LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

MITIGATION AND MONITORING PLAN
TRACT 4870
MILLERTON SPECIFIC PLAN AREA
FRESNO COUNTY, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

Prepared for

Bonadelle Development Corporation
Attention: John Bonadelle, Jr.
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November 8, 2004

File No. 110-07

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1.0 INTRODUCTION

This report constitutes a wetland and open space mitigation and management plan for Tract 4870, a residential subdivision to be constructed in the Millerton Specific Plan Area of Fresno County, California. This plan is consistent with the original *Millerton Specific Plan Mitigation Measures and Monitoring Program Matrix* measures 16.a through 16.h, as applicable to Tract 4870. These measures were derived from Hartesveldt (1998) and subsequent comments drafted by the California Department of Fish and Game (date unknown).

The original matrix was based on a preliminary delineation of Waters of the United States (jurisdictional waters) for the Millerton Specific Plan Area that was completed in 1997. A revised study of jurisdictional waters was prepared and verified by the U.S. Army Corps of Engineers in 2002. The original matrix made reference to wetlands identified in the preliminary study that were determined not to be present in the subsequent study verified by the Corps. This mitigation and monitoring report was based on the original matrix. A proposed revised matrix based on the most recent delineation of jurisdictional waters has been provided in Appendix A. Implementation of the measures listed in the document would mitigate to a less than significant level anticipated project impacts to vegetation and wildlife resources of Tract 4870 that have been identified in both matrixes.

Tract 4870 is located in the Millerton Specific Plan Area immediately south of proposed commercial development adjacent to Millerton Road. The site is owned by JPJ, Inc. (formerly Westcal, Inc.) of Fresno, California. That portion of the site proposed for development is approximately 83 acres in size and is part of a larger 323-acre parcel that is also within the Specific Plan Area. The Specific Plan Area is located approximately 10 miles to the north of the City of Clovis (Figures 1 and 2). Tract 4870 can be found on the Friant U.S.G.S. 7.5 minute quadrangle in Sections 10 and 15, Township 11 south, Range 21 east.

The proposed 83-acre project area includes proposed residential development, infrastructure (streets, utilities, and stormwater drainage facilities), and open space corridors associated with White Fox Creek and one tributary drainage (Figure 3). The mitigation and monitoring

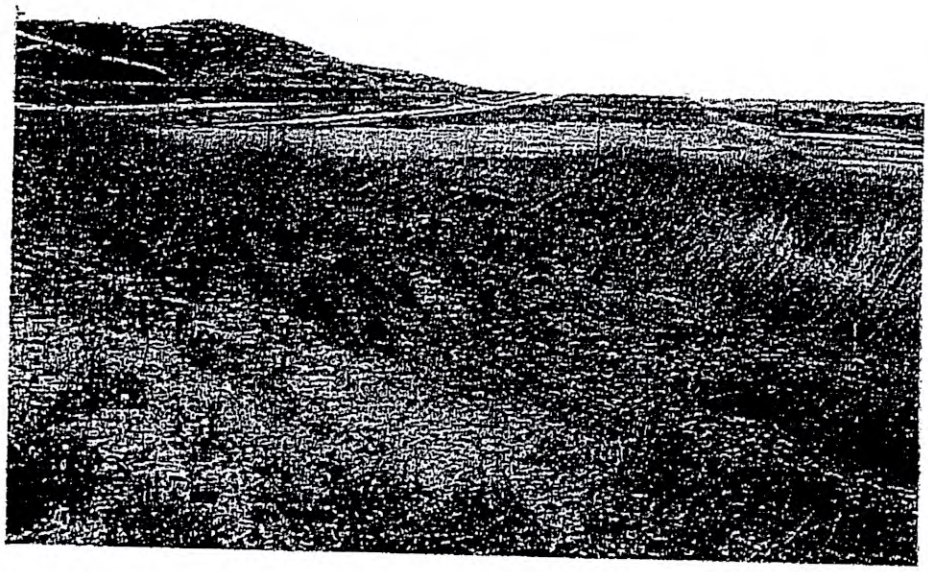


Photo #5. Distant view of graded terrace, Tract 4870.

Photo #6. Close-up view of terracing, Tract 4870.

Photo #1. Graded terraces of Tract 4870 are shown in background. The orange construction fencing marks the far bank of White Fox Creek, the boundary of Tract 4870.

