treatment ponds had minimal or no emergent and overhanging vegetation, limiting their suitability as CRLF habitat. Pools in the spillway channel generally had emergent vegetation and overhanging shrubs or trees present. However, American bullfrogs were observed at three pools in the spillway channel and are likely present in each, also limiting their suitability as potential habitat.

Three of the sites potentially affected by Project O&M are situated on public land administered by the BLM. These sites include two sewage treatment ponds near Moccasin Point Recreation Area, Sites F51 and F52, and a pool in the spillway channel near the Tuolumne River, Site F89.

Don Pedro Reservoir itself does not possess the essential components of CRLF breeding habitat because of the absence of suitable vegetation. This reservoir is also stocked with a variety of introduced, predatory fish which diminish suitability for CRLF. Deep lacustrine water bodies like Don Pedro Reservoir are not known to provide breeding habitat for CRLF, although adult CRLF have been reported to occur at some reservoirs (USFWS 2002).

5.3.2 Sites Not Affected by Project O&M

Aquatic habitats within the 1.0 mile radius study area but not in proximity to potential Project O&M included streams (ephemeral, seasonal, and perennial), pools in streams, natural ponds,

stock ponds, and other wetlands. Some of the areas identified for assessment based on National Wetland Inventory maps were determined to be uplands. Other locations lacking the essential components of CRLF breeding habitat were intermittent streams unlikely to provide standing water for 20 weeks. Field assessment was performed for 70 of the 317 sites not affected by Project O&M, and the remaining sites were assessed aerially. The presence of essential CRLF breeding habitat was determined based on information available from the assessment. Most field assessed sites met the 20-week criterion for CRLF breeding habitat, but lacked suitable vegetation, had predatory species present, or some combination of both. Many of the sites assessed aerially were assumed to meet the 20-week criterion, but were lacking a component of suitable vegetation (either emergent or overhanging).

Within the Project Boundary, 23 of the 53 sites assessed held water for at least 20 weeks during the CRLF breeding season, and it was unknown if 2 sites met the criterion. The majority of sites meeting the 20-week criterion were perennial streams, many of which contained fish and/or American bullfrogs. Table 5.3-2 summarizes the assessment results at sites located within the Project Boundary, excluding those potentially affected by Project O&M.

Table 5.3-2. Summary of other (non-Project affected) sites assessed for CRLF habitat within the Project Boundary.

Aquatic Habitat Type	Number of Aquatic Habitat Locations	Number of Locations that Meet 20-Week Criterion[1]	Land Ownership[3]		
			MID/TID	BLM	Private/ Other
Streams and Pools in Streams	41	18 (*2*)	33[2]	6[2]	8[2]
Natural Ponds	7	4	6[2]	4	2[2]
Stock/Irrigation/ Detection Pond	1	1	0	1	0
Upland/Developed	4	0	3	1	0
Total	**53**	**23 (*2*)**	**42[2]**	**12[2]**	**10[2]**

[1] Italic numbers in parenthesis are those sites for which 20-week criterion status is unknown.
[2] Includes locations with multiple ownerships.
[3] Some sites have multiple ownerships; therefore, ownership total exceeds the number of assessed locations.

Outside of the Project Boundary, 172 of the 264 sites assessed held water for at least 20 weeks during the CRLF breeding season. The majority of the sites assessed were natural ponds or other wetlands located on private land. Most of these ponds met the 20-week criterion, but were lacking either emergent or overhanging vegetation. Table 5.3-3 summarizes the assessment results at sites located within one mile outside of the Project Boundary.

Table 5.3-3. Summary of results at other (non-Project affected) aquatic habitat locations within 1.0 mile of the sites assessed for CRLF habitat (excluding sites within Project Boundary).

Aquatic Habitat Type	Number of Aquatic Habitat Locations	Number of Locations that Meet 20-Week Criterion	Land Ownership[1]		
			TID/ MID	BLM	Private/ Other
Streams and Pools in Streams	58	50	2	1	55
Natural Ponds	129	105	3[2]	2	125[2]

Aquatic Habitat Type	Number of Aquatic Habitat Locations	Number of Locations that Meet 20-Week Criterion	Land Ownership[1]		
			TID/ MID	BLM	Private/ Other
Stock/ Irrigation/ Detention Pond	11	9	0	1[2]	11[2]
Other Wetlands	62	6	1[2]	1[2]	62
Upland[2]/ Developed	3	2	0	0	1
Other	2	2	0	0	2
Total	**264**	**172**	**5[2]**	**5[2]**	**256[2]**

[1] Includes locations with multiple ownerships.
[2] Some sites have multiple ownerships; therefore, ownership total exceeds the number of assessed locations.

5.3.3 Sites on BLM Administered Public Land

The study area included aquatic habitats located on public land administered by BLM at 23 locations. Table 5.3-4 summarizes the sites located at least partially on BLM land.

Table 5.3-4 Summary of aquatic habitat locations on BLM-administered land.

Site Number	Habitat Description	Area[1] (m^2)	Additional Ownership	Meets 20-Week Criterion	Fish Known to Occur at Project Site
F17	Poor Man's Gulch	60	N/A	Y	Likely
F24	Unnamed ephemeral tributary to Upper Bay	10	N/A	Y	Likely
F27	Deer Creek	5	N/A	Y	None
F30	Kanaka Creek	15	MID/TID	Y	Likely
F32	Perennial stream near Jacksonville Road	2.25	N/A	Y	Likely
F33	Stream, seasonal (unnamed), near Grizzly Road	3	MID/TID	N	None
F34	Stream, seasonal (unnamed), near Moccasin Creek D Road	4.5	MID/TID	N	None
F35	Woods Creek	200	N/A	Y	Yes
F38	Stream, ephemeral, Upper Bay	Unknown	N/A	N	None
F51	Perennial pond near Jacksonville Road	2,760	N/A	Y	None
F52	Perennial pond near Jacksonville Road	95	N/A	Y	None
F54	Sixbit Gulch	6	N/A	Y	Yes
F60	Seasonal pond near Jacksonville Road	650	N/A	Y	None
F70	No aquatic feature present	N/A	N/A	N	None
F88	Pool in perennial stream near Bonds Flat Road	1,350	MID/TID	N	None
F89	Perennial pond near Bonds Flat Road	235	N/A	Y	None
F90	Stock pond near Bonds Flat Road	570	N/A	Y	None
N61	Perennial pond near Arbolada Drive	90	N/A	Y	None
N78	Sixbit Gulch	Unknown	Private	Y	Yes
N217	Emergent wetland	155	Private	N	None

Site Number	Habitat Description	Area[1] (m^2)	Additional Ownership	Meets 20-Week Criterion	Fish Known to Occur at Project Site
N252	Stock pond	140	N/A	Y	None
N224	Perennial Stream Impoundment	120	N/A	Y	None
N271	Pond, seasonal, near New Priest Grade Road	50	N/A	N	None

[1] Total surface area (m^2) of aquatic habitat; for streams, dimensions are maximums of pool habitats.

5.4 Incidental Observations and Recorded Occurrences

No CRLF were observed during the site assessments performed as part of this study, nor were there any incidental sightings of CRLF during performance of the other relicensing studies during 2012. The known historical occurrences of CRLF closest to the Project Boundary are probably not extant; CRLF are considered extirpated from the Tuolumne River watershed (USFWS 2002). The nearest known extant occurrence (Young's Creek) is about 29.3 miles from the Project, within the CAL-1 Critical Habitat Unit (CHU). This CHU consists of 2,764 acres on privately owned land and is the nearest CHU to the Project.

Other incidental observations that may be pertinent to the potential occurrence of CRLF in the study area include the presence of predatory fish particularly bass, sunfish, and mosquitofish; American bullfrog, and introduced crayfish. Observations of these species at CRLF study sites are presented in Attachment A.

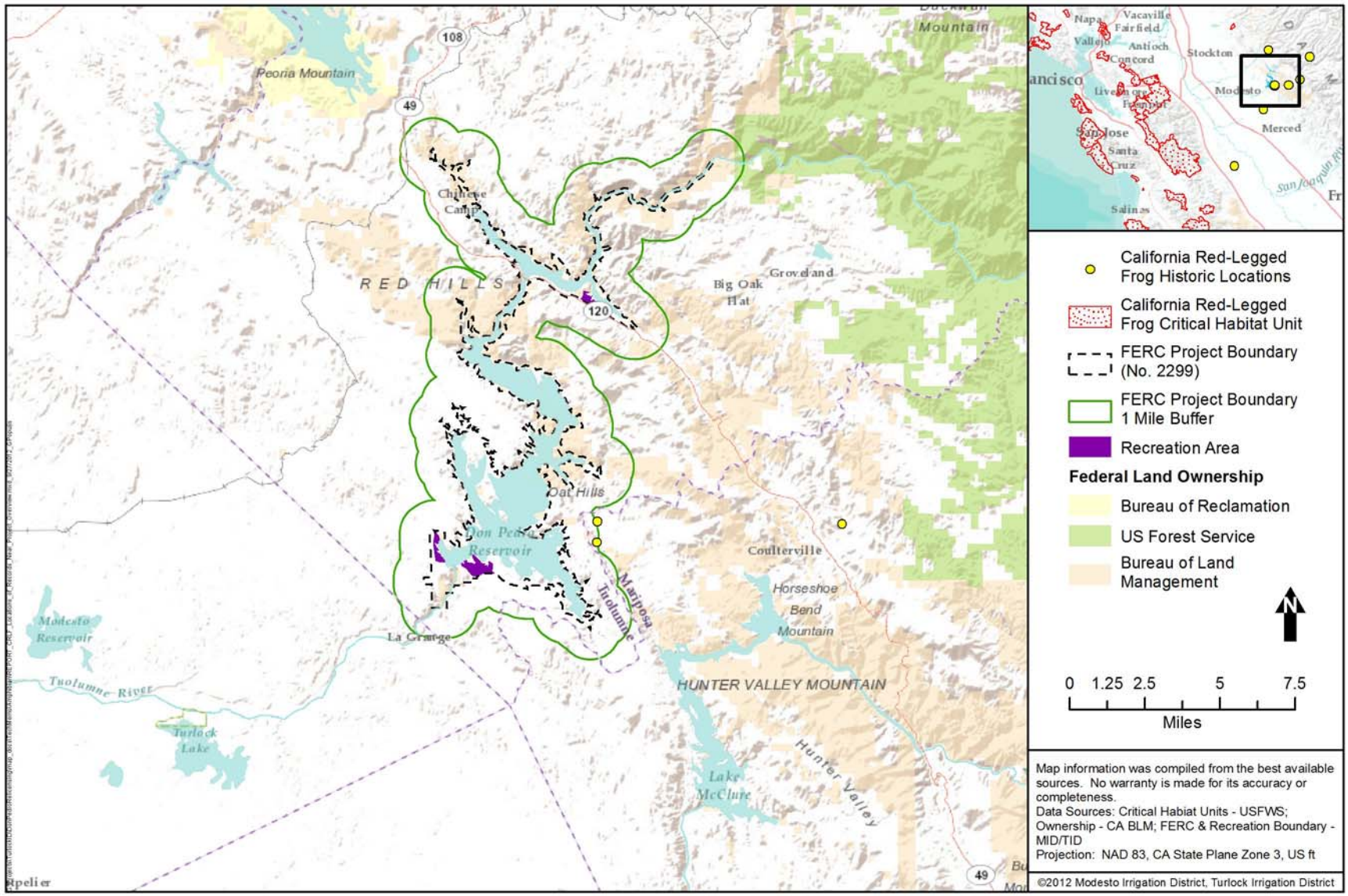

Figure 5.4-1. Locations of historical California red-legged frog occurrences and designated Critical Habitat Units.

6.0 DISCUSSION AND FINDINGS

6.1 Summary

CRLF are not likely to occur in the Don Pedro Project Boundary or the study area. No occurrences of CRLF have been recorded within 5 miles of the Project Boundary since 1984, and USFWS's recovery plan for the species lists CRLF as extirpated from the Tuolumne River watershed (USFWS 2002). No USFWS-designated Critical Habitat Units occur within 29 miles of the Project Boundary.

Potential CRLF breeding habitat was documented at or near 167 sites within the study area. Of these sites, 10 may be affected by Project operations because they are in or adjacent to the spillway channel. However, the potential habitats observed are of generally poor quality due to presumed bullfrog presence, and potential habitats in the spillway channel are not subject to any Project activities under normal O&M. Additionally, seven sites located at Project recreation facilities (sewage treatment ponds and a swimming lagoon) met the 20 week criterion for potential CRLF breeding habitat, but did not provide suitable overhanging and emergent vegetation.

Because CRLF are not known to occur in the study area, and because Project-affected lands in the study area represent generally poor habitat for CRLF, the study concludes that Project O&M, including normal operations within the currently licensed elevation range, operation of the three recreation areas, vegetation management within these recreation areas and Project facilities, ongoing reservoir debris removal and permitted grazing, are not likely to affect CRLF or its habitat.

6.2 Project Effects

FERC's Scoping Document 2 identified the following issues potentially affecting species listed under the ESA:

- Effects of project operation, including water level fluctuations, ground-disturbing activities, and maintenance on plants and wildlife species listed as threatened or endangered under the ESA.
- Effects of maintenance and use of project recreation facilities by recreationists on species listed as threatened or endangered under the ESA.
- Effects of project operation and maintenance on designated critical habitat under the ESA.
- Effects of vegetation clearing for project maintenance on species listed as threatened or endangered under the ESA.

Don Pedro Project O&M includes normal operations within the currently licensed elevation range (up to 830 feet), as well as operation of three formal recreation areas (Moccasin Point, Blue Oaks, and Fleming Meadows), vegetation management within these recreation areas and Project facilities, and ongoing reservoir debris removal and disposal. Recreation activities occur

along portions of the shoreline and include dispersed camping, fishing and hiking. Additionally, the Districts have granted four grazing permits on a limited area within the Project Boundary, on a total of 559 acres.

There are no known CRLF occurrences in the vicinity of Don Pedro Reservoir, and CRLF are considered extirpated from the Tuolumne River watershed (USFWS 2002). Don Pedro Reservoir is characterized by deep, still or slowly moving water with steep banks in most areas and limited vegetation below the high-water mark; it does not constitute aquatic breeding habitat for CRLF. As a result, CRLF is not likely to occur at Don Pedro Reservoir and Project reservoir operations are not likely to affect the species or its potential habitat.

