Biological Resources Impact Analysis US-CA-7280, Cheviot Lucerne, Lake County, California

Prepared for:

Lotis Engineering Group 8899 Main Street, Ste. 107 Williamsville, NY 14221

Contact: Miles C. Walz Salvador, Nationwide NEPA/NHPA Manager

Prepared by:

Environmental Assessment Specialists, Inc. 71 San Marino Avenue

Ventura, CA 93003

Contact: Kyle Workman, Project Ecologist

June 24, 2024

TABLE OF CONTENTS

Section 1: Introduction	
Section 2: Methodology	
2.1 - Biological Resources	
Section 3: Existing Conditions	
3.1 - Site Description	3
3.2 - Vegetation	3
3.3 - Soils	3
3.4 - General Wildlife	
3.5 - Sensitive Biological Resources	
Special Status Species	
3.6 - Jurisdictional Areas	7
Waters of the U.S.	7
Wetlands	
3.7 - Nesting Birds	8
Section 4: Sensitive Biological Resources Impact Analysis	10
4.1 - Sensitive Plant and Wildlife Species	
4.2 - Jurisdictional Areas	
4.3 - Nesting Birds	
Section 5: References	11

LIST OF APPENDICES

Appendix A: Field Data Sheets And Site Photographs

SECTION 1: INTRODUCTION

This report contains the findings of a Biological Resources Impact Analysis conducted by Environmental Assessment Specialists, Inc. (EAS) on a proposed Vertical Bridge (VB BTS II, LLC) telecommunication facility, US-CA-7280 (Cheviot) located within the community of Lucerne, Lake County, California. The project site is generally located north of State Route 20, south of State Route 162, east of State Route 101, and west of Interstate 5, and is depicted on the *Lucerne*, *California* U.S. Geological Survey (USGS) 7.5-minute topographic map.

Vertical Bridge (VB BTS II, LLC) proposes the construction of a new unmanned telecommunications facility at this location. Proposed construction is to include antennas on a new a 150-foot-tall lattice tower and equipment within a 50' x 50' lease area. Additionally proposed are new utility easements and improvements to the existing access road.

The project site was surveyed on May 23, 2024 by qualified EAS biologist Kyle Workman. The biological resources within the site are described in terms of plant communities and jurisdictional drainage features. A literature review provided information regarding sensitive plant and wildlife species potentially occurring within the project site and immediate vicinity. Based on current site conditions and suitable habitat requirements of sensitive species, this report provides an assessment of the sensitive resources found on the site and analyzes the biological significance of the site in view of federal, state, and local laws and policies.

SECTION 2: METHODOLOGY

2.1 - BIOLOGICAL RESOURCES

Data regarding biological resources on the project site were obtained through a literature review that included data on biological resources in the project vicinity and applicable reference materials provided by Vertical Bridge.

Sensitive biological resources present, or potentially present, onsite were identified through a literature review using the following resources: California Department of Fish and Wildlife (CDFW 2024), California Natural Diversity Data Base (CNDDB 2024), and the California Native Plant Society (Tibor 2001 and CNPSEI 2024). For the purpose of this report, "sensitive" or "special status" species are those plant or wildlife species that are federally and/or state listed species, proposed for listing, candidate species and CDFW Species of Special Concern.

An initial review indicated that the project site is located within an undeveloped vacant lot at a private rural residential property. Kyle Workman conducted the biological resources field survey to document existing conditions and to determine potential impacts to sensitive biological resources based on current site plans. The survey was conducted on foot making note of biological resources, such as plant and wildlife species, on field data sheets. These data sheets are included in Appendix A. Special attention was paid to plant communities to determine the presence or potential occurrence of any sensitive species that may occur on the project site.

SECTION 3: EXISTING CONDITIONS

3.1 - SITE DESCRIPTION

The biological assessment survey of the project site was conducted on May 23, 2024. Weather conditions included a temperature of approximately 78 degrees Fahrenheit, winds of 1 to 4 mile per hour, and clear skies. The site is specifically located on a previously graded hillside at 6720 Leslie Place, within the community of Lucerne, California. Land use adjacent to the site generally consists of undeveloped open space and scattered rural residential development.

Vertical Bridge (VB BTS II, LLC) proposes the construction of a new unmanned telecommunications facility at this location. Proposed construction is to include antennas on a new a 150-foot-tall lattice tower and equipment within a 50' x 50' lease area. Additionally proposed are new utility easements and improvements to the existing access road.