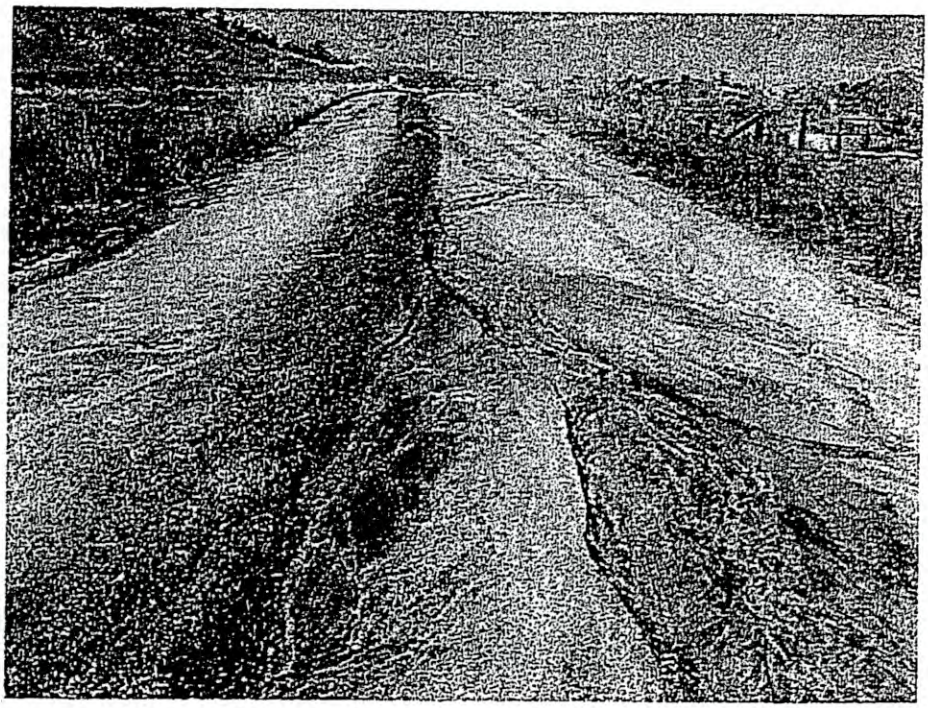


Photo #2. The graded alignment of Marina Drive.

Photo #3. One of the graded terraces of Tract 4870.

Photo #4. A graded terrace of Tract 4870.

Conservation planning for the site focused on protection of jurisdictional wetlands. The project was designed to completely avoid impact to all wetlands, both on and off-site. One existing crossing of White Fox Creek will accommodate Marina Drive, the main access road into the site. Construction of this access road will not require that any earthen fill be deposited into the channel or adjacent wetlands. Where Marina Drive would cross a tributary of White Fox Creek, the applicant has committed to the construction of a clear span bridge that would avoid the need to fill any portion of this tributary. A small wetland located near the northern boundary of Tract 4870 will be avoided. The principal wetland drainage passing through the site, White Fox Creek, will be provided open space buffer on either side, thus establishing an open space corridor along the creek that averages 200 feet in width, with widths of 300-400 feet at some locations. This buffer will protect the creek from both direct and indirect impact associated with nearby residential development.

It is important to note that the conservation planning associated with Tract 4870 was part of a broader effort to preserve contiguous areas of open space along White Fox Creek and a number of tributaries. This open space corridor begins at the northeast corner of the Specific Plan Area and continues in a southwesterly direction through Tract 4870 to the southwest corner of the Specific Plan Area. This corridor will facilitate the movement of terrestrial vertebrates through the Specific Plan Area, and provide riparian habitat suitable for a variety of wildlife species known to forage and breed in the region. This open space corridor along White Fox Creek was incorporated into the site plans of various landowners in the Specific Plan Area after consultation with the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency; and the California Department of Fish and Game.

The conservation planning for Tract 4870 culminates with this report that addresses the mitigation measures found in *Millerton Specific Plan, Mitigation Measures and Monitoring Program Matrix*. The measures found in this report are intended to maximize the value of open space habitat of the site, while providing regular biological monitoring that will evaluate the success of the mitigation measures in reducing impact to vegetation and wildlife resources from the proposed development.

Photo #7. Close-up view of graded terrace, Tract 4870.

Photo #8. Close-up view of graded terraces, Tract 4870.

measures found in the matrix referenced above apply primarily to the open space corridor along White Fox Creek.

The biotic resources of Tract 4870 and other parcels of the Specific Plan Area have been studied since the spring of 1997. Stebbins (1997) identified at a preliminary level biotic habitats present, and their constituent flora and fauna. A reconnaissance survey for the San Joaquin kit fox was also completed. Hartesveldt conducted cursory field surveys of the entire Specific Plan Area in 1998 and from these surveys and the work of Stebbins he prepared *Mitigation Plan, Millerton New Town, Fresno County, California* (1998) based on a preliminary analysis of impact from proposed development. Live Oak Associates, Inc. subsequently conducted extensive monitoring of shallow groundwater on Tract 4870 through the winter of 2000-2001 and prepared a delineation of Waters of the United States (2001) that was verified by the U.S. Army Corps of Engineers in a letter dated September 12, 2002. During the late spring and early summer of 2002, Live Oak Associates, Inc. conducted a comprehensive San Joaquin kit fox den survey on Tract 4870 that employed camera stations and tracking medium for the purpose of detecting any individuals that may be present on the site.

The results of these various surveys were used to design the Tract 4870 subdivision project so as to minimize impact to sensitive biotic resources and identify specific mitigation measures for any impacts that might be considered significant. Jurisdictional wetlands identified on the site were limited to 1.95 acres of freshwater seep/emergent marsh. An additional 0.48 acre of such wetlands were present off-site in the general location of proposed off-site infrastructure necessary for the development of Tract 4870. Vernal pool wetlands were absent from the site. The nearest vernal pools to on-site development would be more than 300 feet to the west. Studies conducted by Stebbins, Hartesveldt, and Live Oak Associates, Inc. indicate that state and federally listed threatened or endangered plant and animal species do not occur on site. The absence of vernal pools from the site precludes the occurrence of listed vernal pool species. The site appears to be well outside the range of the San Joaquin kit fox. No evidence of kit foxes was detected during den surveys. While other wildlife species of special status may occasionally occur on site, the site does not provide significant habitat for them.

maintenance is to occur, then the nest site and a suitable buffer (as determined by a qualified biologist) shall remain off-limits to all maintenance activities until the conclusion of the breeding season. The CDFG recommends setbacks from occupied nest burrows of 100 meters where construction will result in the loss of foraging habitat.

