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Biological Assessment Acronym List

BA	Biological Assessment
BMPs	Best Management Practices
CA	California
CBD	Center for Biological Diversity
CNDDDB	California Natural Diversity Database
ESA	Federal Endangered Species Act
°C	degrees Celsius
FEMA	Federal Emergency Management Agency
Harvey	H.T. Harvey & Associates
msl	mean sea level
NMFS	National Marine Fisheries Service
OES	Office of Emergency Services
PA	Public Assistance
SEA	Supplemental Environmental Assessment
UC-Davis	University of California-Davis
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

SECTION ONE

Summary of Findings and Conclusions

Under the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Program, the County of Santa Clara, California has applied to the California Office of Emergency Services (OES) for funding to repair two sections of Gilroy Hot Springs Road. The proposed project would involve stabilizing the bank of Coyote Creek at two locations using a welded wire wall, gabions, boulders, and rock rip-rap.

This Biological Assessment (BA) addresses the potential project impacts to Federally listed (or proposed for listing) species. Federally listed species include those that are listed as endangered or threatened under the Federal Endangered Species Act (ESA), and under the jurisdiction of the U. S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

Other potential environmental effects will be addressed in a Supplemental Environmental Assessment (SEA) which will be prepared for this project.

National Marine Fisheries Service and U.S. Fish and Wildlife Service Determination

Information on Federally listed (or proposed for listing) species that had the potential to occur in Santa Clara County was provided by the USFWS in a letter dated March 14, 2001 (Appendix A). FEMA evaluated each of the identified species in regard to its habitat requirements and whether or not needed habitat occurred within the project area. Based on the results of this initial evaluation, it was determined that one species under the jurisdiction of the USFWS (California red-legged frog) needed to be evaluated in more detail.

Initially, in 1998, FEMA was of the opinion that the proposed action would not affect the California red-legged frog and asked USFWS for concurrence with this determination. However, USFWS service indicated in a letter dated September 10, 1998, that the project action "may affect and is likely to adversely affect the species" and requested that formal consultation be implemented with their agency. With the submittal of this BA that evaluated project actions in regard to affects on the California red-legged frog, FEMA has initiated formal Section 7 consultation with the USFWS regarding the ESA.

After a literature review, site reconnaissance, communication with experts, and consideration of the activities proposed with the subject project, it was determined that the proposed project may affect and is likely to adversely affect the California red-legged frog, which may be present in Coyote Creek within the project areas. The County of Santa Clara will implement minimization and avoidance measures described in this document to reduce impacts to the listed species. FEMA approval of the proposed project is contingent upon successful implementation of these measures.

- All construction using heavy equipment would occur from Gilroy Hot Springs Road, thus minimizing impacts to Coyote Creek.
- A USFWS-approved biologist will survey the project areas 2 weeks prior to the onset of construction activities. If California red-legged frogs, tadpoles, or eggs are found within areas that would be disturbed by construction activities, the approved biologists will contact the USFWS to determine if moving these life stages is appropriate. The USFWS will

consider the availability of a relocation site in making their determination. If the USFWS approves the moving of frogs, tadpoles, and/or eggs, the approved biologist will be allowed sufficient time to move them from the work site before work activities are initiated. Only USFWS approved biologists will participate in activities associated with the capture, handling, transporting, and monitoring of California red-legged frogs.

- Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the general measures that are being implemented to conserve California red-legged frogs as they relate to the project, and the boundaries within which the project will be accomplished.
- Construction activities would occur during the months of May through October to minimize disturbance of any potential breeding activity within the pool at the confluence of Coyote Creek and Canada de los Osos.
- Erosion control measures would be taken to minimize sedimentation and changes in water quality or substrate quality. The applicant will implement best management practices (BMPs) as identified by the Regional Water Quality Control Board.
- During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of daily. Following construction, all trash and construction debris will be removed from work areas.
- All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 60 feet from any riparian habitat or water body. The applicant will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the county will insure the construction contractor has prepared a plan to allow a prompt and effective response to accidental spills. The contractor will be responsible for informing workers of the importance of preventing spills and of the appropriate measures to take should a spill occur.

