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August 27, 2003

Mr. Mark Subbotin, Senior Vice President  
Newhall Ranch Company  
23823 Valencia Boulevard  
Valencia, CA 91355

**SUBJECT: Results of Focused Arroyo Toad Surveys, Castaic Reservoir Site, Santa Clarita, California**

Dear Mr. Subbotin:

This letter report summarizes methodology and findings of focused protocol surveys for the federally listed endangered arroyo toad [*Bufo (microscaphus) californicus*-herein AT] conducted by Ecological Sciences, Inc. The surveys were conducted to determine the presence/absence of the AT within the subject study area. All surveys followed federal U.S. Fish and Wildlife Service (Service) protocol (2001).

### **Introduction**

Surveys were conducted in potentially suitable habitat in a portion of Castaic Creek ( $\pm 2,700$  feet in length-herein Castaic Reservoir Site). The survey area is generally located just downstream of the Castaic Lagoon State Recreational Area south to the Rancho Boundary (upstream of the confluence with Charlie Canyon). Regional and site vicinity survey location maps are included as **Plate 1** and **Plate 2**, respectively. The survey area is located on the Newhall, California U.S. Geological Survey (USGS) 7.5-minute quadrangle map.

### **General AT Ecology**

The AT was listed as an endangered species by the Service on December 16, 1994 and is also considered a California species of special concern. A federal Recovery Plan was prepared in 1999 and critical habitat was defined in February 2001. This species is restricted to the coastal slopes of southern California and northern Baja California, Mexico, except for one small, isolated population in the Mojave River. The AT averages 5 to 8 cm in length, and has a greenish-gray or tan coloration. It is restricted to rivers with shallow, gravelly pools adjacent to sandy terraces. Eggs are deposited in shallow pools with sand or pea gravel substrate overlain with flocculent silt. These pools have minimal current and little or no emergent vegetation. Juveniles and adults forage for insects on sandy terraces with nearly complete coverage of cottonwoods, oaks, and willows (USFWS 1994).

Many areas that may have historically contained suitable breeding habitat for arroyo toad have been degraded by dam and flood control construction, off-road recreation, urbanization, mining, and introduced predators (USFWS 1999). This species is currently found in relatively small, isolated populations. Most remaining populations of arroyo toad occur on privately owned lands. Less than 50 percent of the known extant populations of arroyo toad occur on the Los Padres, San Bernardino, and Cleveland National Forests (USFWS 1994).