- During the non-breeding season (August through January), resident owls may be relocated to alternative habitat. The relocation of resident owls shall be conducted according to a relocation plan prepared by a qualified biologist in consultation with the California Department of Fish and Game. Passive relocation as described in the aforementioned staff report will be the preferred method of relocation. The plan shall provide for their relocation to nearby open space providing adequate nesting habitat.

Long-term maintenance will be the responsibility of County Service Area No. 34 under contract with an appropriate private entity that will provide this service. Some maintenance activities could require consultation with the California Department of Fish and Game, the U.S. Army Corps of Engineers, and the California Regional Water Quality Control Board. For example, erosion damage to the creek may require the re-shaping of portions of the creek channel and the placement of rock armoring on eroded creek banks. This work would not proceed until all required state and federal permits had been obtained.

i. Submit the mitigation and management plan to the U.S. Army Corps of Engineers for review.

This project will not require a Clean Water Act Permit from the U.S. Army Corps of Engineers, because no jurisdictional waters subject to the Corps' permit authority will be filled. Therefore, the mitigation and management plan need not be submitted to the U.S. Army Corps of Engineers for review.

j. Funds for the Open Space Management Plan shall be part of the CSA No. 34 budget.

Such funds will be provided based on a budget approved and collected by CSA No. 34 from individual homeowner users of CSA No. 34 so that the Open Space Management Plan can be fully implemented. At the time this report was prepared, the total annual budget for implementation of the Tract 4870 portion of the Specific Plan had been

calculated. Estimated fees to fund the Open Space Management Plan are included in *Engineers Report, Assessment for County of Fresno, County Service Area No. 34, Zone 'C'* (Heyman & Associates 2004), which was prepared for Fresno County's review and approval (see Appendix C). These fees will be established and approved by Fresno County prior to recordation of the Final Tract 4870 Map. A copy of the Engineer's report containing these and other fees is being submitted to the California Department of Fish and Game.

k. Develop the Monitoring Program which, at a minimum, shall include;

- **Measurable mitigation objectives;**
- **Measures which will result in objectives being met;**
- **A monitoring protocol by which the success of the plan can be measured that identifies:**
    - **When monitoring will occur;**
    - **Survey methods;**
    - **Reporting requirements;**

The primary mitigation measure to be implemented on site is the preservation and enhancement of native biotic resources in an open space corridor along White Fox Creek. This open space corridor will be maintained and managed for the enhancement and maintenance of native biotic resources, and to provide a scenic backdrop for a recreational trail to be located along Marina Drive. These objectives will be met as described in detail in Mitigation Measure 16.c. The success of the wetland and open space mitigation and management plan will be assessed during annual mitigation monitoring surveys during the first 10 years following riparian plantings as described in Measure 16.c. Annual monitoring will continue at a lesser level of effort in perpetuity. This monitoring will be for the purpose of addressing open space issues identified in Mitigation Measure 16.h.

Monitoring surveys will be conducted on foot in May of each year for 5 years after the open space corridor along White Fox Creek has been planted. During the annual monitoring surveys all numbered planting locations will be checked using the planting plan in order to determine the status of the tree or shrubs planted at them. Trend characteristics of planted trees will also be noted. Such characteristics will include

general health of individual trees and shrubs, amount of dieback, mortality, etc. Other information gathered during the monitoring surveys would include any evidence of noxious weeds in the open space corridor that may have become established, erosion along the channel of White Fox Creek, maintenance requirements for the decorative fence along the outer boundary of the open space corridor, and evidence of human caused damage to biotic resources of the open space corridor.

The results of each monitoring survey will be summarized in an annual report that will be submitted to the California Department of Fish and Game for review and comment.

l. Confirmation of a funding source for plan implementation.

As noted, funds will be provided CSA No. 34 for plan implementation. At the time this report was completed, the funding source was to consist of an assessment on each of the projects constructed in the Millerton Specific Plan Area, including Tract 4870. The final budget for the Plan implementation shall be established and approved by Fresno County prior to recordation of the Final Tract Map for Tract 4870.

MITIGATION MEASURE 16.g. The project proponent shall participate in the formation of a Open Space and Natural Resource Plan (OSNRP) for the Millerton, Dry Creek, and Sierra Foothill areas. The OSNRP will provide protection of sensitive resources by establishing key habitat areas, open and continuous wildlife corridors, ridgetop and view protection, native plant landscapes, and lighting restrictions on hilltops to mitigate glare.