CRLF site assessments documented the essential component of CRLF breeding habitat (i.e., "the capability to hold water for a minimum of 20 weeks in all but the driest of years") at or near 167 sites within the study area, with four sites unknown. Based on proximity to Project facilities, Project O&M may affect may affect potential CRLF breeding habitat at 10 of the assessment locations (F77, F78, F80, F82, F83, F85, F86, F87, F88, F89) in the spillway channel and one pond (F81) adjacent to the spillway channel. However, American bullfrog were observed at three of the pools in the spillway channel and are likely present in each, limiting their suitability as potential habitat. Because CRLF do not occur in the study area and the potential habitats observed are of generally poor quality, Project O&M is unlikely to affect CRLF in these areas. Additionally, potential habitats in the spillway channel are not subject to any Project activities under normal O&M procedures; the spillway has released water only once since Project construction, in 1997. The spillway channel is included in lands permitted for grazing by the Districts, but access to the area is limited by steep slopes; no cattle were observed during field work.

Seven of the nine study sites located at Project recreational facilities met the 20-week criterion and represent potential habitat; one constructed swimming lagoon (F47) and six sewage treatment ponds (F45, F47, F49, F50, F51, and F52). Each of these sites is lined with either concrete or gravel and has minimal surrounding vegetation. While these sites all hold water for at least 20 weeks during the CRLF breeding season, they are considered marginal habitat due to their lack of overhanging and emergent vegetation and are not likely to support CRLF.

The Project is not located within USFWS designated critical habitat for CRLF. The closest designated critical habitat is located approximately 29 miles northwest of the FERC Boundary in Calaveras County. Therefore, Project O&M will have no impact on CRLF critical habitat.

Project-related vegetation clearing and management is limited to roads, the three Project recreation areas, and Project facilities. As described above, available CRLF habitat in the Project recreation areas and facilities is considered marginal, and vegetation clearing and management is not likely to affect CRLF or its potential habitat.

7.0 STUDY VARIANCES AND MODIFICATIONS

The study was conducted consistent with the FERC-approved ESA-listed Amphibians - California Red-Legged Frog Study Plan (Study TR-07). No variances occurred.

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STUDY REPORT TR-07
CALIFORNIA RED-LEGGED FROG

ATTACHMENT A

DETAILED SITE ASSESSMENT RESULTS

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1.0 DON PEDRO RESERVOIR STUDY AREA

CRLF is typically associated with low-gradient streams (Hayes and Jennings 1988), backwaters, and lentic habitat with emergent vegetation, although habitats lacking vegetation are sometimes used. Suitable CRLF breeding habitat is defined as:

> *Low-gradient fresh water bodies, including natural and manmade (e.g., stock) ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds….To be considered essential breeding habitat, the aquatic feature must have the capability to hold water for a minimum of 20 weeks in all but the driest of years (USFWS 2010).*

Existing aerial photography and National Wetlands Inventory (NWI) digital map data (USFWS 1987) were used to identify and map locations potentially suitable for CRLF breeding, or aquatic sites that hold water for a minimum of 20 weeks during the CRLF breeding season. Other aquatic habitats potentially affected by the Project that may be utilized by CRLF for dispersal, foraging, or predator avoidance were also identified and mapped through review of available data and reconnaissance level field assessments. Following habitat mapping, potentially suitable aquatic habitats sufficient for field visits were selected based on review of historical data and additional habitat characterization. Data were collected at each site sufficient to complete a Habitat Site Assessment Data Sheet (Appendix D of USFWS 2005) at each site where reconnaissance level examination was performed, along with photographs depicting habitat and other notable findings.

A total of 337 sites were assessed in the Don Pedro Reservoir study area, including 73 sites within the Don Pedro Hydroelectric Project's (Project) FERC Project Boundary (Table 1.0-1). Don Pedro Reservoir is located on Turlock Irrigation District (TID), Modesto Irrigation District (MID), and the US Department of the Interior, Bureau of Land Management (BLM) land. The Don Pedro Reservoir has a normal maximum water surface elevation of 830 ft, and has a capacity of 2,030,000 acre-feet of water. A study area extending 1.6 km (1.0 mile) from the FERC Project Boundary of Don Pedro Reservoir was evaluated for California red-legged frog (*Rana draytonii*) (CRLF) .

Don Pedro Reservoir is a relatively deep reservoir, with still or slow-moving water, and mostly steeply sloped banks. Predatory fish, including bass, are abundant. Deep lacustrine water bodies, particularly where fish occur, are not known to provide breeding habitat for CRLF (USFWS 2006), although adult CRLF have been reported to occur at some reservoirs (USFWS 2002).

Land ownership within the 1-mile study area is principally MID, TID, and BLM, with some private and other publicly owned land. Existing land uses include ranching, limited residential development and recreation. Uplands in the study area consist of blue and live oak woodland, oak-foothill pine, scrub-shrub chaparral, and annual grassland. Much of the terrain is rugged and was inaccessible for field assessments due to private property restrictions, steep slopes, and lack of roads. Potential barriers to CRLF dispersal include steep terrain, highways, including State Route (SR) 120, SR 59, SR 139, and SR 49, and Don Pedro Reservoir. Two historic CRLF locations occur within the vicinity of the project. Both records are from before 1984, and it is assumed that CRLF have been extirpated from these areas in recent history.

Of the 337 sites, 85 were assessed in the field including 73 that occur within the FERC Project Boundary. One site was assessed from a distance due to safety concerns. The remaining 252 sites were not accessible for on-site assessment or were not within the FERC boundary, and were therefore characterized from aerial imagery, existing site photographs, U.S. Geological Service (USGS) topographic mapping, and other existing descriptive information. Sites were evaluated to determine if water was present for at least 20 weeks during the CRLF breeding season, the key component of CRLF breeding habitat according to the USFWS (2002).

There are two known historical CRLF occurrences within 1 mile of the Don Pedro Reservoir study area, on Piney Creek. Piney Creek is a tributary to Lake McClure, located east of Don Pedro Reservoir. These occurrences were located in a ravine with a deep pool upstream of Highway 132 (Basey, 2010), and at another pool further upstream (USFWS, 2010; Jennings, 2010). American bullfrogs (*Lithobates catesbeianus*) were also found in two other pools on Piney Creek at the time of the CRLF observations. The Piney Creek occurrence is presumed extirpated, based on field investigations conducted by the USFWS (2002).

1.1 Sites Potentially Suitable for CRLF within the Project Boundary

Table 1.1-1. Summary of sites assessed for potential California red-legged frog breeding habitat within the Don Pedro Project Boundary. (73 sites)

Site Number	Habitat Feature/Seasonality/Location	Date Field Assessed	Meets 20-Week Criterion	Notes
F1	Stream, intermittent (unnamed), Hatch Creek Arm	02/09/12	No	American bullfrog tadpoles present
F2	Stream, intermittent (unnamed), near Marsh Flat Road	02/07/12	No	
F3	Stream, perennial (unnamed), near Marshes Flat Road	02/08/12	Yes	Includes stream and in-stream pool
F5	Pond, perennial impoundment in West Fork Big Creek	04/17/12	No	American bullfrog juvenile present
F7	Stream, ephemeral, Upper Bay	06/19/12	No	
F8	Stream, ephemeral, Upper Bay	06/19/12	No	
F9	Stream, ephemeral, Upper Bay	06/19/12	No	
F10	Stream, ephemeral, Upper Bay	06/19/12	No	
F11	Stream, perennial, West Fork Big Creek	04/19/12	Yes	Adult American bullfrog present Fish present
F12	Stream, perennial (unnamed), Big Creek Arm	04/19/12	Yes	Juvenile American bullfrogs present Sierran treefrog tadpoles present Fish present
F13	Stream, perennial (unnamed), 49er Bay	04/19/12	Yes	Adult and juvenile American bullfrog present Western toad tadpoles present Fish present
F14	Stream, ephemeral, Upper Bay	06/19/12	No	
F15	Stream, perennial (Big Creek), near Old Don Pedro Road	04/17/12	Yes	American bullfrog juveniles and tadpoles present Western toads present
F17	Stream, perennial, Poor Man's Gulch	02/09/12	Yes	
F19	Stream, ephemeral, Upper Bay	06/19/12	No	
F20	Stream, ephemeral, Upper Bay	06/19/12	No	
F22	Stream, perennial and associated pond, Big Creek Arm	04/19/12	Yes	Adult American bullfrog present Fish present
F23	Stream, ephemeral, Upper Bay	06/19/12	No	
F24	Stream, ephemeral, Upper Bay	06/19/12	No	
F25	Stream, perennial, Wreck Bay	06/19/12	Yes	Bullfrog tadpoles present Fish present
F26	Stream, intermittent (unnamed), near Grizzly Road	02/07/12	No	
F27	Stream, perennial, Deer Creek	02/09/12	Yes	American bullfrog tadpoles present

Site Number	Habitat Feature/Seasonality/Location	Date Field Assessed	Meets 20-Week Criterion	Notes
F29	Stream, seasonal, North of SR 120	06/18/12	No	
F30	Stream, perennial, Kanaka Creek, near Jacksonville Road	02/09/12	Yes	
F31	Stream, seasonal (unnamed), in Moccasin Point Marina	02/07/12	No	
F32	Stream, perennial (unnamed), near Jacksonville Road	02/09/12	Yes	
F33	Stream, seasonal (unnamed), near Grizzly Road	02/07/12	No	
F34	Stream, seasonal (unnamed), near Moccasin Creek D Road	02/07/12	No	
F35	Stream, perennial, Woods Creek	04/18/12	Yes	American bullfrog adult present
F36	Stream, seasonal (unnamed) , near Molina Street	04/19/12	Yes	American bullfrog adults present Fish present
F38	Stream, ephemeral, Upper Bay	06/19/12	No	
F39	Stream, seasonal (unnamed), 49er Bay	04/19/12	No	
F40	Pond, seasonal (unnamed), near SR 132	02/08/12	No	Sierran treefrog adults present
F41	Pond, perennial, near SR 132	02/08/12	Yes	American bullfrog juvenile present
F43	Pond, perennial, impoundment in West Fork Big Creek	04/17/12	Yes	Unidentified frog species present Western pond turtle present
F45	Pond, perennial, near Fleming Meadows Recreation Area	02/08/12	Yes	Constructed sewage treatment pond
F46	Pond, perennial, near Blue Oaks Recreation Area	02/08/12	Yes	Constructed sewage treatment pond
F47	Pond, perennial (unnamed), at Fleming Meadows Recreation Area	02/08/12	Yes	Public swimming pool
F48	Pond, perennial, impoundment in Lucas Gulch	04/19/12	Yes	Below Don Pedro Reservoir high water line Western toad tadpoles present
F49	Pond, perennial, near Bonds Flat Road	02/08/12	Yes	Constructed sewage treatment pond
F50	Pond, perennial, near Blue Oak Recreation Area	02/08/12	Yes	Constructed sewage treatment pond
F51	Pond, perennial, near Moccasin Point Recreation Area	02/07/12	Yes	Constructed sewage treatment pond
F52	Pond, perennial, near Moccasin Point Recreation Area	02/07/12	Yes	Constructed and disturbed sewage treatment pond
F53	Stream, seasonal (unnamed), near Hoyito Circle	04/19/12	Unknown	Within 1 mile of historical California Red Legged Frog occurrence
F54	Stream, perennial Sixbit Gulch	04/19/12	Yes	American bullfrog present Fish present

Site Number	Habitat Feature/Seasonality/Location	Date Field Assessed	Meets 20-Week Criterion	Notes
F60	Pond, seasonal, near Jacksonville Road	04/18/12	Yes	Below Don Pedro Reservoir high water line American bullfrog adults, juvenile, and tadpoles present
F61	Stream, perennial (unnamed), near Marshes Flat Road	02/07/12	Yes	Includes the stream and pool in stream
F62	Upland, near Marshes Flat Road	02/07/12	No	No aquatic feature present
F63	Upland, near Marshes Flat Road	02/07/12	No	No aquatic feature present
F64	Upland, near Marshes Flat Road	02/07/12	No	No aquatic feature present
F65	Pond, ephemeral, near Marshes Flat Road	02/07/12	No	
F66	Stream, seasonal (unnamed), near Marshes Flat Road	04/19/12	No	American bullfrog juvenile present
F68	Stream, seasonal (unnamed),	04/19/12	No	
F69	Stream, perennial (unnamed), near Bonds Flat Road	02/08/12	Yes	
F70	None	02/08/12	No	No aquatic feature present
F73	Stream, intermittent (unnamed), in Moccasin Point Recreation Area	02/07/12	No	
F75	Stream, seasonal (unnamed)	04/19/12	Unknown	American bullfrog juvenile present
F77	Pool in spillway channel	02/08/12	Yes	Unidentified frog species present
F78	Pool in spillway channel	02/08/12	Yes	Unidentified frog species present
F80	Pool in spillway channel	02/08/12	Yes	Fish presence highly likely
F81	Stock pond, near Bonds Flat Road	02/08/12	Unknown	Generally manually filled by the Tuolumne Irrigation District each year at the request of a local cattle rancher
F82	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns.
F83	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns
F84	Stream, perennial (Big Creek), crosses La Grange Road	02/08/12	Yes	
F85	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns
F86	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns
F87	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns
F88	Pool in spillway channel	N/A	Yes	Assessed aerially due to safety concerns
F89	Pool in spillway channel	02/08/12	Yes	Assessed from 50 ft. away due to access restrictions
F90	Stock pond, perennial, south of Bonds Flat Road	02/08/12	Yes	
F91	Stream, seasonal (unnamed), near Moccasin Creek D Road	02/07/12	No	

Site Number	Habitat Feature/Seasonality/Location	Date Field Assessed	Meets 20-Week Criterion	Notes
F96	Pool in seasonal stream (unnamed), near Old Don Pedro Road	N/A	No	Assessed aerially due to safety concerns
F100	Stream, perennial (Hatch Creek), crosses Sunset Oaks Lane	02/07/12	Yes	Trout (6 inches long) present

Site F1

F1

F1 is a 58-m-long section of an unnamed tributary, a tributary to the Hatch Creek arm of Don Pedro Reservoir, located partially below the high water line of the reservoir within the FERC Project Boundary. F1 is 2.7 km from the nearest known CRLF occurrence. National Wetlands Inventory (NWI) data (USFWS 2012) depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on February 9, 2012. F1 is a seasonal stream that flows in a valley located in a landscape characterized by rolling hills. The bank full width was 2 m with a depth of 0.5 meter. The stream gradient was 4 - 5 percent. Pools measuring up to 1 m x 0.3 m and 0.05 m deep were present in the streameter. Non-pool habitat was a combination of riffle and run. The substrate was made up of soil, cobble, and boulder. Stream banks were gently to moderately sloping and comprised of vegetated soil. Emergent vegetation consisted of grasses and forbs with no vegetation overhanging the site. Upland habitat was a mix of oak (*Quercus* sp.) and foothill pine (*Pinus sabiniana*) woodland.

