

Solano HCP Compliance Monitoring Table

| Project Design, Review, and Approval Avoidance and Minimization Measure Requirements for California Red-Legged Frog | Project Impact/ Applicable Condition | Applicant Proposed Mitigation | Proposal Complies With Measures or Not |
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| CALIFORNIA RED-LEGGED FROG: DESIGN, REVIEW, AND APPROVAL AVOIDANCE AND MINIMIZATION MEASURES IN SECTION 6.3.3.1 | | | |
| General Note about Measures: Implementation of the following avoidance and minimization measures are applicable for all projects in the California Red-Legged Frog Conservation Area (Figure 4-14). RLF DES 1: Habitat Avoidance- Any Covered Activity in the California Red-Legged Frog Conservation Area resulting in the loss of aquatic habitat and associated uplands shall be avoided to the maximum extent practicable where: | | | |
| 1. The aquatic habitat contributes to the habitat quality and value of reserve/preserve lands established (or expected to be established) in perpetuity for conservation purposes; | | | |
| 2. The aquatic habitat lies contiguous to other aquatic habitats, such as riparian or stream corridors, or other permanently protected land; or | | | |
| 3. The aquatic habitat lies contiguous to high quality California red-legged frog habitat. | | | |
| Note for RLF DES 1: Plan Participants (or third-party applicants) proposing activities in above-listed locations that would impact California red-legged frog habitat shall provide documentation explaining why avoidance is not practicable and/or would not contribute to the conservation goals and objectives of the HCP in accordance with the procedures in Section 10.4.1 The determination of compliance with RLF DES 1 for any proposed activity that would result in the loss of California red-legged frog habitat shall be made by SCWA in consultation with the HCP Technical Review Committee (see Section 10.2.6). All avoided habitat shall be protected and maintained under a permanent Conservation Easement, as required under Sections 7.3 and 10.5.2. | | | |
| RLF DES 2: Aquatic Habitat Buffers and Corridors- For aquatic habitat identified in RLF DES 1, the following site design standards shall apply in order to minimize impacts to California red-legged frog: | | | |
| 1. Applicants shall provide an upland buffer between suitable California red-legged frog aquatic breeding habitat and urban development/active open space recreation areas to protect aquatic breeding habitats to the maximum extent practicable. Suitable habitats for California red-legged frogs within 300 feet of development shall be considered to be indirectly impacted and will be subject to mitigation requirements identified in Section 6.4.3. In addition, corridors shall connect avoided aquatic habitat to other suitable aquatic habitat within 0.7 mile. | | | |

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| <p>2. Corridors shall connect avoided aquatic habitat to other suitable aquatic habitat within 0.7 mile. Corridors should have the following minimum dimensions:</p> <ul style="list-style-type: none"> a. Corridors 500 feet or less in length shall have a minimum width of 500 feet b. Corridors more than 500 feet in length but less than 1,320 feet in length shall have minimum dimensions of 1:1 (i.e., a 700 feet long corridor shall be 700 feet in length). c. Corridors 1,320 feet or longer shall have a minimum width of 1,320 feet. <p>All corridors shall be protected and maintained under a permanent Conservation Easement, as required under Sections 7.3 and 10.5.2.</p> | | | |
| <p>RLF DES 3: Design Measures for New Roads- New roads or the expansion of existing roads with a projected night-time traffic volume of more than 20 cars per hour in the California Red-legged Frog Conservation Area shall incorporate design measures to facilitate the movement of small animals and maintain hydrological connectivity. Design measures may include culverts, underpasses, and roadside barriers to prevent animals from accessing the roads. Crossings between open space areas shall be provided in areas where concentrated movement is likely (along swales, significant slope breaks, near wetlands and breeding sites, etc.). Plan Participants (or third-party applicants) proposing road activities in the California Red-Legged Frog Conservation Area shall provide project plans to SCWA that show the specific crossing design measures, and an analysis of how the design measures will accommodate crossing by the applicable Covered and Special Management Species. The plans and analysis will be subject to the review and approval of SCWA in consultation with the HCP Technical Review Committee (see Section 10.2.6).</p> | | | |
| <p align="center">CALIFORNIA RED-LEGGED FROG: IMPLEMENTATION AND CONSTRUCTION AVOIDANCE AND MINIMIZATION MEASURE IN SECTION 6.3.3.2</p> | | | |
| <p>Note for RLF CON 4: This measure is applicable to project design considerations and is required to be implemented within 300 feet of the California Red-Legged Frog Conservation Area (Figure 4-14).</p> <p>RLF CON 4: Best Management Practices to be Implemented During O&M and Construction Activities- This measure is applicable to project design considerations and is required to be implemented throughout and within 300 feet of the California Red-Legged Frog Conservation Area (Figure 4-14). These mandatory requirements include the following:</p> <p>1. Biological Monitor</p> <ul style="list-style-type: none"> a. At least 15 days prior to the onset of work activities, the applicant shall submit the name(s) and credentials of biologists who will conduct California red-legged frog monitoring activities. No work activities shall begin until written approval has been received from SCWA. b. Prior to commencement of work activities, the Approved Biologist shall conduct a training session for all construction personnel. At minimum, the training shall include: (1) a description of California red-legged frog and its habitat; (2) project-specific measures being implemented to conserve the red-legged frog and the possible penalties for not complying with these requirements; | | | |

