

# RECLAMATION

*Managing Water in the West*

## Environmental Assessment

### **Contra Costa Resource Conservation District Recovery Actions for California Red-legged Frog and California Tiger Salamander**

Contra Costa County, California

15-27-MP



U.S. Department of the Interior  
Bureau of Reclamation  
Mid-Pacific Region

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## **Mission Statements**

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

# List of Abbreviations and Acronyms

BAAQMD	Bay Area Air Quality Management District
BO	Biological Opinion
CAA	Federal Clean Air Act
CCAA	California Clean Air Act
CCRDC	Contra Costa Resource Conservation District
CEQ	Council on Environmental Quality
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Register
CNDDDB	California Natural Diversity Database
CRLF	California red-legged frog
CTS	California tiger salamander
CVPCP	Central Valley Project Conservation Program
DOI	Department of the Interior
EA	Environmental Assessment
EBRPD	East Bay Regional Park District
HRP	Habitat Restoration Program
ITA	Indian Trust Assets
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NPDES	National Pollutant Discharge Elimination System
SWPPP	Storm Water Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service
VLP	Voluntary Local Program

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# Section 1 Introduction

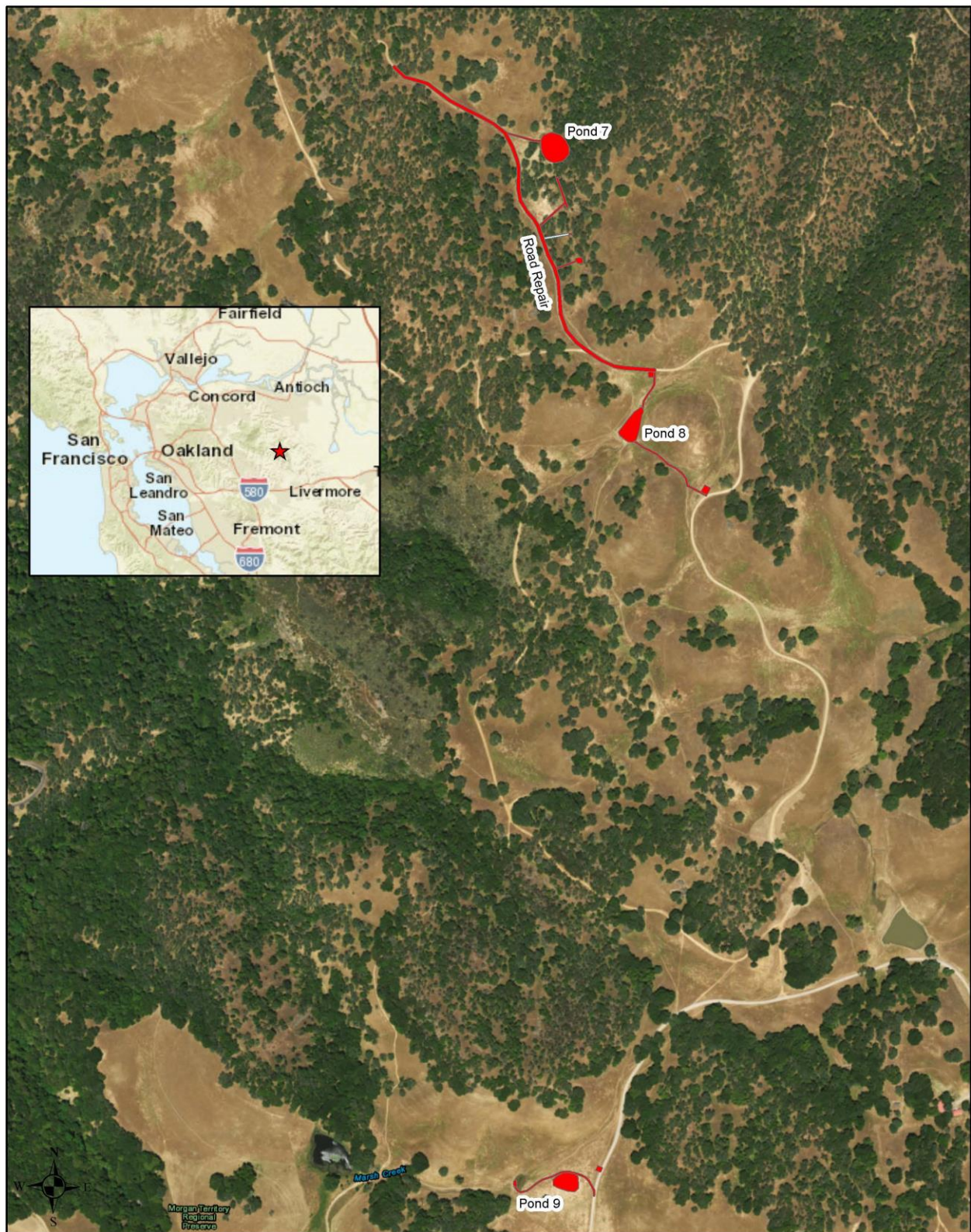
## 1.1 Background

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and DOI Regulations (43 CFR Part 46), the Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with providing funds to Contra Costa Resource Conservation District (CCRDC) for the Recovery Actions for California Red-legged Frog and California Tiger Salamander Project (Project). Reclamation would provide \$186,167 from the Central Valley Project Improvement Act Habitat Restoration Program (HRP) to CCRDC to rehabilitate five existing livestock ponds, repair a 1,800 foot section of an earthen access road and stabilize a gully. The proposed action would result in the lengthening of the ponding period of the livestock ponds to support ongoing cattle operations, enhance breeding habitat for the California red-legged frog (*Rana draytonii*) (CRLF) and California tiger salamander (*Ambystoma californiense*) (CTS).

The CCRCD has partnered with the Natural Resources Conservation Service (NRCS) to implement the Alameda and Contra Costa County Wildlife-friendly Livestock Pond and Rangeland Health Initiative (Program). NRCS will contribute \$181,125 to oversee planning, design, engineering, construction oversight and environmental compliance. NRCS has been designated as the lead federal agency and formal consultation under Section 7 of the Endangered Species Act was undertaken in 2015 for the Program. A Programmatic Biological Opinion (Programmatic BO) was issued to NRCS on August 11, 2015. NRCS' Programmatic BO covers funding assistance to private land owners and managers to implement projects that result in habitat improvements, vegetation management, erosion and drainage control, improved water quality, and conservation.

Three livestock ponds have been identified to receive funding and are evaluated in this environmental assessment. The livestock ponds are located on rangeland within the Morgan Territory Regional Preserve located in Contra Costa County (Figure 1). The locations of the remaining two livestock ponds that will be rehabilitated are unknown at this time. Environmental effects for the other two livestock ponds will be evaluated in a separate EA after a cooperative agreement has been signed between CCRCD and the participating landowner.





**Figure 1. Project Location**

## **1.2 Need for the Proposed Action**

Livestock ponds have become vital breeding habitat for the CRLF and CTS in California since the species' natural habitats have been altered or lost. In Contra Costa County, livestock ponds were installed by private landowners 30 to 60 years ago, and are now approaching failure due to erosion, deterioration of impoundment structures and embankments, inadequate spillway construction, or through accumulation of sediment that reduces capacity of the ponds. Upland habitat surrounding the livestock ponds also requires stewardship to maximize benefits to CRLF and CTS which inhabit uplands during the non-breeding period. Rehabilitating the livestock ponds will provide habitat for wildlife species, and will reduce erosion and the transport of sediment into the ponds in order to provide reliable water sources to support continued livestock operations.