F1 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F2

F2

F2 is a 112-m-long section of an unnamed intermittent tributary to Don Pedro Reservoir, located approximately 65 m west of Marsh Flat Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F2 is 2.5 km from the nearest known CRLF occurrence. NWI data depict F2 as a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature.

The site was assessed on February 7, 2012. F2 is adjacent to F63. The bank full width was estimated to be 2 m and the bank full depth was estimated to be 1.5 meter. The stream gradient was 4 percent. One pool was present, measuring approximately 6 m x 2 m, with a maximum depth of 0.2 meter. Non-pool habitat was riffle. The substrate was sand and vegetated soil. The banks were steeply sloping and consisted of vegetated soil that was eroded in places. Upland grasses made up the emergent vegetation and aquatic vegetation was dominated by duckweed (*Lemna* sp.). Oak and Himalayan blackberry (*Rubus discolor*) were overhanging. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir. Surrounding upland habitat was a combination of oak and foothill pine woodland; below the high water line, canopy cover was minimal.

F2 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F3

F3

F3 is a freshwater pond formed at the confluence of three perennial tributaries to Don Pedro Reservoir, located east of SR 182, 65 m east of Don Pedro Reservoir, and within the FERC Project Boundary. F3 is 4 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. The bank full width was estimated at 1.5 m with a maximum depth of 0.5 m. The stream gradient was approximately 3 percent. Pools measuring up to 5 m x 1.5 m and 0.1 m deep were present at the site. Non-pool habitat was made up of riffles. Substrate consisted of silt. Banks were gently sloping with an incised vegetated channel. The dominant emergent and margin vegetation was grass with no overhanging vegetation present. Surrounding upland habitat consisted of blue oak (*Quercus douglasii*) pastureland. A juvenile American bullfrog was observed during the survey.

F3 holds water for at least 20 weeks during the CRLF breeding season and therefore may represent potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrogs diminish the potential suitability of this site.

Site F5

F5

F5 is a 152-m-long section of an unnamed intermittent tributary to Don Pedro Reservoir, located approximately 75 m north of SR 132, partially below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F5 is 4 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature from the mouth of the reservoir to 350 m upstream, including Site F5, which becomes a freshwater emergent seasonal (PEMC) wetland feature further upstream.

The site was assessed on February 8, 2012. The bank full width was estimated at 1.5 m and depth was 0.5 m. The stream gradient was 3.5 percent. Pools measuring up to 3 m x 0.75 m and 0.1 m deep were present in the stream. Non-pool habitat was a mix of riffle, cascade, and run. The substrate consisted of angular cobbles and boulders. The banks of the channel were incised and consisted of soil with emergent vegetation. Willows (*Salix* sp.) and grasses were the dominant vegetation at the site, with willows overhanging the stream. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir. Surrounding upland habitat was blue oak pastureland, with the canopy cover minimal below the high water line and increasing to 30 percent upstream of the assessment location.

F5 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F7

F7

F7 is a 32-m-long section of an ephemeral tributary to Don Pedro Reservoir at Upper Bay, below the high water line and within the FERC Project Boundary. F7 is 10 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature.

The site was assessed on June 19, 2012. F7 is in the vicinity of seven other ephemeral tributaries to Don Pedro Reservoir at Upper Bay. The bank full width was 1 m with a depth of 0.25 m. The stream gradient was 4 percent. The stream was dry at the time of survey, but it was assumed that pools would be present during flow conditions. Non-pool habitat was assumed to be a mix of riffle and cascade. The substrate was made up of soil and

bedrock with some cobbles. The stream banks were very shallow and vegetated with grasses, sloping to steeper bedrock in places. Emergent vegetation consisted of grasses and forbs below the high water line. Buckthorn, oak, and foothill pine were overhanging the stream channel above the high water line and were the dominant vegetation in the uplands. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F7 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F8

F8

F8 is a 45-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F8 is 10 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F8 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The bank full width was 1 m with a depth of 0.25 m. The stream gradient was 4 percent. The stream was dry at the time of survey, but it was assumed that no pools were present. Non-pool habitat was assumed to be riffle during flow conditions. The substrate was made up of soil and bedrock with some cobbles. The stream bank varied from gently sloping to steep bedrock and cobbles with grass present in flat areas. Emergent and margin vegetation consisted of grasses and forbs below the high water line, with buckthorn and oak in the upland and overhanging the stream channel in some areas. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F8 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F9

F9

F9 is a 37-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F9 is 9.8 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F9 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The bank full width

was 2 m with a depth of 1 m. The stream gradient was 6 percent. The stream was dry at the time of survey, but it was assumed that pools would be present during flow conditions. Non-pool habitat was assumed to be a mix of cascade, riffle, and step-pool. The substrate was made up of soil and grasses that were present throughout the stream channel. Stream banks consisted of somewhat steep bedrock. Emergent and margin vegetation consisted of grasses, with one oak overhanging the stream channel. Upland habitat was dominated by buckthorn (*Ceanothus* sp.). No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F9 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F10

F10

F10 is a 53-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F10 is 9.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F10 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. There was no defined stream channel, so bank full width and depth could not be estimated. The stream was dry at the time of survey, but it was assumed that no pools would be present. Non-pool habitat was assumed to be riffle during flow conditions. The substrate was made up of soil and grasses that were present throughout the stream channel. Emergent and margin vegetation consisted of desiccated grasses, with buckthorn and Manzanita in the upland and overhanging the stream channel in some areas. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F10 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F11

F11

F11 is a 591-m-long section of West Fork Big Creek, a perennial tributary to Don Pedro Reservoir, located partially below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F11 is 17 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F11 is a perennial stream. The bank full width was 4 m with a depth of 1 meter. The stream gradient was 2 percent. Pools measuring up to 2 m x 5 m and 0.75 m deep were present in the stream. Non-pool habitat consisted of riffle, run, and step-pool. The substrate was made up of bedrock and cobbles. Stream banks varied from low gradient to steeper areas of vegetated soil with some bedrock outcroppings. Emergent vegetation was a mix of grasses and forbs, with willow overhanging the site. Upland habitat was made up of oak, a few pines, and shrubs. American bullfrogs and small fish were observed at the site during the survey.

F11 holds water for at least 20 weeks during the CRLF breeding season and therefore may represents potential CRLF breeding habitat. However, the presence of fish and American bullfrogs diminishes the potential suitability of this site.

Site F12

F12

F12 is a 58-m-long section of an unnamed perennial tributary to the Big Creek arm of Don Pedro Reservoir, located 40 m northeast of Don Pedro Reservoir within the FERC Project Boundary. F12 is 8.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F12 is a depressional stream formed in bedrock outcroppings. The bank full width was 4 m with a depth of 1.2 m. The stream gradient was 2 - 4 percent. Pools measuring up to 5 m x 3 m and 0.5 m deep were present in the stream. Non-pool habitat consisted of low gradient run and riffle. The substrate was made up of bedrock and some cobbles. Banks around non-pool habitat were undercut by the stream. Emergent vegetation was made up of rushes, grasses, forbs, and submerged pondweed (*Potamogeton* sp.) with no vegetation overhanging the site. Upland habitat was made up of oak savannah with 40 percent canopy cover. Juvenile American bullfrogs (*Rana catesbeiana*), many larval sierran treefrogs (*Pseudacris sierra***)**, and fish were all observed during the site visit.

F12 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of fish diminish the potential suitability of this site.

Site F13

F13

F13 is a 736-m-long section of an unnamed perennial tributary to 49er Bay, located 15 m south of Old Don Pedro Road, partially below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F13 is 7.3 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F13 is a series of pools within a stream and is not located near any other sites. The pools and stream were fed by two smaller streams, one perennial and one seasonal. The bank full width was 8 m with a depth of 1 meter. The stream gradient was 2 - 4 percent. Pools measuring up to 20 m x 3 m and 0.5 m deep were present in the stream. Non-pool habitat consisted of low gradient run and riffle. The substrate was made up of organic matter, soil, and some subangular cobbles. Stream banks were mainly low gradient vegetated soil, and those around non-pool habitat were undercut by the stream. Emergent vegetation was made up of rushes, grasses, forbs, and submerged pondweed with no vegetation overhanging the site. Upland habitat was made up of oak savannah with 60 percent canopy cover. Larval western toads (*Anaxyrus boreas*), adult and juvenile American bullfrogs, larval sierran treefrog, and fish were all observed during the site visit. A small dirt road crossed the stream within the site.

F13 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrogs diminish the potential suitability of this site.

Site F14

F14

F14 is a 45-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F14 is 9.5 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F19 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The bank full width was 7–10m with a depth of 2-3 m, but the channel was not well defined. The stream gradient was 6 percent. The stream was dry at the time of survey,

but it was assumed that no pools would be present. Non-pool habitat was assumed to be riffle during flow conditions. The substrate was made up of soil and grasses that were present throughout the stream channel. Stream banks were gently sloping and covered with grass with some rocks where the stream approached the reservoir. Emergent and margin vegetation consisted of grasses, with oak in the upland and overhanging the stream channel in the upstream portion of the site. Manzanita and buckthorn were also present in the upland habitat. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F14 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F15

F15

F15 is a 1,218-m-long section of Big Creek and associated tributaries, located partially below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F15 is 12.2 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature from the mouth at the reservoir upstream.

The site was assessed on April 17, 2012. Big Creek is a large perennial tributary to Don Pedro Reservoir in a landscape characterized by bedrock outcroppings. The bank full width of the stream was observed to be 7 - 8 m with a depth of 0.5 m. The stream gradient was 2 - 4 percent. Pools measuring up to 1 m x 3 m and 1.5 m deep were present in the stream. Non-pool habitat consisted of riffle, run, and cascade. The substrate was made up of bedrock, gravel, cobble, and boulder. Stream banks were low gradient near the stream, turning to steeper rolling hills. Emergent and margin vegetation were a combination of grasses and forbs with no vegetation overhanging the site. Upland habitat was a mixed oak and foothill pine savannah with approximately 45 percent canopy cover. Juvenile and larval American bullfrogs were present throughout the site, and 3 western toads were observed in amplexus during the survey. A bald eagle was observed feeding on a bass near the stream with a juvenile or subadult nearby. Horses were observed grazing near the stream.

F15 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrogs diminish the potential suitability of this site.

Site F17

F17

F17 is a 187-m-long section of Poor Man's Gulch, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F17 is 12.8 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on February 9, 2012. F17 is a section of a perennial stream north of F65. The bank full width was 6 m with a depth of 1.5 - 2 m. The stream gradient was 2 - 4 percent. Pools measuring up to 10 m x 6 m and 0.8 m deep were present in the stream. Non-pool habitat was a combination of cascade, step-pool, run, and low gradient riffle. The substrate was made up of bedrock, boulder, and subangular cobble. Stream banks were a mix of confined, steep rocky soil and low gradient vegetated soil. Emergent vegetation was consisted of grasses with foothill pine overhanging. Upland habitat was made up of foothill pine woodland and toyon (*Heteromeles arbutifolia*). No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F17 holds water for at least 20 weeks during the CRLF breeding season and therefore may represent potential CRLF breeding habitat.

Site F19

F19

F19 is a 26-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F19 is 9.8 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F19 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The bank full width was 7 m with a depth of 1 m, but the channel was not well defined. The stream gradient was 6 percent. The stream was dry at the time of survey, but it was assumed that no pools would be present. Non-pool habitat was assumed to be riffle during flow conditions. The substrate was made up of soil and grasses that were present throughout the stream channel. Stream banks were gently sloping bedrock and gravel. Emergent and margin vegetation consisted of grasses, with buckthorn and other scrub/shrubs in the upland and overhanging the stream channel in the upstream portion of the site. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F19 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F20

F20

F20 is a 33-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F20 is 9.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F20 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. There was no defined stream channel, so bank full width and depth could not be estimated. The stream gradient was 6 percent. The stream was dry at the time of survey, but it was assumed that no pools would be present. Non-pool habitat was assumed to be a mix of riffle and cascade during flow conditions. The substrate was made up of soil and grasses that were present throughout the stream channel and bedrock with some cobbles in the upstream section. Emergent and margin vegetation consisted of grasses, with buckthorn in the upland and overhanging the stream channel in the upstream portion of the site. The upland habitat was a combination of pine and scrub/shrub. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F20 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F22

F22

F22 is a 145-m-long section of an unnamed perennial tributary to the Big Creek arm of Don Pedro Reservoir, located 10 m north of Don Pedro Reservoir within the FERC Project Boundary. F22 is 9.1 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F22 is a perennial stream with an associated seasonal pond that is not located near any other sites. The bank full width of the stream was 0.1 m with a depth of 1 meter. The stream gradient was 2 - 4 percent. Pools measuring up to 2 m x 5 m and less than 0.1 m deep were present in the stream. Non-pool habitat consisted of step pool, cascade pool, and low riffle. The substrate was made up of organic matter and soil with bedrock outcroppings. Stream banks varied from low gradient to steeper areas of

vegetated soil with some bedrock outcroppings. The seasonal pool covered an area of 20 m^2 and had a maximum depth of 0.3 m. The banks of the pond were steeply sloped gravel and bedrock with some low gradient areas that may connect to other ponds that were dry at the time of the survey. Emergent vegetation at both the stream and the pond was a mix of grasses and forbs, with no overhanging vegetation. Vegetation in the margin was mostly grasses. Upland habitat was made up of a gently sloping meadow with oak above the high water line of the reservoir. American bullfrogs and small fish were observed at the site during the survey.

F22 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrog and fish diminish the potential suitability of this site.