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| <p>(3) who is authorized to handle and relocate frogs; and (4) identification of the boundaries of permitted work areas.</p> <p>c. The Approved Biologist shall be present at the work site to monitor compliance with all minimization measures. The Approved Biologist shall have the authority to halt any action that might result in impacts in excess of anticipated levels. The Approved Biologist will submit a report detailing the results of the activities to SCWA within 7 days of the completion of the habitat disturbance.</p> | | | |
| <p>2. Habitat Protection and Take Avoidance During Work Activities</p> <p>a. Exclusion fencing shall be installed prior to any required preconstruction surveys and maintained between project work areas and adjacent to preserved habitat during all work activities. Exclusion fencing will consist of silt fabric, plastic, plywood, aluminum, or other SCWA-approved material. The base of the fence will be buried a minimum of 3 to 5 inches in the ground to prevent animals from crawling under and be a minimum of 3 feet in height above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags and the supports shall be placed on the inside of the exclusion fence. Exclusion fences shall also include provisions (e.g., ramps, one-way doors, or exit funnels) for California red-legged frogs and other species to leave the work area. Construction personnel will also install an orange plastic-mesh construction fence 1 foot on the development side of the exclusion fence to increase visibility unless the exclusion fence is composed of highly visible materials. Exclusion fencing shall be inspected weekly and repaired immediately when damage is observed during construction work.</p> <p>b. Control of dense vegetation in and adjacent to water delivery canals (either mechanical or chemical) shall not be conducted until individuals have had sufficient time (minimum of 24 hours) to move away from the work area to more suitable habitats.</p> | | | |
| <p>3. Preconstruction Surveys</p> <p>a. The Approved Biologist shall survey the work site 2 weeks prior to the onset of construction activities. Any life stage of California red-legged frogs (adults, tadpoles, or eggs) found in construction areas shall be captured and relocated to secure sites approved by SCWA in consultation with the HCP Technical Review Committee. Only Approved Biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.</p> | | | |

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| <p>4. Work Timing</p> <ul style="list-style-type: none"> a. Work activities in riparian and aquatic habitat shall be completed between June 15 and October 15. If the applicant can demonstrate a need to conduct activities outside this time period, SCWA may authorize such activities in writing after consulting with the USFWS and CDFW. b. Ground-disturbing, mechanical clearing of vegetation and associated work activities in uplands shall be conducted between June 1 and November 1 or until the first fall rain that produces 0.25 inch of rainfall, unless prior surveys have been conducted and California red-legged frogs are shown to be absent from the site and the site boundary is fenced to preclude California red-legged frogs from moving onto the site. | | | |
| <p>5. Dewatering Activities</p> <ul style="list-style-type: none"> a. If pumping will be used to dewater the project site, intakes shall be completely screened with wire mesh no larger than 5 millimeter in size to prevent California red-legged frog adults and tadpoles from entering the pump. b. Prior to dewatering, the Approved Biologist shall capture and relocate any native fish or other vertebrate species found at the project site. Captured animals shall be relocated to a suitable pool or other location in the same waterbody above or below the project site. c. All dewatering shall be pumped into a temporary siltation pond/desilting basin, Baker tank, or similar detention device in order to allow adequate time for settling of sediments prior to their release downstream in accordance with the approved Storm Water Pollution Prevention Plan (SWPPP). d. Following adequate settling time, water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. | | | |
| <p>6. Exotic Species Removal</p> <ul style="list-style-type: none"> a. The Approved Biologist shall permanently remove and humanely euthanize any exotic wildlife species, such as bullfrogs and crayfish, to the extent possible from within the project site. | | | |
| <p>7. Site Restoration</p> <ul style="list-style-type: none"> a. After completion of any work activities that would temporarily disturb California red-legged frog aquatic or upland habitat, temporarily disturbed areas shall be restored to their original condition, including prework topography and hydrology. Disturbed areas shall be reseeded, if necessary, using local, native, noninvasive species seed mixes. All such restoration work shall be conducted under the supervision of an Approved Biologist. b. Plastic monofilament or wire mesh straw wattles or erosion control blankets shall not be used. Only erosion control materials (blankets, rolls, mats, etc.) with a minimum 2-inch square mesh made of natural coir fibers or other netting approved by SCWA in consultation with the HCP Technical Review Committee shall be used. | | | |