SECTION TWO

Introduction

Gilroy Hot Springs Road is located in Santa Clara County, California, and runs between the town of Gilroy and Gilroy Hot Springs. The road begins at the confluence of Roop Road and Coyote Lake Road near the southeastern end of Coyote Lake. Gilroy Hot Springs Road runs east and north for approximately 4 miles before terminating at Gilroy Hot Springs (Exhibits 1a and 1b).

In January 1997, Coyote Creek experienced high flood flows which caused accelerated erosion of the stream banks at numerous locations along Coyote Creek. Two of the erosion areas resulted in damage to the Gilroy Hot Springs Road. At the first location (Site #8), the embankment was severely cut away by the current of Coyote Creek. Approximately 100 linear feet of roadway lost a strip of pavement approximately 4 feet wide, and an additional 35 feet of roadway suffered severe cracking (Exhibit 2). At the second location (Site #14), the road embankment was undermined for a length of 200 linear feet (Exhibit 3).

2.1 ESA SECTION 7 CONSULTATION

FEMA initiated informal consultation with the USFWS regarding this project in July 1998. At that time, FEMA made a determination of “not likely to result in take” for the California red-legged frog for this and several other projects and requested concurrence from the USFWS. Since the USFWS believed that some of the proposed actions and/or avoidance and minimization could adversely affect the frog, they were not in agreement and requested that formal consultation be implemented for various projects.

A list of special-status species with the potential to occur in the project area was obtained from the USFWS Office in Sacramento (USFWS 2001a) (Appendix A). The list identified nine special-status animal species and three special-status plant species under the jurisdiction of USFWS or NMFS. Of these species, ten are under the jurisdiction of the USFWS and two are under the jurisdiction of the NMFS. Consultation with NMFS is being handled separately from this document.

In compliance with Section 7 of the ESA, the project area was reviewed for the potential habitat for Federally listed threatened and endangered species. To determine known locations of threatened and endangered species within the project area, a search of the California Natural Diversity Database (CNDDDB) was conducted in October 2000, for the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles Gilroy and Gilroy Hot Spring (CNDDDB 2000).

2.2 PURPOSE OF THE DOCUMENT

Because potential habitat for federally proposed and listed species under the jurisdiction of USFWS may exist within the proposed project sites; FEMA has prepared a BA, and with submittal of the BA will initiate formal consultation with the USFWS.

This BA documents the biology and habitat requirement of the California red-legged frog and the biological resources and associated habitat that may occur within the reach of Coyote Creek that will be affected by proposed activities of the Gilroy Hot Springs Road Repair and Stream Bank

Stabilization Project. In addition, this report describes measures that will be employed to minimize any incidental take or disturbances to those species and their supporting habitat. FEMA will require that these measures be implemented as a condition of project approval/funding.

2.3 PROJECT DESCRIPTION

The proposed project would install bank protection at two locations of Coyote Creek along Gilroy Hot Springs Road (Exhibit 4). The two locations, referred to as Site #8 and Site #14, are located approximately 1.5 miles and 2.7 miles east of Coyote Lake Road.

At Site #8, the bank protection would include the installation of a welded wire wall with gabion facia approximately 125 feet long and approximately 50 feet high (Exhibit 5). The slide area would be excavated, then an appropriate base and drainage configuration for the wall and roadway runoff would be laid. The wall would be constructed by placing vertical welded wire sheets with horizontal welded wire mats keyed back into the bank. The wall would be backfilled with clean imported fill, layering the mats to an appropriate height to provide a base for the roadbed. The wall would be reinforced with geotextile material to provide additional stability and erosion protection. The project would be designed to restore the road embankment to its original location, thus reclaiming it from the creek channel. Installation of the wall would occur from the existing slide area along Gilroy Hot Springs Road; therefore, construction equipment would not be working in the stream. However, restoring the road embankment to its original position would involve diversion of the stream during construction and relocation of the low-flow channel. Access and staging for the proposed repair would occur from a small meadow/terrace approximately 500 feet upstream, located between the active channel of Coyote Creek and Gilroy Hot Springs Road (Exhibit 6). Construction at Site #8 is expected to last approximately 2 to 3 months, during which time the creek would be diverted to the opposite side of the channel. Once constructed, the wall would be hydro-seeded to establish vegetative cover. The seed mix would be limited to native species.