Site F23

F23

F23 is a 48-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F23 is 9.6 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F23 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The bank full width was 7 - 10 m with a depth of 2 - 3 m. The stream gradient was 4 percent. The stream was dry at the time of survey, but it was assumed that no pools would be present. Non-pool habitat was assumed to be riffle during flow conditions. The substrate was made up of soil and grasses that were present throughout the stream channel. Stream banks were gently sloping and vegetated, and become increasingly rocky towards the top of the slope. Emergent and margin vegetation consisted of grasses, with Manzanita and buckthorn in the upland and overhanging the stream channel in some areas. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F23 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F24

F24

F24 is a 77-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F24 is 9.1 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F24 is in east of the group of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The site is adjacent to a large constructed gravel slope and beneath power lines. The bank full width was 3 m with a depth of 1.25 m. The stream gradient was 6 percent. The stream was dry at the time of survey, but it was assumed that pools up to 5m x 2m would be present during flow conditions. Non-pool habitat was assumed to be a mix of cascade and riffle. The substrate was made up of soil and gravel with bedrock in the upstream portion. Stream banks were steeply incised and made up of a combination of soil and gravel with bedrock upstream. Emergent and margin vegetation consisted of desiccated grasses and forbs, with no overhanging vegetation. Upland habitat was a mix of pine and oak with 60 percent canopy cover. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F24 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F25

F25

F25 is a 54 -m-long section of an unnamed perennial tributary to Don Pedro Reservoir, located below the high water line of Don Pedro Reservoir and within the FERC Project Boundary in Wreck Bay. F25 is 11.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area.

The site was assessed on June 19, 2012. The bank full width was estimated at 1.5 m. The stream depth at the bank full width was determined to be 0.75 m. The stream gradient was 2 percent. Pools measuring up to 1 m x 3 m and 0.2 m deep were present in the stream. Non-pool habitat was a mix of riffle and run. The substrate consisted of soil, bedrock, gravel, and cobbles. The banks of the channel were made up of moderately sloping bedrock. Emergent and margin vegetation consisted of desiccated grasses and forbs with no overhanging vegetation. Submerged algae was abundant in the stream. Larval American bullfrogs and small fish were present. Surrounding upland habitat included mixed oak and pine woodland with 60 percent canopy cover.

F25 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrog and fish diminish the potential suitability of this site.

Site F26

F26

F26 is a 70 m-long section of an unnamed intermittent tributary to Don Pedro Reservoir, located perpendicular to Grizzly Road, partially below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F26 is 12.1 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature from the mouth at the reservoir upstream, including Site F26.

The site was assessed on February 7, 2012. F26 is not located near any other sites. The bank full width was estimated at 1.3 m with a maximum depth of 1 meter. The stream gradient was 30 percent. Pools measuring up to 0.75 m x 1.3 m and 0.3 m deep were present in the stream. Non-pool habitat was a mix of riffle and cascade. The substrate consisted of boulders and bedrock. The banks of the channel were steep, eroded, incised and comprised of soil and boulders. Himalayan blackberry was the dominant vegetation at the site, with emergent moss and upland grasses present. Surrounding upland habitat included buckeye (*Aesculus californica*), toyon, oak, and foothill pine with 75 percent canopy cover. Another pool was present on the downstream side of the road, below the culvert, that measured approximately 0.9 m x 1.5 m with an average depth of 0.15 m and a bankfull width of 0.3 m. Substrate in the downstream pool consisted of organic matter and vegetation included algae in the water surrounded by upland annual grasses and forbs (*Astragalus* sp.). No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F26 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F27

F27

F27 is a 278-m-long section of Deer Creek, a perennial tributary to Don Pedro Reservoir, located south of Wards Ferry Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F27 is 17 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) in the area of the site.

The site was assessed on February 9, 2012. F27 is not located near any other sites. The bank full width was

estimated at 3.5 m with a maximum depth of 0.5 m. The stream gradient was 4 percent. Pools were present, with a maximum size of 5 m x 1 m and an approximate depth of 1 meter. Non-pool habitat was a mix of riffle, step-pool, and cascade. The substrate consisted of boulders and bedrock. The banks of the channel consisted of steep confined bedrock and moderately sloping soil. Ferns and moss on slabs were the dominant emergent vegetation, with willow and buckeye overhanging the stream. Margin vegetation was made up of timothy grass (*Phleum pretense*), forbs, willows, and buckeye. Surrounding upland habitat included mixed pine, toyon, and chaparral. At least ten American bullfrog tadpoles were present in the stream, downstream of the site.

F27 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the potential presence of American bullfrogs diminishes the potential suitability of this site.

Site F29

F29

F29 is a 167-m-long section of an unnamed seasonal tributary to Don Pedro Reservoir that crosses SR 49, located below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F29 is 12.6 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area.

The site was assessed on June 18, 2012. F25 is located northwest of sites F51 and F52 on SR 49. The bank full width was estimated at 2 m. The bank full width was estimated at 2 m with a maximum depth of 0.75 m. The stream gradient was 5 percent. The stream was dry at the time of survey, but it was assumed that pools measuring up to 1 m x 1 m during flow conditions. Non-pool habitat was assumed to be a mix of riffle and cascade. The substrate consisted of boulders and cobbles. The banks of the channel had a slightly steep grade with no abrupt drop off or incision and were vegetated to the stream. Emergent and margin vegetation consisted of grasses and forbs with willows overhanging. No amphibian or fish species were observed during the survey. Surrounding upland habitat included mixed oak and pine woodland with 90 percent canopy cover upstream, but no cover downstream.

F29 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F30

F30

F30 is a 321-m-long section of a perennial tributary to Don Pedro Reservoir, Kanaka Creek, located south of Jacksonville Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F30 is 14.3 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland feature from the mouth at the reservoir upstream including Site F30.

The site was assessed on February 9, 2012. F30 is located northwest of Site F32. The bank full width was estimated at 2 m with a maximum depth of 0.6 m. The stream gradient was 4 percent. Pools with a maximum size of 5 m x 3 m and 0.5 m deep were present in the stream. Non-pool habitat was a mix of cascade, step pool, and riffle. The substrate consisted of boulders, bedrock, cobble, and gravel. The banks of the channel were steep, rocky, and confined above the high water line. Below the high water line the banks were made up of channelized vegetated soil with a moderate slope. Dehisced forbs were the dominant vegetation and were overhanging the stream in combination with buckthorn and willow. Emergent vegetation was made up of water purslane (*Ludwigia* sp.), beggar-tick (*Bidens* sp.), and algae. Margin vegetation consisted of annual and perennial grasses and asters (*Asteracea*) and vetch (*Vicia* sp). Surrounding upland habitat included foothill pine and interior live oak. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F30 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

Site F31

F31

F31 is a 238-m-long section of an unnamed seasonal tributary to Don Pedro Reservoir, located northeast of US Hwy 120/49 near Moccasin Point Marina, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F31 is 11.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine intermittent, streambed, temporarily flooded (R4SBA) wetland feature upstream of the where the stream joins the river, including Site F31.

The site was assessed on February 7, 2012. F31 is located west of F73 and across the Moccasin Creek arm of the reservoir from F26. The bank full width was estimated at 0.6 m with a maximum depth of 0.6m at bank full. The stream gradient was approximately 5 percent. There was a 0.5 m x 1 m pool present at the culvert where the stream crosses the Moccasin Point Marina access road, with a maximum depth of 0.6 m. Non-pool habitat

consisted of riffle, but the stream was mostly dry at the time of the survey with some seepage at the culvert. Substrate was made up of angular cobble. The stream was channelized with incised banks, especially upstream of the culvert. Downstream of the culvert, no channel was visible at the time of the survey. No emergent vegetation was present, but the margins were vegetated with blackberry and upland grasses. Blackberry was overhanging the stream. Surrounding upland habitat included foothill pine, oak, and Manzanita (*Arctostaphylos* sp.*)*. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F31 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F32

F32

F32 is a 114-m-long section of an unnamed perennial tributary to Don Pedro Reservoir, located southwest of Jacksonville Road, 5 m north of Don Pedro Reservoir, and within the FERC Project Boundary. F32 is 13.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature upstream of the where the stream joins the river, including Site F32.

The site was assessed on February 9, 2012. F32 is located southeast of F30. The bank full width was estimated at 1.5 m with a maximum depth of 0.3m. The stream gradient was approximately 5 percent. Pools measuring up to 1.5m x 1.5 m and 0.1 m deep were present at the site, and the non-pool habitat was a combination of cascade, step-pool, and riffle. Substrate consisted of boulder, cobble, and silt. Banks were very steep and vegetated with blackberries above the high water line, and moderately sloped soil with forbs below. Soil was eroded along the bank due to water elevation changes in the reservoir. Emergent vegetation was made up of sparse grass with live oak (*Quercus virginiana*), buckeye, and blackberry overhanging the stream. Dominant vegetation species were California poppy (*Eschscholzia californica*) and yarrow (*Achillea millefolium*). Surrounding upland habitat included mixed toyon, interior oak, and chapparal. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F27 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of fish diminishes the potential suitability of this site.

Site F33

F33

F33 is an 88-m-long section of an unnamed seasonal tributary to Don Pedro Reservoir, located south of Grizzly Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F33 is 11 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature upstream of the where the stream joins the river, including Site F33.

The site was assessed on February 7, 2012. F33 is located north and across the Moccasin Creek arm of the reservoir from F34. The bank full width was estimated at 3.5 m with a maximum depth of 1 meter. The stream gradient was approximately 5 percent. Pools measuring up to 1.5 m x 2 m and 1 m deep were present in the stream. Non-pool habitat was riffle, but the stream was dry at the time of the survey. Substrate consisted of boulder, cobble, and soil. Banks were gently sloping with eroding soil and cobble and gravel below the high water line. A few pieces of large woody debris were present at the site. Upland grasses made up the emergent vegetation with cow weed (*Heracleum maximum*) overhanging and in the margin. Surrounding upland habitat included foothill pine, oak, and Manzanita with between 0 and 20 percent canopy cover. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F33 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F34

F34

F34 is a 353-m-long section of an unnamed seasonal tributary to Don Pedro Reservoir, located south of Moccasin Creed D Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F34 is 10.7 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature from the mouth at the reservoir upstream including Site F34.

The site was assessed on February 7, 2012. F34 is located south and across the Moccasin Creek arm of the reservoir from F33. The bank full width was estimated at 3.5 m with a maximum depth of 1.3 m. The stream gradient was approximately 4 percent. Pools measuring up to 1.5 m x 3 m and 1.3 m deep were present at the site. Non-pool habitat was a combination of runs and riffles, but the stream was dry at the time of the survey. The stream appeared to flow quickly during periods of high flow, with possible scouring flows due to the spillway. Substrate

mainly consisted of cobble, but boulders, gravel and large woody debris were also present. Banks were sloping and made up of incised soil. The dominant bank and margin vegetation was a mix of upland grasses and willow, with emergent upland aster present and willows overhanging the stream. Surrounding upland habitat included a mix of foothill pine and oak woodland with willow along the banks of the stream. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F34 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F35

F35

F35 is a 173-m-long section of Woods Creek, located below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F35 is 13.6 km from the nearest known CRLF occurrence. NWI data for the area depict a lacustrine, littoral, unconsolidated shore, seasonally flooded, diked/impounded (L2USCh) wetland feature in the area of the site.

The site was assessed on April 18, 2012. F35 is a perennial tributary to Don Pedro Reservoir with areas of large ponding that is not located near any other sites. The bank full width of the stream was 20 m with a depth of greater than 2 m. The stream gradient was 0 to 2 percent. Pools measuring up to 20 m x 10 m and less than 0.75 m deep were present in the stream. Non-pool habitat consisted of run and riffle. The substrate was made up of bedrock, round and subangular cobbles, and large gravel. The stream bank was low gradient soil sloping to a steeper hillside. Emergent vegetation was dominated by grasses, but also included sedges and cattail (*Typha* sp.), with dispersed willow overhanging the stream and grasses and rushes in the margin. Submerged vegetation included pondweed and algae. Upland habitat was a mix of pine and oak scrub-shrub with chamise (*Adenostoma fasciculatum*). American bullfrogs and small fish were observed at the site during the survey. Shade and overhead cover of the stream were extremely limited. An adult American bullfrog was observed near the ponded section of Woods Creek during the survey.

F35 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of fish and American bullfrogs diminishes the potential suitability of this site.

Site F36

F36

F36 is a 78-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir, located below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F36 is 1.9 km from the nearest known CRLF occurrence. NWI data for the area depict a lacustrine, limnetic, unconsolidated bottom, permanently flooded, diked/impounded (L1UBHh) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F36 is a small seasonal stream with areas of rock and debris jam creating cascades and pools. . The bank full width of the stream was 2 m with a depth of 0.25 m. The stream gradient was 2 to 4 percent. Pools measuring up to 2 m x 4 m and less than 0.75 m deep were present in the stream. Non-pool habitat consisted of run, riffle, and cascade. The substrate was made up of bedrock, boulder, gravel, and sand. The stream bank varied from moderately sloped vegetated soil with some areas undercut by the stream to steep bedrock outcroppings. Emergent and margin vegetation was dominated by forbs, but also included grasses and monkey flower (*Mimulus* sp.). No vegetation was overhanging the stream. Upland habitat was dominated by chamise (90 percent canopy cover) with some scattered oak and clusters of foothill pine (20 percent canopy cover). No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F36 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation diminishes the potential suitability of this site.

Site F38

F38

F38 is a 43-m-long section of an ephemeral tributary to the upper bay of Don Pedro Reservoir, below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F38 is 10.1 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on June 19, 2012. F38 is in the vicinity of seven other ephemeral tributaries to the upper bay of Don Pedro Reservoir. The stream flowed from parallel culverts that cross a BLM road over rock face with no defined channel. The stream was dry at the time of survey, but it was assumed that two pools would be present during flow conditions. Non-pool habitat was assumed to be cascade. The substrate was made up of soil and grasses that were present throughout the stream channel. The bank consisted of cobbles on the bedrock outside of the rock face. Emergent and margin vegetation consisted of desiccated grasses, with buckthorn and other scrub/shrubs in the upland and overhanging the stream channel

in some areas. A few scattered oak and pine were also present in the upland. No fish or amphibians were observed; however, fish are known to be present in Don Pedro Reservoir.

F38 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F39

F39

F39 is a 24-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir's 49er Bay, 185 m northwest of Don Pedro Reservoir within the FERC Project Boundary. F39 is 6.4 km from the nearest known CRLF occurrence. NWI data for the area depict a riverine, intermittent, streambed, temporarily flooded (R4SBA) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F39 is a seasonal stream in a depression located within a hilly landscape. Although the stream was mostly dry at the time of the survey, the bank full width was estimated to be 0.25 m with a depth of 0.1 m. The stream gradient was 1 percent. No pools were present in the stream, and habitat consisted of low-gradient run. The substrate was made up of soil and organic matter. Stream banks were low gradient, vegetated soil. Emergent vegetation was a mix of forbs and grasses with no overhanging vegetation. Upland habitat was oak savannah with approximately 40 percent canopy cover. Residential homes and associated structures were located nearby the site. No amphibians or fish were observed during the survey.

