

Biological Study Report

Lake County Courthouse 675 Lakeport Boulevard, Lakeport, CA



Prepared for:

RBF Consulting
500-01

July 15, 2010

Prepared by:



ENPLAN
Environmental Scientists and Planners
www.enplan.com

TABLE OF CONTENTS

1. INTRODUCTION	1
2. METHODOLOGY AND STAFF QUALIFICATIONS	2
3. RESULTS	4
Plant Communities/Wildlife Habitats	4
Special-Status Plant Species	7
Special-Status Animal Species	10
Nesting Migratory Birds	11
Resource-Agency Permits	11
4. CONCLUSIONS AND RECOMMENDATIONS	13
5. REFERENCES CITED	15

APPENDICES

Appendix A.	Figures
Appendix B.	Site Photographs
Appendix C.	Wildlife Habitat Relationships Report Summary
Appendix D.	Rarefind (CNDDDB) Report Summary
Appendix E.	Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDDB to Occur on the Site
Appendix F.	Checklist of Vascular Plant Species Observed
Appendix G.	Checklist of Wildlife Species Observed

1. INTRODUCTION

The purpose of this biological study report is to identify and characterize sensitive natural communities and plant and wildlife resources that are known or expected to occur on a ±5.8-acre project site at 675 Lakeport Boulevard, in the City of Lakeport, Lake County. The site, identified as Lake County Assessor's Parcel Number 025-521-410, is being evaluated for potential construction of a new courthouse. As shown in Figure 1 of Appendix A, the site is located in near the center of Section 25, Township 14 North, Range 10 West, of the U.S. Geological Survey's Lakeport 7.5-minute quadrangle. Photographs of the site are provided in Appendix B.

2. METHODOLOGY AND STAFF QUALIFICATIONS

Prior to conducting fieldwork, a biological records search was completed. This consisted of reviewing the California Department of Fish and Game's California Natural Diversity Data Base (CNDDDB) as well as available local records. The CNDDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Cow Mountain, Upper Lake, Bartlett Mountain, Purdy's Garden, Lakeport, Lucerne, Clearlake Oaks, Hopland, Highland Springs, Kelseyville, and Clearlake Highlands. Available local records consisted of a biological study report and wetland delineation (Northwest Biosurvey, 2006) prepared for a site approximately 0.3 miles to the north of the subject site on Martin Street, and an Initial Study for the same site (City of Lakeport, 2010). The Martin Street site has physical and biological characteristics similar to the subject site, supports several of the same special-status plant species, and was used as a reference site to check the phenology of local special-status plant species.

Upon completion of the pre-field review, a botanical field survey was undertaken in general accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (DFG, 2009). Because of the potential requirement for frontage improvements on Lakeport Boulevard, lands between the subject parcel and the street were included in the biological study area. The botanical survey was conducted on April 9 and 29, May 17, and June 19, 2010. All of the special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The survey consisted of an intensive and systematic evaluation of the site; the field survey effort included four to six hours of field time during each of the four site visits.

The locations and approximate population numbers/densities of the identified special-status plant populations were determined by gridding each population into a number of small polygons and then estimating the number of plants in each polygon.

The wildlife evaluation was conducted in three phases. The first phase consisted of the records search described above. Under the second phase, the habitats and special habitat elements in the study area were determined through field reconnaissance. A list of wildlife species that could potentially occur in the identified

habitats was then compiled using the DFG's Wildlife Habitat Relationships (WHR) System, Version 8.2 (DFG, 2008). This is a predictive system based on scientific information regarding wildlife species and their known habitat relationships. It is useful as a general pre-field screen and provides a somewhat broader view of special-status species potentially occurring in the study area.

The wildlife survey was conducted on March 17, 2010. Many of the special-status animal species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field surveys was determined on the basis of observed habitat characteristics. The initial field effort included approximately three hours of field observations; additional wildlife observations were made during the botanical field survey visits.

The botanical field surveys were conducted by Donald Burk. Mr. Burk has a Bachelor of Arts degree in Biological Sciences and a Master of Science degree in Botany. He has over 25 years of experience in the design and implementation of botanical field studies. He has previously conducted botanical surveys in Lakeport and is familiar with flora of the region as well as state and federal statutes pertaining to special-status species. The wildlife evaluation was conducted by Darrin Doyle. Mr. Doyle has a Bachelor of Science degree in biology, and has 10 years of experience conducting biological surveys in California. He is familiar with wildlife species of the region and their habitat requirements. Mr. Doyle possesses a federal "take" permit for California red-legged frog and vernal pool crustaceans.

3. RESULTS

Plant Communities/Wildlife Habitats

The study site is situated between approximately 1,340 and 1,400 feet above sea level, and is surrounded on three sides by urban development. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Soils on the site are identified as Henneke-Montara-rock outcrop complex, 15 to 50 percent slopes, with a negligible amount of Still loam, stratified substratum, in the extreme northeast corner of the site (USDA, NRCS, 2009). The Henneke-Montara complex consists of very deep, moderately well-drained soils formed in alluvium from mixed rock types. However, grading activities dramatically altered the soils and natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The lower terrace supports a disturbed annual grassland. These two communities are described in more detail below; locations of the communities are shown on Figure 3 of Appendix A and photographs are provided in Appendix B. Two small, shallow seasonal waters with rock substrates are present on the upper terrace. Most runoff from the site enters constructed ditches that convey flow to the east. Flow enters the City's storm drain system, which discharges into Clear Lake approximately ¼-mile east of the site.

Annual grassland

Annual grasslands are characterized by a sparse to dense cover of annual grasses with inclusions of numerous species of native annual forbs ("wildflowers"). Germination occurs with the onset of the fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. On the subject site, the annual grassland community is best represented on the lower terrace of the site, on the eastern edge of the study area. Common species in this community include wild oats, soft

chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. Although several special-status plant species were observed on the fringe of the annual grassland community, the community itself is not considered unique or sensitive.

High-quality annual grasslands are inhabited by a variety of wildlife species. Common mammals include black-tailed jackrabbit, coyote, gophers, moles, and several species of mice and voles. Snakes are often abundant in annual grasslands, feeding on small rodents. Amphibians are relatively uncommon in annual grasslands; however, species such as the western toad and Pacific treefrog may be locally abundant near aquatic habitats. Annual grassland also provides nesting and foraging habitat for certain migratory birds, including western meadowlarks, various sparrows, western kingbirds, and horned larks. The WHR data base predicts that this habitat type may be inhabited by 83 species of wildlife (Appendix C). However, because the onsite grassland is a small, fragmented relic of the grassland that historically was interspersed among the oak woodland, far fewer animal species are expected to be present. Overall, the onsite grassland has low value to wildlife species.

Serpentine herb community

The onsite serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses on the upper terrace and hillsides. Serpentine soils have unique chemical properties that prohibit the growth of many common plant species. A number of other plant species have evolved mechanisms allowing them to survive on serpentine soils. The flora of serpentine sites is thus unique and often supports plants of limited distribution, including a number of endemic species. Plant species observed on the site include naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. As discussed below, four serpentine-adapted special-status plant species were also observed in this community.