## **Section 2 Alternatives Including Proposed Action**

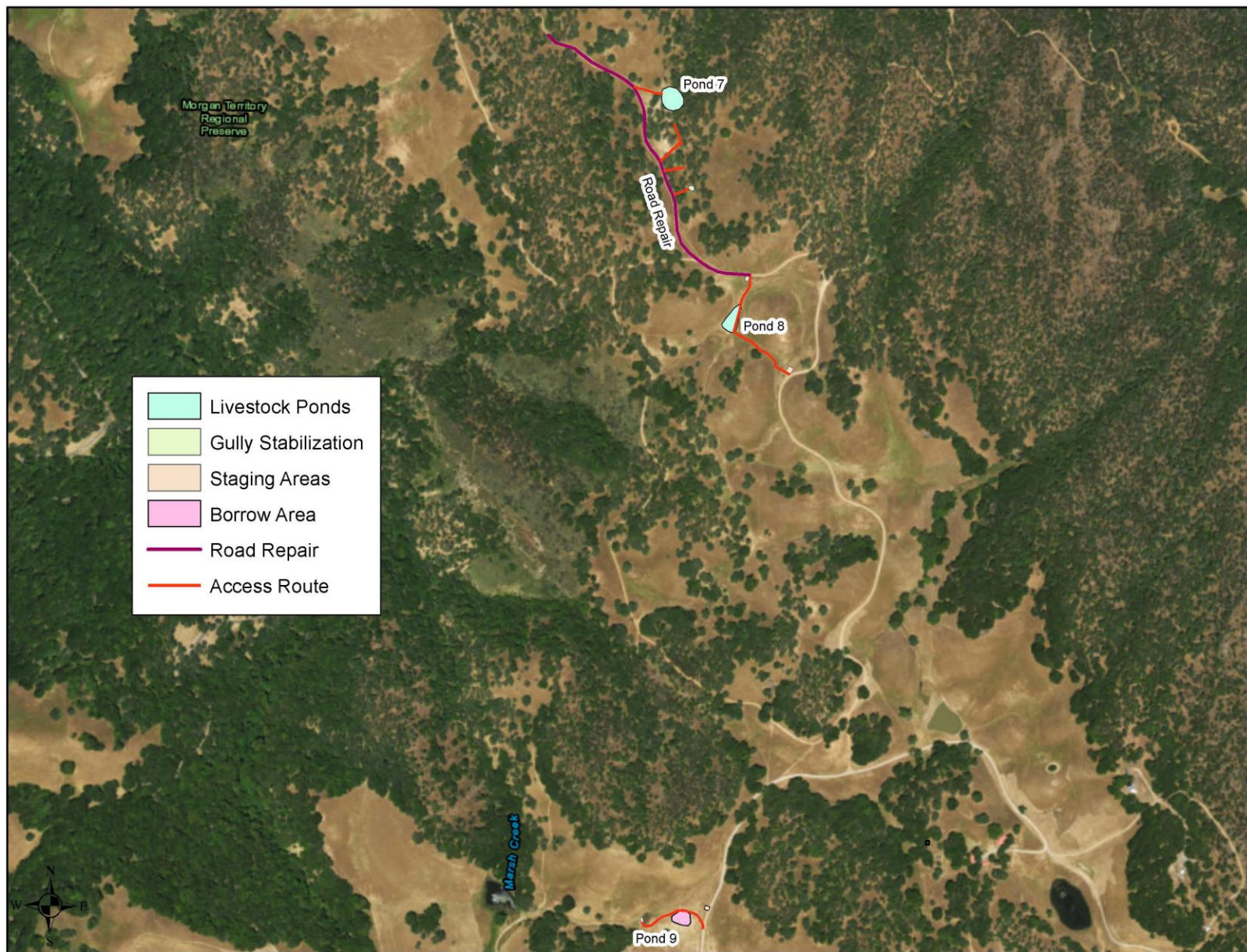
### **2.1 No Action Alternative**

Under the no action alternative, Reclamation would not provide \$186,167 from the HRP to CCRCD to rehabilitate the livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully. If the project is not implemented, the livestock ponds could fail and no longer support the cattle ranching operations or provide habitat for CTS and CRLF. In addition, erosion of the earthen access road and the gully will continue. To implement the proposed action, CCRCD would be required to obtain the \$186,167 from other public or private sources.

### **2.2 Proposed Action**

Reclamation would provide \$186,167 from the HRP to CCRCD to rehabilitate existing livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully created from excessive runoff from the access road (Figure 2). The livestock ponds are located at the Morgan Territory Regional Preserve (Preserve) owned by the East Bay Regional Park District (EBRPD). Livestock pond rehabilitation activities include removing silt from the ponds, reconstruction of an embankment, and placement of rock at a spillway. Road improvement activities include the installation of rolling dips, grading to direct road runoff to a roadside ditch, relocation of a road segment and replacement of a failed culvert crossing. Gully work is aimed at stabilizing a drainage by redirecting road runoff and adding rock check dams at locations within the gully to trap sediment and buttress the steep gully bank. The project designs will follow the Contra Costa County Voluntary Local Program (VLP) wildlife-friendly pond specifications for improving habitat for CTS and CRLF which includes management of upland habitat to benefit CTS and CRLF.





**Figure 2. Project Features**



### 2.2.1 Livestock Pond Rehabilitation Activities

Work will be conducted at three livestock ponds CCRCO has identified as shown in Figure 2. Those are livestock ponds number 7, 8, and 9. An NRCS Engineer and U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) approved biologist will be present to monitor project activities. Actions to be taken at each pond are as follows:

#### Livestock Pond 7

The activities at livestock pond 7 involve sediment removal, roadwork, gully stabilization, staging of equipment, and creating site access for equipment. No work will take place on the existing pond embankment or spillway. Work will consist of removing accumulated sediment from the pond. Approximately 900 cubic yards of sediment will be removed (Table 1). All removed sediment will be placed in a predesignated location on site, as determined by the engineer and USFWS/CDFW approved biologist, so that it will not re-enter the livestock pond or downstream waterway. The sediment placement area would disturb 0.425 acre of grassland. Disturbed areas will be seeded with a mixture of native grasses and forbs.

**Table 1. Livestock Pond 7 Sediment Removal Impacts**

Activity	Volume of Material (cubic yards)	Surface Area (acres)
Sediment Removal	900	0.230
Sediment Placement (outside of waterway)		0.425
Total	900	0.655

#### Livestock Pond 8

Rock armor will be placed along approximately 25 feet of the livestock pond spillway where there is a series of headcuts within fractured bedrock. Approximately 800 cubic yards of sediment will be removed from the livestock pond. All removed sediment will be placed onsite in a predesignated location, as determined by the engineer and USFWS/CDFW approved biologist, so it will not re-enter the pond or downstream waterway (Table 2). All disturbed areas will be seeded with mixture of native grasses and forbs. Sediment will be placed in upland habitat over approximately 0.376 acres.

**Table 2. Livestock Pond 8 Sediment Removal and Rock Spillway Impacts**

Activity	Volume of Material (Cubic Yards)	Surface Area (Acres)
Sediment Removal	800	0.185
Sediment Placement (outside of waterway)		0.376
Spillway Rock Armoring	15	0.005
Total	815	0.566

### **Livestock Pond 9**

Work includes reconstruction of the existing embankment, regrading and reshaping of the existing spillway, and protection of the spillway by placing rock armor and biodegradable erosion control fabric in the spillway. A suitable borrow area has been identified along the proposed temporary access route from an existing access road to the project area. Approximately 125 cubic yards of earth will be removed (cut) and 285 cubic yards of fill material will be placed and compacted to repair the eroded embankment. Approximately 25 cubic yards of rock armor will be placed in the steep portion of the spillway to protect it from erosion (Table 3).

**Table 3. Livestock Pond 9 Embankment/Spillway Impacts**

<b>Structure</b>	<b>Type and volume of materials</b>		<b>Surface Area (acres)</b>
	<b>Material</b>	<b>Volume (cubic yards)</b>	
Embankment/Spillway Repair	Soil	125 (cut) 285 (fill)	0.184
	Type 1 Rock	25	
Borrow Area	Soil	160	0.172
	Totals	595	0.356

### **Dewatering Plan**

It is anticipated standing water will not be present in the livestock ponds during construction based on the time of year construction will be occurring. However, if standing water is present, the livestock ponds will be surveyed by a USFWS/CDFW approved biologist before project construction. Water will be pumped using screened and filtered pumps. Turbid water will be pumped to areas where it can infiltrate. Pumped water will not be allowed to enter existing waterways as overland flow. If necessary, filter bags or similar devices will be used to treat turbid water to prevent sediment from entering waterways. The contents of the filter bag will be emptied onto the sediment removal area and the used bag will be disposed of at the appropriate facility. USFWS/CDFW approved biologists with all necessary permits will be on-site during all dewatering activities. Any native species detected will be moved to the nearest appropriate location as determined by the biologist and in accordance with an approved USFWS Relocation Plan.

### 2.2.2 Road Work and Gully Stabilization

A 1,800 foot segment of a dirt road from livestock pond 7 to livestock pond 8 does not have proper drainage. Uncontrolled runoff has caused erosion along the road and a formation of a gully adjacent to the road. Treatments to control road runoff include:

- The installation of rolling dips.
- Extending an existing roadside drainage ditch and grading a 125-foot segment of road to provide cross slope so the road drains toward the extended ditch.
- Replacement of a non-functional culvert with a 24 inch diameter 30-foot long corrugated metal pipe to safely convey runoff below the existing road.
- Regrade 400 linear feet of the existing road so that it will drain into an existing protected swale.

Improvements to help stabilize the gully include directing road runoff away from the gully, stabilizing the two headcuts leading into the gully, and placing rock check dams in the gully. The road treatments described above will reduce the amount of runoff being conveyed to the gully. The headcuts leading into the gully will be stabilized by lining the channels with rock. Berms will be constructed upslope of the headcuts to ensure runoff is conveyed to the rock-lined channels and not allowed to flow over the unprotected slope. Three approximately 15 foot wide (2.25 foot tall) rock check dams will be constructed at appropriate locations within the gully to trap sediments and buttress the steep gully banks, allowing for natural recruitment of vegetation to help further stabilize the banks.

**Table 4. Culvert and Road Impacts**

Activity	Volume of Material (cubic yards)	Surface Area (acres)
Earthwork at Berm and Road	15(cut) 60 (fill)	0.057
Rolling Dips	64.2	0.033
Culvert Basin Rock	21.6	0.006
Culvert Replacement and Grading	60.9	0.067
Proposed Road Realignment		0.268
Total	221.70	0.431

### 2.2.3 Equipment and Staging, Borrow Area, and Access

The equipment and material staging areas will be located along the existing ranch road adjacent to the ponds. Equipment that will be used includes an excavator, bulldozer, loader, pump, dump truck, compactor, and hand labor.