3.2 - VEGETATION

The project site is located within previously disturbed areas associated with a private rural residential development. The proposed lease area location has been previously graded and is vegetation is routinely cleared. Vegetation within the proposed lease area location primarily consists of non-native grasses and ruderal (weedy) species. An oak woodland occurs within the vicinity of the site and within portions of the proposed access road and utility trench route Several oak trees (*Quercus* sp.) and pine trees (*Pinus* sp.) will be removed during the proposed road improvements to the site. Common species observed on and within the vicinity of the site include slender wild oats (*Avena barbata*), coyote brush (*Baccharis pilularis*), red brome (*Bromus madritensis* ssp. *rubens*), Star thistle (*Centaurea* sp.), and manzanita (*Arctostaphylos* sp.). A complete list of plant species observed on or in the vicinity of the project site can be found in Appendix A: Field Data Sheets.

3.3 - SOILS

The projects site contains two soil series. A soil series is a group of soils that have similar soil profiles (such as, thickness and arrangement). The soils that exist on the project is mapped as Millsholm-Bressa-Hopland association, 30 to 50 percent slopes and Neice-Sobrante-Hambright complex, 15 to 30 percent slopes (United States Department of Agriculture (USDA) Soil Survey.

3.4 - GENERAL WILDLIFE

The project site and surrounding area provide habitat for wildlife species that commonly occur in mixed conifer communities. No amphibian, reptilian, or mammalian species were observed or detected during the field survey. Avian species observed/detected include:

• Common raven (*Corvus corax*)

Other wildlife species expected to occur onsite include side-blotched lizard (*Uta stansburinia*), Steller's jay (*Cyanocitta stelleri*), and desert cottontail (*Sylvilagus audubonii*).

3.5 - SENSITIVE BIOLOGICAL RESOURCES

Special Status Species

Special status species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (ESA). The ESA provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The ESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become endangered in the foreseeable future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species that is in a project area generally imposes severe constraints on development, particularly if development would result in take of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize take when it is incidental to, but not the purpose of, an otherwise lawful act.

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in immediate jeopardy, a "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management, and a "rare" species is one present in such small

numbers throughout its range that it may become endangered if its present environment worsens. The term "rare" species applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. "Species of special concern" is an informal designation used by CDFW for some declining wildlife species that are not state candidates. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

The California Native Plant Society (CNPS) has developed an inventory of California's sensitive plant species (Tibor 2001). This inventory summarizes information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition, the CNPS provides an inventory of plant communities that are considered sensitive by the state and federal resource agencies, academic institutions, and various conservation groups. Determination of the level of sensitivity is based on the number and size of remaining occurrences as well as recognized threats.

Sensitive habitats are natural communities that support concentrations of sensitive plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife (CNDDB 2024). Sensitive habitats are not afforded legal protection unless they support protected species, except for wetland habitats, which cannot be filled without authorization from the U.S. Army Corps of Engineers (USACE) and CDFW.

The following discussion describes the special-status plants, wildlife, and habitats that have been afforded special recognition by federal, state, or local resource agencies or organizations and are known to occur in the region of the project site. Sources used for the classification of sensitive resources are as follows:

- Plants California Department of Fish and Wildlife (CDFW March 2024), California Natural Diversity Data Base (CNDDB 2024), and California Native Plant Society (Tibor 2001 and CNPSEI 2024)
- Habitats CNDDB (2024), Holland (1986)
- Wildlife CDFW (March 2024), CNDDB (2024)

A review of the CNDDB and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants resulted in a list of 10 sensitive plant species, 21 sensitive wildlife species, and 3 sensitive plant communities that occur within the *Lucerne*, *California* as well as the surrounding USGS topographic quadrangles.

The sensitive plant species include:

- Anthony Peak lupine (Lupinus antoninus)
- Bent-flowered fiddleneck (Amsinckia lunaris)
- Broad-lobed leptosiphon (Leptosiphon latisectus)
- Bristly leptosiphon (Leptosiphon acicularis)
- Colusa layia (Layia septentrionalis)
- Eel-grass pondweed (Potamogeton zosteriformis)
- Glandular western flax (Hesperolinon adenophyllum)
- Konocti manzanita (Arctostaphylos manzanita ssp. elegans)
- Napa lomatium (*Lomatium repostum*)
- Two-carpellate western flax (Hesperolinon bicarpellatum)

Proposed development will be contained within a previously graded clearing at a private rural residential property. Previous disturbances onsite are associated with the site's close proximity to rural residential development. Evidence of surface disturbance on and in the immediate vicinity of the site has greatly reduced the potential for sensitive plant species to occupy the area. Therefore, none of the above-listed sensitive plant species are anticipated to occur onsite, and the proposed project is not anticipated to result in any impacts to sensitive plant species. No further action is recommended with regard to sensitive plant species.