With the exception of crevices between boulders, the serpentine herb community lacks sufficient cover objects for most animal species. Accordingly, this habitat type

supports relatively few species of wildlife. Ground squirrels, which are present in small numbers on the site, create their own shelter by burrowing into hillsides or under large boulders. A number of birds may forage in this habitat; gulls, ravens, and crows were observed overhead, and may feed on picnic remains from the adjacent visitor's center. While the serpentine herb community does not provide tree-nesting habitat for birds, ground-nesting species such as the killdeer could potentially nest on the site. Overall, this habitat type has low value to wildlife species. No estimate on the number of animals that may potentially utilize the serpentine herb community is available, as there is no corresponding WHR habitat type for this community.

Site grading resulted in the creation of two very shallow depressions on the western edge of the serpentine herb community. These depressions pond water to a depth of two to three inches. Because of the underlying bedrock, the water ponds for long duration. These features appear to be subject to U.S. Army Corps of Engineers jurisdiction as non-wetland "waters of the United States." They drain to the northwest and southwest corners of the upper terrace and overflow enters small constructed ditches that ultimately discharge to the City's storm drain system. These waters are essentially unvegetated and provide minimal wildlife value. However, they do attract some species, such as killdeer. A delineation of wetlands and other waters on the subject site has been completed by ENPLAN and is presented in a separate report (ENPLAN, 2010).

The serpentine herb community is considered to be a sensitive natural community due to its somewhat restricted distribution and the high potential for endemic plant species to be present. The onsite community has been highly disturbed by grading. Although this has reduced the value of the site for some plant species, it has formed a "serpentine barren" that supports a unique suite of species, including four special-status species. Loss of the serpentine herb community as a result of project development is considered a significant adverse impact. Mitigation for this loss is best considered in conjunction with impacts on the four special-status plant species, and is addressed below.

Special-Status Plant Species

Review of CNDDDB records showed that two special-status plant species, green jewel-flower and mayacamas popcorn-flower, have been broadly mapped to include the study area. Twenty-six other special-status plant species are known to occur within a 10-mile radius: Anthony's Peak lupine, beaked tracyina, bent-flowered fiddleneck, Boggs Lake hedge-hyssop, Bolander's horkelia, Brandegees' eriastrum, bristly sedge, Burke's goldfields, Colusa layia, dimorphic snapdragon, eel-grass pondweed, glandular western flax, Koch's cord moss, Konocti manzanita, Napa bluecurls, Norris' beard moss, oval-leaved viburnum, Raiche's manzanita, Rincon Ridge ceanothus, robust monardella, serpentine cryptantha, small-flowered calycadenia, small groundcone, Sonoma canescent manzanita, two-carpellate western flax, and woolly meadowfoam (Appendix D). The potential for each special-status plant species to utilize the study area is evaluated in Appendix E.

The botanical survey confirmed the presence of four special-status plant species on the project site: Colusa layia, bent-flowered fiddleneck, serpentine cryptantha, and Tracy's clarkia (a special-status species not reported in the CNDDDB records search). The locations of the plant populations are shown in Figure 3 of Appendix A. A checklist of vascular plant species observed during the botanical field surveys is provided in Appendix F. Data forms documenting the special-status plant occurrences have been submitted to the California Natural Diversity Data Base.

Colusa layia (*Layia septentrionalis*)

Colusa layia is an annual herb that occurs in oak woodlands, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species occurs between 300 and 3,600 feet in elevation. A total of 44 populations are reported in CNDDDB records. These populations occur in the North Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). Reported population sizes (available for only about 25 percent of the records) range mostly from 100 to 200 plants, with the largest reported population having about 2,000 plants. With

roughly 20,000 to 25,000 plants observed on the subject site, the onsite Colusa layia population is by far the largest of those for which data is available. On the subject site, the species is most abundant on hillsides within the serpentine herb community, with a small number of plants present on the upper and lower terraces.

Bent-flowered fiddleneck (*Amsinckia lunaris*)

Bent-flowered fiddleneck occurs in cismontane woodlands, and valley and foothill grassland. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species is reported between 50 and 1,500 feet in elevation. A total of 50 populations are reported in CNDDDB records. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. Reported population sizes (available for only about 35 percent of the records) range mostly from 10 to 300 plants. The largest quantified population size estimate is 3,650 plants, although the plants are noted to be “common” at other sites. Approximately 500 bent-flowered fiddleneck plants were observed on the subject site, primarily growing on hillsides within the serpentine herb community.

Serpentine cryptantha (*Cryptantha clevelandii* ssp. *dissita*)

Serpentine cryptantha generally occurs on serpentine rock outcrops in chaparral communities. The species is reported between 1,100 and 2,400 feet in elevation. The species is not state or federally listed, but is on CNPS List 1B.1 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California). A total of 10 populations are reported in CNDDDB records. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. Six of the ten populations were observed between 1902 and 1967, the remaining four populations were observed between 1999 and 2003. No population size data is available. Approximately 10,000 serpentine cryptantha plants were observed on the subject site. Most of the plants occur within the serpentine herb community, on the upper terrace and on the hillside just below the upper terrace.

Tracy's clarkia (*Clarkia gracilis* ssp. *tracyi*)

Tracy's clarkia generally occurs on serpentine soils in chaparral communities. The species is reported from 200 to 2,200 feet above sea level. The species is not state or federally listed, but is on CNPS List 4.2 (Plants of Limited Distribution (A Watch List); Fairly Threatened in California). Populations are known to occur in Colusa, Humboldt, Lake, Mendocino, Napa, Trinity, and Tehama counties. Because of the lower CNPS status, the CNDDB does not offer online data regarding the number of recorded populations or population sizes. Nearly 10,000 Tracy's clarkia plants were observed on the site. All of these plants were growing on the periphery of the site, on both undisturbed and highly disturbed soils.

As noted above, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck are on the California Native Plant Society's List 1B. Although not state or federally listed, plants with this CNPS listing status are generally considered to qualify as "endangered, rare, or threatened" under Section 15380(d) of the California Environmental Quality Act (CEQA) Guidelines and thus require consideration during CEQA review. Tracy's clarkia is on CNPS List 4; plants of this status rarely qualify for state listing, but may be locally significant. As such, potential impacts to this species should also be evaluated during the CEQA process.

Because detailed site development plans have not yet been prepared, the extent of impacts to the serpentine herb community and the four onsite special-status plant species cannot be quantified. However, in general terms, site development has a high potential to adversely affect these resources. It appears that Tracy's clarkia, which is the least sensitive of the plants, would be least affected because it primarily occurs on the periphery of the site. Serpentine cryptantha, which is the most sensitive of the four species on the site, is the most centrally located and would be the most difficult to avoid during site development. Because all four of the special-status plant species have an affinity for serpentine soils, mitigation for the loss of the plants would also provide at least some mitigation for the loss of the serpentine herb community.

Department of Fish and Game staff were contacted following discovery of the special-status plant populations. However, the DFG has not conducted a field review of

the site or provided guidance as to potential mitigation strategies. Because full avoidance of the special-status plant populations and serpentine herb community does not appear to be possible, we recommend that the project proponent prepare a mitigation plan acceptable to DFG prior to project construction. Mitigation would likely include avoidance of at least some of the onsite serpentine herb community and associated special-status plant populations. Detailed mapping of the extent and densities of the special-status plant communities prepared as part of the botanical study (Figure 3 of Appendix A) will assist in preparing a site design that minimizes impacts to the populations. We recommend that the mitigation plan be prepared as early as possible, in conjunction with preparation of site design and development plans. Other options for mitigation include preservation of other local populations of these special-status plants, restoration of degraded populations on other sites in the area, and/or creation of new populations.

