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**CALIFORNIA RED-LEGGED FROG FOCUSED
SURVEYS FOR THE INDIAN VALLEY PROPERTY,
MORAGA, CONTRA COSTA COUNTY
CALIFORNIA**

The information provided in this document is intended solely for the use and benefit of Mr. David Bruzzone

No other person or entity shall be entitled to rely on the services, opinions, recommendations, plans or specifications provided herein, without the express written consent of Sycamore Associates LLC, 2099 Mt. Diablo Blvd., Suite 204, Walnut Creek, CA 94596.

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SUMMARY

Sycamore Associates LLC (Sycamore) was contracted by Mr. David Bruzzone to conduct U.S. Fish and Wildlife Service (USFWS) protocol-level focused surveys for the federally-listed Threatened and California designated Special Concern Species, California red-legged frog (CRF), (*Rana aurora draytonii*). Surveys for foothill yellow-legged frog (FYF) (*Rana boylei*), a California designated Special Concern Species, were conducted concurrently. The study area is within the Oakland East quadrangle, T1S, R3W, Sections 14, 23, and 24.

The approximately 400-acre study area is located within Indian Valley in the southwest corner of the Town of Moraga. The study area is bordered by Flicker Ridge to the west, with sparse rural residential development in the community of Canyon along the northwestern boundary. To the east, beyond the crest of Gudde Ridge, dense residential developments associated with Moraga Country Club are present. Watershed lands, owned and managed by East Bay Municipal Utilities District (EBMUD), for Upper San Leandro Reservoir are present immediately to the south and west. Undeveloped open space within the City of Orinda is located to the north.

The site is located along Indian Creek, a headwater tributary to San Leandro Creek. The valley supports an abundance of aquatic features including perennial seeps and springs that feed into the main branch of the creek. Indian Creek, a blue-line stream that carries running water during most of the year, flows more or less south a short distance before emptying into San Leandro Creek, immediately north of Upper San Leandro Reservoir. Topography on site consists of valley bottomlands to steeply sloping hills ranging in elevation between 550 feet to 1,070 feet above mean sea level.

A USFWS protocol-level Site Assessment was not conducted for the study area. However, based on a reconnaissance-level biological assessment that was conducted for the property on October 28, 2002, the study area was considered to support potentially suitable habitat for CRF and FYF. Based on the findings of this assessment, focused surveys were recommended.

No CRF or FYF were detected during the course of surveys on site or within off site areas surveyed. Nonetheless, as a precautionary measure Sycamore recommends conducting pre-construction surveys for CRF and FYF within the on-site and off-site aquatic features of the study area within two weeks prior to any ground disturbing activities.

1.0 INTRODUCTION

Sycamore Associates LLC (Sycamore) was contracted by Mr. David Bruzzone to conduct a protocol-level focused surveys for the federally Threatened and California designated Special Concern Species, California red-legged frog (CRF), (*Rana aurora draytonii*), for the Indian Valley property. Surveys for foothill yellow-legged frog (FYF) (*Rana boylei*), a California designated Special Concern Species, were conducted concurrently. The study area is within the Oakland East quadrangle, T1S, R3W, Sections 14, 23, and 24. This report presents the results of our field investigations.

The approximately 400-acre study area is located within Indian Valley in the southwest corner of the Town of Moraga. The property is located approximately one mile west of downtown Moraga and approximately three-quarters of a mile east of Redwood Regional Park. The site is accessible via Canyon Road on the southern property boundary. The study area is bordered by Flicker Ridge to the west, with sparse rural residential development in the community of Canyon along the northwestern boundary. To the east, beyond the crest of Gudde Ridge, dense residential developments associated with Moraga Country Club are present. Watershed lands, owned and managed by East Bay Municipal Utilities District (EBMUD), for Upper San Leandro Reservoir are present immediately to the south and west. Undeveloped open space within the City of Orinda is located to the north.

Indian Creek, a blue-line stream that carries flowing water during most of the year, is the main aquatic feature on site. It flows more or less south a short distance before emptying into San Leandro Creek, immediately north of Upper San Leandro Reservoir. Topography on site consists of valley bottomlands to steeply sloping hills ranging in elevation between 550 feet to 1,070 feet above mean sea level. The valley supports an abundance of aquatic features including perennial seeps and springs that feed into the main branch of the creek.

A single residence is located at the southwestern portion of the property, with associated out buildings and livestock corrals. Historically, the site has been used as a walnut orchard and as pastureland for cattle.

A U.S. Fish and Wildlife Service (USFWS) protocol-level Site Assessment was not conducted for the study area. However, based on a reconnaissance-level biological assessment that was conducted for the property on October 28, 2002, the study area was considered to support potentially suitable breeding, dispersal, and aestivation habitat for CRF. Based on the findings of this assessment, focused surveys were recommended. Furthermore, it was considered that the site may support suitable habitat for California Special Concern Species, foothill yellow-legged frog (*Rana boylei*). Therefore, it was recommended that foothill yellow-legged frog should be surveyed for concurrently.