F39 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F40

F40

F40 is a palustrine freshwater pond, located south of US Hwy 132, below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F40 is 4.4 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated shore, seasonally flooded, diked/impounded (PUSCh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F40 is a pond located above a culvert within a gently sloping drainage. The site covers approximately 14,300 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 2 m. The pond was dry at the time of assessment. Substrate consisted of soil, silt, bedrock, and boulders. Emergent vegetation consisted of sparse grass and forbs, the dominant vegetation in the area. No vegetation was

overhanging the pond. Sierran treefrog was heard calling but was not observed. Upland habitat was made up of blue oak pastureland.

Hydrological conditions at F40 vary greatly from year to year depending on reservoir operations. In most years F40 holds water for at least 20 weeks during the CRLF breeding season and may represent potentially suitable CRLF. However, lack of overhanging vegetation diminishes the potential suitability of this site.

Site F43

F43

F43 is a palustrine, freshwater pond created by a natural impoundment within West Big Fork Creek, located below the high water line of Don Pedro Reservoir and within the FERC Project Boundary. F43 is 9.6 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on April 17, 2012. F43 is adjacent to site F21. The site covers approximately 9,900 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 2 m. Substrate consisted mostly of organic matter and silt with some small gravel. The banks of the pond were mostly vegetated and varied from low grade to somewhat steep with angular bedrock outcroppings. Emergent vegetation was dominated by grasses, but included a mix of grasses and forbs with willows overhanging. The margins were vegetated with grasses and forbs. An abundance of large woody debris was present at the time of survey. Upland habitat consisted of rolling hills dominated by oak with a few large willows near the pond. An unidentified frog species jumped into the pond while vocalizing and a western pond turtle was seen basking on the opposite side of the pond.

F43 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

Site F45

F45

F45 is a perennial, freshwater pond, located southwest of Bond Flat Road, 790 m south of Don Pedro Reservoir, and within the FERC Project Boundary. F45 is 7.3 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F45 is a constructed sewage treatment pond located in an open herbaceous area, adjacent to F49. The site covers approximately 6,100 m^2; the maximum observed water depth was greater than 2 m; the

bank full depth was estimated to be 5 m. Substrate consisted of soil that was vegetated with grasses. No emergent or overhanging vegetation was present, but some cattails were present in the margin. Upland habitat was made up of blue oak pastureland, with no canopy cover over the pond. Killdeer (*Charadrius vociferous*) and buffleheads (*Bucephala albeola*) were observed at the site.

F45 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F46

F46

F46 is a perennial, freshwater pond, located southwest of Bonds Flat Road, 175 m west of Don Pedro Reservoir, and within the FERC Project Boundary. F45 is 8.9 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, semipermanently flooded, excavated (PUBFx) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F46 is a constructed sewage treatment pond located in an open herbaceous area, south of site F50. The site covers approximately 6,210 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 2 m. The pond was lined with concrete, with soil, cobble, and gravel substrate. No emergent or overhanging vegetation was present, but some grass clumps were present in the margin. Upland habitat was made up of blue oak (*Quercus douglasii*) pastureland, with no canopy cover over the pond. A male and a female bufflehead were observed at the site.

F46 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F47

F47

F47 is a perennial, freshwater pond, located north of Bonds Flat Road, 305 m south of Don Pedro Reservoir, and within the FERC Project Boundary. F46 is 6.7 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F47 is a public swimming pool lined with concrete, and was not located near any other sites. The site covers approximately 8,726 m^2; the maximum observed water depth was greater than 2 m; the bank full

depth was greater than 3 m. The pool was lined with concrete, with sand substrate. No vegetation was present in or around the pool. Upland habitat was made up of blue oak pastureland.

F47 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F48

F48

F48 is a perennial, freshwater pond created by an impoundment in Lucas Gulch, located below the high water line of Don Pedro Reservoir, within the FERC Project Boundary. F48 is 4.5 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F48 is separated from Don Pedro Reservoir by an impoundment and is not located near any other sites. The site covers approximately 1,585 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 2 m. Substrate consisted of soil with angular cobbles and gravel. The banks of the pond were moderately sloped with somewhat dense upland oaks on hilltops. Emergent vegetation was a mix of grasses, forbs, and monkey flower. No overhanging vegetation was present. Upland habitat consisted of oak savannah with approximately 90 percent canopy cover. Many western toad tadpoles were observed in the upstream shallow end of the pond.

F48 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation diminishes the potential suitability of this site.

Site F49

F49

F49 is a perennial, freshwater pond, located southwest of Bond Flat Road, 710 m south of Don Pedro Reservoir, and within the FERC Project Boundary. F49 is 7.4 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F49 is a constructed sewage treatment pond located in an open herbaceous area, adjacent to site F45. The site covers approximately 500 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was estimated to be greater than

2.5 m. The pond was lined with concrete, with no other substrate present. No emergent or overhanging vegetation was present, but cudweed (*Gnaphalium* sp.) was present in the margin. Upland habitat was made up of blue oak rangeland and dirt access roads, with no canopy cover over the site. A small unidentified frog jumped into the water upon approach by the surveyors and bufflehead and mallard (*Anas platyrhynchos*) were present.

F49 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F50

F50

F50 is a perennial, freshwater pond, located west of Bond Flat Road, 200 m west of Don Pedro Reservoir, and within the FERC Project Boundary. F50 is 8.9 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, semipermanently flooded, excavated (PUBFx) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F50 is a constructed sewage treatment pond located in an open herbaceous area, adjacent to site F46. The site covers approximately 2,875 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 2 m. The pond was lined with concrete, with no other substrate present. No emergent or overhanging vegetation was present, but cudweed was present in the margin and was the dominant plant. Upland habitat was made up of blue oak pastureland, with no canopy cover over the site.

F50 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F51

F51

F51 is a perennial, freshwater pond, located north of SR49, 195 m southeast of Don Pedro Reservoir, and within the FERC Project Boundary. F51 is 12.1 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh wetland feature in the area of the site.

The site was assessed on February 7, 2012. F51 is a constructed sewage treatment pond, adjacent to site F52. The site covers approximately 2, 760 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was estimated to be greater than 2 m. The substrate was made up of soil. Vegetation consisted of bulrush (*scirpus* sp.) upstream of the site and grasses in the upland area. Emergent vegetation was limited, but

some algae was observed at the inflow. Upland habitat was made up of oak woodland, foothill pine, and Manzanita.

F51 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and limited emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F52

F52

F52 is a perennial, freshwater pond, located north of SR49, 190 m southeast of Don Pedro Reservoir, and within the FERC Project Boundary. F52 is 12.2 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) wetland feature in the area of the site.

The site was assessed on February 7, 2012. F52 is a disturbed sewage treatment pond with a pump and machinery present in the pool, located adjacent to site F51. The site covers approximately 95 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was estimated to be greater than 2 m. The pond was lined with concrete, with no other substrate present. The vegetation was sparse with a few disturbed forbs near the shore. Upland habitat was made up of a gravel access road immediately surrounding the pond with oak and foothill pine woodland beyond the gravel. Sierran treefrog were heard calling during the survey.

F52 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and limited emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F53

F53

F53 is a 62-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir, 8 m northwest of Don Pedro Reservoir and within the FERC Project Boundary. F53 is within 1.4 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, scrub-shrub temporarily flooded (PSSA) wetland feature in the area of the site

The site was assessed on April 19, 2012. F53 is a seasonal stream surrounded by steep bedrock cliffs with vegetated slopes. The bank full width of the stream was 4 m with a depth of 0.25 m. The stream gradient was 10 percent. Pools, measuring up to 4 m x 6 m and 2 m deep were present in the stream. Non-pool habitat consisted of riffle, run, and cascade. The substrate was made up of gravel, subangular cobble, organic matter, and bedrock. Stream banks were mostly steep bedrock with some lower

gradient areas of vegetated soil. Emergent vegetation was dominated by forbs, but also contained some grasses. Overhanging vegetation consisted of oak, beggar-tick, and foothill pine that were growing on the steep slopes above the stream. Upland habitat was mixed oak and foothill pine with approximately 30 percent canopy cover and some tickbush shrub with approximately 10 percent canopy cover.

It is unknown if F53 holds water for at least 20 weeks during the CRLF breeding season and therefore may represent potential CRLF breeding habitat.

Site F54

F54

F54 is a 335-m-long section of Sixbit Gulch, a perennial tributary to Don Pedro Reservoir, located mostly below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F54 is 14 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, scrub-shrub temporarily flooded (PSSA) wetland feature in the area of the site.

The site was assessed on June 21, 2012. F54 is a perennial stream surrounded by steep bedrock cliffs with vegetated slopes crossed by a BLM road. The bank full width of the stream was 4 m with a depth of 1 m. The stream gradient was 1 percent. Pools, measuring up to 2 m x 3 m and 0.5 m deep were present in the stream. Non-pool habitat consisted of riffle. The substrate was made up of bedrock, cobbles, and concrete at the BLM road crossing. Stream banks were moderately sloped and lined with bedrock. Emergent vegetation was a mix of sedges and forbs with willows and Western spicebush (*Calycanthus occidentalis*) overhanging. The site was mostly enclosed in a dense willow thicket that completely covered the stream. Upland habitat was made up of foothill pine and scrub-shrub, with 20 percent canopy cover. American bullfrogs and small fish were present.

F54 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

Site F60

F60

F60 is a seasonal, freshwater pond, located below the high water line of Don Pedro Reservoir, within the FERC Project Boundary. F60 is 13.9 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, emergent, temporarily flooded, diked/impounded (PEMAh) wetland feature in the area of the site.

The site was assessed on April 18, 2012. F60 is a pond fed by a seasonal branch of a creek. The site covers approximately 650 m^2; the maximum observed water depth was greater than 1 m; the bank full depth was greater than 2 m. Substrate consisted of soil, organic matter, and subangular cobble. The banks of the pond were flat but adjacent to a steep hillside. Emergent vegetation was made up of grasses, with cocklebur, grasses and forbs in the margin around the entire pond. Cockleburs were the dominant vegetation in the area and two smaller willows were overhanging the site. Submerged vegetation consisting of duckweed and algae was present in the upstream end of the pool. Upland habitat was a mix of Manzanita and chamise with some oak and foothill pine with approximately 20 percent canopy cover. Adult, juvenile, and many larval American bullfrog were observed during the survey.

F60 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

Site F61

F61

F61 is a 47-m-long section of an unnamed perennial tributary to Don Pedro Reservoir, located west of Marshes Flat Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F61 is 2.8 km from the nearest known CRLF occurrence and is not within the USFWS Critical Habitat unit. NWI data for the area depict a palustrine, emergent, saturated (PEMB) wetland feature in the area of the site.

The site was assessed on February 7, 2012. F53 is west of N62 and includes a perennial stream and in-stream pool. The bank full width was estimated at 2 m with a maximum depth of 0.6 m. The stream gradient was 4 percent. One large pool was present below the high water line of Don Pedro Reservoir, measuring 20 m x 8 m with an approximate depth of 0.5 m. Non-pool habitat was a mix of riffle and run. The substrate consisted of boulders, silt, and sub-angular cobble. The banks of the channel varied between rocky and steep and sloping soil. Grass was the dominant emergent and margin vegetation. Surrounding upland habitat included oak woodland with approximately 5 percent canopy cover.

F61 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation diminishes the potential suitability of this site.

Sites F62, F63, and F64

F62, F63, and F64

F62, F63, and F64 are all upland areas located west of Marshes Flat Road, adjacent to Don Pedro Reservoir, and south of Hatch Creek. The sites were labeled as emergent wetlands on the NWI map and were therefore included in the assessment; however, no aquatic feature currently occurs at the mapped location. Upland grassy slopes occurred along the shoreline in this location.

Site F65

F65

F65 is an ephemeral, freshwater pond, located adjacent to Sunset Oaks Lane. F65 is 2.9 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, emergent, saturated (PEMB) wetland feature in the area of the site.

The site was assessed on February 7, 2012. F65 is a pond formed in a roadside ditch. The site covered approximately 350 m^2; the pond was dry at the time of the survey; the bank full depth was greater than 0.75 m. Substrate consisted of soil and a few boulders on the south end of the pond. Emergent vegetation was made up of grasses, with dehisced forbs and shrubs in the margin. No vegetation was overhanging the site. Upland habitat was grassland with some oak with approximately 20 percent canopy cover.

F65 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F66

F66

F66 is a 35-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir, located 120 m from Don Pedro Reservoir within the FERC Project Boundary. F66 is 7.3 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, emergent, saturated (PEMB) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F66 is a seasonal stream surrounded by steep bedrock cliffs with vegetated slopes south of F67. Although the stream was mostly dry at the time of survey, the bank full width of the stream was observed to be 10 - 12 m with a depth of 1 - 2 m. The stream gradient was 2 to 4 percent. One large pool was present in the stream, measuring approximately 10 m x 5 m with a maximum depth of 1 m. Non-pool habitat consisted of riffle and run. The substrate was made up of subangular boulders and cobbles. Stream banks were vegetated to the stream with a steep gradient and extremely incised. Emergent vegetation was a mix of grasses, forbs, and bulrush, with submerged duckweed, and rushes in the margin, and oak overhanging the site. Upland habitat was made up of oak woodland with approximately 50 percent canopy cover. Juvenile American bullfrogs were present in the pool and a bobcat (*Lynx rufus*) was observed running as the survey team approached the site.

F66 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F68

F68

F68 is a 34-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir, located partially below the high water line of Don Pedro Reservoir within the FERC Project Boundary. F68 is 7.1 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, emergent, saturated (PEMB) wetland feature in the area of the site.

The site was assessed on April 19, 2012. F68 flows over a valley created by bedrock outcropping within a vegetated hillside. The bank full width of the stream was observed to be 5 m with a depth of 1 - 3 m. The stream gradient was 5 to 12 percent. Pools measuring up to 1 m x 3 m and 0.25 m deep were present in the stream. Non-pool habitat consisted of high gradient riffle. The substrate was made up of bedrock with some soil and gravel. Stream banks were moderately sloping with vegetated soil lining the bedrock. Emergent vegetation was a mix of sparse grass and forbs with thick willows in the stream and overhanging the site. Upland habitat was made up of oak savannah with 30 - 60 percent canopy cover. A large metal pipe was observed in the stream channel.

F68 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F69

F69

F69 is a 658-m-long section of an unnamed perennial tributary to Don Pedro Reservoir, located north of Bonds Flat Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F69 is 5.1 km from the nearest known CRLF occurrence. NWI data for the area depict a palustrine, emergent, temporarily flooded, diked/impounded (PEMAh) wetland feature in the area of the site.

