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**SURVEY FOR ARROYO SOUTHWESTERN TOAD
FOR
NEWHALL RANCH**

Prepared for

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Introduction

Arroyo southwestern toad surveys were conducted within the Santa Clara River and Castaic Creek on the Newhall Ranch property in the spring of 1999. The Newhall Ranch property is located in the northwestern portion of Los Angeles County west of the city of Santa Clarita and south of Highway 126 (Figures 1 and 2). Major water courses on the property include a portion of the Santa Clara River and Castaic Creek. These two waterways were the focus of the arroyo toad surveys because they contain suitable habitat for the subspecies. Other smaller drainage courses on the property do not have suitable habitat for arroyo toads, primarily because they are ephemeral and do not support the pools necessary for successful breeding of the arroyo toad..

Arroyo Southwestern Toad Ecology and Distribution

The arroyo southwestern toad (*Bufo microscaphus californicus*) was listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) on January 17, 1995, and is a California species of special concern. This toad subspecies is restricted to the coastal slopes of southern California and northern Baja California, Mexico, except for one small, isolated population in the Mohave River (Jennings and Hayes 1994). Southern California populations occur on the Sisquoc River, Santa Ynez River, and Mono and Indian Creeks in Santa Barbara County; Sespe Creek, lower Piru Creek, and Agua Blanca Creek in Ventura County; upper Piru Creek, Castaic Creek, and Big Tujunga Canyon in Los Angeles County; and additional drainages in San Bernardino and San Diego Counties (Sweet 1992; USFWS 1998).

Near the proposed Newhall Ranch project, the arroyo southwestern toad has been recently recorded along Castaic Creek, both above and below the dam at Castaic Lake (USFWS 1998). Approximately 50 adult toads were found below the dam over a distance of about 3.2 kilometers (two miles) (USFWS 1998). Arroyo southwestern toads along Castaic Creek are likely affected by exotic aquatic predators (e.g., bull frog), off-road-vehicle activities, recreational activities, potential urban development, and water flow regulation below the dam.

The arroyo southwestern toad has very specific habitat requirements. It inhabits sandy banks of washes, streams, and arroyos with low currents and large, deciduous trees. Within these drainages, arroyo southwestern toads breed in pools with the majority of the pool greater than one foot deep with a substrate of sand, gravel, or pebbles. The pools tend to lack vegetation (Sweet 1992). Arroyo toads are nocturnal and breed from March to June depending on local climate. Females lay between 2,000 and 10,000 eggs in strings in the breeding pools. Larvae metamorphose from tadpoles to toads in 65 to 85 days. Adult toads estivate through the summer in burrows that they dig on sandbars (Jennings and Hayes 1994).