The sensitive wildlife species include:

- Bald eagle (Haliaeetus leucocephalus)
- Brownish dubiraphian riffle beetle (*Dubiraphia brunnescens*)
- Cackling (Aleutian Canada) goose (Branta hutchinsii leucopareia)
- California red-legged frog (Rana draytonii)
- Clear Lake hitch (Lavinia exilicauda chi)
- Clear Lake prickly sculpin (*Cottus asper* ssp.)
- Clear Lake roack (Hesperoleucus venustus x H. symmetricus)
- Clear Lake tule perch (Hysterocarpus traskii lagunae)
- Double-crested cormorant (*Phalacrocorax auritus*)
- Great blue heron (Aredea herodias)
- Northern spotted owl (Strix occidentalis caurina)
- Osprey (Pandion haliaetus)
- Prairie falcon (Falco mexicanus)
- Red-bellied newt (Taricha rivularis)

- Sacramento perch (Archoplites interruptus)
- Silver-haired bat (Lasionycteris noctivagans)
- Townsend's big-eared bat (Corynorhinus townsendii)
- Western pond turtle (Actinemys marmorata)
- Western ridged mussel (Gonidea angulata)
- Yellow warbler (Dendroica petechia brewsteri)
- Yellow-breasted chat (*Icteria virens*)

Proposed development will be contained within a previously graded clearing at a private rural residential property. No portions of the proposed development footprint contain the important habitat suitability elements for any of the above-listed sensitive wildlife species; none are likely to occur within the proposed development footprint itself. Therefore, no direct impacts are anticipated to result to any sensitive wildlife species and their habitat from implementation of the proposed project.

The sensitive plant communities include:

- Clear Lake drainage cyprinid/Catostomid stream
- Clear Lake drainage seasonal lakefish spawning stream
- Coastal and valley freshwater marsh

No sensitive plant communities occur on the project site.

3.6 - JURISDICTIONAL AREAS

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the federal Clean Water Act is founded on a connection or nexus between the water body in question and interstate commerce. This connection may be direct through a tributary system, linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the USACE regulations.

Waters of the U.S.

USACE jurisdiction over non-tidal waters of the United States extends laterally to the ordinary high water mark (OHWM) or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" [33 CFR 329.11(a)

(1)]. Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible. Recently, the federal courts have restricted USACE jurisdiction over waters that are not directly connected to traditional navigable waters (isolated waters), thereby increasing the focus on clearly establishing the physical connection between the subject water body(ies) as a tributary to traditional navigable waters or otherwise by directly establishing the nexus with interstate commerce.

During the biological assessment survey, the site was evaluated according to the guidelines provided in the USACE 1987 Manual (i.e. Environmental Laboratory, 1987). Waters of the U.S. were absent from the site; no water bodies having a perceptible OHWM were identified on site or adjacent to the site.

Wetlands

The USACE and EPA define "wetlands" as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions." In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met. Several parameters may be analyzed to determine whether the criteria are satisfied.

The project site and surrounding area contain plant species commonly found in mixed conifer forest communities. No hydrophytic plant species were observed on the project site; therefore, it was not necessary to examine the other two wetland criteria (hydrology and soils), since all three criteria must be met where wetlands are present. No jurisdictional wetlands will be impacted by the installation of the proposed facility.

3.7 - NESTING BIRDS

The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States except the house sparrow, starling, feral pigeon, and resident Wildlife birds such as pheasant, grouse, quail, and wild turkey. Resident Wildlife birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

California Fish and Game (CFG) Code 3503 makes it illegal to destroy any birds' nest or any birds' eggs that are protected under the MBTA. CFG Code 3503.5 further protects all birds in the orders *Falconiformes* and *Strigiformes* (birds of prey, such as hawks and owls) and their eggs and nests from any form of take.

No avian nests or nesting activity were observed during the field survey. The trees and shrubs located within the immediate vicinity of the site provide suitable avian nesting habitat.

SECTION 4: SENSITIVE BIOLOGICAL RESOURCES IMPACT ANALYSIS

4.1 - SENSITIVE PLANT AND WILDLIFE SPECIES

- Sensitive Plant Species: The project site contains no suitable habitat for any sensitive plant species. Therefore, no sensitive plant species have a moderate or high potential to occur onsite and focused surveys are not recommended.
- Sensitive Wildlife Species: The project site contains no suitable habitat for any sensitive wildlife species. Therefore, no sensitive wildlife species have a moderate or high potential to occur onsite and focused surveys are not recommended.
- Sensitive Plant Communities: No sensitive plant communities occur on the project site; none will be impacted by the proposed development.