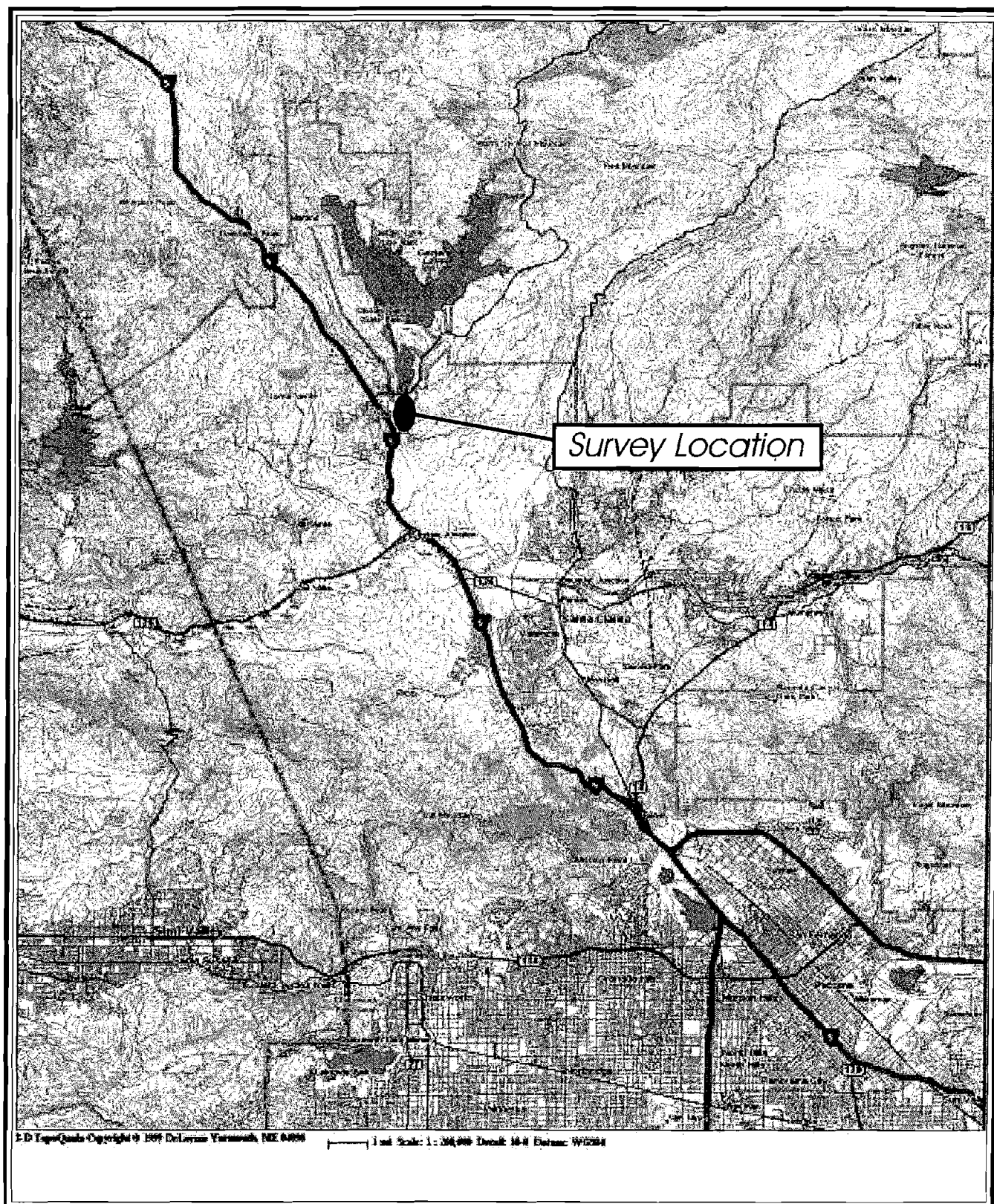


plate 1



## **AT Critical Habitat**

USFWS had identified 22 critical habitat units for the recovery of the arroyo toad. The unit nearest to the subject study area was Unit 6, the Upper Santa Clara River Basin, which consisted of portions of Castaic and upper San Francisquito Creeks, and adjacent uplands. Subunit 6b included Castaic Creek below Castaic Lake (including the subject study area) to the confluence with the Santa Clara River. However, the USFWS final critical habitat designation issued for the arroyo toad (February 2001) was vacated on October 30, 2002, by the United States District Court for the District of Columbia [*Building Industry Legal Defense Foundation v. Norton*, 231 F.Supp.2d 100 (D.D.C. 2002)].

## **Primary Constituent Elements**

Criteria used by the Service to select critical habitat includes evaluation of an area to determine the presence of 'primary constituent elements,' as defined at 50 CFG 424.12(b) (USFWS 2001a). These elements include physical and biological features that are essential to the conservation of the species, and that may require special management and protection (USFWS 2001a).

Primary constituent elements for the arroyo toad include aquatic breeding habitats and non-breeding upland habitats. These elements include: **A hydrologic regime** that supplies sufficient flowing water of suitable quality and sufficient quantity to sustain eggs, tadpoles, metamorphosing juveniles, and adult breeding toads; **Low-gradient stream segments** (typically less than 4 percent) with sandy or fine gravel substrates which support the formation of shallow pools and sparsely vegetated sand and gravel bars for breeding and rearing of tadpoles and juveniles; **A natural flooding regime** or one sufficiently corresponding to a natural regime that will periodically scour riparian vegetation, rework stream channels and terraces, and redistribute sands and sediments, such that adequate numbers and sizes of breeding pools and sufficient terrace habitats with appropriate vegetation are maintained; **Upland habitats** (particularly alluvial streamside terraces and adjacent valley bottomlands that include areas of loose soil and dependable subsurface moisture where toads can burrow underground and avoid desiccation) of sufficient width and quality to provide foraging and living areas for subadult and adult arroyo toads; **Few or no nonnative species** that prey upon or compete with arroyo toads, or degrade their habitat; **No man-made barriers** that completely or substantially impede migration to over-wintering sites, dispersal between populations, or recolonization of areas that contain suitable habitat; and **Limited human-related disturbance**.

## **Methodology**

Guidelines for the AT do not presently require a permit under section 10 (a) (1) (A) of the Endangered Species Act of 1973, as amended. However, during the course of surveys conducted for AT, identification, and therefore direct examination, of AT juveniles and tadpoles may be necessary during spring/summer surveys of aquatic habitats. Accordingly, all field surveys for AT were conducted pursuant to the most recent Service guidelines under the authority of federal section 10(a) permit number TE-808242-4 issued to Scott Cameron, Principal Biologist of Ecological Sciences, Inc.