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| <p>8. Firebreak Construction and Maintenance</p> <ul style="list-style-type: none"> a. Mowing to establish fuel breaks is preferred to disking. Mowing shall generally be conducted as late as possible in the spring, reducing the herbaceous cover to less than 2 inches in height. b. Where mowing is not practicable or will not provide an adequate fuel break, disking may be implemented under the following conditions: <ul style="list-style-type: none"> 1) Prior to firebreak construction, “No Disk” zones shall be established for wetlands and any significant habitat areas such as California red-legged frog aquatic habitat, as well as areas with concentrations of fossorial mammal burrows. “No Disk” zones shall be permanently staked using metal fence posts placed at least 50 feet from the edge of the pools. A post and sign shall be installed on each side of the pool (“No Disk” zone) to warn the disk operator of the presence of habitat from each direction. 2) At those points designated as “No Disk” zones, the disk operator shall raise the disk blades out of the soil and cross the “No Disk” zone. Not until the disk blades are beyond the “No Disk” sign on the opposite side of the sensitive habitat shall the operator be allowed to lower the blades, and in no case shall the operator allow the blades to touch the soil while in the “No Disk” zone. 3) “No Disk” zones shall not be crossed if water is standing in wetlands, aquatic habitat, or if the soil is wet. In such cases, the operator must raise the disk blades and make a detour around the wetland or aquatic area. Operators shall consult a site map, if available, to determine the best route around this area. | | | |
| <p align="center">CALIFORNIA RED-LEGGED FROG: MITIGATION MEASURES IN SECTION 6.4.3 WITHIN THE CALIFORNIA RED-LEGGED FROG CONSERVATION AREA (FIGURE 4-14) AND INNER COAST RANGE NATURAL COMMUNITY (FIGURE 3-5)</p> | | | |
| <p>General Note for Mitigation Requirements: The following mitigation measures shall be implemented for unavoidable impacts to California red-legged frog habitat in the California Red-Legged Frog Conservation Area (Figure 4-14) and Inner Coast Range Natural Community (Figure 3-5).</p> <p>RLF MIT 1: Mitigation for Direct and Indirect Impacts to Upland Habitat in the California Red-Legged Frog Conservation Area- Direct Impacts: As mitigation for conversion of upland habitats in the California Red-Legged Frog Conservation Area, upland habitat shall be preserved and managed at a 3:1 ratio (mitigation-to-impacted). All upland preservation shall occur in the California Red-Legged Frog Conservation Area and be located within 0.7 mile of breeding habitats and non-breeding aquatic habitats.</p> | | | |
| <p>RLF MIT 1-Indirect Impacts: Indirect impacts resulting from new development within 300 feet of upland habitat in the California Red-Legged Frog Conservation Area shall provide an additional 1.5:1 ratio with preservation of known occupied upland habitat in the California Red-Legged Frog Conservation Area.</p> | | | |