A borrow area is located adjacent to livestock pond 9. The maximum depth of excavation at the borrow area will be 4.5 feet. Once the borrow material has been removed, the area will be graded so runoff cannot concentrate. Borrow area slopes will be left no steeper

than 5 foot horizontal by one foot vertical (5H:1V) and the area will drain via sheet flow in the same direction prior to borrow area grading.

Temporary access roads through open grassland will provide access to the livestock ponds and borrow area. The spoils placement area will be located directly adjacent to an existing access road. All disturbed areas will be seeded with a mixture of native grasses and forbs (Table 5).

**Table 5. Disturbed Area Seed Mix**

Species	Common Name	lbs/acre
<i>Stipa pulchra</i>	Purple Needlegrass	3
<i>Eschscholzia californica</i>	California Poppy	3
<i>Bromus carinatus</i>	California Brome	10
<i>Elymus glaucus</i>	Blue Wild Rye	8
Total		24

## 2.2.4 Construction Schedule

Project work will occur between August 31<sup>st</sup> and October 31, 2017. Work hours would be limited daylight hours between 6 a.m. and 7 p.m.

## 2.2.5 Avoidance and Minimization Measures

The CCRCD requires the implementation of avoidance and minimization measures in the Contra Costa Voluntary Local Program (VLP) to limit impacts to biological resources and listed species. The measures that will be implemented are listed in detail in Table 6. Environmental consequences for resource areas assume the measures specified would be fully implemented.

**Table 6 Environmental Protection Measures**

Resource	Protection Measure
Biological Resources	<p>The following general measures will be implemented:</p> <ul style="list-style-type: none"> <li>• A qualified biologist shall conduct preconstruction surveys immediately prior to ground disturbing activities. If at any point the ground disturbance ceases for more than five consecutive days, additional surveys shall be conducted prior to resuming management practices.</li> <li>• A qualified biologist shall provide an education presentation for all persons employed or otherwise working on management practices before performing any work. The presentation shall include a discussion of the biology and general behavior of the listed species, information about the distribution and habitat needs of the listed species, sensitivity of the listed species to human activities, and its status pursuant to the California Endangered Species Act. The qualified biologist shall provide a fact sheet containing this information for workers (in English and other languages as needed) to carry while performing management practices.</li> <li>• Construction activities shall be conducted only during daylight hours.</li> <li>• All steep-walled trenches and holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that</li> </ul>



	<p>is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a listed species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.</p> <ul style="list-style-type: none"> <li>• No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat.</li> <li>• The general construction season for stream restoration shall be June 15 to October 31 (or the first rainfall depositing more than 0.25") to avoid impacts to breeding, feeding, and sheltering of listed species found within the riparian corridor.</li> <li>• For any dewatering activities, water will be diverted by installation of a temporary barrier. All water above the barrier will be diverted downstream at an appropriate rate to maintain downstream flows during construction. A qualified biologist, with all necessary State permits shall relocate fish, amphibians and other native aquatic species within the project site. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Adequate water depth and channel width will be maintained at all times to allow for fish passage. When construction is completed, the barriers to flow will be removed in a manner that will allow flow to resume with the least disturbance possible to the substrate.</li> <li>• Rodent burrows shall be avoided to the maximum extent practicable when constructing beneficial activities that involve surface disturbance.</li> </ul>
Biological Resources	<p>The following measures would also be implemented for the California tiger salamander and California red-legged frog:</p> <ul style="list-style-type: none"> <li>• Structural components repair at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.</li> <li>• A qualified biologist shall be present on site during all grading, dewatering, riparian or aquatic vegetation removal activities. The qualified biologist shall monitor implementation of the management practices for listed species. The qualified biologist shall be responsible for inspecting construction vehicles, equipment, materials/supplies, storage areas or otherwise suitable locations for listed species to hide each morning before construction begins. The qualified biologist shall inspect all dredged and excavated materials for listed species. If a California tiger salamander or California red-legged frog is found, it shall be allowed to leave the Project Area on its own, or if it can be safely captured it shall be relocated by the qualified biologist to a suitable location outside of the Project Area. Construction shall not begin until the qualified biologist has reported the area clear of the listed species.</li> <li>• Restoration activities shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.</li> <li>• Sediment removal during pond maintenance/restoration shall be placed where it shall not pass into California tiger salamander breeding pools; nor shall it pass into any other waters of the state as per Fish and Game Code section 5650.</li> <li>• Sediment shall not be placed over areas with ground squirrel burrows.</li> <li>• Excavation and grading shall only be conducted during dry weather.</li> </ul>

Biological Resources	<p>The following measures would also be implemented for the Alameda whipsnake:</p> <ul style="list-style-type: none"> <li>• All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.</li> <li>• Disturbance in known or potential Alameda whipsnake habitat shall only take place between June 15 and October 31, when the Alameda whipsnake is more active and less likely to be impacted.</li> </ul>
Biological Resources	<p>The following measures would also be implemented for the San Joaquin kit fox:</p> <ul style="list-style-type: none"> <li>• If preconstruction surveys determines that there is potential for San Joaquin kit foxes or their dens to be present within upland habitat at a project site, then the project will adhere to the current Standard Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance.</li> </ul>
Biological Resources	<p>The following measures would be implemented to protect riparian habitat:</p> <ul style="list-style-type: none"> <li>• Native tree removal and disturbance of native shrubs or woody perennials adjacent to the streambank or stream channel shall be avoided or minimized to the fullest extent possible. If riparian vegetation will be disturbed, it shall be replaced with similar species</li> </ul>
Biological Resources	<p>The following migratory bird protection measures would be implemented:</p> <ul style="list-style-type: none"> <li>• If construction shall occur in a riparian area before August 1, a survey must be conducted for nesting bird activity. If nesting birds are found within the area, staff must consult with the Department to determine appropriate avoidance measures.</li> </ul>
Water Quality	<p>The following measures would also be implemented for water quality:</p> <ul style="list-style-type: none"> <li>• Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channels and avoiding areas of concentrated ground squirrel burrows suitable for use by listed species. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream or pond shall be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream must be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles must be moved away from the stream prior to refueling or lubrication.</li> </ul>

## Section 3      **Affected Environment and Environmental Consequences**

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternatives.

### **3.1      Resources Not Analyzed in Detail**

The following resources have minor or no impacts but are being described here due to Department of the Interior and Reclamation requirements.

### **3.1.1 Cultural Resources**

The expenditure of Federal funds is an undertaking as defined in 36 CFR § 800.16(y) of the Protection of Historic Properties and is a type of activity that has potential to effect historic properties. The implementing regulations at 36 CFR Part 800 for Section 106 describe the process Federal agencies must take to identify historic properties within the area of potential effects (APE) and to assess the effects the undertaking will have on those historic properties through consultations with the State Historic Preservation Officer, Indian tribes, and other identified consulting and interested parties. Under 36 CFR 800.2(a)(2) Reclamation designated NRCS as the lead federal agency for the undertaking.

Historic properties identification efforts were conducted by NRCS cultural resources staff. These efforts included archaeological and built-environment surveys covering the entirety of the APE. Surveys of the APE were conducted in March 2016, and on July 27, 2017 following selection of the borrow site. No cultural resources were identified within the APE. Letters were sent to Indian tribes and Native American organizations and individuals identified by the California Native American Heritage Commission (NAHC) as having knowledge of and interest in cultural resources in the project area, requesting comments or concerns about the project.

Native American consultation took place for this undertaking in conjunction with consultation for a separate NRCS project being planned on grazing lands at the Vasco Caves Regional Preserve located within EBRPD's park boundary. Three meetings were held with the interested tribes on June 28, July 6, and July 26, which were coordinated by the EBRPD Cultural Resources Coordinator. Taking into consideration the tribes concerns, the nature of the undertaking, and the cultural sensitivity of the project area, NRCS agreed to coordinate with EBRPD and have a cultural monitor present during construction. Cultural monitoring will be coordinated by the NRCS District Conservationist in the Concord Service Center.

No historic properties were identified in the APE for the proposed undertaking. Through correspondence dated August 15, 2017, NRCS initiated consultation with the California State Historic Preservation Officer (SHPO), notifying the SHPO of a Section 106 finding of no historic properties affected pursuant to 36 CFR § 800.4(d)(1).

### **3.1.2 Indian Trust Assets**

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. There are no Indian reservations, rancherias or allotments in the project area. The closest ITA to the project area is the Lytton Rancheria about 27 miles to the east. The Proposed Action will have no effect on ITAs (Appendix A).

### **3.1.3 Indian Sacred Sites**

Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoids adversely affecting the physical integrity of such sacred sites. The Proposed

Action would not be located on Federal lands and therefore would not affect access to or use of Indian sacred sites.

### **3.1.4 Environmental Justice**

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Reclamation has not identified adverse human health or environmental effects on any population as a result of implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on minority or low-income populations.