At least six (6) surveys were conducted within the subject study areas, with at least seven (7) days between each survey. Additionally, AT surveys were conducted both during daylight hours and at night between one hour after dusk and midnight. Each day and nighttime AT survey was conducted within the same 24-hour period. Surveys were conducted between late March and early June, with at least one survey conducted per month during April, May, and June per protocol. Daytime surveys included an assessment of arroyo toad habitat suitability as well as searches for sign of AT presence (e.g., eggs, larvae, or juveniles). Extreme caution was taken to avoid inadvertent disturbances to AT potentially presence within adjacent stream areas.

All nighttime surveys were conducted when air temperatures were at least 55 degrees Fahrenheit. Periods of full moon phases were generally avoided. Surveys were conducted each night from about 8:30 p.m. to approximately 12:00 a.m. Weather conditions were generally calm and clear throughout the survey effort with just a few days of relatively overcast conditions. The site was surveyed by walking



slowly and carefully along stream banks or within the stream itself when necessary. As with the daytime surveys, every precaution was taken not to disturb or create silt deposits within potential breeding pools, and care was taken not to disturb or injure potentially occurring AT adults, juveniles, tadpoles, or egg masses. Periodic stops were taken to listen for calling AT at 15-minute intervals or as appropriate depending upon individual site conditions. Surveys were conducted as quietly as possible to maximize the potential to hear calling AT. Handheld flashlights and headlamps were used to visually locate AT within potential breeding pools and along stream banks.

Surveys were initiated on April 11 and completed on June 21, 2003 as follows: Survey One (April 11); Survey Two (April 18); Survey Three (May 3); Survey Four (May 15); Survey Five (June 4); and Survey Six (June 21).

### **Existing Study Area Conditions**

Each of the primary constituent elements was determined to be present in the southern portion of the survey area when flows were being released from the lagoon. An open low-flow channel was characteristic of the southern portion of the survey area, indicative of a sufficiently low gradient to support breeding pools. The southern, more open channels supported sandy to gravelly substrate with little accumulated silt. Shallow pools (when water is present), sandbars, and sparsely vegetated terraces are also present in the southern portion of the survey area. An unnamed flood control channel directing flows from Violin and Marple canyons enters Castaic Creek from the west near the southern end of the survey area.

During the first few survey dates when water was being released from the lagoon, a relatively broad shallow pond characterized the northern portion of the survey area immediately below the lagoon outfall with dense vegetation in and around it. This habitat is not characteristic of areas generally utilized by AT. Dominant vegetation includes mule fat (*Baccharis salicifolia*), willows (*Salix* spp.), cottonwood (*Platanus racemosa*), and scattered non-native giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.). The stream bottom in the northern ponded portion of the reach was sandy to very silty.

The upper terrace habitats (beyond the riverbanks) on most of the east side of the creek are not suitable for AT over-wintering, as they are inaccessible and approximately 200 feet higher than the streambed. The upper terrace habitats occurring west the Castaic Creek banks were heavily disturbed by vehicle traffic, developed, graded or regularly disked, inaccessible to AT, did not support suitable soils, or a combination of two or more of these conditions.

### **Results**

No direct observations or vocalizations of AT were recorded during the focused survey effort. In addition, no egg masses or other sign of AT were recorded within the subject survey areas. Common amphibian species recorded during the focused AT survey effort included adults, juveniles, and tadpoles of the western toad (*Bufo boreas*) and Pacific chorus frog (*Pseudacris regilla*). No sensitive aquatic species were recorded during the survey effort.

At the onset of the survey period, sufficient flows to support AT were present within the subject study area. However, these flows are regulated by discharge ultimately from Castaic Dam. Following the cessation of water releases sometime in May, areas initially evaluated as potentially suitable AT breeding habitat quickly dried. Even if AT were to have been observed or detected in the survey area, there would not likely have been sufficient time for tadpoles to hatch, fully develop, and metamorphose into juvenile toads. The nearest recorded AT observation known to Ecological Sciences is located  $\pm 4.5$ -miles south of the subject study area near the Interstate 5 bridge crossing of the Santa Clara River.

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If you have any questions regarding results presented in this report, please don't hesitate to call us at the letterhead address.

Sincerely,

Ecological Sciences, Inc.



Scott D. Cameron  
Principal Biologist



## References

Impact Sciences, Inc. 2001. Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians in Portions of Castaic Creek in Castaic Creek within the Valencia Commerce Center Area. November 26.

U.S. Fish and Wildlife Service, 1994. *Determination of Endangered Status for the Arroyo Southwestern Toad; Final Rule*. 50 CFR Part 17, RIN 1018-AB97.

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U.S. Fish and Wildlife Service. 2001a. 50 CFR Part 17, *Final Designation of Critical Habitat for the Arroyo Toad; Final Rule*.