Special-Status Animal Species

Review of CNDDDB records showed that one special-status animal species, American badger, has been broadly mapped as occurring within the study area. In addition, eight other special-status animal species are known to occur within a 10-mile radius: Clear Lake hitch, foothill yellow-legged frog, grasshopper sparrow, Pacific fisher, Sacramento perch, Townsend's big-eared bat, tricolored blackbird, and western pond turtle (Appendix D). The CNDDDB records search also identified seven non-status animal species within the search radius: *Calasellus californicus*, Bell's sage sparrow, blennosperma vernal pool andrenid bee, double-crested cormorant, great blue heron, osprey, and silver-haired bat.

The potential for each special-status animal species to utilize the study area is evaluated in Appendix E. No special-status animal species were observed in the study area during the wildlife evaluation. However, as documented in Appendix E, two special-status animal species, grasshopper sparrow and Townsend's big-eared bat, as well as the non-status silver-haired bat could potentially utilize the site at some point during their life cycles. A checklist of wildlife species observed at the site is presented in Appendix G.

The grasshopper sparrow, a migratory bird, has a low potential to nest in the onsite annual grassland community. Potential adverse effects on nesting grasshopper sparrows can be avoided through proper timing of vegetation removal (see Nesting Migratory Birds below).

Townsend's big-eared bat and silver-haired bat could potentially forage on the site. However, they are very unlikely to roost on the site, given the lack of suitable roosting sites. Because suitable roosting habitat is much more available on other local sites and similar or higher quality foraging habitat is widely available, site development would have a negligible effect on these bat species; no mitigation is warranted.

Nesting Migratory Birds

Although no bird nests were observed in the study area during the field inspections, it is possible that migratory birds, particularly ground-nesting species, could nest on the study area in future years. The federal Migratory Bird Treaty Act requires that nesting migratory birds not be adversely affected by human activities. To ensure compliance with the Act, vegetation should be removed from the project area outside of the nesting season. In the local area, most birds nest between March 1 and July 31. Accordingly, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation before March 1 or after July 31. If this is not possible, a nesting survey should be conducted within two weeks prior to vegetation removal. If active nests are present, work within 500 feet of the nest(s) should be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

Resource-Agency Permit Requirements

If the Corps of Engineers confirms that the small depressions and constructed ditches are waters subject to federal jurisdiction, a Department of the Army permit would be required prior to fill of the features. As a condition of the Department of the Army permit, issuance of a Water Quality Certification by the Regional Water Quality Control Board would also be required. It is unlikely that a Streambed or Lakebed Alteration Agreement would be required by the Department of Fish and Game; however, we recommend this be confirmed through consultation with Department staff. As for any

project involving more than one acre of surface disturbance, a General Construction Activity Storm Water Permit must be obtained from the State Water Resources Control Board; this requires preparation and implementation of a Storm Water Pollution Prevention Plan. Project implementation would also necessitate obtaining other permits (e.g., encroachment permits, air quality permits), but these involve issues beyond the scope of this document.

4. CONCLUSIONS AND RECOMENDATIONS

In summary, we find that the study area supports non-wetland “waters of the United States,” a unique serpentine herb community, and four special-status plant species: *Colusa layia*, serpentine cryptantha, bent-flowered fiddleneck, and Tracy’s clarkia. In addition, two special-status animal species (grasshopper sparrow and Townsend’s big-eared bat), the non-status silver-haired bat, and nesting migratory birds could potentially utilize the site at some point during their life cycle.

Mitigation is not warranted for the bat species because they are unlikely to roost on the site and foraging habitat is widely available. Mitigation is not warranted for Tracy’s clarkia given its relative abundance and low listing status; however, mitigation for the serpentine herb community and other three special-status plants is expected to offset the loss of Tracy’s clarkia. Implementation of the following measures would reduce the remaining biological impacts to a level below that of significance.

1. Obtain Required Resource-Agency Permits. The project proponent shall obtain all necessary resource-agency permits prior to initiating any grading or construction activities within “waters of the United States.” The required permits may include a Department of the Army Nationwide Permit from the U.S. Army Corps of Engineers, Water Quality Certification from the Regional Water Quality Control Board, and possibly a Streambed Alteration Agreement from the California Department of Fish and Game.
2. Avoid/Minimize/Offset the Loss of the Serpentine Herb Community and Associated Special-Status Plants. The project proponent shall prepare a mitigation plan identifying specific impacts of the proposed courthouse project on the serpentine herb community, *Colusa layia*, serpentine cryptantha, and bent-flowered fiddleneck. The plan shall include measures to avoid and minimize impacts to these resources through careful site design and establishment of onsite avoidance areas. To the extent feasible, Tracy’s clarkia shall also be avoided/protected. If avoidance is not possible or does not provide sufficient mitigation, other mitigation measures shall be designated in the plan, including preservation of offsite serpentine habitats and special-status plant populations, restoration of degraded habitats on other local sites capable of supporting the sensitive resources, and/or creation of new habitats capable of supporting the sensitive resources. The mitigation plan shall be submitted to the California Department of Fish and Game for review, and must be approved in writing by DFG prior to initiation of site construction activities.