The site was assessed on February 8, 2012. F69 is a ditch below the high water line of Don Pedro Reservoir with a maximum depth of 1.5 m. The stream gradient was 2 percent. One large pool was present below the high water line of the reservoir, measuring 0.3 m x 0.1 m with an approximate depth of 0.05 m. No non-pool habitat was present. The substrate consisted of soil with a few boulders, cobbles, and some large woody debris. The banks were steep and comprised of soil with small forbs and grasses. Upland grasses made up the emergent and margin vegetation with no plants overhanging the site. All vegetation was severely trampled by cattle.

F69 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat

Sites F70

F70

F70 is located south of Bonds Flat Road, 1,900 m south of Don Pedro Reservoir. The site was labeled as an emergent wetland on the NWI map and was therefore included in the assessment; however, no aquatic feature currently occurs at the mapped location. An upland grassy/gravel area occurred along the shoreline in this location.

Site F73

F73

F73 is a 43-m-long section of an unnamed intermittent tributary to Don Pedro Reservoir, located north of Moccasin Creek D Road, partially below the high water line of Don Pedro Reservoir, and within the FERC Project Boundary. F73 is 11.5 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 7, 2012. F73 is not located near any other sites and flows from a culvert under an unnamed road to Don Pedro Reservoir. The bankfull width was 1 m with a maximum depth of 0.5 m. The stream gradient was 4 percent. Pools were present, with a maximum size of 1 m x 1m and an approximate depth of 0.5 m. An abundance of organic matter was present in the pools. Non pool habitat was made up of riffle. The substrate consisted angular cobbles and boulders. The banks were steep, incised, and mostly vegetated. No water was present upstream of the culvert at the time of the survey, but the area downstream of the culvert had some flow due to seepage. Emergent vegetation was made up of curled dock (*Rumex crispus*), cleavers (*Galium* sp.), aster, grasses, and submerged rushes (*Juncus* sp.) and algae with oak and toyon overhanging the site. Willow and soaproot (*Chlorogalum* spp) were present in the margin. The adjacent upland habitat included oak and foothill pine with Manzanita.

F73 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F75

F75

F75 is a 49-m-long section of a seasonal unnamed tributary to Don Pedro Reservoir, located 110 m northeast of Don Pedro Reservoir within the FERC Project Boundary. F75 is 6.7 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature at the site.

The site was assessed on April 19, 2012. F75 flows in a depression through a hilly, vegetated area. The bank full width of the stream was observed to be 4 m with a depth of 0.25 m. The stream gradient was 0 to1 percent. Pools measuring up to 4 m x 6 m and 0.5 m deep were present in the stream. Non-pool habitat consisted of run and low gradient riffle. The substrate was made up of soil and organic matter with a few subangular cobbles. Stream banks varied from low to higher gradient, somewhat incised, and vegetated throughout the stream channel. Emergent vegetation was a mix of grasses, rushes, and forbs with no vegetation overhanging the site. Upland habitat was made up of oak savannah with 60 percent canopy cover. A juvenile

American bullfrog was observed in a pool upstream of the site. Fences were present at the site, but grazing was still occurring along the stream.

It is unknown if F75 holds water for at least 20 weeks during the CRLF breeding season and therefore may represent potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrogs diminish the potential suitability of this site.

Site F77

F77

F77 is a series of perennial, freshwater ponds, located east of Bonds Flat Road, 110 m west of Don Pedro Reservoir, within the FERC Project Boundary. F77 is 8.7 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F77 is located east of site F78, within the spillway channel. The site covers 547 m^2 with ponds ranging from small (1 m x 0.5 m) to very large (30 m x 15 m) within the scoured bedrock channel. Observed water depth ranged from 0.1 m at small ponds to greater than 2 m at large ponds; the bank full depth was estimated to be greater than 3 m. The substrate was made up of bedrock and boulders. Emergent vegetation consisted of cattail, monkeyflower, bulrush, and primrose (*Ludwigia* sp.) with no vegetation overhanging the site or in the margin. Upland habitat was made up of angular cobble with no canopy over the site. An unidentified frog, red-wing blackbirds (*Agelaius phoeniceus*), and waterfowl were observed at the site. American bullfrogs have been observed at the site in the past.

F77 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging vegetation and the presence of American bullfrogs diminish the potential suitability of this site.

Site F78

F78

F78 is a perennial, freshwater pond, located west of Bonds Flat Road, 200 m west of Don Pedro Reservoir, within the FERC Project Boundary. F78 is 8.8 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F77 is located east of site F78, within the spillway channel. The site covers approximately 250 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was estimated to be 4 m. Emergent vegetation consisted of cattail, bulrush, primrose, and fern (*Azolla* sp.) with no vegetation overhanging the site. Some deciduous trees were present

in the margin. Upland habitat was made up of oak pastureland and the nearby highway. Small frogs, likely American bullfrogs, were present at the site along with various waterfowl.

F78 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of American bullfrogs diminishes the potential suitability of this site.

Site F80

F80

F80 is a perennial, freshwater pond, located southwest of Bonds Flat Road, 480 m southwest of Don Pedro Reservoir, within the FERC Project Boundary. F80 is 9 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F80 is located south of site F79, connected to the Tuolumne River. The site covers approximately 6,500 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 4 m. Banks of the pond were vegetated and varied from steep to sloping. The substrate consisted entirely of bedrock. Emergent vegetation was made up of cattail and some sedges with sparse buckeye overhanging the site. Upland grasses and vetch were present in the margin. Dominant species at the site were cattail and upland grasses. Upland habitat was blue oak rangeland with no canopy cover at the site. Fish presence is highly likely in the pond due to the connection with the Tuolumne River, although no fish were observed at the time of the survey. Waterfowl and red wing blackbirds were observed during the survey.

F80 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of American bullfrogs and the high potential of fish presence diminish the potential suitability of this site.

Site F81

F81

F81 is a man-made, freshwater stock pond above a small dam, located southwest of Bonds Flat Road, 800 m southwest of Don Pedro Reservoir, within the FERC Project Boundary. F81 is 9.2 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F81 is located southwest of site F80, and is generally manually filled by the Tuolumne Irrigation District each year at the request of a local cattle rancher. The site covers approximately 3,565 m^2; the maximum observed water depth was 2 m; the bank full depth was greater than 4 m. The substrate consisted of soil with a limited amount of bedrock. Emergent vegetation consisted of primrose and bulrush with sparse blue oak overhanging the

site. Grasses were the dominant vegetation at the site. Upland habitat was blue oak pastureland with approximately 20 percent canopy cover on the northeast side of the site.

It is unknown if F81 holds water for at least 20 weeks during the CRLF breeding season and therefore may represent potential CRLF breeding habitat.

Sites F82, F83, F85, F86, F87, and F88

F82, F83, F85, F86, F87, and F88 are all perennial pools within the spillway channel that are connected via a seasonal stream during high flow conditions. All of the sites were determined to be inaccessible for assessment due to unsafe conditions. The sites are located in a bedrock lined canyon, south of Bonds Flat Road, within the FERC Boundary. NWI data for the area do not show a wetland feature in the area of the sites.

F82 covers approximately 1,325 m^2, is 9 km from the nearest known CRLF occurrence. Emergent vegetation was present and willows were overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F82 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

F83 covers approximately 1,800 m^2, is 9 km from the nearest known CRLF occurrence. Emergent vegetation was present and willows were overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F83 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

F85 covers approximately 1,345 m^2, is 9 km from the nearest known CRLF occurrence. Emergent and aquatic vegetation was present and willows and shrubs were overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F85 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

F86 covers approximately 3,250 m^2, is 9 km from the nearest known CRLF occurrence. Emergent vegetation was present and willows were overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F86 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

F87 covers approximately 1,300 m^2, is 9 km from the nearest known CRLF occurrence. Emergent vegetation was present with oaks and willows overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F86 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

F88 covers approximately1,350 m^2, is 9 km from the nearest known CRLF occurrence. Emergent and aquatic vegetation were present with shrubs overhanging. Upland habitat was oak pastureland above a steep ravine and rock cliffs. F88 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat.

Site F84

F84

F84 is a 357-m-long section of a Big Creek, a perennial tributary to Don Pedro Reservoir that crosses and is adjacent to La Grange Road, within the FERC Project Boundary. F84 is 7 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F84 is made up of a pool within a stream running under La Grange Road through a culvert. The maximum observed water depth was0.75 m; the bank full width was 3 m with a depth of 2 m; the stream gradient was 0.5 percent. One large pool was present, measuring 8 m x 2 m and approximately 0.75 m deep. No non-pool habitat was present. The substrate consisted of cobbles, boulders, and a culvert. The banks were steep, eroded, and vegetated with grasses. Emergent vegetation included cattail, willow, and primrose with willow overhanging the site. Willow and grasses were present in the margin. The dominant vegetation at the site was willow. Upland habitat was blue oak pastureland with approximately 80 percent canopy cover from willow in water.

F84 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of fish and American bullfrogs diminishes the potential suitability of this site.

Site F89

F89

F89 is a perennial, freshwater pond, located within a spillway, 1,800 m south of Don Pedro Reservoir, within the FERC Project Boundary. F89 is 9 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012, but could not be accessed by foot and was assessed from 50 ft. away on the fill dam. F89 is located southeast of site F88 in a deeply incised canyon, and is dammed by fill on the south end. The site covers approximately 235 m^2; the maximum observed water depth was greater than 2 m; the bank full depth was greater than 3 m. The substrate consisted entirely of bedrock. No emergent or overhanging vegetation was present. Upland habitat was blue oak pastureland above a steep ravine and rock cliffs.

F89 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F90

F90

F90 is a perennial, freshwater stock pond, located 1,200 m south of Don Pedro Reservoir, within the FERC Project Boundary. F90 is 8.6 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 8, 2012. F90 is not located near any other sites. The site covered approximately 100 m^2 at the time of the survey, but is assumed to cover approximately 570 m^2 when full. The maximum observed water depth was 0.75 m and the bank full depth was estimated to be 3 m. Substrate consisted of soil, cobble, and gravel. No emergent or overhanging vegetation were present at the site, but sparse clumps of grass occupied the margin. Upland habitat was made up of blue oak rangeland, cudweed, dried aster, and buckthorn with approximately 1 percent canopy cover on the west side of the site. A horsehair snake (*Nematamorpha* sp.) was observed at the site during the survey.

F90 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, lack of overhanging and emergent or aquatic vegetation diminishes the potential suitability of this site.

Site F91

F91

F91 is a 117-m-long section of an unnamed seasonal tributary to Don Pedro Reservoir, located west of Moccasin Creek D Road, 235 m southeast of Don Pedro Reservoir within the FERC Project Boundary. F91 is 10.5 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 7, 2012. F91 is southeast of site F34. The stream gradient was 0.5 percent. The stream was dry at the time of the survey, but no pools were present and non-pool habitat would have consisted of riffle. The bankfull width was estimated to be 0.3 m with a depth of 2 m during seasonal flows. The substrate was made up of soil and cobble. The banks were vegetated and incised. Emergent vegetation in the stream bank was dominated by upland grasses at the time of the survey. Vegetation in the margin consisted of upland grasses with cow weed and cockleburs (*Xanthium* sp.) overhanging the site.

Upland habitat was a mix of blue oak and foothill pine woodland with 20 percent canopy cover at the site.

F91 does not hold water for at least 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F96

F96 is a pool in a seasonal, freshwater tributary to Don Pedro Reservoir, west of Old Don Pedro Road, within the FERC Project Boundary. The site was determined to be inaccessible for assessment due to proximity to private property where the owner denied access. NWI data for the area do not show a wetland feature in the area of the site.

F96 covers approximately 110 m2, is 8.1 km from the nearest known CRLF occurrence. Emergent and aquatic vegetation were present with one oak tree overhanging. Upland habitat was mostly grassland with oak pastureland nearby. F96 does not hold water for 20 weeks during the CRLF breeding season and therefore does not represent potential CRLF breeding habitat.

Site F100

F100

F100 is a 167-m-long section of Hatch Creek, a perennial tributary to Don Pedro Reservoir that crosses Sunset Oaks Lane, 235 m southeast of Don Pedro Reservoir within the FERC Project Boundary. F100 is 3 km from the nearest known CRLF occurrence. NWI data for the area do not show a wetland feature in the area of the site.

The site was assessed on February 7, 2012. F100 is north of F65. The bank full width was 15 - 20 m with a depth of 1.1 m. The stream gradient was 2 percent. Pools measuring up to 6 m x 15 m and 0.8 m deep were present at the site. The substrate was made up of subangular cobble and boulder. The banks consisted of gently sloping soil covered in burrows. Emergent vegetation consisted of grasses, with willows overhanging the site in the margin. Willows were the dominant species at the site. Upland habitat was oak woodland with chaparral. Trout, approximately 6 inches long, were observed at the time of the survey.

F100 holds water for at least 20 weeks during the CRLF breeding season and therefore represents potential CRLF breeding habitat. However, the presence of fish diminishes the potential suitability of this site.