## **3.2 Air Quality**

### **3.2.1 Affected Environment**

Air quality management responsibilities exist at Federal, State, and local levels of government. The primary statutes that establish ambient air quality standards and the regulatory authorities necessary to enforce the regulations designed to attain those standards are the Federal Clean Air Act (CAA) and California Clean Air Act (CCAA). The Federal CAA and the CCAA require that the California Air Resources Board, based on air quality monitoring data, designate portions of the state where Federal or State ambient air quality standards are not met as “nonattainment areas”. Because of the differences between the Federal and State standards, the designation of “nonattainment area” is different under the Federal and State legislation.

Contra Costa County is in attainment for all State ambient air quality standards except for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. Contra Costa County is classified as a nonattainment area under the Federal ambient air quality standards for ozone and PM<sub>2.5</sub>. The region is in attainment or unclassified for all other air pollutants, including PM<sub>10</sub>.

The Bay Area Air Quality Management District (BAAQMD) has local jurisdiction over the project area. BAAQMD is responsible for maintaining or coming into compliance with Federal and State air quality standards within the Basin. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels and to develop and implement strategies to attain the applicable Federal and State standards.

### **3.2.2 Environmental Consequences**

#### **No Action**

Under the no action alternative, Reclamation would not provide grant funding from the HRP to the CCRCD rehabilitate livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully. Air quality would continue to be influenced by climate and geographic conditions, local and regional emissions from vehicles, and local land uses.



### **Proposed Action**

Construction of the proposed action would result in short-term temporary generation of ROG, CO, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and CO<sub>2</sub> emissions from excavation, motor vehicle exhaust associated with construction equipment, employee commute trips, material transport, material handling and other construction activities. Construction activities would be completed within 60 days beginning August 31, 2017.

As part of an effort to attain and maintain ambient air quality standards for ozone, PM<sub>2.5</sub>, and PM<sub>10</sub>, BAAQMD has established thresholds of significance for precursor air pollutants. BAAQMD thresholds of significance for the California Environmental Quality Act (CEQA) compliance, were adopted in June 2010 and updated in May 2011. These thresholds are for ozone precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub>. According to the BAAQMD thresholds of significance, a project that generates more than 10 tons per year or 54 pounds per day of ROG, NO<sub>x</sub>, or PM<sub>2.5</sub>, or more than 15 tons per year or 82 pounds per day of PM<sub>10</sub> is considered to have a significant construction or operational-related air quality impact. To determine the point at which a project would exceed these thresholds, BAAQMD developed a screening table that indicates the size at which a particular land use could be potentially significant.

The BAAQMD has adopted screening level thresholds for daily emissions of criteria/precursor pollutants related to construction. The BAAQMD screening table shows that construction of a residential development results in ROG exceeding its respective threshold before NO<sub>x</sub>, PM<sub>2.5</sub> or PM<sub>10</sub>. The BAAQMD screening level for emissions related to construction of a single-family residential project is 114 dwelling units (at which point ROG may exceed the 10 tons per year or 54 pounds per day threshold). Given that the proposed action is substantially smaller than the screening thresholds, project construction activities would not generate significant amounts of criteria/precursor air pollutants that would increase local pollutant levels. The project would therefore have minor effects to air quality.

The Federal CAA requires Federal agencies to ensure that their actions conform to applicable implementation plans for the achievement and maintenance of the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. To achieve conformity, a Federal action must not contribute to new violations of NAAQS, increase the frequency or severity of existing violations, or delay timely attainment of standards in the area of concern (for example, a state or a smaller air quality region). The proposed action is located in an area whose Federal status is designated as nonattainment for ozone and PM<sub>2.5</sub>. BAAQMD screening thresholds are less than the *de minimis* values for criteria pollutants for federal general conformity for the air basin. Since the proposed action will not generate emission that exceed BAAQMD CEQA screening thresholds, the project is also expected to generate emissions below *de minimis* values therefore, a general conformity analysis is not required.

### **3.3 Biological Resources**

#### **3.3.1 Affected Environment**

CTS and CRLF upland habitat occurs in and around the livestock ponds. There is no emergent vegetation present in the livestock ponds. The surrounding vegetation is annual grassland. The dominant plant species include bromes (*Bromus* spp.), California poppy (*Eschscholzia californica*), filaree (*Erodium* spp.), lupines (*Lupinus* spp.), mustard (*Brassica* spp.), wild oat (*Avena* spp.), owl's-clover (*Castilleja* spp.), ryegrasses (*Festuca* spp.), and thistle (*Cirsium* spp.). Annual grasslands provide foraging habitat for resident and migratory songbirds, small mammals, and reptiles. Mixed oak woodland habitat occurs adjacent to the livestock ponds. There are no natural wetlands or vernal pool habitats in the project area other than the constructed livestock ponds.

A listing of federally listed endangered, threatened, proposed, and candidate species (listed species) and critical habitat was obtained on June 14, 2017 via the USFWS website. In addition, a search of the California Natural Diversity Database (CNDDB) conducted on June 14, 2017 indicated no state or federally listed species were reported within the project boundaries. However, the livestock ponds are known to provide breeding habitat for both the CTS and CRLF. No bullfrogs are known to occur in the area. Alameda whipsnake and the San Joaquin kit fox has been sighted within a mile of the livestock ponds by EBRPD staff.

#### **3.3.2 Environmental Consequences**

##### **No Action**

Under the no action alternative, Reclamation would not provide grant funding from the HRP to the CCRCD rehabilitate livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully. The conditions of the livestock ponds would continue to deteriorate and remain at risk of failure. If the livestock ponds fail, they would no longer provide habitat for CTS, CRLF, and other wildlife species.

##### **Proposed Action**

Construction related activities have the potential to affect a variety of wildlife species that use the grassland habitat. It is anticipated that most of the terrestrial species using the area would temporarily relocate due to increased disturbance and activity in the area. Any displaced wildlife is expected to return to the area after the project is completed.

Migratory birds such as western blue bird, mallards, lesser goldfinch, and their habitats are protected under the Migratory Bird Treaty Act, as amended (16 U.S.C 703 et seq.). The proposed action would occur outside the birds' nesting season (February 15 to August 30). Due to the timing and short duration of the proposed improvements are not expected to have any effects on migratory birds.

The proposed action could result in short term impacts to CTS, CRLF, Alameda whipsnake, and San Joaquin kit fox. Implementation of avoidance and minimization measure discussed in Section 2.2.5 and implementation of the Conservation Measures in

the Programmatic BO will minimize adverse effects but some injury or mortality may still occur. Activities covered by the Programmatic BO include livestock pond repair, maintenance, and restoration that aims at improving wildlife habitats and water availability. The Proposed Action activities meets the criteria specified in the Programmatic BO and a request to append the Programmatic BO to include the Proposed Action was submitted to USFWS June 21, 2017 (Appendix B). Take coverage for the Proposed Action will be included in the appended BO.

In addition to the effects analyzed in the Programmatic BO, the Proposed Action will result in approximately two acres of disturbance. Consultation for site specific effects from disturbance is ongoing and will be included in the appended BO. Temporary disturbance to habitat could also displace wildlife into adjacent areas due to increased levels of human disturbance and equipment noise. Livestock pond 9 will result in 0.356 acres of direct disturbance. Of that, 0.184 acres will be in the form of temporary disturbance to the existing embankment and spillway, and 0.172 acres will be in the form of temporary disturbance to grassland from the soil borrow area. Livestock pond 8 will result in 0.566 acres of direct disturbance. Of that, 0.185 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, 0.005 acres will be in the form of temporary disturbance to the spillway area, and 0.376 acres will be in the form of temporary disturbance to grassland from the sediment placement area. Livestock pond 7 will result in 0.655 acres of direct disturbance. Of that, 0.230 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, and 0.425 acres will be in the form of temporary disturbance to grassland habitat from the sediment placement area.

The road work and gully stabilization will result in 0.447 acres of direct disturbance. Of that, 0.09 acres will be in the form of temporary disturbance to the existing road from the rolling dips and road repair work, 0.268 will be in the form of permanent disturbance to grassland in oak woodland from the road realignment work, and 0.089 will be in the form of temporary disturbance to the existing gully/drainages.

All disturbed areas will revegetate upon completion of construction and the upland disturbed areas will return to pre-construction conditions. The net beneficial effects provided by directly and indirectly improving the aquatic and upland habitat would compensate for the small and temporary disturbance.

The Proposed Action would provide benefits to CTS and CRLF that would contribute toward recovery of the species' populations. Rehabilitation of the livestock ponds would improve CTS and CRLF breeding habitat, reducing soil erosion and sedimentation, and improving water availability for livestock and wildlife. In addition, grazing in the project areas will be managed by EBRPD staff to maximize benefits to CTS, CRLF, and other sensitive species.

Long-term benefits of the project would result in improvement to CTS and CRLF breeding habitat, better management of the upland habitats surround each livestock ponds

to support CTS and CRLF dispersal, and restoring habitat connectivity allowing CTS and CRLF to migrate between livestock ponds.

### **3.4 Land Use and Agriculture**

#### **3.4.1 Affected Environment**

EBRPD leases suitable lands within the Preserve to tenants with expertise in livestock grazing. Historically, the area has been grazed by cattle for over a century. The current tenant has managed a livestock operation on the Preserve for 30 years. Cattle grazing at the Preserve is seasonal and begins in fall and lasts until mid-spring. Ponds developed for livestock watering are located though the Preserve. The Preserve is open to the public, and supports trails for mountain bikers, equestrians, and hikers.