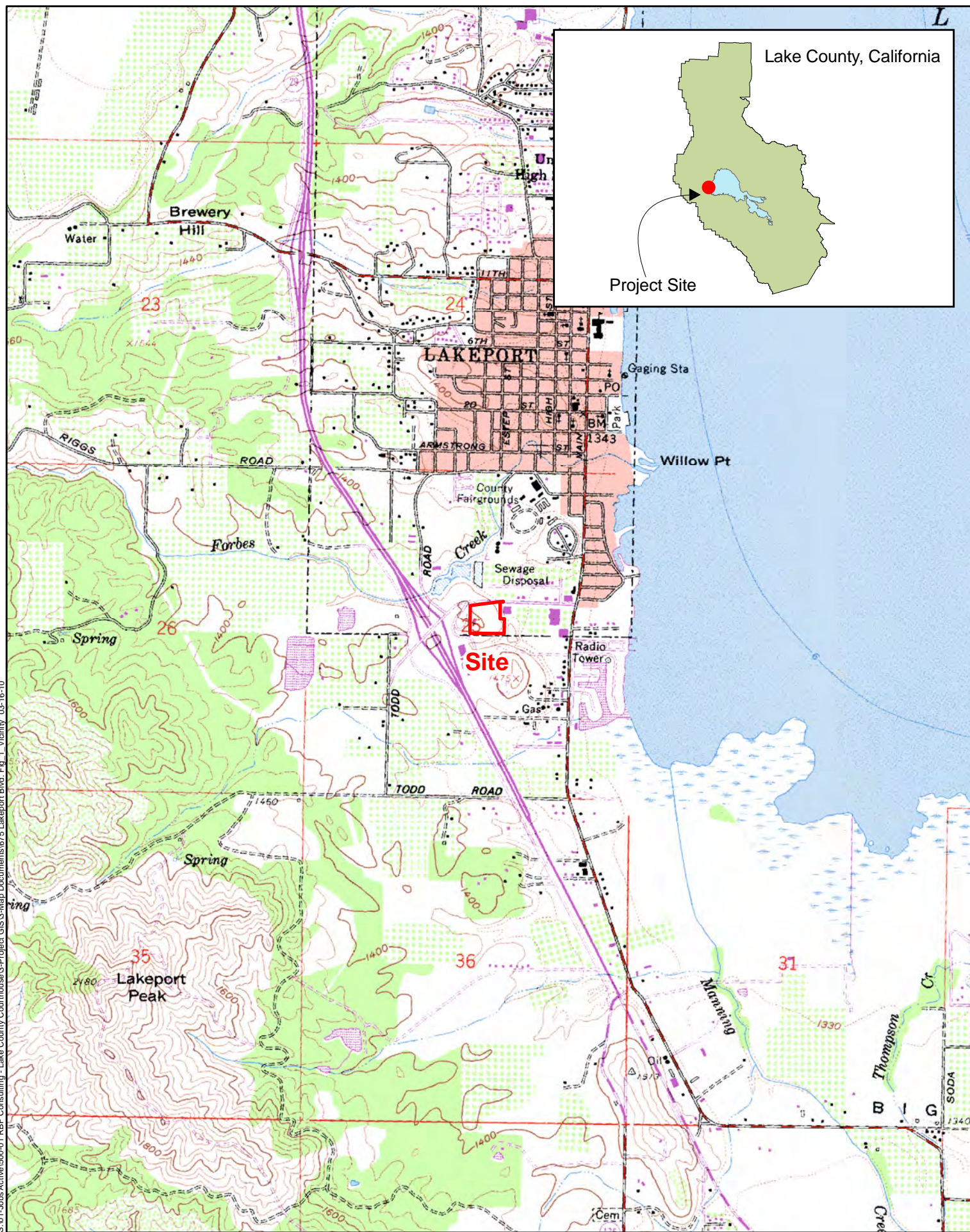
3. Avoid Disturbance of Nesting Migratory Birds, Including Grasshopper Sparrow. If feasible, vegetation removal shall be conducted between August 1 and February 28. If vegetation removal must be conducted between March 1 and July 31, a nesting bird survey shall be conducted within two weeks prior to initiation of work; if active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

5. REFERENCES CITED

- California Department of Fish and Game. 2010. California Natural Diversity Data Base, RareFind Printout, March 2010 Data.
- _____. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.
<<http://nrm.dfg.ca.gov/documents/docviewer.aspx>>
- _____. 2008. California Interagency Wildlife Task Group. California Wildlife Habitat Relationships Systems, Version 8.2, personal computer version. Sacramento, California.
- City of Lakeport. 2010. Mitigated Negative Declaration and Initial Environmental Study, Lakeport Pacific Associates. AR 10-03 / ARC 10-02 / ER 10-02.
- ENPLAN. 2010. Pre-jurisdictional Delineation Report: Lake County Courthouse Site, 675 Lakeport Boulevard, Lakeport, California. Unpublished report on file with ENLAN.
- Northwest Biosurvey. June 30, 2006. Biological Assessment with Botanical Survey and Wetland Delineation for the Scott Johnson Property, APN 025-431-35.
<<http://www.cityoflakeport.com/departments/docs.aspx>>
- URS Corporation. December 2009. Final Draft Phase I Environmental Site Assessment Report: Proposed New Lakeport Courthouse – 675 Lakeport Boulevard Site. 675 Lakeport Boulevard, Lakeport CA 95453. Unpublished document on file with the Judicial Council of California, Administrative Office of the Courts.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web Soil Survey, August 31, 2009 Map Data. <<http://websoilsurvey.nrcs.usda.gov/app/>>

Appendix A

Figures



Feature and boundary locations depicted are approximate only. 03.16.10



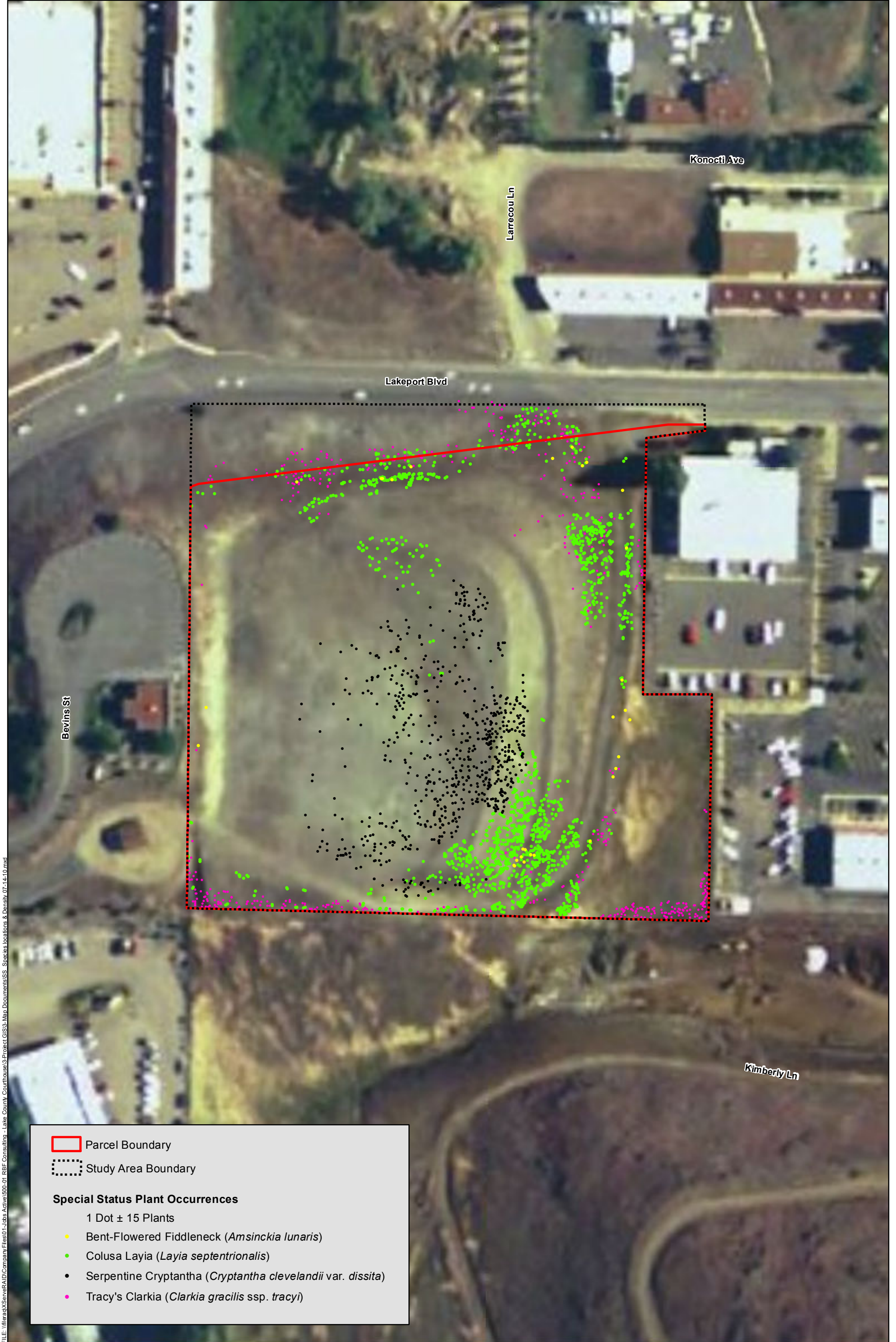
Figure 1
Project Vicinity Map



Feature and boundary locations depicted are approximate only. 07.12.10



Figure 2
Project APE and Area Surveyed



FILE: \\liveradXServer\RAID\Company\Fies01\Jobs\Active\600-01 RBF Consulting - Lake County Courthouse\GIS\Project\GIS\Map Documents\SS_Species locations & Density 07-14-10.mxd