1.2 Other Potentially Suitable Locations for CRLF within the Study Area

Table 1.2-1. Summary of sites (aquatic habitat locations) assessed for potential California red-legged frog breeding habitat within the Don Pedro Project study area (excluding sites within Project Boundary). (264 sites)

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N3	Pond, forested shrub wetland	No	Emergent and aquatic vegetation present Shrub and some oak overhanging Large woody debris present	N/A
N4	Stream in emergent wetland, near SR 49	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N10	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N11	Pond, perennial	Yes	Emergent and margin vegetation present Shrub overhanging	N/A
N18	Pond, seasonal, near Juniper Mine Road	No	Emergent vegetation present Oak overhanging No standing water in July	N/A
N24	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N27	Wetland, emergent	Yes	Emergent vegetation present No tree cover or overhanging vegetation Small pond present through year round	N/A
N29	Pond, perennial	Yes	Emergent vegetation present Some oak overhanging Bordered by dirt road on all sides	N/A
N32	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N34	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation Densely vegetated throughout	N/A
N35	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N36	Wetland, emergent, near Hidalgo Street and Banderilla Drive	No	Emergent vegetation present No tree cover or overhanging vegetation Passes through a school that is mostly impervious surface	N/A
N37	Wetland, emergent with pond, near Castillo Way	Yes	Emergent vegetation present Oak and shrub overhanging	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			Perennial pond present near El Prado Road Wetland follows small stream that parallels Castillo Way	
N39	Wetland, emergent	No	Emergent vegetation present Oak and shrub overhanging	N/A
N40	Pond, perennial, near Marshes Flat Road	Yes	Emergent vegetation present Oak and shrub overhanging Connected to N41 and reservoir by small stream	N/A
N41	Pond, perennial, near Marshes Flat Road	Yes	Emergent and aquatic vegetation present Oak and shrub overhanging Connected to N40/N53 and reservoir by small stream	N/A
N42	Wetland, emergent, near Merced Falls Road	No	Emergent vegetation present Oak overhanging	N/A
N44	Wetland, emergent, near SR 132 and Las Palmas Way	Yes	Emergent and margin vegetation present Oak and shrub overhanging Wetland created between two branches of seasonal stream channel	N/A
N47	Wetland, emergent, near El Prado Road	No	Emergent and margin vegetation present Oak and shrub overhanging on east side Wetland in seasonal stream channel Crosses Merced Falls Road	N/A
N48	Wetland, forested/shrub, near Marshes Flat Road	No	Emergent vegetation present Oak and shrub overhanging Directly connected to N41/N49	N/A
N49	Wetland, forested/shrub, near Marshes Flat Road	Yes	Emergent and margin vegetation present Oak, pine, and shrub overhanging Directly connected to N41 (pond)	N/A
N51	Freshwater emergent wetland, near Merced Falls Road	No	Emergent vegetation present Oak overhanging No standing water	N/A
N52	**Pond, perennial, near Marshes Flat Road and Hatch Creek Road**	**Yes**	**Size: 40m x 53m** **Emergent vegetation: grass, forbs, duckweed** **Overhanging: blackberry, toyon, mountain mahogany, tree of heaven** **Substrate: soil and organic matter** **Field assessed on 4/17/12** **Sierran treefrog present** **American bullfrog present**	**0793 - 0812**
N55	Pond, seasonal , near Penole Peak Road	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N56	Pond, perennial	Yes	Emergent vegetation present Oak and pine overhanging	N/A
N57	Stream, perennial with emergent wetland, near El Cerrito Way	Yes	Emergent vegetation present Oak and shrub overhanging	N/A
N60	**Pond, perennial, near Marshes Flat Road**	**Yes**	**Size: 33m x 26m** **Emergent and margin vegetation: forbs and grasses** **Overhanging: redbud** **Substrate: soil and organic matter** **Field assessed on 4/17/12** **Sierran treefrog present**	**0777 - 0782**
N61	Pond, perennial, near Arbolada Drive	Yes	No emergent vegetation Oak and pine overhanging	N/A
N62	Pond, perennial, near Hoyito Circle	Yes	Emergent and margin vegetation present Oak and shrub overhanging Directly connected to F53	N/A
N63	Pond, perennial, near Las Palmas Way	Yes	Emergent vegetation present No tree cover or overhanging vegetation Pond near school	N/A
N67	Wetland, forested/shrub	No	No emergent vegetation present Oak and, pine, and shrub overhanging Adjacent to N68/N72 (pond)	N/A
N68	Pond, perennial, near Buena Vista Court	Yes	Emergent and margin vegetation present Oak and shrub overhanging	N/A
N69	Pond, perennial, near Penole Peak Road	Yes	Emergent and margin vegetation present Oak overhanging	N/A
N71	Stream, perennial, adjacent to SR 132	Yes	Emergent vegetation present Oak overhanging Vegetated throughout stream channel	N/A
N73	Wetland, emergent, around ephemeral stream channel stream channel, near Madreselva Street	No	Emergent vegetation present Oak and shrub overhanging No standing water present	N/A
N74	Wetland, emergent, near Merced Falls Road	No	No emergent vegetation present No tree cover or overhanging vegetation Field adjacent to baseball diamond near school	N/A
N75	**Stream, perennial**	**Yes**	**Bankfull width: 2 – 3 m; gradient: 2 - 4 percent** **Pool size: 1m x 10m** **Non-pool habitat: run, riffle, step-pool, cascade** **Emergent Vegetation: forbs and grasses**	**0783 - 0790**

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			Overhanging: oak **Substrate: soil, organic matter, boulders, cobbles, gravel** **Banks are steep and deeply incised with vegetation.** **Field assessed on 4/17/12** **Sierran treefrog present** **Within 1 mile of historic California red legged frog location**	
N76	Stock pond, perennial	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N77	Pond, perennial, near Old Don Pedro Road	Yes	Emergent vegetation present Oak overhanging	N/A
N78	**Stream, perennial, Sixbit Gulch**	**Yes**	**Bank full width: 3m** **Depth at bank full: 0.5m** **Size of pools: 2m x 4m** **Maximum depth of pool: 0.5m** **Emergent vegetation: sedges, grasses, forbs** **Overhanging: willow and Western spicebush** **Substrate: bedrock and cobbles** **Field assessed on 6/21/12** **Fish present**	**1681 -1688**
N79	Stream, seasonal, near Red Hills Road	Yes	Emergent and margin vegetation present Some oak overhanging Wetland follows stream channel	N/A
N82	**Pond, perennial, near Shawmut Road**	**Yes**	**Size: 480m x 20m** **Emergent vegetation: rushes, plantego, grass** **No overhanging vegetation** **Substrate: soil and organic matter** **Field assessed on 4/18/12**	**0987 - 0992**
N83	Wetland, forested/shrub	No	No emergent vegetation present Oak and shrub overhanging No standing water	N/A
N84	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N85	Stream, perennial with emergent wetland, near Old Don Pedro Road	Yes	Emergent and margin vegetation present Oak overhanging	N/A
N87	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak and shrub overhanging Connected to Don Pedro Reservoir by small stream	N/A
N89	Pond, perennial	Yes	Emergent vegetation present	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			Some oak overhanging	
N90	Wetland, emergent	No	Emergent vegetation present No tree cover or overhanging vegetation Connected to Big Creek by intermittent stream channel	N/A
N91	Pond, perennial, near Old Don Pedro Road	Yes	Emergent and aquatic vegetation present Oak overhanging	N/A
N92	Wetland, emergent	No	No emergent vegetation overhanging No tree cover or overhanging vegetation	N/A
N93	Wetland, emergent in ephemeral streambed	No	Emergent vegetation present Sparse oak and shrub overhanging	N/A
N94	Stream, seasonal, near SR 49	Yes	Ephemeral vegetation present Oak and shrub overhanging	N/A
N97	Pond, perennial, near Menke Hess Road	Yes	Ephemeral and margin vegetation present Oak, pine, and shrub overhanging	N/A
N98	Stream, seasonal	Yes	Ephemeral vegetation present Oak overhanging	N/A
N99	Pond, perennial, near Jacksonville Road	Yes	Emergent and margin vegetation No tree cover or overhanging vegetation	N/A
N100	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation Large woody debris present	N/A
N101	Stream, seasonal	Yes	Emergent and margin vegetation present Some oak and shrub overhanging	N/A
N103	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N106	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N107	Stream, perennial (Sixbit Gulch), with forested/shrub wetland	Yes	Emergent vegetation present Pine and shrub overhanging	N/A
N108	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation Crosses SR 49 Wetland in ephemeral stream channel	N/A
N110	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water Vegetation community is red colored in July	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N112	Wetland, emergent, near Old Don Pedro Road	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N113	Wetland, emergent, near Old Don Pedro Road	No	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N115	Stream, perennial, near SR 49 and Menke Hess Road	Yes	Emergent vegetation present Oak, pine, and shrub overhanging	N/A
N116	Wetland, emergent	Yes	Emergent vegetation present Oak overhanging Formed in streambed that has been cutoff from N125 (pond) by berm	N/A
N117	Stream, perennial with emergent wetland, near Old Don Pedro Road	Yes	Emergent and margin vegetation present Oak overhanging	N/A
N118	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water Beneath power lines	N/A
N120	Wetland emergent, near Old Don Pedro Road	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water Formed in ephemeral stream channel	N/A
N121	Pond, perennial, near Old Don Pedro Road	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N122	Wetland, emergent, near SR 49	No	No emergent vegetation present Some oak overhanging	N/A
N123	Pond, perennial, near SR 49	Yes	Emergent and margin vegetation present Rushes overhanging	N/A
N124	Pond, perennial, near Shawmut Road	Yes	Emergent vegetation present Oak and shrub overhanging Berm separates site from N82/N95/N96	N/A
N125	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N128	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N131	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N132	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation Separated from N332 by berm	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N133	**Pond, perennial, near El Encanto and SR 59 behind gravel parking area**	**Yes**	**Size: 50m x 26m** **Emergent vegetation: bulrush, grasses, forbs, duckweed** **Overhanging: oak** **Substrate: soil and organic matter** **Field assessed on 4/19/12** **Great egret present**	**1142 - 1145**
N134	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak overhanging Beneath power lines	N/A
N135	Pond, seasonal, near Paseo Seven Legends	No	No emergent vegetation No tree cover or overhanging vegetation Dry most of the year	N/A
N136	Pond, seasonal	No	No emergent vegetation No tree cover or overhanging vegetation	N/A
N137	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water Concrete trough structure present	N/A
N138	Stream pool, seasonal	No	No emergent vegetation No tree cover or overhanging vegetation	N/A
N140	Pond, seasonal	No	No emergent vegetation present Oak overhanging Dry by June	N/A
N141	**Pond, perennial, near La Grange Road**	**Yes**	**Size: 10m x 20m** **Emergent vegetation: grasses and forbs** **No overhanging vegetation** **Substrate: soil and organic matter** **Field assessed on 4/19/12**	**1152 - 1157**
N142	Pond, seasonal	No	No emergent vegetation present Oak overhanging Dry by June Adjacent to dirt road	N/A
N143	**Pond, perennial, near Paseo Seven Legends**	**Yes**	**Size: 40m x 20m** **Emergent vegetation: rushes** **Aquatic: algae** **Oak overhanging** **Substrate: soil** **Field assessed on 6/20/12** **Berm separating pond from ditch or stream** **Juvenile western toad present**	**1592 - 1609**
N144	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N145	Pond, perennial	Yes	Emergent vegetation present	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			No tree cover or overhanging vegetation	
N146	Pond, seasonal	Yes	No emergent vegetation No tree cover or overhanging vegetation	N/A
N147	Pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N148	**Pond, perennial, near La Grange Road**	**No**	**Size: 78m x 15m** **Emergent vegetation: Typha, duckweed** **Margin vegetation: rushes, grass, forbs** **Overhanging vegetation: plantago, oak** **Substrate: soil, organic matter** **Field assessed on 4/19/12** **American bullfrog present**	**1169 - 1172**
N149	Pond, perennial, near Bonds Flat Road	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N150	Pond, seasonal, near Don Pedro Road	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N151	Pond, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation Depression in roadway No standing water	N/A
N152	Pond, perennial	Yes	Emergent vegetation present Shrub overhanging	N/A
N153	Wetland, forested/shrub	No	No emergent vegetation present Oak overhanging No standing water	N/A
N155	Wetland, emergent	No	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N156	Pond, perennial	Yes	Emergent vegetation present Oak and shrub overhanging	N/A
N157	Pond, seasonal	Yes	No emergent vegetation present Oak overhanging	N/A
N158	**Pond, perennial, near Paseo Seven Legends**	**Yes**	**Size: 10m x 20m** **Emergent vegetation: grasses and rushes** **Aquatic vegetation: algae** **No overhanging** **Substrate: soil and cobbles** **Field assessed on 6/20/12** **Separated from N158B by berm** **American bullfrog present**	**1631 – 1632, 1634, 1636 - 1641**
N159	Stream pool, seasonal	No	No emergent vegetation present No tree cover or overhanging	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			vegetation	
N160	Pond, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N161	**Pond, perennial**	**Yes**	**Size: 45m x 20m** **Emergent vegetation: rushes** **Aquatic vegetation: algae** **Oak overhanging** **Substrate: soil and cobbles** **Field assessed on 6/20/12** **American bullfrog present**	**1611 - 1622**
N162	Pond, seasonal	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N163	Wetland, emergent, near Don Pedro Road	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N164	**Pond, seasonal, near Paseo Seven Legends**	**Yes**	**Size: 15m x 15m** **No emergent vegetation** **Margin vegetation : desiccated grasses** **No overhanging** **Substrate: soil** **Separated from N158A by berm** **Field assessed on 6/21/12**	**1689 - 1696**
N165	**Pond, seasonal, near Paseo Seven Legends**	**No**	**Size: 10m x 15m** **No emergent vegetation** **Forbs present throughout** **No overhanging** **Substrate: soil and cobbles** **Separated from N158A by berm** **Field assessed on 6/20/12**	**1633, 1635, 1636 - 1641**
N166	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N167	Stream pool, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N168	Stream pool, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N169	Pond, seasonal	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N170	Pond, seasonal	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N171	Pond, seasonal, near Paseo Seven Legends	No	No emergent vegetation No tree cover or overhanging vegetation Pond created by culvert in ephemeral stream channel	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N172	**Pond, perennial, near La Grange Road**	**Yes**	**Size: 97m x 27m** **Emergent and margin vegetation: grasses and forbs** **No overhanging vegetation** **Substrate: soil, organic matter, subangular cobble** **Field assessed on 4/19/12**	**1158 - 1168**
N174	Wetland, emergent	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N175	Stream pool, seasonal	No	No emergent vegetation present Oak overhanging	N/A
N176	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N177	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak overhanging	N/A
N178	Pond, perennial, near Las Armomitas	Yes	Emergent and margin vegetation present Shrub overhanging	N/A
N179	**Pond, seasonal, near Paseo Seven Legends**	**Yes**	**Size: 30m x 10m** **No emergent vegetation present, grasses and forbs throughout** **Oak overhanging** **Substrate: soil, grasses, cobbles** **Field assessed on 6/20/12** **Fed by 1m wide ditch** **Dry in June 2012**	**1586 - 1590**
N180	Wetland, forested/shrub	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N182	Pond, perennial	Yes	Emergent and margin vegetation present No tree cover or overhanging vegetation	N/A
N184	Pond, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N185	Pond, perennial, near Avenida Lugo Road	Yes	Emergent and margin vegetation present No tree cover or overhanging vegetation	N/A
N186	Pond, seasonal	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N187	Pond, perennial, near County Road J59	Yes	Emergent vegetation present No tree cover or overhanging vegetation Used by cows	N/A
N188	Pond, perennial, near	Yes	Emergent vegetation present	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
	Don Pedro Road		No tree cover or overhanging vegetation	
N189	Pond, seasonal, near Paseo Seven Legends	Yes	Emergent vegetation present Oak overhanging	N/A
N190	Pond, perennial, near Wards Ferry Road	Yes	Emergent, aquatic, and margin vegetation present Oak and rushes overhanging Pond vegetated throughout	N/A
N191	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak and shrub overhanging	N/A
N195	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N197	Pond, perennial, near Wards Ferry Road	Yes	Emergent vegetation present Oak and shrub overhanging	N/A
N198	Pond, perennial, near Major Way	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N199	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak overhanging	N/A
N202	Stream, perennial (Deer Creek) with forested/shrub wetland, near Wards Ferry Road	Yes	No emergent vegetation present Oak, pine, and shrub overhanging Stream in bedrock channel	N/A
N203	Pond, perennial, near Jacksonville Road	Yes	Emergent and aquatic vegetation present Oak overhanging	N/A
N204	Pond, perennial	Yes	Emergent and aquatic vegetation present Willow overhanging	N/A
N205	Wetland, emergent	No	No emergent vegetation present Some oak overhanging	N/A
N207	Wetland, emergent	No	No emergent vegetation Shrub and pine overhanging Overlaps maintained dirt area around treatment pond (N208)	N/A
N208	Treatment pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N211	Wetland, emergent, near SR 49 and New Priest Grade Road	No	No emergent vegetation present Shrub overhanging	N/A
N212	Pond perennial, near Moccasin Reservoir spillway	Yes	Emergent vegetation present Oak overhanging Connected to Moccasin Reservoir by spillway under Moccasin Switchback Road	N/A
N213	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N214	Pond, perennial, near	Yes	Emergent vegetation present	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
	Moccasin Reservoir spillway		No tree cover or overhanging vegetation	
N216	Wetland, forested/shrub	No	No emergent vegetation present Pine and shrub overhanging Depression between two hills No standing water	N/A
N217	Wetland, emergent	No	No emergent vegetation present Oak, pine, and shrub overhanging No standing water	N/A
N219	Pond, seasonal	No	Emergent vegetation present Oaks and shrub overhanging	N/A
N220	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N221	Stock pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N222	**Pond, perennial, by Egan Road**	**Yes**	**Size: 100m x 75m** **Emergent vegetation: cattail/bulrush grasses, forbs, plantago, algae** **Oak overhanging on north side** **Substrate: soil and organic matter** **Field assessed on 4/18/12** **American bullfrog present** **Waterfowl present**	**0994 - 1004**
N223	Stream impoundment, seasonal	No	Stream channel appears intermittent	N/A
N224	Stream impoundment, perennial	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N226	Stream impoundment, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation In agricultural field	N/A
N227	Stream impoundment, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation In agricultural field	N/A
N228	Stream impoundment, seasonal	Yes	Emergent vegetation present No tree cover or overhanging vegetation In agricultural field	N/A
N229	Pond, seasonal	No	No emergent vegetation present Shrub overhanging In agricultural field	N/A
N230	Reservoir, constructed	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N231	Stream impoundment	Yes	Emergent , aquatic, and margin vegetation present	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			Some oak overhanging on northeast side	
N232	Stock pond, constructed	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N233	Pond, perennial	Yes	Emergent , aquatic, and margin vegetation present Shrub overhanging on north side	N/A
N234	Pond, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation In agricultural field	N/A
N235	Pond, perennial	Yes	Some emergent vegetation present No tree cover or overhanging vegetation	N/A
N236	Pond , perennial	Yes	Emergent vegetation present Oak overhanging on south and west sides	N/A
N237	Pond, perennial	Yes	Emergent and margin vegetation present Oak overhanging on south side	N/A
N238	Pond, perennial	Yes	Emergent, aquatic, and margin vegetation present Oak overhanging on north side	N/A
N239	Pond, emergent depression	Yes	Emergent, aquatic, and margin vegetation present Shrub overhanging along west side	N/A
N240	Pond, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation Concrete trough structure present No standing water evident	N/A
N241	Pond, emergent depression	Yes-	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N242	Stream impoundment, perennial	Yes	Emergent and margin vegetation present No tree cover or overhanging vegetation	N/A
N243	Pond, perennial	Yes	Aquatic vegetation present No tree cover or overhanging vegetation	N/A
N244	Pond,	Yes	Emergent vegetation present Oak overhanging on south side	N/A
N245	Pond, emergent depression, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation Adjacent to cleared equipment parking area	N/A
N247	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			No standing water	
N248	Stream impoundment, seasonal	No	No emergent vegetation Oak overhanging southeast side Pond is dry by June	N/A
N249	Pond, perennial	Yes	Emergent and margin vegetation present Oak and pine overhanging	N/A
N250	Pond, perennial	Yes	No emergent vegetation Oak overhanging	N/A
N251	Stock pond, seasonal	No	No emergent vegetation Oak overhanging northeast side	N/A
N252	Stock pond, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N253	Wetland, emergent depression	No	No emergent vegetation present Oak overhanging No standing water	N/A
N255	Stream impoundment	Yes	Emergent and aquatic vegetation present Oak and shrub overhanging	N/A
N259	Stock pond, seasonal	No	Emergent vegetation present Oak overhanging	N/A
N260	Stream impoundment, perennial	Yes	Emergent and margin vegetation present Shrub overhanging	N/A
N261	Pond, perennial, near Powell Ranch Road	Yes	Emergent and margin vegetation present Oaks and shrub overhanging	N/A
N262	Pond, emergent depression, seasonal, near Powell Ranch Road	Yes	No emergent vegetation present No tree cover or overhanging vegetation Dries by mid – late July	N/A
N263	Stream impoundment, perennial	Yes	Emergent and margin vegetation present Oaks and shrub overhanging Separated from stream by road or berm	N/A
N264	Pond, perennial	Yes	Emergent and aquatic vegetation present Oak overhanging In depression between hillside and road	N/A
N265	Pond, perennial	Yes	Emergent and margin vegetation present Oak and shrub overhanging In depression between hillside and road	N/A
N266	Road, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation Depression in dirt road No standing water	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N267	Wetland, emergent depression, near Jacksonville Road	No	No emergent vegetation present Oak overhanging on south side Adjacent to road and parking area	N/A
N269	Pond, emergent depression	Yes	Emergent and margin vegetation present Oak overhanging	N/A
N270	Emergent marsh	No	Emergent and margin vegetation present No tree cover or overhanging vegetation	N/A
N271	**Pond, seasonal, near New Priest Grade Road**	**No**	**Size: 10m x 5m** **Emergent vegetation: forbs, dock** **Margin vegetation: forbs** **No overhanging** **Substrate: soil and organic matter** **Field assessed on 6/18/12** **Dry in June 2012**	**1453 - 1460**
N272	Stream impoundment, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation Impoundment cause by dirt road	N/A
N273	Pond, perennial	Yes	Emergent and aquatic vegetation present Shrub and oak overhanging	N/A
N274	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N275	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N276	Stock pond, perennial	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N277	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N278	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N280	Wetland , emergent	No	No emergent vegetation present Oak and shrub overhanging	N/A
N281	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N282	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N283	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N285	Stream impoundment	Yes	No emergent vegetation Some oak overhanging	N/A
N286	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water	N/A
N287	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N288	Wetland, emergent depression	No	No emergent vegetation present Oak overhanging	N/A
N289	Wetland, emergent depression	No	No emergent vegetation present Oak overhanging	N/A
N290	Wetland, emergent depression	No	No emergent vegetation present Oak overhanging No standing water	N/A
N291	Stream impoundment, perennial	Yes	Emergent and aquatic vegetation present Oak overhanging	N/A
N292	Stream impoundment, seasonal	Yes	No emergent vegetation present No tree cover or overhanging vegetation Dry by July in low flow years	N/A
N293	Stream impoundment, perennial	Yes	Emergent vegetation present Oak overhanging in during higher flow	N/A
N294	Stream impoundment, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N296	Wetland, emergent depression, near Brunette Road	No	No emergent vegetation present No tree cover or overhanging vegetation In field adjacent to residence	N/A
N297	Stream pool, seasonal	No	No emergent vegetation present Oak overhanging Dry by June	N/A
N298	Emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation No standing water No vegetation present during growing season	N/A
N299	Stock pond, perennial	Yes	Margin vegetation present No tree cover or overhanging vegetation	N/A
N300	Stock pond, perennial, near Paseo Seven	Yes	Emergent vegetation present Oak overhanging	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
	Legends Road			
N301	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N304	**Pond, seasonal, near La Grange Road**	**No**	**Size: 2m x 4m** **Emergent vegetation: grasses, forbs** **Margin vegetation: grass, forbs** **Overhanging vegetation: oak on south side** **Substrate: soil, organic matter** **Field assessed on 4/19/12** **Redtail hawk nest on nearby powerline**	**1173 - 1178**
N307	Pond, perennial, near Paseo Seven Legends Road	Yes	Emergent vegetation present Oak overhanging west side	N/A
N308	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N310	Emergent depression, near Las Cruces	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N311	Stream impoundment, perennial, near El Encino Drive	Yes	Emergent and aquatic vegetation present Oak and shrub overhanging	N/A
N312	Stream impoundment, seasonal, near El Encino Drive	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N313	Stream pool, perennial, near County Road J59 and Bonds Flat Road	Yes	Emergent vegetation present Oak overhanging	N/A
N314	Stream pool, perennial, near County Road J59 and Bonds Flat Road	Yes	Emergent vegetation present No tree cover or overhanging vegetation Stream enters culvert at Bonds Flat Road	N/A
N315	Pond, emergent depression	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N316	**Pond, perennial, near El Encanto and SR 59 behind gravel parking area**	**Yes**	**2 excavated ponds, separated by earthen berm** **Pond 1 Size: 46m x 13m** **Pond 2 Size: 55m x 12m** **Emergent vegetation: rushes, grasses, forbs, dock** **Overhanging: oak** **Substrate: soil , organic matter, gravel** **Field assessed on 4/19/12** **American bullfrog present**	**1146 - 1151**