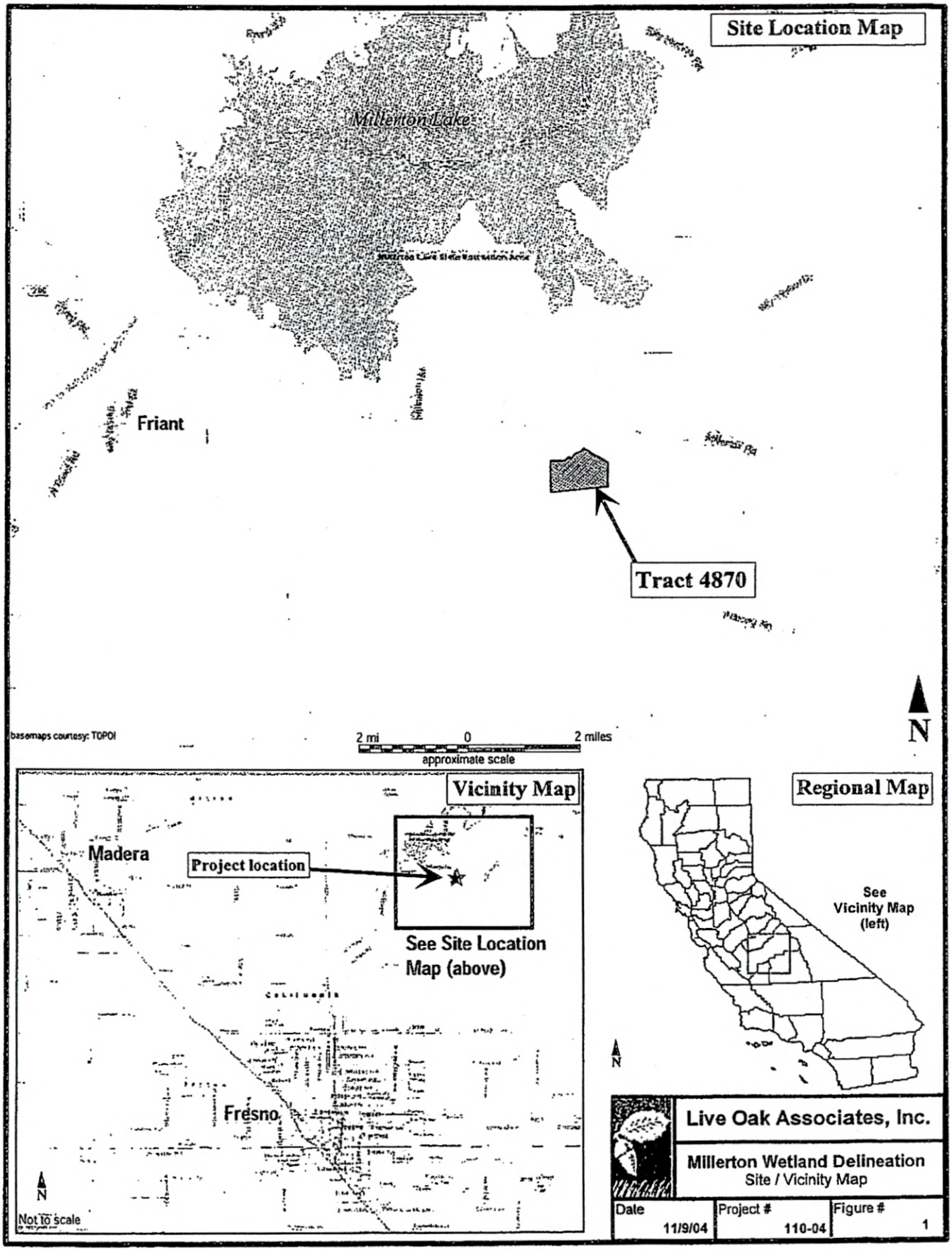
The Millerton Open Space and Natural Resource Plan was developed partially in response to Mitigation Measure 16.g and 16.h. In 1999, a group of developers, biologists, and land managers who were collectively interested in the preservation of the natural resources of the Millerton area drafted the Millerton Open Space and Natural Resource Plan to be administered by a board of directors and to be implemented according to an adopted "Articles of Organization". The geographic area covered by the plan is the entire Millerton New Town Specific Plan Area (which included Tract 4870). This area has been already expanded to include the nearby holdings of other private landowners. The plan calls for the collection of "impact

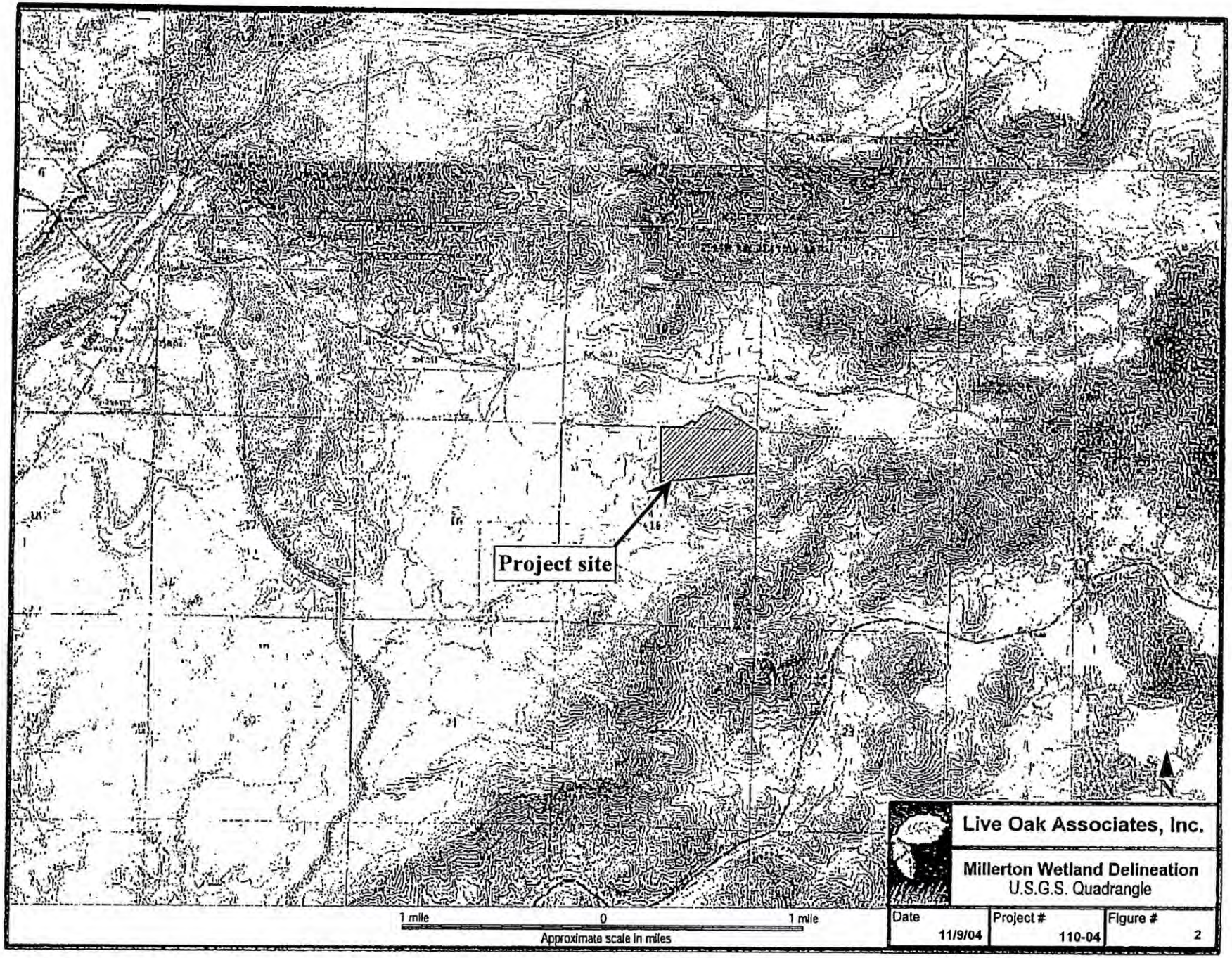
fees" for each residential unit constructed in the area covered by the plan. These fees are to be paid to the Sierra Foothill Conservancy for the acquisition of land and protective easements on lands in and around the Millerton area where future development will occur. Tract 4870 will generate approximately $30,000 in impact fees that would be paid up front to the Sierra Foothill Conservancy for the purchase of conservation easements on open space parcels in the area. The Sierra Foothill Conservancy has targeted parcels on McKenzie Table, Big Table and in the Sierra foothills adjacent to these geologically unique landforms for acquisition or conservation easement. These lands are within 2-5 miles of Tract 4870. Therefore, the development of Tract 4870 will contribute to the mitigation of cumulative impacts that may result from regional development in the future.