Parcel Boundary

Study Area Boundary

Special Status Plant Occurrences

1 Dot ± 15 Plants

Bent-Flowered Fiddleneck (*Amsinckia lunaris*)

Colusa Layia (*Layia septentrionalis*)

Serpentine Cryptantha (*Cryptantha clevelandii* var. *dissita*)

Tracy's Clarkia (*Clarkia gracilis* ssp. *tracyi*)



0 70 Feet

Figure 3
Special-Status Plant Population Locations and Density Representation

Feature and boundary locations depicted are approximate only. 07.15.10



Appendix B

Site Photographs

Site Photographs



Annual Grassland (front) and Serpentine Herb (back) Communities 3/17/10



Annual Grassland Community 6/17/10



Serpentine Herb Community on Upper Terrace 3/17/10



Serpentine Herb Community on Undisturbed Slope 6/17/10



Ponded Water on Upper Terrace 2/8/10



Constructed Drainage Ditch 4/29/10



Bent-flowered Fiddleneck 4/9/10



Colusa Layia 5/19/10



Serpentine Cryptantha 6/17/10



Serpentine Cryptantha on Hillside 6/17/10



Tracy's Clarkia 6/17/10



Tracy's Clarkia Habitat 6/17/10

Appendix C

Wildlife Habitat Relationships Report Summary

WHR SPECIES SUMMARY REPORT (VERSION 8.2)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

ID	SPECIES NAME	STATUS													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A007	California newt							7							
A043	Foothill yellow-legged frog							7				11	12		
A046	Bullfrog														14
A071	California red-legged frog		2					7							
R004	Western pond turtle							7				11	12		
R036	Western skink							7				11			
R048	Ringneck snake												12		
R057	Gopher snake							7							
R059	California mountain kingsnake							7					12		
R061	Common garter snake	1		3		5		7							
B051	Great blue heron													13	
B052	Great egret													13	
B071	Snow goose														14
B075	Canada goose														14
B077	Green-winged teal														14
B079	Mallard														14
B080	Northern pintail														14
B083	Cinnamon teal														14
B084	Northern shoveler														14
B085	Gadwall														14
B086	Eurasian wigeon														14
B087	American widgeon														14
B094	Lesser scaup														14
B110	Osprey													13	
B111	White-tailed kite					5									
B113	Bald eagle			3		5								13	
B114	Northern harrier							7							
B124	Ferruginous hawk											11			
B126	Golden eagle					5						11		13	
B129	Peregrine falcon			3		5							12	13	
B133	Ring-necked pheasant														14
B134	Sooty grouse							7							14
B138	Wild turkey														14
B140	California quail							7							14
B141	Mountain quail														14
B149	American coot														14
B255	Mourning dove														14
B269	Burrowing owl							7				11			
B272	Long-eared owl							7							
B273	Short-eared owl							7							
B338	Purple martin							7							
B342	Bank swallow				4										
B353	American crow														14
B410	Loggerhead shrike	1						7							
B461	Common yellowthroat							7							
B487	Rufous-crowned sparrow							7							
B499	Savannah sparrow			3				7							
B501	Grasshopper sparrow							7							
B505	Song sparrow							7							

<u>ID</u>	<u>SPECIES NAME</u>
B519	Red-winged blackbird
B520	Tricolored blackbird
B522	Yellow-headed blackbird
M001	Virginia opossum
M006	Ornate shrew
M018	Broad-footed mole
M023	Yuma myotis
M026	Fringed myotis
M033	Western red bat
M037	Townsend's big-eared bat
M038	Pallid bat
M045	Brush rabbit
M047	Desert cottontail
M051	Black-tailed jackrabbit
M087	San Joaquin pocket mouse
M105	California kangaroo rat
M112	American beaver
M117	Deer mouse
M134	California vole
M146	Coyote
M147	Red fox
M149	Gray fox
M151	Black bear
M152	Ringtail
M153	Raccoon
M157	Long-tailed weasel
M160	American badger
M161	Western spotted skunk
M162	Striped skunk
M165	Mountain lion
M166	Bobcat
M176	Wild pig
M177	Elk
M181	Mule deer

[illegible]

Total Number of Species: 83

Habitats Selected:

Annual grassland

STATUS KEY:

- 1 = Federal Endangered
- 2 = Federal Threatened
- 3 = California Endangered
- 4 = California Threatened
- 5 = California Fully Protected
- 6 = California Protected
- 7 = California Species of Special Concern
- 8 = Federally - Proposed Endangered
- 9 = Federally - Proposed Threatened
- 10 = Federal Candidate
- 11 = BLM Sensitive
- 12 = USFS Sensitive
- 13 = CDF Sensitive
- 14 = Harvest

Appendix D

Rarefind (CNDDDB) Report Summary

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle ¹											Status ²
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
Animals												
American badger					•							SSC
<i>Calasellus californicus</i>										•		None
Bell's sage sparrow									•			None
Blennosperma vernal pool andrenid bee					•							None
Clear Lake hitch		•			•	•	•		•		•	SSC
Double-crested cormorant					•							None
Foothill yellow-legged frog				•					•	•		SSC
Grasshopper sparrow				•				•				SSC
Great blue heron					•							None
Osprey			•	•	•	•	•			•		None
Pacific fisher				•								FC, SSC
Sacramento perch					•	•	•				•	SSC
Silver-haired bat			•			•						None
Townsend's big-eared bat				•								SSC
Tricolored blackbird		•			•							SSC
Western pond turtle		•						•	•	•		SSC
Plants												
Anthony's Peak lupine			•									1B.3
Beaked tracyina				•	•			•				1B.2
Bent-flowered fiddleneck					•	•			•			1B.2
Boggs Lake hedge-hyssop										•		SE, 1B.2
Bolander's horkelia				•					•			1B.2
Brandegee's eriastrum										•		1B.2
Bristly sedge	•							•				2.1
Burke's goldfields										•		FE, SE, 1B.1
Colusa layia					•	•	•	•	•	•		1B.2
Dimorphic snapdragon									•			4.3
Eel-grass pondweed						•	•			•	•	2.2
Glandular western flax			•		•	•			•	•		1B.2
Green jewel-flower					•							1B.2
Koch's cord moss				•				•				1B.3
Konocti manzanita						•			•	•		1B.3
Mayacamas popcorn-flower					•							1A
Napa bluecurls										•		1B.2
Norris' beard moss			•		•	•			•			2.2
Oval-leaved viburnum								•				2.3
Raiche's manzanita				•								1B.1
Rincon Ridge ceanothus				•								1B.1
Robust monardella										•		1B.2
Serpentine cryptantha					•				•			1B.1
Small-flowered calycadenia									•			1B.2
Small groundcone				•				•				2.3
Sonoma canescent				•								1B.2

Rarefind (CNDDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle ¹											Status ²
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
manzanita												
Two-carpellate western flax			•			•						1B.2
Woolly meadowfoam										•		4.2
Natural Communities												
Clear Lake Drainage Cyprinid /Catostomid Stream						•				•		None
Clear Lake Drainage Resident Trout Stream										•		None
Clear Lake Drainage Seasonal Lakefish Spawning Stream						•				•		None
Coastal and Valley Freshwater Marsh		•			•	•						None
Northern Interior Cypress Forest				•								None
Serpentine Bunchgrass				•								None

Highlighting denotes the quadrangle in which the project site is located.