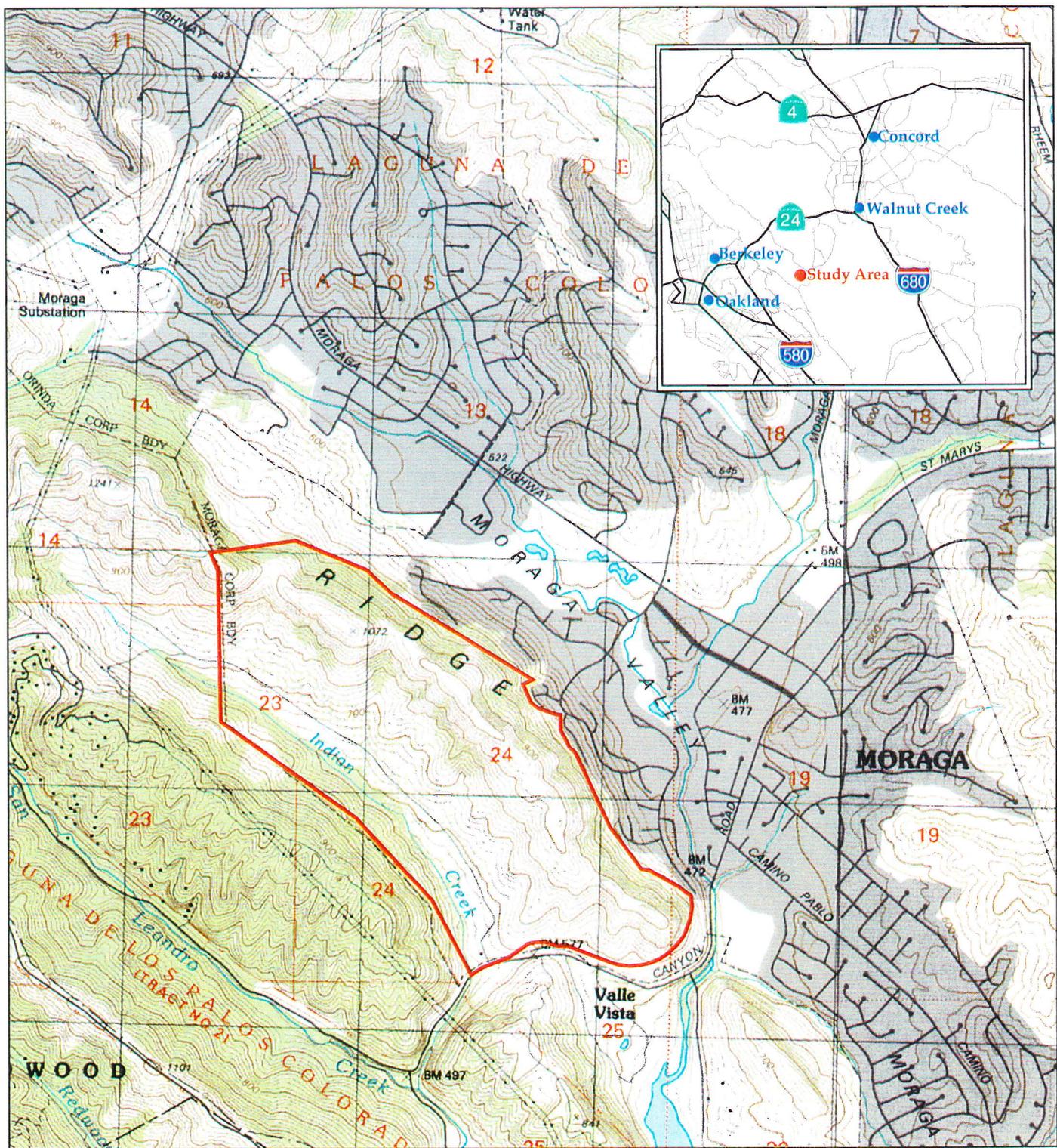


Figure 1

Location of the Indian Valley Study Area
Moraga, Contra Costa County, California

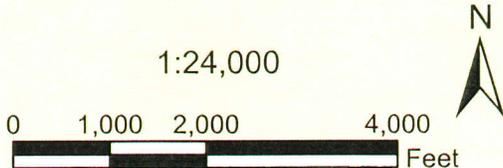
Legend

 Study Area

1:24,000

0 1,000 2,000 4,000 Feet

N




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1.1 Site Description

The site is located along Indian Creek, just north of Upper San Leandro Reservoir. Topography on site consists of valley bottomlands to steeply sloping hills ranging in elevation between 550 feet to 1,070 feet above mean sea level. The valley supports an abundance of aquatic features including perennial seeps and springs that feed into the main branch of the creek. Geology of the study area is characterized by rocks of Tertiary age, including the durable, ridge-forming volcanics of the Moraga Formation along the tops of the hills on the east, underlain by older sedimentary rocks of the Orinda Formation forming the bedrock of the lower slopes and the valley bottom.