MITIGATION MEASURE 16.H. The project proponent shall pay a fair share of the mitigation fees established by the OSNRP consistent with other projects within the OSNRP area, taking into account previous development commitments recognized in the Millerton Specific Plan and the project conditions of approval that already include open space set-aside and other protection measures.

According to provisions of the Millerton Open Space and Natural Resource Plan, the project proponent will pay impact fees of $175 per unit, but provision was made for fee increases over time.

EXHIBIT D
PHOTOGRAPHS: TRACT 4870


Site Location Map
Millerton Lake
Friant
Tract 4870
basemaps courtesy: TOPO!
2 mi
0
2 miles
approximate scale
N
Vicinity Map
Madera
Project location
See Site Location Map (above)
Fresno
N
Not to scale
Regional Map
See Vicinity Map (left)
N
Live Oak Associates, Inc.
Millerton Wetland Delineation
Site / Vicinity Map
Date
11/9/04
Project #
110-04
Figure #
1


Project site
1 mile
0
1 mile
Approximate scale in miles
N
Live Oak Associates, Inc.
Millerton Wetland Delineation
U.S.G.S. Quadrangle
Date
11/9/04
Project #
110-04
Figure #
2

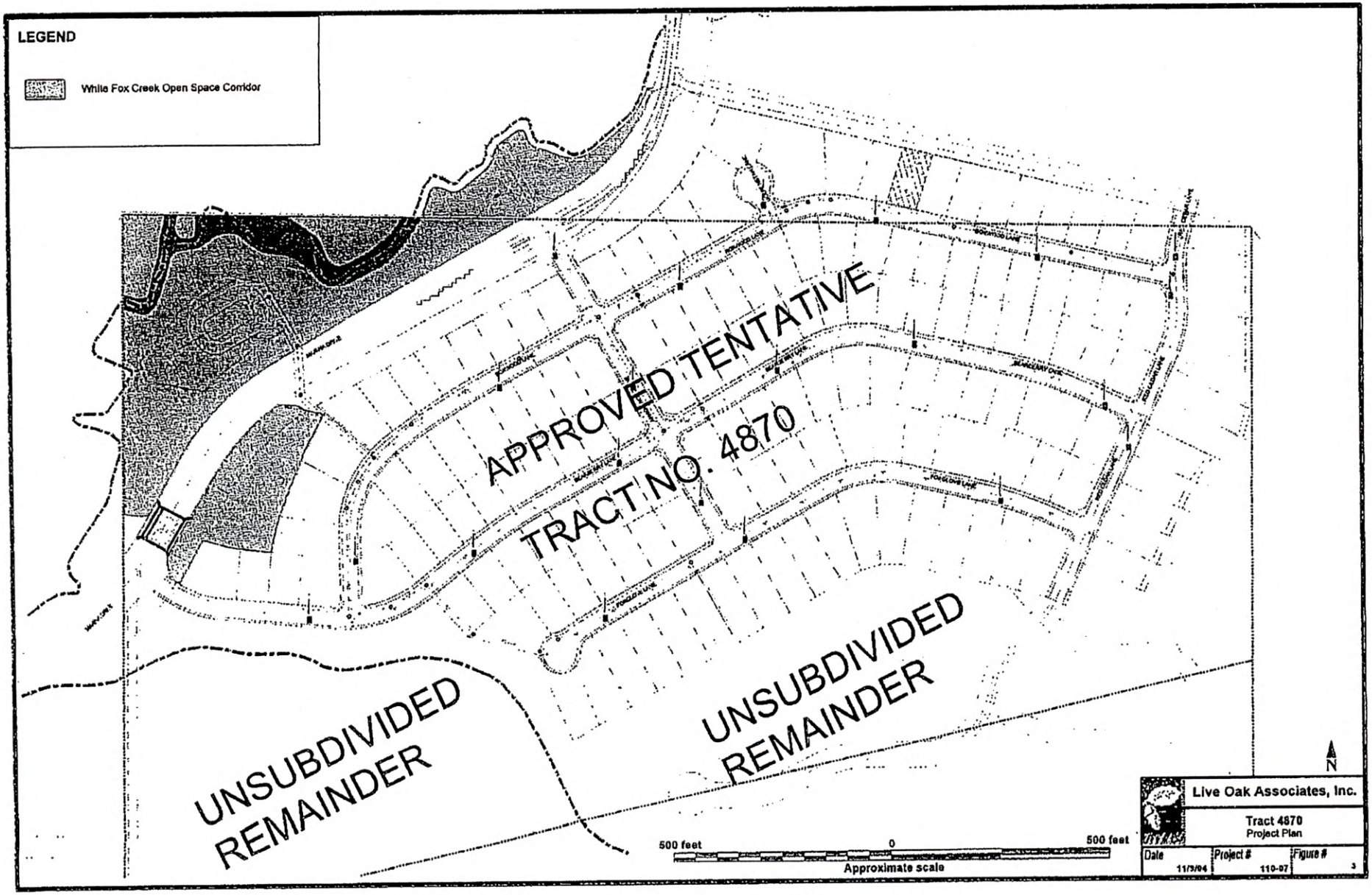

LEGEND
White Fox Creek Open Space Corridor
APPROVED TENTATIVE
TRACT NO. 4870
UNSUBDIVIDED
REMAINDER
UNSUBDIVIDED
REMAINDER
500 feet
0
500 feet
Approximate scale
N
Live Oak Associates, Inc.
Tract 4870
Project Plan
Date
11/3/04
Project #
110-97
Figure #
3

EXHIBIT E
HABITAT ASSESSMENT: TRACT 4870
(LETTER FROM DR. MARK JENNINGS)

Live Oak Associates, Inc.
39913 Sharon Avenue
Davis, CA 95616-9456
(530) 753-2727
RanaResources@aol.com

#10,966
May 30, 2005

Mr. David J. Hartesveldt
Live Oak Associates, Inc.
P.O. Box 2697
Oakhurst, CA 93644

Dear Dave:

Per your request, I checked out the Tract 4870 site (project #110-08) for suitable California tiger salamander (*Ambystoma californiense*) breeding and estivation habitat on 13 and 14 April 2005. Overall, I found the site to be highly degraded with pads and roads cut in the sandy soils and relatively little vegetation left. The site sits at the edge of a wash and there was some down cutting from the site to the wash via recent rain events. During the course of my survey, I noted two very small pools of water (less than 6 inches deep), one of which contained Pacific treefrog (*Hyla regilla*) larvae. I noted only 6 Botta pocket gopher (*Thomomys bottae*) burrows on the entire site and no California ground squirrel (*Spermophilus beecheyi*) burrows. The rest of the small mammal burrows were probably eliminated when the earth moving activities took place.

Given all the recent earth moving on the property and the lack of small mammal burrows, it is my professional opinion that the site is no longer possible suitable estivation habitat for California tiger salamanders. It is a considerable distance (=several thousand feet) from known breeding habitat for this species and there is no suitable breeding habitat on site. I don't know what was present before the earth grading occurred, but clearly the site has now been so altered that salamanders cannot colonize or persist there.

Thanks for allowing me to be involved with this project. Please give me a telephone call if you have any questions on this material.

Sincerely,

Mark R. Jennings
Associate Herpetologist and Fisheries Biologist

EXHIBIT F
SAN JOAQUIN KIT FOX STUDY REPORT
PREPARED BY CURT UPTAIN

SURVEY OF EWELL PROPERTY FOR THE PRESENCE OF SAN JOAQUIN KIT FOX

By Curt Uptain and Russell Kokx
Prepared for John Stebbins

INTRODUCTION

A development consisting of mixed residential/commercial is being proposed on an area of about 840 acres near Friant, Fresno County, California. The site is located adjacent to an existing housing development, Brieghton Crest, and approximately 0.5 miles west of the Table Mountain Casino Complex.

The primary plant community on the site is Introduced Valley Grassland, although some small stands of Oak Woodland are present. There are a variety of wetlands on the site including several ponds, a running stream that probably flows intermittently, and many small bogs and vernal pools. The topography is one of rolling hills; there are several small outcrops of granite in the hilly areas in the east and west portions of the site. Soils are predominantly Fallbrook sandy loam, Vista sandy loam, and Sesame sandy loam. There are also some heavy clay loams associated with the wetlands which occur in the low areas.

Because of the numerous wetlands that are present on the site and the potential for sensitive plant and wildlife species to occur there, a Biological Assessment for the project is being prepared (Stebbins, in prep.). This report only presents the methods, results, and discussion of the results of surveys to detect the potential occurrence of San Joaquin kit fox (*Vulpes macrotis mutica*). Results of the other surveys will be presented in Stebbins (in prep.).