¹Quadrangle Code

CM = Cow Mountain
UL = Upper Lake
BM = Bartlet Mtn.
PG = Purdy's Garden

LA = Lakeport
LU = Lucerne
CO = Clearlake Oaks
HO = Hopland

HS = Highland Springs
KE = Kelseville
CH = Clearlake Highlands

²Status Codes

Federal/State

FE = Federally Listed – Endangered
FT = Federally Listed – Threatened
FC = Federal Candidate Species

FD = Federally Delisted
SE = State Listed – Endangered
ST = State Listed – Threatened

SSC = State Species of Concern

California Native Plant Society

List 1A = Plants Presumed Extinct in California
List 1B = Plants Rare, Threatened or Endangered in California and Elsewhere
List 2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 = Plants About Which We Need More Information – A Review List
List 4 = Plants of Limited Distribution – A Watch List

Threat Ranks

0.1 = Seriously Threatened in California
0.2 = Fairly Threatened in California
0.3 = Not Very Threatened in California

Appendix E

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur at the Project Site

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Wildlife		
American badger <i>Taxidea taxus</i>	Badgers are most commonly found in dry, open areas in shrub, forest, and herbaceous habitats, with friable soils. Badgers dig burrows in dry, sandy soil, usually in areas with sparse overstory.	Review of CNDDDB records found that the American badger has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Field inspection found no badgers or badger dens. The American badger is thus not expected to be present or affected by project implementation.
<i>Calasellus californicus</i>	<i>Calasellus californicus</i> , a freshwater isopod, is found in association with springs and seeps. The species is known to occur in Lake, Santa Clara, and Napa counties.	Springs and seeps do not occur on the project site. <i>Calasellus californicus</i> would thus not be present or affected by project implementation.
Bell's sage sparrow <i>Amphispiza belli belli</i>	Bell's sage sparrow nest in chaparral dominated by dense stands of chamise.	The project area does not support chaparral or dense stands of chamise. Bell's sage sparrow would thus not be present.
Blennosperma vernal pool andrenid bee <i>Andrena blennospermatis</i>	The blennosperma vernal pool andrenid bee is a solitary, ground-nesting bee that inhabits upland areas around vernal pools. This bee has a patchy distribution in California's Sacramento Valley and foothills.	Vernal pools do not occur on or adjacent to the project site. The blennosperma vernal pool andrenid bee would thus not be present or affected by project implementation.
Clear Lake hitch <i>Lavinia exilicauda chi</i>	Clear Lake hitch are endemic to Clear Lake (Lake County) and its associated tributaries. Hitch are also found in nearby Thurston Lake and Lampson Pond. Adults spawn in seasonal tributary streams to Clear Lake, such as Kelsey, Seigler Canyon, Adobe, Middle, Scotts, Cole, and Manning creeks. Spawning occurs in gravelly areas in the lower reaches of these streams.	The project area lacks lakes and streams. Clear Lake hitch would thus not be present or affected by project implementation.
Double-crested cormorant <i>Phalacrocorax auritis</i>	Double-crested cormorant is a year-long resident along the coast and inland lakes and rivers, and feeds primarily on fish. Double-crested cormorants are colonial nesters, and nest from April through August. Nesting/roosting habitat includes off-shore rocks, islands, cliffs, wharfs, jetties, or overhanging tree branches along lakes and rivers.	The project area lacks suitable nesting and foraging habitat for the double-crested cormorant. The double-crested cormorant would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Foothill yellow-legged frog <i>Rana boylei</i>	Foothill yellow-legged frogs are typically found in partly-shaded, shallow streams and riffles with a rocky substrate in a variety of aquatic habitats. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low to moderate gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	The project area lacks suitable habitat for the foothill yellow-legged frog. The foothill yellow-legged frog was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
Grasshopper sparrow <i>Ammodramus savannarum</i>	Grasshopper sparrows frequent dry or well-drained native grasslands. Nesting occurs from early April through mid-July in these grasslands. Nests are constructed of grasses or forbs in slight depressions on the ground, usually at the base of an overhanging clump of grass or forbs.	Although not observed during the wildlife survey, the grassland on the project site has a low potential to provide nesting habitat for the grasshopper sparrow.
Great blue heron <i>Ardea herodias</i>	Great blue herons nest in colonies along marshes, lake margins, tideflats, wet meadows, rivers, and streams. Nests are generally in the tops of tall trees and snags. Uncommon nest sites include rock ledges, sea cliffs, and tule mats.	The project site lacks suitable nesting habitat for the great blue heron. Great blue herons were not observed during the wildlife survey and are not expected to nest on the site.
Osprey <i>Pandion haliaetus</i>	Ospreys require large bodies of permanent water and suitable nest sites. Nesting occurs on large decadent trees or structures such as powerline towers, buildings, and bridges. Ospreys are primarily associated with pine and mixed-conifer habitats, although urban or suburban nests are not unusual.	The project site lacks suitable nesting habitat for the osprey. Ospreys were not observed during the wildlife survey and are not expected to nest on the site. Review of CNDDB records found that the nearest reported osprey nest is approximately ¼-mile southeast of the project site, along the shore of Clear Lake.
Pacific fisher <i>Martes pennanti pacificus</i>	Pacific fishers primarily inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for Pacific fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure.	No forest habitat occurs on the project site. Field inspection found no fishers or fisher dens on the site. The Pacific fisher would thus not den on the site or be affected by project implementation.
Sacramento perch <i>Archoplites interruptus</i>	The Sacramento perch is a warm-water fish that historically occurred in Clear Lake (Lake County), as well as the Sacramento, San Joaquin, Pajaro, and Salinas river systems. The species is presently restricted to Clear Lake and several small reservoirs and farm ponds where they have been introduced. Adults and juveniles associate with beds of aquatic vegetation in shallow water.	Lakes and streams do not occur on the project site. The Sacramento perch would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Silver-haired bat <i>Lasionycteris noctivagans</i>	Silver-haired bats occur in coastal and montane forests. Silver-haired bats roost in hollow trees, snags, rock crevices, caves, and under bark.	The project site provides suitable foraging habitat for the silver-haired bat, but does not provide roosting habitat.
Townsend's big-eared bat <i>Corynorhinus townsendii pallescens</i>	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	The project site provides suitable foraging habitat for Townsend's big-eared bat, but does not provide roosting habitat.
Tricolored blackbird <i>Agelaius tricolor</i>	Tricolored blackbirds require open water, usually nesting in dense cattails or tules although they can also nest in thickets of willow, blackberry, wild rose and tall herbs. Tricolored blackbirds are colonial nesters. Nesting areas must be large enough to support a minimum colony of about 50 pairs.	The project site lacks suitable nesting habitat for the tricolored blackbird. Tricolored blackbirds were not observed during the wildlife survey and are not expected to nest on the site.
Western pond turtle <i>Actinemys marmorata</i>	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. In cold weather, pond turtles hibernate underwater in bottom mud.	The project site lacks suitable habitat for the western pond turtle. The western pond turtle was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
PLANTS		
Anthony's Peak lupine <i>Lupinus antoninus</i>	Anthony's Peak lupine occurs on rocky outcrops and dry talus and shaley slopes on mountaintops above timberline (4,000 to 7,500 feet above sea level). The species is known to occur in Mendocino, Trinity, and Lake counties. The flowering period is May through July.	The project site is well below the elevational range of Anthony's Peak lupine. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Beaked tracyina <i>Tracyina rostrata</i>	Beaked tracyina is an annual herb that usually occurs on dry, grassy slopes in coastal prairie. The species is reported between 400 and 1,000 feet in elevation. Most populations are reported in Humboldt and Mendocino counties, although several populations are found in Lake and Sonoma counties. The flowering period is May through June.	The disturbed grassland on the project site has a low potential to support beaked tracyina. However, beaked tracyina was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	Bent-flowered fiddleneck occurs in cismontane woodland, and valley and foothill grassland. The species is reported between 50 and 1,500 feet in elevation. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. The flowering period is March through June.	The project site provides suitable habitat for bent-flowered fiddleneck, and the species was observed during the botanical survey.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	The project site lacks marshes, swamps, and vernal pools. Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bolander's horkelia <i>Horkelia bolanderi</i>	Bolander's horkelia occurs along grassy margins of vernal pools. The species is reported between 1,500 and 3,000 feet in elevation. Populations are known to occur in Colusa, Lake, and Mendocino counties. The flowering period is June through August.	Vernal pools do not occur on the project site. Bolander's horkelia was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Brandegge's eriastrum <i>Eriastrum brandegeae</i>	Brandegge's eriastrum occurs on dry gravelly to loamy soils on flats and benches in chaparral or closed-cone pine forests. The species is reported between 1,000 and 3,400 feet in elevation in the northern Coast Range. Populations are known to occur in Colusa, Glenn, Lake, Shasta (extreme southwestern portion), Trinity, Santa Clara, and San Mateo counties. The flowering period is April through August.	Chaparral or closed-cone pine forests do not occur on the project site. Brandegge's eriastrum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bristly sedge <i>Carex comosa</i>	Bristly sedge occurs in marshes, and swamps, or along lake margins. This species is reported from sea level to 2,100 feet in elevation. The flowering period is May through September.	Marshes, swamps, or lake margins do not occur on the project site. Bristly sedge was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Burke's goldfields <i>Lasthenia burkei</i>	Burke's goldfields occurs in vernal pools, meadows, and seeps. The species is reported between 50 and 2,000 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Vernal pools, meadows, and seeps do not occur on the project site. Burke's goldfields was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Colusa layia <i>Layia septentrionalis</i>	Colusa layia is an annual herb that occurs in oak woodland, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is reported between 300 and 3,600 feet in elevation. Populations are known to occur in the Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). The flowering period is April through May.	The project site provides suitable habitat for Colusa layia, and the species was observed on the northern portion of the upper terrace and on the slope below the terrace.