At Site #14, approximately 85 linear feet of the southern bank of Coyote Creek along Gilroy Hot Springs Road would be stabilized using boulders at the toe of the slope with half-ton grouted rip-rap above the boulders. All work at Site #14 will be conducted from Gilroy Hot Springs Road; therefore, construction equipment would not be working in the stream. Construction is expected to last approximately 1 month. The finished bank would be hydro-seeded to establish vegetative cover. The seed mix would be limited to native species.

SECTION THREE

Environmental Setting and Biotic Resources

3.1 COYOTE CREEK

Coyote Creek is a perennial stream that begins in the Diablo Mountain Range. At the time of the site reconnaissance survey on January 26, 2001, the creek was approximately 30 feet wide and alternated between fast-moving riffles and slower-moving areas. The creek is located in a fairly narrow canyon with steep (but not vertical) side slopes. The canyon walls rise several hundred feet above the creek.

The substrate is clean and predominately gravelly cobbles, but varies from gravel to boulder size. Coyote Creek meanders through a fairly wide channel (approximately 100 to 300 feet in some areas), and it is presently located adjacent to Gilroy Hot Springs Road at Site #8. Downstream from the project areas, Coyote Creek flows into Coyote Lake. Water released from Coyote Lake flows approximately 4 miles before entering Anderson Reservoir.

3.2 HABITAT DESCRIPTION FOR THE PROJECT AREA

At Site #8, the roadway is approximately 50 feet above the channel, and is void of vegetation in the area of the slope failure. At this site, the creek is physically in contact with the toe of the slope. Immediately adjacent to the slope failure, the canopy is dominated by a mixture of coast live oak (*Quercus agrifolia*), alder (*Alnus sp.*), California bay (*Umbellularia californica*), and western sycamore (*Platanus racemosa*). Understory vegetation consists of aforementioned tree seedlings and an herbaceous layer of soaproot (*Chlorogalum pomeridianum*), miner's lettuce (*Montia peroliata*), prickly lettuce (*Lactuca serriola*), bur chervil (*Anthriscus caucalis*), and annual grass species. On the opposite bank of Coyote Creek, a thin strip of willows (*Salix sp.*), approximately 10 feet wide, lines portions of the active channel. Exhibit 7 shows the vegetation in the vicinity of Site #8.

The meadow upstream of the Site #8 to be used for construction access is a crescent-shaped terrace approximately 50 feet wide at its narrowest point to approximately 275 feet wide at its maximum. It is located approximately 500 feet upstream of the slide area, and approximately 20 feet above the Coyote Creek channel. A gate (posted as Santa Clara County Parks Department) and unpaved roadway will provide access from Gilroy Hot Springs Road to the meadow. Dominant vegetation in the meadow includes annual grass species, star thistle (*Centaurea ssp.*), black mustard (*Brassica nigrans*), and erodium (*Erodium ssp.*). A thin strip of live oak, alder, and bay trees is also located between the meadow and Gilroy Hot Springs Road. These trees will not be removed by the proposed construction. Several gopher tunnels were also noted in the meadow area, but no other evidence of larger mammal burrows (e.g., kit fox) was observed. Soils at both the streambank and meadow appears to be a silty loam that is highly susceptible to water erosion. No serpentine soils were seen.