METHODS

The kit fox range has recently been divided into 2 sub-ranges by the Fish and Wildlife Service (USFWS; USFWS, 1997); the northern and southern ranges. Survey protocols for determining presence/absence of kit foxes in the northern part of the range are much more involved than those for the southern range. According to the description of the northern range, the project site falls within the southern range. Hence, the more involved survey protocols were not followed. Instead, we followed the survey protocols established for the southern range(USFWS, 1989), with some modifications. Our surveys

consisted of a review of the California Natural Diversity Database (CNDDB) records for previous kit fox sightings in the area, a site walkover to locate any potential or known fox dens, night spotlighting surveys, and scent station surveys.

Review of California Natural Diversity Database Records

Recently, the CNDDB has eliminated all point records of San Joaquin kit fox from their database. Instead, CNDDB has delineated polygons around those areas that are considered important for kit foxes based upon previous sighting records. We generated a map of these areas, using Arc/info. We also used an old version of the CNDDB files to locate point records from near the project site.

Site Walkover

A site walkover was conducted to locate any potential or known kit fox dens. Meandering transects were walked by 2 or more biologists at a distance that would allow 100% coverage of the site. These transects were walked in conjunction with surveys for wetlands, sensitive plants, and other sensitive wildlife (e.g., burrowing owl and badger). Accordingly, specific details of the walkover surveys, such as dates of surveys and other findings, are presented in Stebbins (in prep).

Night Spotlighting Surveys

Night spotlighting was conducted on the project site for 3 consecutive nights from May 20 to 22, 1997. Spotlighting was conducted by 2 observers with 100,000 candlepower spotlights. At least 2 hrs. were spent spotlighting on the site each night . The routes used provided excellent coverage of the site; spotlighting routes are shown in Stebbins (in prep.).

Scent Station Surveys

Seven scent stations were established on the site. They consisted of a 1 meter-square metal plate with fire clay spread on the surface. They were baited each evening with tins of cat food and checked in the morning for 3 consecutive days between May 22 and 24, 1997. The locations of the stations are shown in Stebbins (in prep.).

RESULTS

Review of California Natural Diversity Database Records

According to the CNDDB polygon map of kit fox areas, the closest important area to the project site is approximately 40 miles to the southwest (see Stebbins, in prep.). There are 2 previous sighting records that are relatively close to the project site. The closest one is approximately 1.5 miles to the west near the town of Friant where a kit fox was observed in 1994. The other record is from near the junction of Highway 99 and the San Joaquin river, about 20 miles to the west. There are also 2 records to the south of the project site; they are over 20 miles away and on the valley floor whereas our site is located in the foothills.

Site Walkover

During the site walkover, we found no potential or known fox dens. For biological resources that were found, see Stebbins (in prep.).

Night Spotlighting Surveys

During the night spotlighting surveys, we did not observe any kit foxes. We did observe barn owls, cottontail, bobcats, coyotes, great-horned owls, western toads, and mule deer (Table 1; see Stebbins, in prep.).

Scent Station Surveys

There were no kit fox tracks left on the scent stations. Most tracks left were of California ground squirrels and cottontails, although coyotes, various birds, and voles also left tracks at the stations (Table 2; see Stebbins, in prep.).

DISCUSSION

Although there is adequate prey, there are virtually no denning opportunities for foxes on this site. The soil types that are present are shallow, categorized as being from 1.5 to 3.5 feet deep. On this site, the soils seem to be at the lower end of this range as evidenced by the numerous rock outcrops. This would tend to preclude the presence of adequate dens and, in fact, no dens were found. Kit fox predators were also relatively numerous on the site. Previous records from the area are almost non-existent, mostly occurring at lower elevations. The site is not in an area that is considered to be important for the recovery kit foxes (Patrick Kelley, pers. comm.).

CONCLUSIONS

It is not likely that kit foxes inhabit this site and the site should not be considered important to the recovery of kit foxes. Specific mitigation or compensation for loss of kit fox habitat from the development of this site should not be considered appropriate.

LITERATURE CITED AND PERSONAL COMMUNICATIONS

Kelly, Patrick. Pers. Comm. Director of the Endangered Species Recovery Planning Program.

U. S. Fish and Wildlife Service. 1989. Standardized recommendations for the protection of the San Joaquin kit fox. Unpubl rept. 14 pp.