Dimorphic snapdragon <i>Antirrhinum subcordatum</i>	Dimorphic snapdragon occurs on serpentine or shale soils in foothill woodland or chaparral on south or west-facing slopes, between 600 and 2,500 feet above sea level. The flowering period is April through July.	Serpentine rocks cover most of the project site. However, dimorphic snapdragon was not observed during the botanical survey and is not expected to be present.
Eel grass pondweed <i>Potamogeton zosteriformis</i>	Eel grass pondweed occurs in ponds, lakes, streams, marshes, and swamps up to 6,000 feet in elevation. This aquatic plant has been reported in Lassen, Shasta, Modoc, Contra Costa, and Lake counties.	Suitable habitat for eel grass pondweed does not occur on the project site. Eel grass pondweed was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Glandular western flax <i>Hesperolinon adenophyllum</i>	Glandular western flax generally occurs on serpentine soils in chaparral. The species is reported between 1,400 and 4,300 feet in elevation. Populations are known to occur in Lake and Mendocino counties. The flowering period is May through August.	Serpentine rocks cover most of the project site. However, glandular western flax was not observed during the botanical survey and is not expected to be present.
Green jewel-flower <i>Streptanthus breweri</i> var. <i>hesperidis</i>	Green jewel-flower occurs in openings in chaparral and cismontane woodland, or on serpentine or rocky sites. The species is reported between 400 and 2,500 feet in elevation. Populations are known to occur in Glenn, Lake, Napa, and Sonoma counties. The flowering period is May through July.	Review of CNDDDB records found that the green jewel-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Serpentine rocks cover most of the project site. However, green jewel-flower was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Koch's cord moss <i>Entosthodon kochii</i>	Koch's cord moss occurs on moist soils in cismontane woodland. The species is reported between 1,600 and 3,300 feet in elevation. Populations are known to occur in San Luis Obispo, Mariposa, Marin, and Mendocino counties.	The project site lacks cismontane woodland and is slightly below the reported elevation range for Koch's cord moss. Koch's cord moss is not expected to be present or affected by project implementation.
Konocti manzanita <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita occurs on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 1,300 and 4,600 feet in elevation. Populations are known to occur in Colusa, Glenn, Tehama, Lake, Napa, and Sonoma counties. The flowering period is March through May.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Konocti manzanita. Konocti manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Mayacamas popcorn-flower <i>Plagiobothrys lithocaryus</i>	Mayacamas popcorn-flower occurs on moist sites in cismontane woodland, and valley and foothill grasslands. The species is reported between 900 and 1,500 feet in elevation. Populations are known to occur in Mendocino and Lake counties. The flowering period is April through May.	Review of CNDDDB records found that the Mayacamas popcorn-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. The onsite grassland provides marginally suitable habitat for Mayacamas popcorn-flower. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Napa bluecurls <i>Trichostema ruygtii</i>	Napa bluecurls occurs in vernal pools in valley and foothill grasslands, and in openings in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 100 and 2,000 feet in elevation. Populations are known to occur in Napa and Solano counties. The flowering period is June through October.	The project site lacks vernal pools, chaparral, and cismontane woodland. Napa bluecurls was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Norris' beard moss <i>Didymodon norrisii</i>	Norris' beard moss occurs on rocks in cismontane woodland and lower montane coniferous forest. The species is reported to occur between 2,000 and 6,500 feet in elevation.	The project site is well below the elevational range of Norris' beard moss. The species would thus not be present.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Oval-leaved viburnum <i>Viburnum ellipticum</i>	Oval-leaved viburnum inhabits chaparral, cismontane woodland, and lower montane coniferous forests. The species often occurs on north-facing slopes covered by dense brush. Oval-leaved viburnum is found between 700 and 4,600 feet in elevation. The flowering period is May through June.	The project site lacks chaparral, cismontane woodland, and montane coniferous forest. Oval-leaved viburnum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Raiche's manzanita <i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita occurs on serpentine soils in chaparral and lower montane coniferous forest. The species is reported between 1,500 and 3,300 feet in elevation. Populations are known to occur in Mendocino County. The flowering period is February through April.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Raiche's manzanita. Raiche's manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Rincon Ridge ceanothus <i>Ceanothus confusus</i>	Rincon Ridge ceanothus occurs on dry, serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. The species is reported between 250 and 3,500 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is February through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Rincon Ridge ceanothus. Rincon Ridge ceanothus was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	Robust monardella occurs in openings in chaparral and oak woodlands. The species is reported from sea level to 4,300 feet in elevation. Populations are known to occur in Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa, Santa Clara, Santa Cruz, San Mateo, and Sonoma counties. The flowering period is June through July.	The project site is nearly barren of trees and shrubs. Robust monardella was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Serpentine cryptantha <i>Cryptantha clevelandii</i> var. <i>dissita</i>	Serpentine cryptantha occurs on serpentine rock outcrops in chaparral. The species is reported between 1,100 and 2,400 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Serpentine cryptantha was observed on the project site.
Small-flowered calycadenia <i>Calycadenia micrantha</i>	Small-flowered calycadenia generally occurs on rocky talus or in sparsely vegetated areas, but is occasionally found on serpentine soils and roadsides. The species is reported from sea level to 5,000 feet in elevation. Populations are known to occur in Monterey, Trinity, Lake, Napa, and Colusa counties. The flowering period is June through September.	The project site has a moderate potential to support small-flowered calycadenia. However, small-flowered calycadenia was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Small groundcone <i>Boschniakia hookeri</i>	Small groundcone occurs in North Coast coniferous forests, and is often found in association with salal. The species is reported between 300 and 2,900 feet in elevation. Populations are known to occur in Del Norte, Humboldt, Mendocino, Marin, and Trinity counties. The flowering period is April through August.	The project site is nearly devoid of trees and shrubs, and does not have suitable habitat for small groundcone. Small groundcone was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Sonoma canescent manzanita <i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i>	Sonoma canescent manzanita generally occurs in openings in chaparral. The species is most often found on dry, rocky ridges and slopes of serpentine origin. In the southern portion of its range, the species is found on volcanic soils. Sonoma canescent manzanita is reported between 650 and 4,900 feet in elevation. Populations are known to occur in Humboldt, Trinity, Mendocino, Lake, Colusa, Tehama, and Sonoma counties. The flowering period is January through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Sonoma canescent manzanita. Sonoma canescent manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Two-carpellate western flax <i>Hesperolinon bicarpellatum</i>	Two-carpellate western flax occurs in serpentine barrens at the edge of chaparral. The species is reported between 500 and 2,700 feet in elevation. Populations are known to occur in Lake, Napa, and Sonoma counties. The flowering period is May through July.	Serpentine rocks cover most of the project site. However, two-carpellate western flax was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Woolly meadowfoam <i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	Woolly meadowfoam generally occurs in vernal pools, ditches, and ponds in valley foothill and grasslands, cismontane woodland, and chaparral. The species is reported between 200 and 3,600 feet in elevation. The flowering period is March through June.	A ditch in the southeast portion of the project site has marginally suitable habitat for woolly meadowfoam. However, woolly meadowfoam was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Appendix F