At Site #14, the creek is only in contact with the slope during periods of high flow. The low-flow channel of the creek is located at least 50 feet from the road. The dominant vegetation in the project area consists of a sparse shrub layer of coyote brush (*Baccharis pilularis*) and blackberry (*Rubus discolor*), with an herbaceous layer of cocklebur (*Xanthium strumarium*),

SECTION THREE

Environmental Setting and Biotic Resources

shepherd's purse (*Capsella bursa-pastoris*), lupine (*Lupinus sp.*), and annual grass species. All work would be conducted from Gilroy Hot Springs Road in this area, which is 10 to 15 feet above the active Coyote Creek channel. Exhibit 8 shows the vegetation in the vicinity of Site #14.

SECTION FOUR

Special Status Species

4.1 STUDY METHODOLOGY

A list of Federally listed endangered, threatened, and proposed for Federal listing species that have the potential to be located within the Gilroy and Gilroy Hot Springs USGS 7.5-minute quadrangles was obtained from the USFWS on March 14, 2001 (USFWS 2001a) (Appendix A).

The species lists contained the following species:

Plants

- Santa Clara Valley dudleya (*Dudleya setchellii*) – endangered
- Metcalf Canyon jewel-flower (*Strejptanthus albidus ssp. Albidus*) – endangered
- Showy Indian clover (*Trifolium amoenum*) - endangered

Invertebrates

- Bay checkerspot butterfly (*Euphdryas editha bayensis*) – threatened

Amphibians

- California red-legged frog (*Rana aurora draytonii*) – threatened

Mammals

- San Joaquin kit fox (*Vulpes macrotis mutica*) – endangered

Birds

- Mountain plover (*Charadrius montanus*) – proposed threatened
- Bald eagle (*Haliaeetus leucocephalus*) – threatened

Fish

- Winter-run chinook salmon (*Oncorhynchus tshawytscha*) – endangered**
- Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha*) – threatened**
- Delta smelt (*Hypomesus transpacificus*) – threatened
- Sacramento splittail (*Pogonichthys macrolepidotus*) – threatened
- South Central California steelhead (*Oncorhynchus mykiss*) – threatened**

** These species are under the jurisdiction of the NMFS. Potential impacts to these species are being evaluated under a separate consultation with NMFS. Therefore, these species will not be addressed further in this BA.

4.1.1 Special Status Species That Would Not Occur in the Project Area

Each of these species was evaluated in regards to its potential to occur within the project area and/or its potential to be affected by project activities. Based on this evaluation, FEMA has determined that the following species do not have the potential to be affected by the proposed project and are not discussed further in this document. The rationale for eliminating each species from further evaluation is provided in Table B-1 (Appendix B).

Plants

Santa Clara Valley dudleya – endangered

Metcalf Canyon jewel-flower – endangered

Showy Indian clover - endangered

Invertebrates

Bay checkerspot butterfly – threatened

Mammals

San Joaquin kit fox – endangered

Birds

Mountain plover – proposed threatened

Bald eagle – threatened

Fish

Delta smelt – threatened

Sacramento splittail – threatened

4.1.2 Special Status Species Potentially Occurring in the Project Area

Based on the preliminary evaluation, FEMA has determined that only the California red-legged frog has the potential to be affected by the proposed project.

The California red-legged frog (*Rana aurora draytonii*) is one of two subspecies of the red-legged frog (*Rana aurora*) and was Federally listed as threatened on May 23, 1996. The California red-legged frog is the largest native frog in the western United States, ranging from 1.5 to 5 inches in size. The adult females are approximately 1 inch longer than adult males (CBD 2001). The dorsal surface of the frog is reddish to olive in color and covered with small black flecks and large irregular dark blotches that generally have indistinct edges. The flecks may be continuous and form lines. The chest, abdomen, and hind legs are usually a gray or white color, though the legs are largely red in color. The males have paired vocal sacs that allow the frog to call in the air. Red-legged frogs usually have an eye mask that extends from the nostril to the angle of the jaw. The eye mask is usually blackish to brown in color, though it may be indistinct in some individuals. Most red-legged frogs have a light lip line that extends from the eye to the shoulder; this line parallels the eye mask. Red-legged frogs have long legs, and hind toe webbing is concave and comes only to the first joint of the longest toe (Orecity 2001).