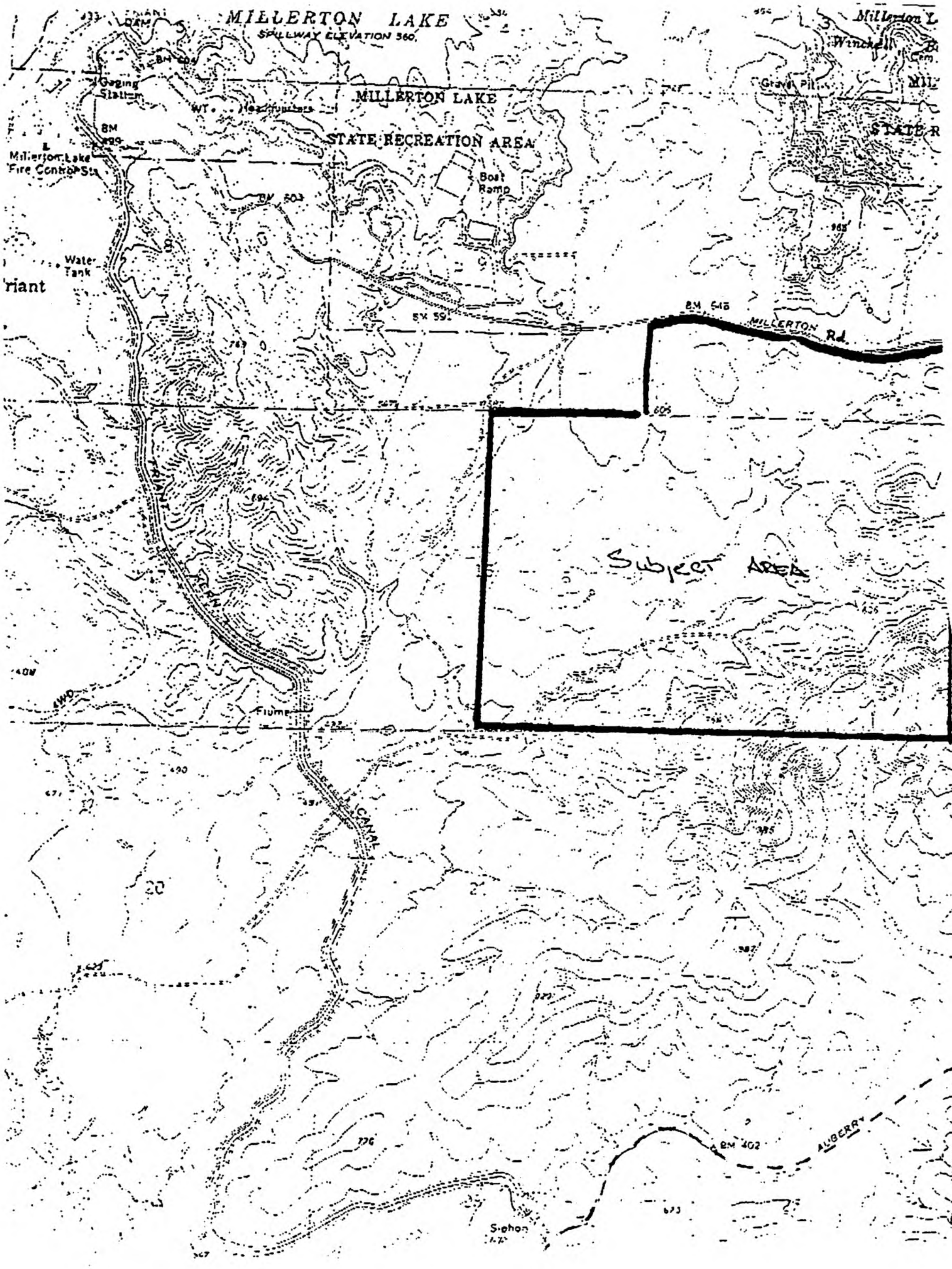
U.S. Fish and Wildlife Service. 1997. San Joaquin kit fox survey protocol for the northern range. Unpubl. rept. 13pp.

Table 1. Animals observed during the night spotlighting surveys

DATE OBSERVED	COMMON NAME	SCIENTIFIC NAME	TOTAL
20 May, 1997			
	barn owl	*Tyto alba*	4
	cottontail	*Sylvilagus audubonii*	18
	mule deer	*Odecoiles hemonoides*	3
	bobcat	*Lynx rufus*	2
	coyote	*Canis latrans*	4
	great-horned owl	*Bubo virginianus*	1
	western toad	*Bufo boreas*	0
	Bat	unk.	0
	deer mouse	*Peromyscus* sp.	0
21 May, 1997			
	barn owl	*Tyto alba*	5
	cottontail	*Sylvilagus audubonii*	15
	mule deer	*Odecoiles hemonoides*	1
	bobcat	*Lynx rufus*	0
	coyote	*Canis latrans*	0
	great-horned owl	*Bubo virginianus*	0
	western toad	*Bufo boreas*	1
	Bat	unk.	0
	deer mouse	*Peromyscus* sp.	0
22 May, 1997			
	barn owl	*Tyto alba*	6
	cottontail	*Sylvilagus audubonii*	20
	mule deer	*Odecoiles hemonoides*	0
	bobcat	*Lynx rufus*	0
	coyote	*Canis latrans*	1
	great-horned owl	*Bubo virginianus*	0
	western toad	*Bufo boreas*	0
	Bat	unk.	1
	deer mouse	*Peromyscus* sp.	2

Table 2. Animal tracks observed on the scent stations.

DATE	TRACKS OBSERVED
Station # 1	
5/22/97	no tracks
5/23/97	no tracks
5/24/97	no tracks
Station # 2	
5/22/97	no tracks
5/23/97	cottontail and Calif. ground squirrel
5/24/97	no tracks
Station # 3	
5/22/97	vole, insect (probably beetle)
5/23/97	vole
5/24/97	no tracks
Station # 4	
5/22/97	no tracks
5/23/97	blackbird
5/24/97	no tracks
Station # 5	
5/22/97	no tracks
5/23/97	no tracks
5/24/97	coyote - 1/2 bait eaten
Station # 6	
5/22/97	no tracks
5/23/97	no tracks
5/24/97	no tracks
Station # 7	
5/22/97	cottontail and Calif. ground squirrel
5/23/97	cottontail and Calif. ground squirrel
5/24/97	Calif. ground squirrel


MILLERTON LAKE
SPILLWAY ELEVATION 360
MILLERTON LAKE
STATE RECREATION AREA
Gaging Station
Millerton Lake Fire Control Sta
Water Tank
Friant
Boat Ramp
Gravel Pit
Winchell
Millerton L
Flume
FRIANT - KERN CANAL
MILLERTON Rd.
Subject AREA
AUBERRY
BM 402
Siphon