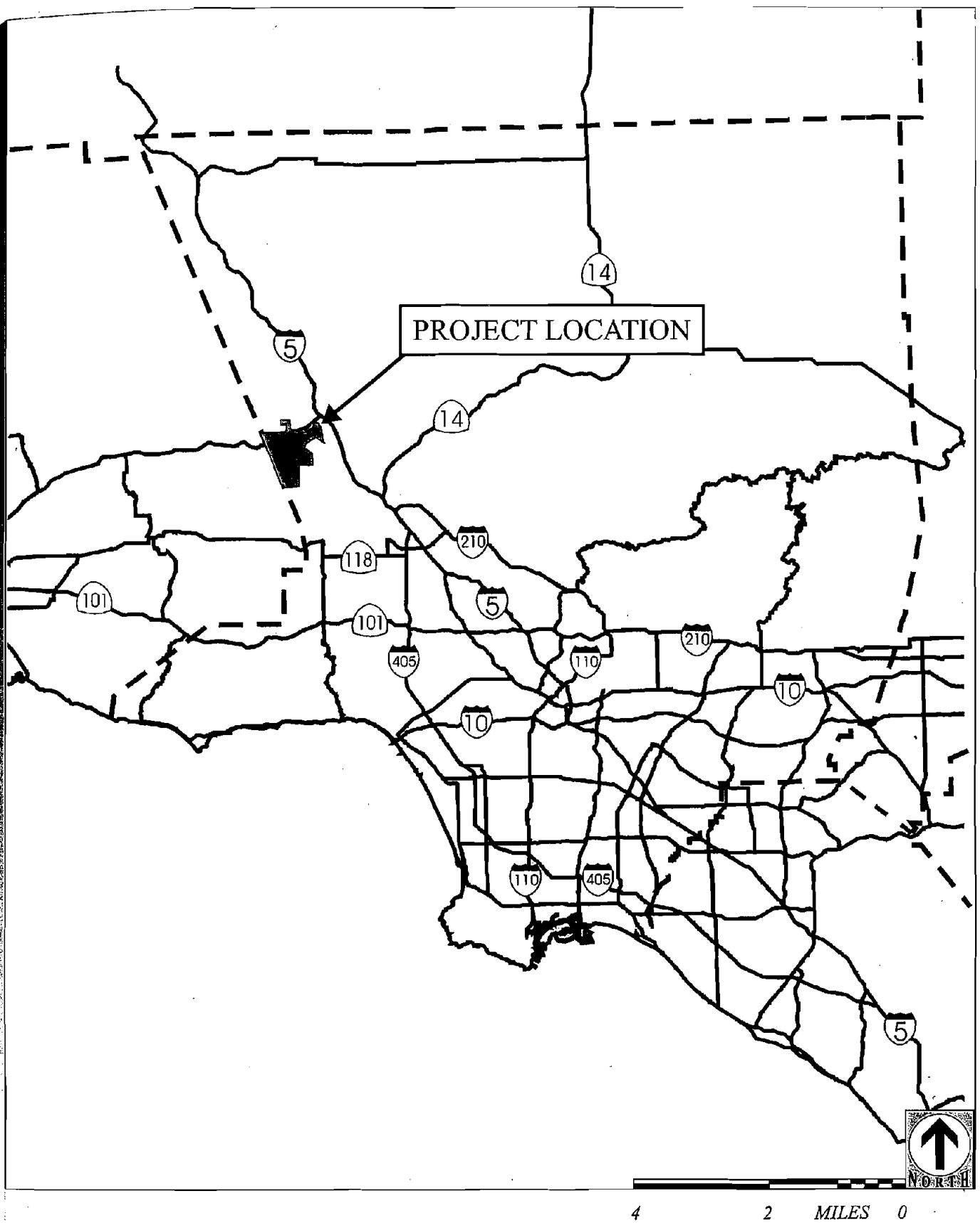


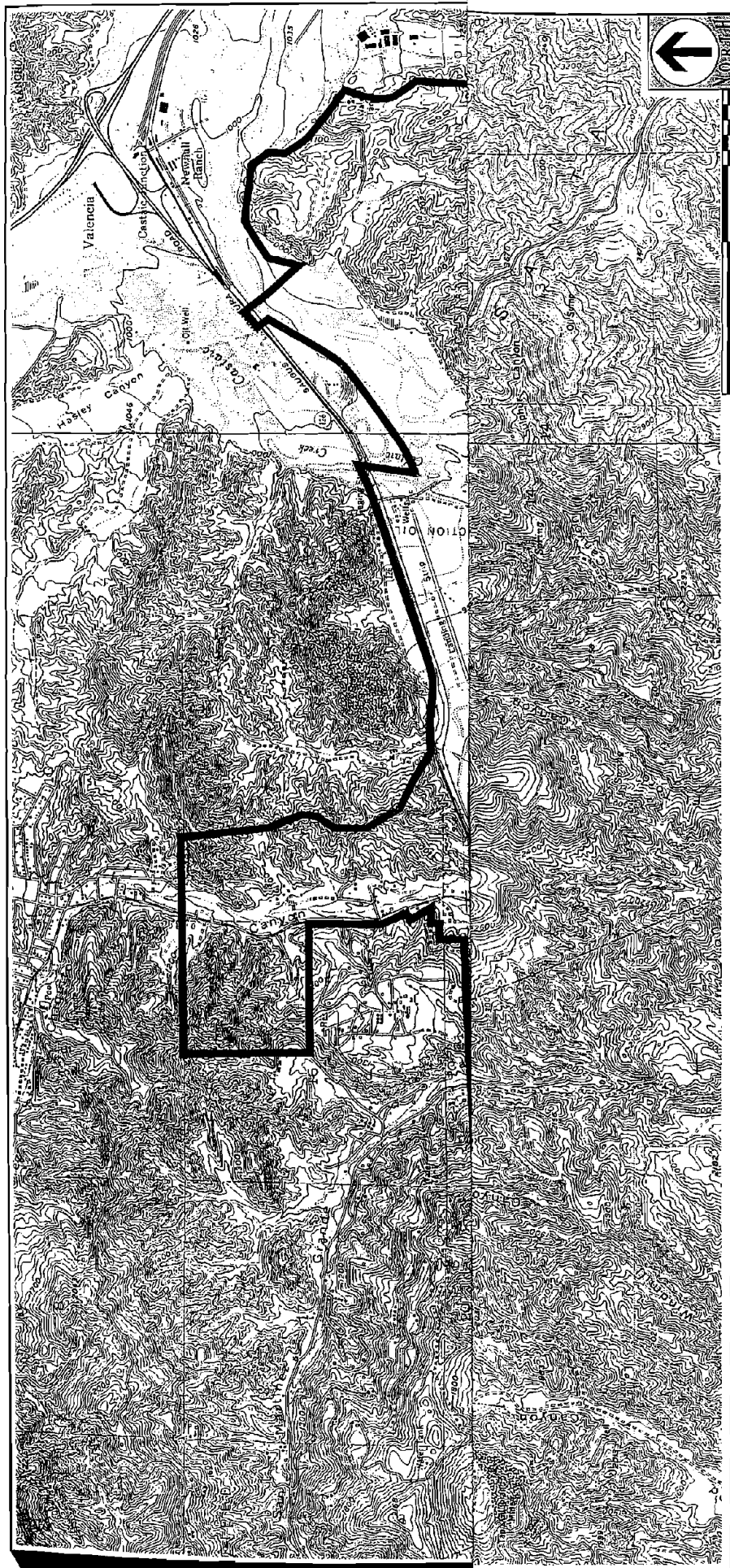
FIGURE 1

Regional Location of the Project



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Map Source: U.S.G.S. 7.5 minute topographic maps, Newhall,
Val Verde, Oat Mountain, and Simi Valley East

FIGURE 2



Project Vicinity

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Threats to this species include dam construction, flood control, urbanization, and predation by introduced species including bullfrogs (*Rana catesbeiana*) and exotic fishes (50 CRF 17, December 16, 1994).

Survey Methods

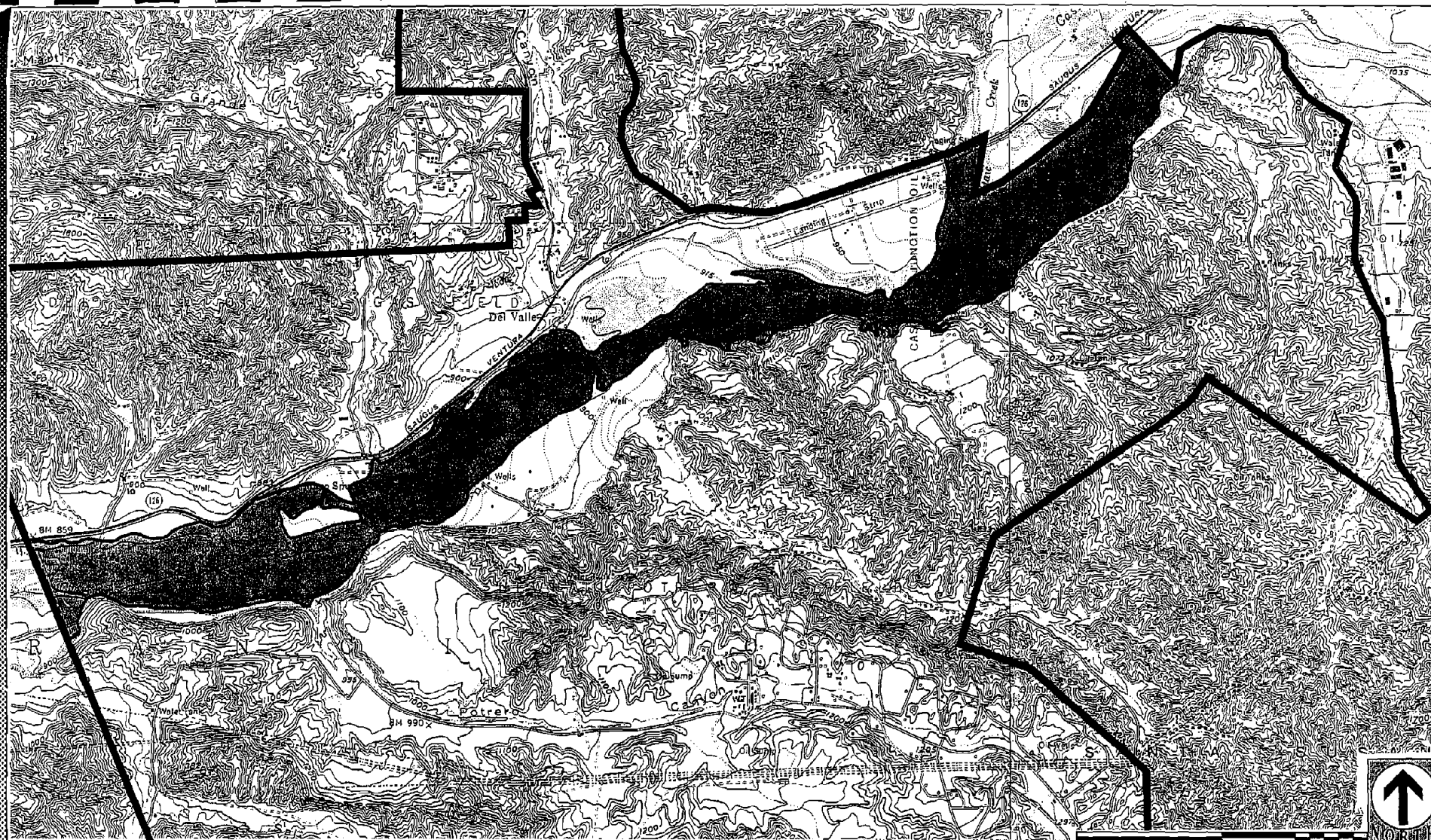
Surveys for arroyo southwestern toads along the portions of the Santa Clara River and Castaic Creek on the Newhall Ranch property were conducted according to the protocol issued by the USFWS in March 1995. All suitable habitat areas along the above-mentioned waterways were surveyed for calling adult male arroyo southwestern toads a minimum of three times during the 1999 breeding season (Table 1). The surveys were conducted between March 15 and May 30 in the evening hours between dusk and midnight. Nights with a full moon, air temperatures less than 55 degrees F., or with adverse weather conditions were avoided. Surveys attempted in mid-March and early April did not meet the survey protocol conditions due to low air temperatures and storm conditions.