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N317	Pool, constructed	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N318	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N319	Stock pond, constructed	Yes	No emergent vegetation present No tree cover or overhanging vegetation Rectangular concrete structure constructed in depression	N/A
N320	Wetland, emergent depression	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N322	Stream pool, perennial	Yes	Emergent vegetation present Oak and shrub overhanging Stream flows through bedrock outcropping	N/A
N323	Stream pool, perennial, near Bonds Flat Road	Yes	No emergent vegetation present Oak overhanging	N/A
N324	Stream pool, near Bonds Flat Road	Yes	Emergent vegetation present No tree cover or overhanging vegetation Impoundment created by raised road grade	N/A
N325	Wetland, emergent depression	No	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N327	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A
N328	Pond, seasonal	No	No emergent vegetation present Oak overhanging No standing water	N/A
N330	Stream pool, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N331	Stream pool, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation Connects to N332 via culvert	N/A
N332	Stream pool, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation Connects to N331 via culvert	N/A
N333	Stream pool, perennial	Yes	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N334	Stream pool, Big Creek, perennial	Yes	Emergent and margin vegetation present Oak overhanging	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
N335	Stream pool, Big Creek, perennial	Yes	Emergent vegetation present Oak and shrub overhanging Pool in bedrock outcropping	N/A
N336	Stream pool, Big Creek, perennial	Yes	Emergent vegetation present Oak and shrub overhanging Pool in bedrock outcropping	N/A
N337	Stream pool, Big Creek, perennial	Yes	Emergent vegetation present Oak and shrub overhanging Pool in bedrock outcropping	N/A
N338	Stream pool, Big Creek, perennial	Yes	Emergent vegetation present Oak and shrub overhanging Pool in bedrock outcropping	N/A
N339	Pond, perennial	Yes	Emergent vegetation present Oak overhanging	N/A
N340	Pond, perennial, near Bonds Flat Road	Yes	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N341	Pond, seasonal	Yes	Emergent vegetation present No tree cover or overhanging vegetation Mostly dry by end of July	N/A
N342	Pond, seasonal	No	Emergent vegetation present No tree cover or overhanging vegetation	N/A
N343	Pond, seasonal	No	No emergent vegetation present No tree cover or overhanging vegetation	N/A
N344	Stream impoundment, perennial	Yes	Emergent, aquatic, and margin vegetation present Oak and shrub overhanging	N/A
N346	Stream pool, perennial	Yes	Emergent vegetation present Oak and shrub overhanging	N/A
N347	Pond, perennial	Yes	Emergent vegetation present Oak and shrub overhanging	N/A
N348	Pond, perennial	Yes	Emergent vegetation and algae present No tree cover or overhanging vegetation	N/A
N351	Stream pool, perennial, near Jalapa Way	Yes	Emergent vegetation present No tree cover or overhanging vegetation Stream flows behind residences	N/A
N352	Stream pool, perennial, near Jalapa Way	Yes	Emergent vegetation present No tree cover or overhanging vegetation Stream flows around a residence	N/A
N354	Pond, perennial	Yes	Emergent and margin vegetation present No tree cover or overhanging vegetation Adjacent to dirt road	N/A
N355	Pond, perennial	Yes	Emergent and margin vegetation	N/A

Site Number[1,2,3]	Habitat Feature/Seasonality/ Location	Meets 20-Week Criterion	Notes[4]	Photo Number
			present No tree cover or overhanging vegetation	
N356	Stream pool, perennial	Yes	Emergent vegetation present Oaks and shrub overhanging Behind residence	N/A
N357	Pond, perennial	Yes	Emergent and aquatic vegetation present No tree cover or overhanging vegetation	N/A

[1] All sites in table are within the current or historic range of the CRLF. There are no known records of CRLF within 1.6 km (1 mile) of any sites. Nearest CRLF CHU is CAL-1, and is 28 miles from the Don Pedro Project.
[2] Land ownership: Orange = BLM; Pink = Private; Purple = TID/MID
[3] Sites field-assessed in bold.
[4] Some aspects of the site assessment are not discernible from aerial imagery (e.g. depth, substrate, etc.).

1.2.1 Photos of Sites (Aquatic Habitat Locations) Field Assessed for Potential California Red-Legged Frog Breeding Habitat within the Don Pedro Study Area (Excluding Sites within the Project Boundary)

Figure 2.0-1. N52

Figure 2.0-2. N60

Figure 2.0-3. N75

Figure 2.0-4. N82

Figure 2.0-5. N133

Figure 2.0-6. N141

Figure 2.0-7. N143

Figure 2.0-8. N148

Figure 2.0-9. N158

Figure 2.0-10. N161

Figure 2.0-11. N164

Figure 2.0-12. N165

Figure 2.0-13. N172

Figure 2.0-14. N179

Figure 2.0-15. N222

Figure 2.0-16. N271

Figure 2.0-17. N304

Figure 2.0-18. N316

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