The historic range of the California red-legged frog extended along the coast from the vicinity of Point Reyes National Seashore, Marin County, and inland from the vicinity of Redding, Shasta County, in California, southward to northwestern Baja California, Mexico. Today they are known to occur in about 238 streams or drainages in 23 counties and are found primarily in wetlands and streams in the coastal drainages of central California. Monterey, San Luis Obispo, and Santa Barbara Counties support the greatest amount of currently occupied habitat (CBD 2001).

The California red-legged frog needs a distinct habitat consisting of both aquatic and riparian components. Adult frogs require still or slow moving water that is relatively deep, with shrubby or emergent riparian vegetation. They are generally found near permanent bodies such as small ponds, quiet pools along streams, reservoirs, springs, lakes, and marshes. California red-legged frogs live in small mammal burrows and moist leaf litter (Orecity 2001).

Adult frogs that have access to permanent water will generally remain active throughout the summer. In cooler areas they may hibernate in burrows or other refuges (CBD 2001). Adult California red-legged frogs stress when exposed to water temperatures at or above 29 degrees Celsius (°C), and can die if the exposure is chronic. Additionally, salinity greater than 4.5 percent causes 100 percent mortality of pre-hatching embryos (UC-Davis 2001).

Breeding takes place between November and March, though the more southerly the frog the earlier the breeding. The frogs breed in small temporary ponds, lakes, in potholes, in overflow from rivers and lakes, or in slow-moving rivers. Males arrive at the breeding sites first (2 to 4 weeks before the females), calling the females to them. Breeding is temperature-dependant; only when the air temperature reaches a certain temperature does breeding begin (Orecity 2001). Timing is probably to ensure that water is cool enough for embryonic survival and that sufficient water exists for larval growth to metamorphosis (UC-Davis 2001).

California red-legged frogs are relatively prolific breeders, usually laying egg masses during or shortly following heavy rainfall in late winter or early spring. Females can lay between 2,000 and 5,000 eggs in a single mass (CBD 2001). The eggs are the largest known for any North American frog. The average egg mass is between 6 and 10 inches in diameter, with each egg being 0.1 inches in diameter (Orecity2001). Egg masses are typically attached to emergent vegetation (i.e., bulrushes, cattails), with a vertical orientation at or near the surface of the water (UC-Davis 2001).

Time to hatching is 6 to 14 days. Larvae metamorph between July and September, 3.5 to 7 months after egg-laying. Tadpoles are between 0.5 and 3.2 inches in length, usually dark brown in color with small metallic-like flecks. The ventral surface of the tadpole or larvae is generally brassy to pink in color (Orecity 2001).

Males probably reproduce after 3 years and females after 4 years of age. The estimated life span is 8 years for males and 10 years for females (UC-Davis 2001). The highest rates of mortality for this species occur during the tadpole stage: less than 1 percent of eggs hatched reach

adulthood. Tadpoles and young frogs hunt day and night. This constant activity makes them visible and, consequently, more vulnerable to predators (CBD 2001).

The food that the California red-legged frog preys upon differs with the age and size of the frog. Adult frogs eat insects, arachnids, and molluscs. Large adult frogs prey upon Pacific tree frogs (*Hyla regilla*) and California mice (*Peromyscus californicus*). These, among other vertebrates, make up more than half of an adult frog's diet. Juvenile frogs prey largely on invertebrates, such as insects and molluscs. Tadpoles or larvae probably feed on algae. Adult frogs are mostly nocturnal, while juvenile frogs are active diurnally and nocturnally. Feeding occurs along the shoreline and the surface of the water (Orecity 2001).

Wading birds, particularly bitterns (*Botaurus lentiginosus*) and black-crowned night herons, (*Nycticorax nycticorax*) are likely significant predators on adult California red-legged frogs. Juveniles, who are more active during the day than adults, are preyed upon by garter snakes (*Thamnophis sp.*). Non-native predatory fish likely prey upon the larva and adults (UC-Davis 2001).