Vegetation within the study area is dominated by non-native annual grassland. Other plant communities identified on site include Central Coast riparian scrub, coast live oak woodland, freshwater marsh and seeps, northern coyote brush scrub, sage scrub, and an abandoned walnut orchard with associated ruderal vegetation. Also present are small, homogenous populations of bitter cherry (*Prunus emarginata*), forming distinct thickets within the coast live oak woodland on the eastern side of Gudde Ridge.

A single residence is located at the southwestern portion of the property, with associated out buildings and livestock corrals. Historically, the site has been used as a walnut orchard and as pastureland for cattle.

1.2 Habitat Assessment

A reconnaissance-level biological assessment was conducted for the property on October 28, 2002 (Sycamore 2003). Based on this assessment the study area was found to support an abundance of aquatic features including seeps, freshwater marsh, and ephemeral drainages. No ponds were detected within the study area. However, Indian Creek supports a combination of partially exposed bedrock, cobble, and gravel channel bottom, with areas of potential backwater pools. A majority of the creek is associated with a dense canopy cover, with some areas supporting little to moderate amounts of bankside vegetation, including willow thickets here characterized as Central Coast riparian scrub. These aquatic features were thought to provide suitable habitat for CRF and FYF.

Both CRF and FYF have been reported less than three and two miles northwest of the study area, respectively, within the Gateway Valley in Orinda (CNDDDB 2003). Based on reported occurrences within the regional vicinity, the presence of suitable habitat, both species were considered to have a moderate to high potential to occur within the study area, and focused surveys were recommended.

2.0 METHODS

For the purposes of this report the “study area” includes all aquatic features within the property boundary, including Indian Creek, it’s on-site tributaries, and all identified, seeps and springs (Figure 2). Surveys were conducted according to the USFWS protocol *Guidance*

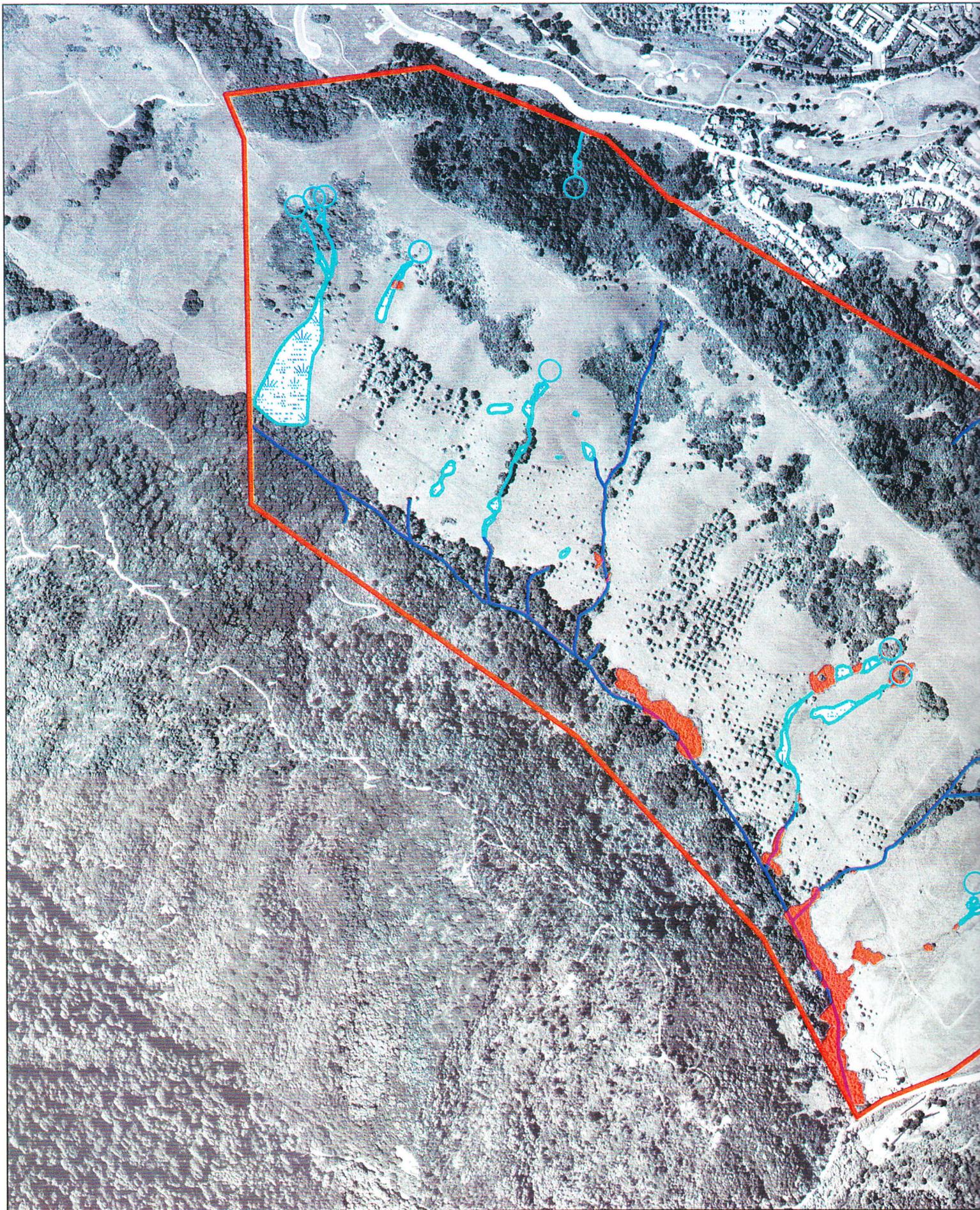
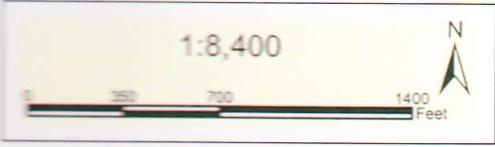