4.2 - JURISDICTIONAL AREAS

No potentially jurisdictional waters or wetlands are present on or in the vicinity of the project site. Therefore, installation of the proposed facility will not impact any jurisdictional areas.

4.3 - NESTING BIRDS

The trees located within the immediate vicinity of the project site provide suitable nesting habitat for several avian species. Therefore, pursuant to the MBTA and CFG Code, installation of the proposed facility should be conducted outside the nesting season. The nesting season generally extends from early February through August, but can vary slightly from year to year based upon seasonal weather conditions.

If facility installation must occur during the nesting season, a qualified biologist should conduct a nesting bird survey to identify any potential nesting activity. If active nests are observed, construction activity must be prohibited within a 500-foot (~160-meter) buffer around the nest until the nestlings have fledged. All construction activity within the vicinity of active nests must be conducted in the presence of a qualified biological monitor. Construction activity may encroach into the buffer area at the discretion of the biological monitor.

SECTION 5: REFERENCES

- Burt, W. and Grossenheider, R. 1980. Peterson Field Guides to Mammals. Houghton Mifflin Company, New York, New York.
- California Department of Fish and Wildlife (CDFW), 2024 (March). Endangered and Threatened Animals List. The Resources Agency of California, Department of Fish and Wildlife, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California.
- California Department of Fish and Wildlife (CDFW), 2024 (April). Endangered, Threatened, and Rare Plants. The Resources Agency of California, Department of Fish and Wildlife, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California.
- California Department of Fish and Wildlife (CDFW), 2024 (January). Special Animals List. The Resources Agency of California, Department of Fish and Wildlife, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California.
- California Department of Fish and Game (CDFG). 2003 (September). Natural Communities List. The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.
- California Department of Fish and Wildlife (CDFW). 2024 (April). Special Vascular Plants, Bryophytes, and Lichens List. The Resources Agency of California, Department of Fish and Wildlife, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California.
- California Native Plant Society Electronic Inventory (CNPSEI). 2024. Retrieved from http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi
- California Natural Diversity Data Base (CNDDB). 2024. RareFind 5 personal computer program. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species for the *Lucerne, California* and surrounding USGS Topographic Quadrangles. California Department of Fish and Wildlife, Natural Heritage Division. Sacramento, California.
- Hickman, J. C. 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-Wildlife Heritage Program. California Department of Fish and Wildlife. Sacramento.
- Munz, P. A. 1974. A Flora of Southern California. University of California Press. Berkeley, California.
- Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians. 3rd ed. Houghton-Mifflin Company. Boston, Massachusetts.
- Tibor, D. P. 2001. California Native Plant Society's Inventory of Rare and Endangered Plants of California. California Native Plant Society. Special Publication, No. 1, 6th ed.
- Udvardy, M.D. 1994. National Audubon Society Field Guide to North American Birds. Alfred A. Knopf, Inc. New York, New York.

Арр	oendix A: Fi	ield Data S	heets and \$	Site Photog	raphs

Field Notes - US-CA-7280, Cheviot

Date: May 23, 2024

Location: 6720 Leslie Place, Lake County, California

Time: 1:30 pm to 2:45 pm

Weather Conditions: 1 to 4 mile per hour winds, clear skies with a temperature of 78 degrees

Plant Community/Site description: Site will be developed within at a private rural residence and native vegetation surrounds the site. The lease area has been previously been graded and vegetation is routinely cleared as part of ongoing maintenance. Native conifer trees and several oaks will be removed during the proposed road improvements

Wildlife Species Observed:

Common raven (Corvus corax)

Plant Species Observed:

Oak tree (*Quercus* sp.) slender wild oats (*Avena barbata*) manzanita (*Arctostapylos* sp) coyote brush (*Baccharis pilularis*) red brome (*Bromus madritensis* ssp. *rubens*), pine tree (*Pinus* sp.) cheatgrass (*Bromus* sp.) toyon (*Heteromeles arbutifolia*) Star thistle (*Centaurea* sp.)



View of project site facing north.





View of project site facing south.



View of project site facing west.



Overview of proposed facility location facing northwest.



View of existing access road facing west.



View of existing access road facing northwest.



View of existing access road facing north.



View of existing access road facing north.



View of existing access road facing west.



East facing view from the project site.



North facing view from the project site.



West facing view from the project site.



South facing view from the project site.