#### **3.4.2 Environmental Consequences**

##### **No Action**

Under the no action alternative, Reclamation would not provide grant funding from the HRP to the CCRCD to rehabilitate livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully. The conditions of the livestock ponds would remain at risk of failure and no longer support the cattle ranching operations. Additionally, the dirt road will continue to erode and inhibit vehicle access to pond 7.

##### **Proposed Action**

Construction related activities would temporally make the livestock ponds inaccessible to cattle. Due to the short duration of construction, the livestock pond improvements are not expected to have any effects on the livestock operations. Construction is anticipated to occur when the livestock ponds are dry and not utilized by the cattle. Upon completion on the project, the livestock ponds will pond for a longer period of time and the transport of sediment to livestock pond 7 would be eliminated. This will create a more reliable water supply to the cattle. Ultimately, the proposed action will improve rangeland health and prolong pond function.

The livestock ponds are located in areas away from designated trails. Construction activities would not prohibit the use of the trails or interfere with recreational activities. Long term benefits of the project would result in continued maintenance of the livestock ponds and implementing sustainable grazing as per the Program requirements.

### **3.5 Water Resources and Quality**

#### **3.5.1 Affected Environment**

The three livestock ponds were constructed over 30 years ago and are now approaching failure due to erosion or siltation. These ponds are filled through rainfall runoff and support cattle grazing operations, and are breeding habitat for CTS and CRLF. Livestock



ponds 7 and 8 are very shallow due to sedimentation and do not have sufficient capacity to support the necessary hydroperiod for native amphibians breeding in normal rain years. At livestock pond 9, there is a breach in the existing embankment that has decreased the livestock pond's water holding capacity and is threatening to completely dewater the pond if not repaired.

The 1,800 foot segment of road from livestock pond 8 to the west of livestock pond 7 does not have water bars and drainage dips to control runoff and direct water off the road. Stormwater runoff concentrates on the road which has resulted in erosion of the road. In addition, uncontrolled runoff from the road has led to the formation of a gully adjacent to the road. The size of the gully has increased and is hydrologically connected to livestock pond 7 and delivers sediment to the pond.

### **3.5.2 Environmental Consequences**

#### **No Action**

Under the no action alternative, Reclamation would not provide grant funding from the HRP to the CCRCD to rehabilitate livestock ponds, repair a 1,800 foot section of an existing earthen access road, and stabilize a gully. Without funding, the livestock ponds would continue to fill with sediment, remain at risk of failure, and the road will continue to erode.

#### **Proposed Action**

Site preparation for the project would include ground disturbing activities including minor clearing and grubbing, and excavation. Approximately two acres of land would be disturbed during construction of the proposed action. Construction activities have the potential to temporarily impair water quality if disturbed and eroded soil, petroleum products, or construction-related wastes are accidentally discharged into receiving waters or onto the ground where they can be carried into receiving waters. Soil and associated contaminants that enter receiving waters through runoff and erosion can increase turbidity, increase sedimentation of aquatic habitat, and introduce compounds that are toxic to aquatic organisms.

A National Pollutant Discharge Elimination System (NPDES) permit would be required. The contractor would be required to develop and implement a SWPPP and to obtain a Construction General Permit prior to initiating construction activities and to implement standard BMPs. Dust control measures would be implemented to prevent dust from being generated during construction activities. Precautions would be followed to avoid erosion and movement of soils into drainage systems. Implementation of BMPs and NPDES permit requirements would reduce water quality impacts from construction.

Maintenance activities on livestock ponds are exempted from Section 404 of the Clean Water Act. The proposed action is consistent with normal farming practice and would support ongoing cattle ranching operations. Cattle will continue to use the livestock ponds after implementation of the proposed action. Therefore, a Section 404 permit from the U.S. Army Corps of Engineers is not required.

The Proposed Action will restore livestock pond functionality through removal of sediment that has accumulated in the decades since the livestock ponds were constructed and repairing the impounding embankments and spillway at livestock pond 9. The increased pond depth at pond 7 and 8 will improve water temperatures and water quality in the ponds. In addition, stabilization of the gully and headcut which has formed and is increasing in depth and extent above pond 7. The gully is depositing large amounts of sediment into the livestock pond 7 that degrades the quality of water in the pond. Long term benefits from the project would improve water quality by controlling erosion and reducing sedimentation to prolong pond function.

### **3.6 Cumulative Effects**

According to CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions*. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

The Proposed Action is exempt from General Conformity Regulations and will have no effect on cultural resources, ITAs, Indian sacred sites, or environmental justice. There are no adverse impacts associated with implementing the Proposed Action, and therefore there are no cumulative effects to consider.

## **Section 4 Consultation and Coordination**

Reclamation consulted with the following agencies regarding the Proposed Action:

- Contra Costa Resource Conservation District
- East Bay Regional Park District
- Natural Resource Conservation Service
- California Office of Historic Preservation
- U.S. Fish and Wildlife Service

### **4.1 Central Valley Project Conservation Program and Habitat Restoration Program Technical Team**

Managers for the HRP and the associated Central Valley Project Conservation Program (CVPCP) are guided by a Technical Team of biologists and natural resource specialists from Reclamation, the Service, and CDFW who help HRP/CVPCP managers select projects for funding. During the period of October 2014 through February 2015, members of the Technical Team reviewed and scored proposals submitted to the CVPCP and HRP

for consideration for funding. The CCRCDD's habitat restoration proposal ranked in the top tier of proposals, and was selected for funding following evaluation by the Team. On March 5, 2015, Reclamation and the USFWS management approved the proposal for funding.

## Section 5      References

- California Department of Fish and Game. 2010. Report to the Fish and Game Commission: A Status Review of the California Tiger Salamander (*Ambystoma californiense*). January 11, 2010.
- California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database. Rarefind electronic database.  
<http://www.dfg.ca.gov/biogeodata/cnddb/rarefind.asp>.  
Accessed June 14, 2017.
- ICF. 2010. Draft Eastern Alameda County Conservation Strategy. Released for public comment September 3, 2010. Downloaded October 6, 2010 from <http://eastalco-conservation.org/documents.html>.
- San Francisco Bay Regional Water Quality Control Board. 2004. Contra Costa Creeks Inventory and Watershed Characterization Report.
- U.S. Fish and Wildlife Service (USFWS). 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. viii + 173 pp.
- \_\_\_\_\_. 2004. Endangered and threatened wildlife and plants; determination of threatened status  
13 for the California Tiger Salamander; and special rule exemptions for existing routine  
14 ranching activities; Final Rule. *Federal Register* 69 (149):47212-47248. August 4,  
2004.
- \_\_\_\_\_. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical  
Habitat for the California Red-legged Frog, and Special Rule Exemption  
Associated with Final Listing for Existing Routine Ranching Activities; Final  
Rule. *Federal Register* 71 (71): 19244-19346. April 13, 2006.
- \_\_\_\_\_. 2010. Endangered Species List.  
<http://ecos.fws.gov/ipac/project/UTA6HY33ZZEY7OIGDYCTUBPR4M/resources>  
Accessed June 14, 2017.



# **Appendix A**

## **Indian Trust Assets Compliance**

Indian Trust Assets  
Request Form

\*\*Please send your request to: Kevin Clancy, [kclancy@usbr.gov](mailto:kclancy@usbr.gov)

Date:

Requested by	Jamie LeFevre, x 5035
Fund	15XR0680A3
WBS	RX304249930250000
Cost Center	2015200
Region # (if other than MP)	(NA)
Project Name	Recovery Actions for California Red-legged Frog and California Tiger Salamander in Contra Costa County
CEC or EA Number	15-27-MP
Project Description	Reclamation would provide \$186,167 from the Habitat Restoration Program to the Contra Costa Resource Conservation District to improve five existing livestock ponds by rehabilitating the impoundment structures and/or through removal of accumulated sediment from the livestock pond bottoms. The proposed action would also repair a 1,800 foot section of an earthen access road, and stabilize a gully.
*Project Location (Township, Range, Section, e.g., T12 R5E S10, or XY cords)	<p>Morgan Territory Pond 7: Township 1 South Range 2 East Section 19 Quad: Tassajara <i>37°49'58.95"N 121°47'30.68"W</i></p> <p>Morgan Territory Pond 8: Township 1 South Range 2 East Section 19 Quad: Tassajara <i>-121.790, 37.8296</i></p> <p>Morgan Territory Pond 9:</p>

	Township 1 South Range 2 East Section 30 Quad: Tassajara -121.7920, 37.8205
--	---

\*Please include map with request, if available.

ITA Determination:

The closest ITA to the proposed **Recovery Actions for California Red-legged Frog and California Tiger Salamander in Contra Costa County** activity is the **Lytton Rancheria** about **27** miles to the **east** (see attached image).

Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.