Figure 2
Aquatic Features of
Indian Valley
Moraga, Contra Costa County,
California

Legend

-  Study Area
-  Central Coast Riparian Scrub
-  Freshwater Marsh/Seep
-  Freshwater Marsh/Seep
-  Unvegetated Waters
-  Seeps



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on Site Assessment and Field Surveys for California Red-legged Frog (*Rana aurora draytonii*) (USFWS 1997). Standing and flowing water or subsurface seepage was present within all the aquatic features at the commencement of surveys. However, most aquatic features had dried or nearly dried near the completion of the surveys.

Sycamore biologists Kim Briones, Heath Bartosh, and Mathew Bettelheim conducted focused surveys on July 29, 2003 and August 4, 12, and 21, 2003. Daytime surveys were conducted between the hours of 1000 and 1600 and nighttime surveys were conducted between the hours of 2000 and 2300. Weather conditions during the daytime surveys were clear and warm (between 78 and 92 ° Fahrenheit) with little to no winds. Weather conditions during the nighttime surveys were clear and warm to cool (between 70 and 72 ° Fahrenheit).

Surveys were conducted by walking the length of Indian Creek, its' associated tributaries, seeps and freshwater marsh habitats, while visually scanning the area. Spotlights were used during night surveys to detect eyeshine. All wildlife species detected by sight or sign were identified and recorded.

3.0 RESULTS AND RECCOMENDATIONS

No CRF or FYF were detected within the study area. Amphibians that were detected within the study area include Pacific treefrog (*Hyla regilla*) adults and tadpoles, bullfrog tadpoles (*Rana catesbeiana*), and numerous California newt (*Taricha torosa*) larvae.

Other wildlife species observed incidentally by sight or sign include dark-eyed junco (*Junco hyemalis*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), spotted towhee (*Pipilo maculatus*), American goldfinch (*Carduelis tristis*), red-tailed hawk (*Buteo jamaicensis*), stellar's jay (*Cyanocitta stelleri*), acorn woodpecker (*Melanerpes formicivorus*), turkey vulture (*Cathartes aura*), western fence lizard (*Sceloporus occidentalis*), house wren (*Troglodytes aedon*), orange-crowned warbler (*Vermivora celata*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus*), and woodrat (*Neotoma fuscipes*).

Although CRF and FYF were not found on site during the current focused surveys, Sycamore recommends conducting pre-construction surveys for CRF within the study area within two weeks prior to any ground disturbing activities as a precautionary measure. Pre-construction surveys for FYF should be conducted concurrently.

4.0 REFERENCES

- California Department of Fish and Game (CDFG). 2003. *California Natural Diversity Data Base (CNDDDB)*. Database Query for the Oakland East 7-½ minute Quadrangle. May.
- Sycamore 2003. *Biological and Wetlands Assessment for the Indian Valley Property, Moraga, Contra Costa County*. January. (Revised December 31, 2003).
- U.S. Fish and Wildlife Service. 1997. Guidance on Site Assessment and Field Surveys for California Red-legged Frogs (*Rana aurora draytonii*). Sacramento Field Office. February.