Bullfrogs introduced to California from the east in the late 1800s are also considered a threat to the California red-legged frog. Bullfrogs not only prey upon the larval stages of the species, but also are more suited to survive in human-disturbed areas (USFWS 2001b).

SECTION FIVE

Impacts and Minimization Measures

In March 2000, H.T. Harvey & Associates (Harvey) conducted a survey for the California red-legged frog within the project area. The survey indicated that the habitat associated with Coyote Creek at the project sites is not typical California red-legged frog habitat (Harvey 2000).

Within the project sites, Coyote Creek is a relatively fast flowing, shallow stream containing a cobble-sized substrate, but lacking dense, shrubby riparian vegetation at the water's edge or emergent vegetation within the Creek (Harvey 2000). However, Canada de los Osos, located approximately one-half mile downstream from Site #14, contains a deep pool at the Gilroy Hot Spring Road Bridge, with vegetation close to the water which may be more preferable to red-legged frogs (Harvey 2000).

Harvey searched three databases (CNDDDB, Collection of the Museum of Vertebrate Zoology, University of California, Berkeley; and Herpetology Collection of the California Academy of Sciences) for historical sighting of the California red-legged frog in the vicinity of the project sites. Three sightings were within 1 mile of Site #14. Fifteen sightings were noted between 1 and 5 miles of the project sites. The vicinity of these records to the project sites, plus the absence of barriers to dispersal, indicate that populations of red-legged frogs may be sufficiently close for individual frogs to disperse to the sites and use the sites for foraging (Harvey 2000). However, the project sites are not considered conducive to breeding (Harvey 2000). The Harvey report is included in Appendix A.

The report concluded that absence of barriers to dispersal and the close proximity of the project areas to recorded sightings indicate that the frogs could disperse and forage at the project sites. Therefore, direct incidental "take of individuals" could occur if frogs are located within the project area. Additionally, direct impacts to the creek (i.e., changes in water or substrate quality) could result in the "take of individuals".

The Gilroy Hot Spring Road Repair and Stream Bank Stabilization Project would involve restoring the road base that has been undermined and adding bank stabilization to prevent recurrence of the erosion. At Site #8, welded wire wall with a gabion facia would be used to stabilize the bank. The construction would occur from the road itself. However, a small meadow, just upstream of the site, would be used to stockpile needed supplies and for parking of equipment. At Site #14, the bank would be stabilized with rock rip-rap. All construction activities would occur from the road.

In order to minimize potential impacts to any California red-legged frog that may be present in the project area, the following procedures would be implemented by the County of Santa Clara.

- All construction using heavy equipment would occur from Gilroy Hot Springs Road, thus minimizing impacts to Coyote Creek.
- A USFWS-approved biologist will survey the project areas 2 weeks prior to the onset of construction activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologists will contact the USFWS to determine if moving these life stages is appropriate. The USFWS will consider the availability of a relocation site in making their determination. If the USFWS approves the moving of frogs, tadpoles, and/or eggs, the

approved biologist will be allowed sufficient time to move them from the work site before work activities are initiated. Only USFWS approved biologists will participate in activities associated with the capture, handling, transporting, and monitoring of California red-legged frogs.

- Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the general measures that are being implemented to conserve California red-legged frogs as they relate to the project, and the boundaries within which the project will be accomplished.
- Construction activities would occur during the months of May through October to minimize disturbance of any potential breeding activity within the pool at the confluence of Coyote Creek and Canada de los Osos.
- Erosion control measures would be taken to minimize sedimentation and changes in water quality or substrate quality. The applicant will implement BMPs as identified by the Regional Water Quality Control Board.
- During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of daily. Following construction, all trash and construction debris will be removed from work areas.
- All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 60 feet from any riparian habitat or water body. The applicant will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the applicant will insure the construction contractor has prepared a plan to allow a prompt and effective response to accidental spills. The contractor will be responsible for informing workers of the importance of preventing spills and of the appropriate measures to take should a spill occur.