Surveys were conducted by walking sections of the river or creek, remaining a safe distance (greater than 10 feet) away from potential breeding pools (Figure 3). Surveyors listened for calls of adult male toads at each location. Local weather conditions, date, time, and other notes were recorded on each visit (see Table 1).

Recent Surveys of Project Area and Results of 1999 Surveys

Surveys to detect arroyo southwestern toads on the Newhall Ranch property were conducted by RECON in March 1994 and April 1995. No arroyo toads were detected during these surveys of the Santa Clara River and Castaic Creek on the property. It was concluded that the potential for arroyo toads to occur in the area was moderate given the presence of suitable habitat, but that population numbers would likely be low.

Surveys conducted between March 15 and May 30, 1999, along the Santa Clara River and Castaic Creek on Newhall Ranch did not detect any calling male arroyo toads. Species that were heard calling or observed included Pacific treefrog (*Hyla regilla*), California treefrog (*Hyla cadaverina*), and California toad (= western toad) (*Bufo boreas halophilus*).



Arroyo southwestern toad survey area



FIGURE 3
Survey Area for Arroyo Southwestern Toad

RECON

TABLE 1
1999 SURVEY INFORMATION FOR ARROYO TOAD ON NEWHALL RANCH

Surveyors	Date	Time	Wind Speed	Air Temperature (F) (dusk)	Water Temperature (F)
Gerry Scheid Wendy Loeffler	April 21, 22	8:00 P.M. – 12:00 A.M.	Calm 0 – 2 mph	58° – 62°	66°
Gerry Scheid Wendy Loeffler	May 16, 17	8:00 P.M. – 12:00 A.M.	Light breeze 5 – 10 mph	66° - 68°	70°
Gerry Scheid Wendy Loeffler	May 26, 27	8:30 P.M. – 12:00 A.M.	Light breeze 5 – 10 mph	68° – 72°	74°

Conclusion

Although habitat that appears appropriate to support arroyo southwestern toad on the property, none were detected during repeated surveys on the Santa Clara River and Castaic Creek on the Newhall Ranch property. Possible factors for the absence of this species include disturbance from cattle and agriculture along the Santa Clara River, and off-road-vehicle activity, human access, and the regulation of water flows in Castaic Creek. Low population numbers of arroyo toads in the vicinity of the property is also a factor because there is a low potential for dispersal to suitable habitats located downstream due to low overall numbers of individuals.

References Cited

Jennings, M. R., and M. P. Hayes

1994 *Amphibian and Reptile Species of Special Concern in California*. California Department of Fish and Game. Rancho Cordova, California.

Sweet, S.

1992 Initial Report on the Ecology and Status of the Arroyo Toad (*Bufo microscaphus californicus*) on the Los Padres National Forest of Southern California, with Management Recommendations. Contract Report to U.S. Department of Agriculture, Forest Service, Los Padres National Forest, Goleta, California. Revised March.

U.S. Fish and Wildlife Service

1998 Draft Recovery Plan for the Arroyo Southwestern Toad (*Bufo microscaphus californicus*). U.S. Fish and Wildlife Service, Portland, Oregon.