KYLE D. WORKMAN, BIOLOGIST

OVERVIEW

Bachelor's degree Environmental Science and Ecology – Western State College of Colorado

Kyle Workman is a project biologist with range of project experience in the environmental field. Mr. Workman has inventoried plants and wildlife and has conducted biological assessments and restoration monitoring surveys for various projects throughout the western United States and Hawaii. He has experience in water quality analysis, nest search techniques, habitat analyses, and has conducted research on aquatic insects.

RELATED EXPERIENCE

NEPA Compliance/Telecommunication Facilities. Assisting a variety of telecommunication providers throughout Arizona, California, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah and Washington in complying with the National Environmental Policy Act (NEPA) for the implementation of cellular communication facilities. This project includes the preparation of NEPA compliance documents in accordance with the Federal Communication Commissions regulations pertaining to telecommunication facilities, in particular, biological surveys, including focused sensitive species surveys and wetland delineations and permitting, construction monitoring, and arborist surveys. Reports are prepared associated with field surveys, reviews and project compliance include biological resources assessment reports, nesting bird survey letters, and focused plant and wildlife survey reports. Regularly prepare budgets and scopes of work for clients.

Section 7 consultations. Routinely conduct informal and formal section 7 consultation for proposed projects located within USFWS designated Critical Habitat. Work has involved effects analyses of projects, appropriate mitigation measures, and concurrence letters. Consultation has resulted in the approval of numerous projects located within Critical Habitat for sensitive species, which include California red-legged frog, Alameda whipsnake, California gnatcatcher, desert tortoise, and delta smelt.

Biological Resources Impact Analysis. Conducted biological assessments for various clients in Southern California. Field surveys involved inventorying plant and wildlife species, vegetation mapping, sensitive species habitat assessments, and jurisdictional drainage feature evaluations. Biological Resources Survey Reports are prepared to discuss the findings of the biological assessments.

Western Riverside County Multiple Habitat Conservation Plan (MSHCP) Consistency Analysis. Conducted habitat assessments throughout Riverside County, CA, with particular emphasis on sensitive plant and wildlife species including burrowing owl, least Bell's vireo, San Miguel savory, and many-stemmed dudleya. Field surveys and reports also include Riverine/Riparian analysis and urban/wildlands interface analysis as described by the MSHCP. Prepared various reports including MSHCP Consistency Analysis Reports, focused survey reports for burrowing owl, least Bell's vireo, and San Miguel savory, and Determination of Biological Equivalency or Superior Preservation Reports.

Habitat Restoration, Enhancement, and Conservation. Assisted numerous clients in management and monitoring of multiple restoration projects. Responsibilities have included inventorying native and non-native plant species, conducting monthly, quarterly, and annual monitoring surveys analyzing wildlife use, making recommendations for remedial measures necessary to achieve performance standards, and preparing various monitoring reports.

Biological Monitoring and Compliance. Assisted numerous clients throughout Southern California during all aspects of construction. This project included ongoing monitoring for compliance with USFWS, CDFG, and USACE rules and regulations for the project site and included erosion control monitoring and permit compliance. The assessment included monitoring all aspects of ground disturbing activity including tree removal, vegetation grubbing, and mass grading. The effort also involved inventorying plant and wildlife species. Has included leading weekly training sessions for construction personnel to inform them of biological issues.

Burrowing owl focused surveys. Conducted numerous focused surveys for burrowing owls for a variety of clients and projects in San Bernardino, Orange, and Riverside Counties. Surveys involved data collection on burrowing owl numbers, behavior, locations, occupied burrows, and sign. Coordinated a project that involved the passive relocation of burrowing owls and mitigation through the construction and monitoring of artificial burrows. The effort involved agency coordination, budgeting and scoping the work effort, organizing client meetings, and assigning work efforts to appropriate staff. Reports were prepared to document findings.

Desert tortoise focused surveys. Conducted numerous focused protocol surveys for desert tortoise for various projects in San Bernardino, Kern and Riverside Counties. Surveys involved data collection on suitable tortoise habitat, potential burrow locations and the documentation of findings in focused survey reports.

Least Bell's vireo focused surveys. Conducted numerous focused protocol surveys for least Bell's vireo for projects in Riverside County. Located numerous territories at various project sites and documented findings in focused surveyed reports.

PROFESSIONAL TRAINING

CNPS Vegetation and Habitat Rapid Assessment Workshop 8/05 Construction Storm Water Compliance Workshop 9/05 Desert Tortoise Handling Workshop and Certification 11/06 Basic Wetland Delineation Training - Portland State University 3/08