With this scenario, activities of the Gilroy Hot Springs Road Repair and Streambank Stabilization Project would not be expected to jeopardize the continued existence of the federally listed (threatened) California red-legged frog. This determination was based on limiting construction to the period of May through October and the implementation procedures to protect habitat and procedures to control soil erosion and stream sedimentation.

SECTION SIX

Cumulative Impacts

Several sections of Gilroy Hot Springs Road have been damaged by erosion of streambanks along Coyote Creek. As stated in this BA, two sections were damaged during the 1997 flood and are scheduled for repair in 2001.

Other disturbances in the area include a new housing development being constructed immediately upstream of the meadow associated with Site #8.

All these activities would be expected to have a cumulative effect on Gilroy Hot Springs Road by decreasing the potential for erosion and increasing traffic on the road. None of these activities would be expected to occur within prime habitat for the California red-legged frog, and the road repair projects have adopted measures that lessen potential impacts on the frog.

SECTION SEVEN

Consultation and Coordination

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SECTION EIGHT**References**

California Natural Diversity Database (CNDDDB). 2000. California Department of Fish and Game, Rarefind 2. October.

Center for Biological Diversity (CBD). 2001. California Red-Legged Frog. Website: www.biologicaldiversity.org/swcbd/species/rlfrog/rlfrog.html. Visited March 5.

H.T. Harvey & Associates (Harvey). 2000. Gilroy Hot Springs Road Washout Repair Herpetological Surveys. March 29.

Orecity. 2001. California Red-Legged Frog. Website: www.orecity.k12.or.us.ochs/departments/science/species/california_red-legged_frog.html Visited March 5.

University of California-Davis (UC-Davis). 2001. Species Tour of California. California Red-Legged Frog. Website: <http://ice.ucdavis.edu/Toads/aurora.html>. Visited March 5.

U.S. Fish and Wildlife Service (USFWS).

2001a. Species List for Gilroy and Gilroy Hot Springs Quadrangles, Santa Clara County, California. March 14.

U.S. Fish and Wildlife Service (USFWS). 2001b. Division of Endangered Species, Creature Feature. The California Red-Legged Frog. Website: endangered.fws.gov/features/rl_frog/rlfrog.html Site visited March 5.

SECTION NINE**List of Preparers**

URS Group prepared this BA for the Public Assistance Program staff of the FEMA Region IX office, in San Francisco, California.

URS Group staff includes:

Mr. Quentin Bliss, Senior Environmental Planner, Task Order Manager – Over 33 years of progressive experience in the environmental field and has been involved with the Endangered Species Act since it was enacted. Has extensive experience with all aspects of endangered species, including the preparation of listing packages, public information meeting, preparation of Biological Assessment, the identification of appropriate minimization measures, and agency coordination. Project experience includes over 50 multidiscipline projects that involved compliance with the Endangered Species Act.

Ms. Susan Volkmer, Environmental Planner 2 – Over 7 years of experience with Environmental Assessments and Biological Assessments. Project experience includes over 30 projects that involved compliance with the Endangered Species Act.

Ms. Janet Frentzel, Environmental Planner 2 – Two years of experience with Environmental Assessments and Biological Assessments. Project experience includes over 20 multidiscipline projects that involved compliance with the endangered Species Act.