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| <p>RLF MIT 2: Mitigation for Direct and Indirect Impacts to Riparian, Stream, Pond, and Freshwater Habitats in the California Red-legged Frog Conservation Area- Mitigation for unavoidable impacts to riparian, in-stream, pond, and freshwater marsh habitats in the California Red-Legged Frog Conservation Area shall be provided through the preservation, construction, and/or restoration of similar habitats at a prescribed mitigation ratio (acres restored to acres impacted) consistent with RSM MIT 2 for the Riparian, Stream, and Freshwater Marsh Natural Community, but subject to the following conditions:</p> <p>Direct Impacts to Aquatic Breeding Habitat. Impacted breeding habitat shall be mitigated by preserving existing occupied breeding habitat at a 2:1 ratio and constructing new breeding habitat at a minimum 2:1 ratio. If occupied breeding habitat is not available for preservation, construction of additional new breeding habitat at this same ratio may be substituted for this requirement (increasing the constructed pond ratio to 4:1). All habitat preservation, restoration, or creation shall also occur in the California Red-Legged Frog Conservation Area and be located within at least 1 mile of occupied ponds.</p> | | | |
| <p>RLF MIT 2- Direct Impacts to Non-Breeding Aquatic and Riparian Habitats. Impacts to other wetland/aquatic and riparian habitats will be mitigated at a: (a) 2:1 ratio for created or restored aquatic habitats, or (b) 3:1 ratio where enhancement measures for existing habitat areas are implemented and the affected habitat is replaced (constructed) at a minimum 1:1 ratio. Non-breeding aquatic habitat consists of any typically shallow (non-lacustrine) freshwater features not suitable as breeding habitat, such as streams, small seeps, and ponds that dry too quickly for successful recruitment (USFWS 2008b). The restoration of suitable habitat or construction of new riparian and aquatic habitats shall occur in the California Red-Legged Frog Conservation Area and be located within dispersal distance of occupied habitat. An endowment fund or other approved funding source for long-term operation and maintenance (O&M) of the features shall also be provided, including control of invasive plant and animal species (e.g., bullfrogs, pepperweed).</p> | | | |
| <p>RLF MIT 2- Indirect Impacts to Aquatic and Riparian Habitats. Indirect impacts resulting from new development within 300 feet of wetland/aquatic and riparian habitats in the California Red-Legged Frog Conservation Area shall provide an additional 1.5:1 ratio with preservation of known occupied wetland/aquatic and riparian habitat in the California Red-Legged Frog Conservation Area.</p> | | | |
| <p>RLF MIT 3: Mitigation for Temporary Impacts to Upland, Marsh, Pond/Aquatic, and Riparian Habitats- Temporary impacts associated with soil disturbance and removal of vegetation for ordinary channel operation and other Covered Activities in breeding and non-breeding aquatic habitats in the California Red-Legged Frog Conservation Area shall not require direct compensation for the temporary loss of herbaceous vegetation or woody vegetation less than 1 inch in diameter, provided activities comply with the riparian vegetation replacement mitigation ratios specified in RSM MIT 1 and all work is conducted within specified work windows and conditions under RLF CON 4 (Section 6.3.3). Also, all temporarily disturbed habitats shall be restored to original conditions within 1 year at a minimum 1:1 ratio. If work cannot be completed in one season, mitigation shall be provided at half the habitat-specific ratios and conditions as specified in RLF MIT 1 for uplands and RLF MIT 2 for aquatic, wetland, and riparian habitats:</p> | | | |

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| RLF MIT 3- Uplands: Preserve uplands at a 1.5:1 ratio . | | | |
| RLF MIT 3- Temporary Impacts to Aquatic Breeding Habitat: Preserve existing occupied breeding habitat at a 1:1 ratio and construct new breeding habitat at a minimum 1:1 ratio . | | | |
| RLF MIT 3- Temporary Impacts to Non-Breeding Aquatic and Riparian Habitats: Create or restore similar aquatic habitat at a 1:1 or 1.5:1 ratio where enhancement measures for existing habitat areas are implemented and the affected habitat is replaced (constructed) at a minimum 0.5:1 ratio . | | | |
| RLF MIT 4: Mitigation for Impacts to Breeding and Non-Breeding Aquatic Habitat Outside of the California Red-legged Frog Conservation Area- Compensatory mitigation for unavoidable impacts to suitable breeding and non-breeding aquatic habitat (e.g., riparian, stream, pond, and freshwater marsh habitats) outside of the California Red-Legged Frog Conservation Area shall be provided through the construction and/or restoration of similar habitats at a prescribed mitigation ratio consistent with RSM MIT 2, and an endowment fund or other approved funding source shall be provided to implement management plans for preserved lands in perpetuity consistent with Sections 7.3 and 10.5. | | | |
| RLF MIT 5: Nonnative Predator Habitat- Development activities (including golf courses) in the California Red-Legged Frog Conservation Area and the Inner Coast Range Natural Community shall not establish new perennial ponds (including ornamental ponds), small lakes, or other perennial water bodies that could provide habitat for nonnative species that prey on California red-legged frogs (i.e., bullfrog, crayfish, and warm water fish). Storm water runoff and other associated discharges from Covered Activities shall be controlled to prevent “perennialization” of intermittent creeks. An endowment fund or other approved funding source for long-term O&M of storm water features shall also include sufficient contingency funds to control invasive species (e.g., bullfrogs) if, in the future, these features are found to support these invasive species. | | | |

BA = Biological Assessment
CDFW = California Department of Fish and Wildlife
DPS = Distinct Population Segment
HCP = Habitat Conservation Plan
MPWD = Maine Prairie Water District
NPDES = National Pollutant Discharge Elimination System
RD 2068 = Reclamation District 2068
RWQCB = Regional Water Quality Control Board
SID = Solano Irrigation District
USFWS = United States Fish and Wildlife Service

BMP = Best Management Practices
Dixon RCD = Dixon Resource Conservation District
ESU = Evolutionarily Significant Unit
MMP = Mitigation and Monitoring Plan
NOAA NMFS = National Oceanic Atmospheric Association National Marine Fisheries Service
O&M = Operation and Maintenance
RSM = Riparian, Stream, and Freshwater Marsh
SCWA = Solano County Water Agency
SWPPP = Storm Water Pollution Prevention Plan