*K. Clancy*

Signature

Kevin Clancy

Printed name of approver

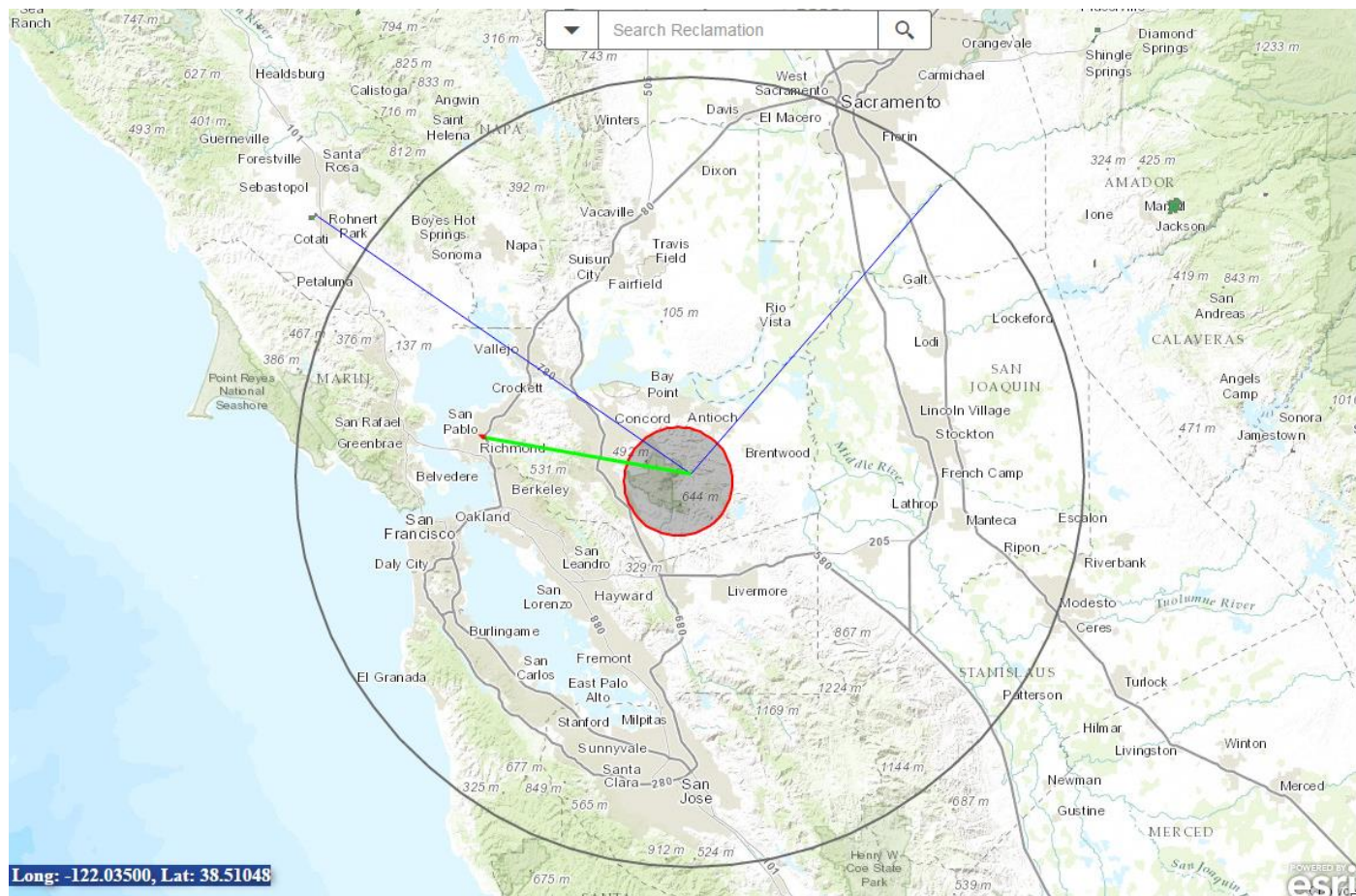
12-7-2015

Date



Figure 1. Project Location





## Native American Lands

Close App

### Step 1. Search radius in miles

50

### Step 2. Longitude and latitude

If you CLICK on the map, the lat/longs are inserted below!  
Or you can type them in.

Longitude:

-121.85181

Latitude:

37.88642

### Step 3.

Find closest Native American Lands

Distance to closest native american land: 26.72 miles

Name: Lytton

Tribe: Lytton Rancheria

[Help!](#)

## **Appendix B**

### **Endangered Species Act Compliance**



United States Department of Agriculture

June 21, 2017

Mr. Ryan Olah  
Coast Bay Division Chief  
Fish and Wildlife Service, Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825

RE: Request to append project to NRCS Contra Costa County Programmatic Biological Opinion (08ESMF00-2015-F-0928). Project: *Morgan Territory 2017 Pond Projects*

Dear Mr. Olah:

The USDA Natural Resources Conservation Service (NRCS) respectfully requests inclusion of the Morgan Territory 2017 Pond Projects to the Contra Costa County Programmatic Biological Opinion (Programmatic BO). The project involves rehabilitation of 3 existing livestock ponds as well as an access road/gully stabilization project to reduce sedimentation to one of the ponds. The projects are located in Morgan Territory Regional Preserve, owned by East Bay Regional Park District. The project goals are to improve livestock water and wildlife habitat and to maintain proper grazing distribution on the preserve. The required location map, project plan map, and project description are attached.

We have determined that the proposed project may adversely affect the California red-legged frog, California tiger salamander and Alameda whipsnake. The project falls under the Covered Activities (Pond Restoration: Pond de-siltation and structural components repair, and Erosion Control: Access road improvements and water control structures) and meets all other criteria specified in the Programmatic BO. The total estimated project footprint is 2.02 acres.

Please contact me at (925) 672-4577 ext. 4144 or [hilary.phillips@ca.usda.gov](mailto:hilary.phillips@ca.usda.gov) with any questions.

Sincerely,

**HILARY  
PHILLIPS**

Digitally signed by  
HILARY PHILLIPS  
Date: 2017.06.21  
14:52:42 -07'00'

Hilary Phillips  
District Conservationist

Natural Resources Conservation Service  
5552 Clayton Road, Concord, CA 94521  
Voice: (925) 672 4577  
An Equal Opportunity Provider and Employer



### **Project Background**

The Cooperator, Ronald Batteate, leases approximately 3900 acres from East Bay Regional Park District (EBRPD) within the Morgan Territory Regional Preserve (Preserve) located in Contra Costa County. The cooperator is a cattle rancher and manages vegetation with his cow/calf operation.

Ronald Batteate has entered into an Environmental Quality Incentives Program (EQIP) contract with the Natural Resources Conservation Service (NRCS) in 2017 for the purpose of rehabilitating three existing livestock ponds to provide and maintain habitat for listed and common wildlife species, provide reliable livestock water sources, improve safe livestock access to two of the ponds, and reduce erosion and the transport of sediment to one of the ponds by repairing an access road and stabilizing a gully. These rangeland treatments will ultimately improve rangeland health and prolong pond function. Additional funding is being provided through a grant from the Bureau of Reclamation (BOR) that the Contra Costa Resource Conservation District has obtained.

### **Project Description**

#### **General**

This project focuses on three existing livestock ponds, an existing 1,800 foot section of earthen access road and a large gully created by uncontrolled runoff from a segment of the access road. Pond activities include the desiltation of two ponds, reconstruction of one pond embankment and strategic rock placement at two of the pond's spillway sites. Road improvement activities include the installation of rolling dips, grading to direct road runoff to a road-side ditch, relocation of a road segment and replacement of a failed culvert crossing along an existing earthen road to divert water and to reduce soil erosion from entering into Pond 7. Gully work is aimed at stabilizing the draw by redirecting road runoff and adding rock check dams at discrete locations to trap sediments and buttress the steep gully bank. Project work will occur in phases between August 31<sup>st</sup> and October 31<sup>st</sup> 2017.

A designated flat area in close proximity to each pond will be used for equipment and material staging. Equipment that will be used at each site includes an excavator, bulldozer, loader, compactor, dump truck, pump, and hand labor. Access to sites will be on existing ranch roads or require temporary access roads. If, at the time of construction, the ponds are full enough that the water level needs to be lowered to perform repairs, ponds will be surveyed before project construction. Water will be pumped using screened and filtered pumps. Dewatering bags will be connected to the pump to prevent sediment from entering waterways. The contents of the dewatering bag will be emptied onto the sediment removal area and the used bag will be disposed of at the appropriate facility. A Service approved biologist with all necessary permits will be on-site during all dewatering activities. Any native species detected will be moved to the nearest appropriate location as determined by the approved biologist. All disturbed graded grassland areas will be revegetated with the seed mix listed in Table 1 below.

#### **Pond 9**

This seasonal pond is closest to the Morgan Territory Staging Area. The pond was constructed over 30 years ago, it is known to provide breeding habitat for both the CRLF and CTS. No bullfrogs are known to occur in the area. It has been determined the current condition of the pond provides suitable aquatic habitat for listed species and desiltation is not required. However, there is a breach in the existing embankment that has decreased the pond's water holding capacity and is threatening to

completely dewater the pond if not addressed. Proposed Pond 9 work includes reconstruction of the existing embankment, regrading and reshaping of the existing spillway and protection of spillway by placing rock armor and biodegradable erosion control in the spillway. A suitable borrow area has been identified along the proposed temporary access route from an existing access road to the project area.