EXHIBITS

APPENDIX A
AGENCY CORRESPONDENCE

APPENDIX B
SUMMARY OF SPECIES

TABLE B-1

FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY

Scientific Name	Common Name	Federal Status	Preferred Habitat	Nearest Occurrence to the Project Site	Likelihood of occurring in the project area.
Plants					
<i>Dudleya setchellii</i>	Santa Clara Valley dudleya	Endangered	Valley and foothill grassland, cismontane woodland. Endemic to serpentines of Santa Clara County. On rocky serpentine outcrops and on rocks within grassland or woodland. 80 to 335 meters above mean sea level (msl).	At end of Highland Avenue just west of junction with Turlock Avenue, southwest of San Martin.	None: serpentine soils not present within proposed project area.
<i>Streptanthus albidus ssp albidus</i>	Metcalf Canyon jewel-flower	Endangered	Valley and foothill grassland. Endemic to Santa Clara County. Relatively open areas in dry grassy meadows on serpentine soils; also on serpentine balds. 45 to 245 meters msl.	Only record from 1957 near Llagas Avenue; 1.5 miles east of Oak Glen Avenue.	None: serpentine soils not present within proposed project area.
<i>Trifolium amoenum</i>	showy Indian clover	Endangered	Moist, heavy soils in disturbed areas, <100 meters. Presumed extant. Last collected from Sonoma County in 1969.	No records listed in CNDDDB for Gilroy or Gilroy Hot Springs quads.	None: no suitable soils. Project area soils are clay.
Invertebrates					
<i>Euphryas editha bayensis</i>	bay checkerspot butterfly	Threatened	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is primary host plant, <i>Orthocarpus densiflorus</i> and <i>O. purpurascens</i> are secondary host plants.	Along the ridge west of Coyote Reservoir, just southwest of the dam on Coyote Reservoir, 6 miles north of Gilroy.	None: serpentine soils not present within proposed project area.
Amphibians					
<i>Rana aurora draytonii</i>	California red-legged frog	Threatened	Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Several sightings around Henry Coe State Park.	Likely: project area provides potential dispersal habitat. See BA for further discussion.

TABLE B-1

FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY

Scientific Name	Common Name	Federal Status	Preferred Habitat	Nearest Occurrence to the Project Site	Likelihood of occurring in the project area.
Mammals					
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Endangered	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Four individuals spotted in 1992 in the area surrounding Hollister-north to Gilroy; south just past Paicines.	Unlikely: although no burrows were seen during the site visit and the kit fox is generally not seen near roads, suitable habitat exists within the general vicinity of the project.
Birds					
<i>Charadrius montanus</i>	mountain plover	Proposed Threatened	Winters principally in the San Joaquin Valley in California from November through March. Winter habitat is similar to that used in the summer. Breeds on the arid short-grass prairie from northern Montana to southern New Mexico. Blue grama and buffalo grass with scattered clumps of cacti and forbs is the preferred dominant flora.	No records listed in CNDDDB for Gilroy or Gilroy Hot Springs quads.	None: although the project area is located within the general wintering habitat region, no short-grass prairie is located within the project area. Additionally, no construction activities would occur during the winter months.
<i>Haliaeetus leucocephalus</i>	bald eagle	Threatened	Hunting area or home range varies from approximately 1,700 to 10,000 acres. Preferred habitat is along a coast or on major lakes and rivers. Wintering habitat requires "open" water. Breeding occurs from January through March within the project region. Nests are generally built in tall trees or cliffs.	No records listed in CNDDDB for Gilroy or Gilroy Hot Springs quads.	None: the general project area does not provide adequate water for hunting. Additionally, no nesting habitat exists within the project areas.

**TABLE B-1
 FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

Scientific Name	Common Name	Federal Status	Preferred Habitat	Nearest Occurrence to the Project Site	Likelihood of occurring in the project area.
Fish					
<i>Hypomesus transpacificus</i>	delta smelt	Threatened	Found only in the Sacramento-San Joaquin estuary in brackish water. Migrates to fresh water to spawn in late winter to early summer.	No records listed in CNDDDB for Gilroy or Gilroy Hot Springs quads.	None: the project area is a fresh water stream located upstream of two Coyote Creek mainstem dams.
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	Threatened	Primarily limited to tidal fresh and brackish waters of the Sacramento-San Joaquin Delta, Suisun Bay, Suisun, Napa and Petaluma marshes. Adult foraging and spawning migrations occur in the Sacramento River every year and in the San Joaquin River during years with high freshwater outflow.	Splittail are known to have inhabited the mouth of Coyote Creek in the late 1800s and were thought to be extirpated early in the 20 th century. Last captured in Coyote Creek in 1983.	None: presumed extant. Two reservoirs prevent connection with brackish waters and migration.