Work will consist of repairing the livestock pond embankment and the pond spillway. Approximately 125 cubic yards of cut and 285 cubic yards of compacted engineered fill will be required to repair the eroded embankment. Approximately 25 cubic yards of rock armor will be placed in the steep portion of the spillway to protect it from erosion. It is anticipated that water will not be present during construction.

A designated flat area nearby will be used for equipment and material staging. A temporary access road will provide construction access to the pond and borrow area through open grassland. The maximum depth of excavation at the borrow area will be 4.5 feet. Once borrow is complete the area will be graded so runoff cannot concentrate. Borrow area slopes will be left no steeper than 5H:1V and the area will drain via sheet flow in the same direction prior to borrow area grading.



Figure 1: Pond 9, Photo Date: 04/2016

#### Pond 8

Pond 8 is less than a mile away from Pond 9. It is known to provide breeding habitat for both CRLF and CTS. No bullfrogs are known to occur in the area. This pond has obvious sediment accumulated in it due to years of not being maintained. Cattle are consistently getting stuck in this pond and dying. There is no emergent vegetation present at this pond, the surrounding vegetation is annual grassland. The project involves sediment removal and stabilization of a section of spillway.

Rock armor will be placed along approximately 25 feet of the pond spillway where there is a series of headcuts within fractured bedrock. Approximately 800 cubic yards of sediment will be removed from the pond. The spoils will be moved to an appropriate nearby site where it will be spread. All removed

sediment will be placed in a predesignated location, as determined by the Engineer and a Qualified Biologist, so it will not re-enter the pond or waterway. It is anticipated that water will not be present during construction.

The equipment and material staging area will be located along the existing ranch road adjacent to Pond 8. Equipment that will be used at the site includes an excavator, loader, pump, dump truck, and hand labor. Temporary access roads through open grassland will provide access for pond dredging and placement of rock armoring in the spillway. The spoils placement area will be located directly adjacent to an existing access road.



Figure 2: Pond 8 spillway erosion



Figure 3: Pond 8

#### Pond 7

This pond is known to provide breeding habitat for the CRLF. No bullfrogs are known to occur in the area. This pond has obvious sediment accumulated in it due to years of not being maintained and upstream road erosion issues (see description below under Road Work and Gully Stabilization section). Cattle are consistently getting stuck in this pond and dying. There is no emergent vegetation present at this pond, the surrounding vegetation is oak woodland.

Work will consist of de-sedimentation of the existing livestock pond. Approximately 900 cubic yards of sediment will be removed. All removed sediment will be placed in a predesignated location, as determined by the Engineer and Qualified Biologist, so it will not re-enter the pond or waterway. Standing water may be present during construction.

The equipment and material staging area will be located directly adjacent to the existing ranch road above the pond. Equipment that will be used at the site includes an excavator, bulldozer, dump truck, loader, pump, and hand labor. Access to the pond site will be on existing access roads.





Figure 4: Pond 7

#### Road Work and Gully Stabilization

The 1,800 foot segment of road from Pond 8 to the drainage divide west of Pond 7 is void of water bars and drainage dips to control runoff and direct water off the road at strategic locations. Stormwater runoff is allowed to concentrate on the road. This has resulted in erosion of the road and the delivery of sediment to Pond 7. At one location, uncontrolled runoff from the road onto a steep hillside has led to the formation of a narrow gully adjacent to the road that becomes a much wider and deeper gully in a draw that is directly connected to Pond 7. Treatments to control road runoff include:

- The installation of rolling dips.
- Extending an existing roadside drainage ditch and grading a 125-foot segment of road to provide cross slope so the road drains toward the extended ditch.
- Replacement of a non-functional culvert with a 24" diameter 30 -foot long corrugated metal pipe to safely convey runoff below the existing road.
- Relocating 400 linear feet of an existing road from the fall point of a draw onto the adjacent hill and outsloping the relocated road so that it can drain to a protected swale at the fall point. The abandoned section of road will be regraded and seeded with the seed mix in Table 1.

Improvements to help stabilize the gully include directing road runoff away from the gully, stabilizing the two headcuts leading into the gully, and placing rock check dams in the gully. The road treatments described above will reduce the amount of runoff being conveyed to the gully. The headcuts leading into the gully will be stabilized by lining the channels with rock. Berms will be constructed upslope of the headcuts to ensure runoff is conveyed to the rock-lined channels and not allowed to flow over the unprotected slope. Three approximately 15 foot wide (2.25' tall) rock check dams will be constructed at discrete locations within the gully to trap sediments and buttress the steep gully banks, allowing for natural recruitment of vegetation to help further stabilize the banks.

A designated flat area nearby will be used for equipment and material staging. Equipment that will be used at the site includes an excavator, bulldozer, dump truck, loader, and hand labor. Access to the pond site will be via an existing access road. Access to the gully will be along temporary access routes flagged in the field at the time of construction to avoid sensitive vegetation.



Figure 5: Rills from access road



Figure 6: Gully down the draw

#### *Acreage of Disturbance*

##### Pond 9

Pond 9 will result in 0.356 acres of direct disturbance. Of that, 0.184 acres will be in the form of temporary disturbance to the existing embankment and spillway, and 0.172 acres will be in the form of temporary disturbance to grassland from the soil borrow area.

##### Pond 8

Pond 8 will result in 0.566 acres of direct disturbance. Of that, 0.185 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, 0.005 acres will be in the form of temporary disturbance to the spillway area, and 0.376 acres will be in the form of temporary disturbance to grassland from the sediment placement area.

##### Pond 7

Pond 7 will result in 0.655 acres of direct disturbance. Of that, 0.230 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, and 0.425 acres will be in the form of temporary disturbance to grassland habitat from the sediment placement area.

#### Road Work and Gully Stabilization

The road work and gully stabilization component of the project will result in 0.447 acres of direct disturbance. Of that, 0.09 acres will be in the form of temporary disturbance to the existing road from the rolling dips and road repair work, 0.268 will be in the form of permanent disturbance to grassland in oak woodland from the road realignment work, and 0.089 will be in the form of temporary disturbance to the existing gully/drainages.

**Table 1. Disturbed Area Seed Mix**

Species	Common Name	lbs/acre
<i>Stipa pulchra</i>	Purple Needlegrass	3
<i>Eschscholzia californica</i>	California Poppy	3
<i>Bromus carinatus</i>	California Brome	10
<i>Elymus glaucus</i>	Blue Wild Rye	8
Total		24

#### *Conservation Measures*

The NRCS and the Cooperator will implement the Conservation Measures specified in the Programmatic Biological Opinion on the Natural Resources Conservation Service's Conservation Practices in Contra Costa County, California; reference no. 08ESMF00-2015-F-0929, dated August 11, 2015 (NRCS Contra Costa County Programmatic BO) in addition to the proposed project specific conservation measures. These measures will reduce sedimentation and erosion from construction activities and minimize adverse effects to listed species and their habitats.

#### **Baseline**

##### *General*

Morgan Territory Preserve's landscape is a mosaic of annual rangeland, oak woodlands and chaparral. The Preserve is open to the public, and popular with mountain bikers, equestrians and hikers. The grazing tenant, Ron Batteate, has managed a livestock operation on this Preserve for 30 years. Historically, the area has been grazed by domestic livestock for over a century. Morgan Territory Preserve can be accessed from Morgan Territory Road via the Staging Area.

##### *Pond 9*

The livestock pond is currently functioning as a healthy seasonal pond, and provides valid breeding habitat for native amphibians as well as serving as an important freshwater drinking source for livestock and wildlife. There is a breach in the existing embankment, most likely caused from ground squirrel burrowing, that has decreased the pond's water holding capacity and is threatening to completely dewater the pond if not addressed. The spillway has some erosion issues with evidence of a series of headcuts within fractured bedrock. California tiger salamanders are known to occur in the pond.

##### *Pond 8*

Pond 8 has obvious sediment accumulated in it due to years of not being maintained. Cattle are consistently getting stuck in this pond and dying. There is no emergent vegetation present at this pond, the surrounding vegetation is annual grassland. The pond is known to provide breeding habitat for both California tiger salamanders and California red-legged frogs.

#### *Pond 7*

Pond 7 is perennial in some years. This pond has obvious sediment accumulated in it due to years of not being maintained and upstream road erosion issues. Cattle are consistently getting stuck in this pond and dying. There is no emergent vegetation present at this pond, the surrounding vegetation is oak woodland. This pond is known to provide breeding habitat for the California red-legged frog.

#### *Road Work and Gully Stabilization*

The 1,800 foot segment of road from Pond 8 to the drainage divide west of Pond 7 is void of water bars and drainage dips to control runoff and direct water off the road at strategic locations. Stormwater runoff is allowed to concentrate on the road. This has resulted in erosion of the road and the delivery of sediment to Pond 7. At one location, uncontrolled runoff from the road onto a steep hillside has led to the formation of a narrow gully adjacent to the road that becomes a much wider and deeper gully in a draw that is directly connected to Pond 7.

#### *California red-legged frog*

#### *Pond 9*

The action area and project footprint are located within the range of the California red-legged frog (CRLF) and is located within the South and East San Francisco Bay Recovery Unit. CRLF are known to occur in Pond 9. The project is approximately 1.75 miles north of California red-legged frog critical habitat unit CCS-2B.

Potential CRLF dispersal habitat is present in the form of annual grassland in the borrow area. Potential CRLF breeding habitat and refugia is present in the pond. Based on the known locations of CRLF within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CRLF could be present on the project site and affected by project activities.

#### *Pond 8*

The action area and project footprint are located within the range of the California red-legged frog (CRLF) and is located within the South and East San Francisco Bay Recovery Unit. CRLF are known to occur in Pond 8. The project is approximately 2.5 miles northeast of California red-legged frog critical habitat unit CCS-2B.

Potential CRLF dispersal habitat is present in the form of annual grassland in the sediment placement area. Potential CRLF breeding habitat and refugia is present in the pond. Based on the known locations of CRLF within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CRLF could be present on the project site and affected by project activities.

#### *Pond 7*



The action area and project footprint are located within the range of the California red-legged frog (CRLF) and is located within the South and East San Francisco Bay Recovery Unit. CRLF are known to occur in Pond 7. The project is approximately 2.75 miles northeast of California red-legged frog critical habitat unit CCS-2B.

Potential CRLF dispersal habitat is present in the form of annual grassland in the sediment placement area. Potential CRLF breeding habitat and refugia is present in the pond. Based on the known locations of CRLF within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CRLF could be present on the project site and affected by project activities.

#### *Road Work and Gully Stabilization*

The road work and gully stabilization are located between ponds 7 & 8. Potential CRLF habitat is present in the form of upland habitat in the project area. Based on the known locations of CRLF within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CRLF could be present on the project site and affected by project activities.

#### *California tiger salamander*

##### *Pond 9*

The action area and project footprint are located within the range of central California tiger salamanders (CTS). The project occurs within upland grassland habitat for the California tiger salamander. Ground squirrel burrows are present within the project vicinity. California tiger salamanders are known to occur in Pond 9. The project is approximately 5 miles north of California tiger salamander critical habitat unit 18, Central Valley Geographic Region.

Potential CTS habitat is present in the form of aquatic and upland habitat in the project area. Based on the known locations of CTS within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CTS could be present on the project site and affected by project activities.

##### *Pond 8*

The action area and project footprint are located within the range of central California tiger salamanders (CTS). The project occurs within upland grassland habitat for the California tiger salamander. Ground squirrel burrows are present within the project vicinity. California tiger salamanders are known to occur in Pond 8. The project is approximately 5.5 miles north of California tiger salamander critical habitat unit 18, Central Valley Geographic Region.

Potential CTS habitat is present in the form of aquatic and upland habitat in the project area. Based on the known locations of CTS within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CTS could be present on the project site and affected by project activities.

##### *Pond 7*

The action area and project footprint are located within the range of central California tiger salamanders (CTS). The project occurs within upland grassland/oak woodland habitat for the California tiger salamander. Ground squirrel burrows are present within the project vicinity. California tiger salamanders have not been documented in Pond 7. The nearest known California tiger salamander documentation is approximately 0.25 miles south of Pond 7 in Pond 8. The project is approximately 5.75 miles north of California tiger salamander critical habitat unit 18, Central Valley Geographic Region.

Potential CTS habitat is present in the form of aquatic and upland habitat in the project area. Based on the known locations of CTS within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CTS could be present on the project site and affected by project activities.

#### *Road Work and Gully Stabilization*

The road work and gully stabilization are located between ponds 7 & 8. Potential CTS habitat is present in the form of upland habitat in the project area. Based on the known locations of CTS within the Action Area, and construction activities that would disturbed potential habitat, it is reasonable to conclude that CTS could be present on the project site and affected by project activities.

#### *Alameda whipsnake*

##### *Pond 9*

The nearest Alameda whipsnake sighting is approximately 0.5 miles south of Pond 9 in Contra Costa Water District's Los Vaqueros Reservoir Watershed. There is also a CNDDDB occurrence approximately 0.85 miles north of Pond 9 within Morgan Territory Regional Preserve. The project is approximately 2.5 miles east of Alameda whipsnake critical habitat unit 4.

Work for Pond 9 is going to be implemented in grassland habitat, not chaparral scrub habitat. It is possible that Alameda whipsnake individuals could disperse through the project site. Based on the potential for habitat and individuals to be located within the project site, and that construction activities would disturbed potential grassland dispersal habitat, it is reasonable to conclude that Alameda whipsnake could be present on the project site and affected by project activities.

##### *Pond 8*

The nearest Alameda whipsnake sighting is approximately 0.3 miles northwest of Pond 8 within Morgan Territory Regional Preserve. The project is approximately 3 miles east of Alameda whipsnake critical habitat unit 4.

Work for Pond 8 is going to be implemented in grassland habitat, not chaparral scrub habitat. It is possible that Alameda whipsnake individuals could disperse through the project site. Based on the potential for habitat and individuals to be located within the project site, and that construction activities would disturbed potential grassland dispersal habitat, it is reasonable to conclude that Alameda whipsnake could be present on the project site and affected by project activities.

##### *Pond 7*

The nearest Alameda whipsnake sighting is approximately 0.15 miles west of Pond 7 within Morgan Territory Regional Preserve. The project is approximately 3 miles east of Alameda whipsnake critical habitat unit 4.

Work for Pond 7 is going to be implemented in grassland/oak woodland habitat, not chaparral scrub habitat. It is possible that Alameda whipsnake individuals could disperse through the project site. Based on the potential for habitat and individuals to be located within the project site, and that construction activities would disturb potential grassland dispersal habitat, it is reasonable to conclude that Alameda whipsnake could be present on the project site and affected by project activities.

#### *Road Work and Gully Stabilization*

The road work and gully stabilization are located between ponds 7 & 8. This work is going to be implemented in grassland/oak woodland habitat, and on the existing road, not chaparral scrub habitat. It is possible that Alameda whipsnake individuals could disperse through the project site. Based on the potential for habitat and individuals to be located within the project site, and that construction activities would disturb potential grassland dispersal habitat, it is reasonable to conclude that Alameda whipsnake could be present on the project site and affected by project activities.

### **Effects**

#### *General*

Improvements to Ponds 9, 8, and 7 can help to improve the overall rangeland health and herd management of the grazing unit by ensuring that the ponds remain a source of livestock water. Repairing the embankment and spillway of Pond 9 will reduce the risk of pond failure, ensuring that the pond remains on the landscape for both livestock and wildlife. Removing sediment in Ponds 8 and 7 will improve breeding habitat for the California red-legged frog and California tiger salamander, and also ensure various wildlife such as mammals, birds, bats, etc. have a water source for a longer period of time. This desedimentation will also help to prevent livestock and other animals from getting stuck in the pond bottom, resulting in healthier water quality and herd conditions. Improvements to the access road and gully will help to reduce rates of sedimentation in Pond 7. Benefits to wildlife and livestock through the pond restoration activities are consistent with those described in the Programmatic Biological Opinion.

Construction could result in crushing of burrows inhabited by California red-legged frogs or Central California tiger salamanders, resulting in injury or death. Dewatering could result in the stranding or injury at the pump filter of adults or juvenile California red-legged frogs or Central California tiger salamanders. Alameda whipsnakes could be injured or killed by crushing from construction equipment. Foraging and dispersal behavior of Alameda whipsnakes, California tiger salamanders, and California red-legged frogs may be altered due to sound or vibration disturbance from construction activities. The implementation of the Conservation Measures in the Programmatic Biological Opinion will minimize adverse effects to the California red-legged frog, Central California tiger salamander, and Alameda whipsnake during construction, but some injury or mortality may still occur.

In addition to the effects analyzed in the Programmatic Biological Opinion, the proposed project will result in the following acreage of disturbance: Pond 9 will result in 0.356 acres of direct disturbance. Of that, 0.184 acres will be in the form of temporary disturbance to the existing embankment and spillway, and 0.172 acres will be in the form of temporary disturbance to grassland from the soil borrow area. Pond 8 will result in 0.566 acres of direct disturbance. Of that, 0.185 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, 0.005 acres will be in the form of temporary disturbance to the spillway area, and 0.376 acres will be in the form of temporary disturbance to grassland from the sediment placement area. Pond 7 will result in 0.655 acres of direct disturbance. Of that, 0.230 acres will be in the form of temporary disturbance to aquatic (pond) habitat from the sediment removal area, and 0.425 acres will be in the form of temporary disturbance to grassland habitat from the sediment placement area. The road work and gully stabilization component of the project will result in 0.447 acres of direct disturbance. Of that, 0.09 acres will be in the form of temporary disturbance to the existing road from the rolling dips and road repair work, 0.268 will be in the form of permanent disturbance to grassland in oak woodland from the road realignment work, and 0.089 will be in the form of temporary disturbance to the existing gully/drainages.

The area will revegetation within a year and the upland disturbed areas will return to normal conditions. The net beneficial effects provided by directly and indirectly improving pond habitat would compensate for the small and temporary disturbance to both aquatic and upland habitat. In addition, the implementation of the Conservation Measures in the Programmatic Biological Opinion will minimize adverse effects to the California red-legged frog, Central California tiger salamander, and Alameda whipsnake habitat from construction.