Checklist of Vascular Plant Species Observed

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site
April 9 and 29, May 17, and June 19, 2010

Amaranthaceae

Amaranthus albus

Apiaceae

Lomatium macrocarpum

Perideridia sp.

Torilis arvensis

Asteraceae

Achyrrachaena mollis

Agoseris grandiflora

Agoseris heterophylla

Ancistrocarphus filagineus

Anthemis cotula

Baccharis pilularis

Calycadenia pauciflora

Carduus pycnocephalus

Centaurea solstitialis

Chamomilla suaveolens

Cirsium cymosum

Filago gallica

Hemizonia congesta ssp. *clevelandii*

Hypochaeris glabra

Lactuca sp.

Lagophylla ramosissima var. *ramosissima*

Lasthenia californica

Layia septentrionalis

Micropus californicus var. *californicus*

Microseris douglasii ssp. *douglasii*

Psilocarphus tenellus var. *tenellus*

Rigiopappus leptocladus

Senecio vulgaris

Sonchus asper ssp. *asper*

Uropappus lindleyi

Boraginaceae

Amsinckia lunaris

Amsinckia menziesii var. *menziesii*

Cryptantha clevelandii var. *dissita*

Plagiobothrys nothofulvus

Brassicaceae

Athysanus pusillus

Brassica rapa

Capsella bursa-pastoris

Lepidium sp.

Lepidium nitidum var. *nitidum*

Streptanthus barbiger

Thysanocarpus curvipes

Amaranth Family

Tumbleweed

Carrot Family

Large-fruited lomatium

Yampah

Field hedge-parsley

Sunflower Family

Blow-wives

Large-flowered agoseris

Annual agoseris

Wooly fishhooks/false neststraw

Stinking chamomile

Coyote-brush

Smallflower western rosinweed

Italian thistle

Yellow star thistle

Pineapple weed

Peregrine thistle

Narrow-leaved filago

Hayfield tarweed

Smooth cat's ear

Prickly lettuce

Common hareleaf

California goldfields

Colusa tidytips

Slender cottonweed

Douglas' silverpuffs

Slender woolly marbles

Rigiopappus

Old-man-in-the-Spring

Prickly sow thistle

Silverpuffs

Borage Family

Bent-flowered fiddleneck

Menzies' fiddleneck

Cleveland's cryptantha

Rusty popcorn-flower

Mustard Family

Petty athysanus

Field-mustard

Shepherd's purse

Peppergrass

Shining peppergrass

Bearded jewelflower

Lace pod

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Campanulaceae

Githopsis specularioides

Caryophyllaceae

Cerastium glomeratum

Minuartia douglasii

Petrorhagia dubia

Scleranthus annuus ssp. *annuus*

Spergularia rubra

Convolvulaceae

Convolvulus arvensis

Crassulaceae

Crassula tillaea

Cucurbitaceae

Marah sp.

Cuscutaceae

Cuscuta californica

Euphorbiaceae

Eremocarpus setigerus

Fabaceae

Astragalus gambelianus

Lotus sp.

Lotus denticulatus

Lotus humistratus

Lotus purshianus

Lupinus bicolor

Medicago minima

Medicago polymorpha

Medicago praecox

Trifolium albopurpureum var. *dichotomum*

Trifolium bifidum var. *decipiens*

Trifolium dubium

Trifolium hirtum

Trifolium willdenovii

Vicia sativa ssp. *nigra*

Vicia villosa ssp. *villosa*

Fagaceae

Quercus lobata

Gentianaceae

Centaurium muehlenbergii

Bluebell Family

Common bluecup

Pink Family

Mouse-eared chickweed

Douglas' sandwort

Grass pink

German knotgrass

Ruby sand spurry

Morning Glory Family

Bindweed

Stonecrop Family

Moss pygmy weed

Gourd Family

Man-root

Dodder Family

Chaparral dodder

Spurge Family

Dove weed

Legume Family

Gambel's dwarf milkvetch

Lotus

Riverbar birds-foot trefoil

Hairy lotus

Spanish lotus

Bicolored lupine

Hairy bur-clover

California bur-clover

Mediterranean bur-clover

Branched Indian clover

Deceptive clover

Little hop clover

Rose clover

Tomcat clover

Garden vetch

Winter vetch

Oak Family

Valley oak (seedling)

Gentian Family

Muhlenberg's centaury

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Geraniaceae

Erodium botrys
Erodium brachycarpum
Erodium cicutarium

Geranium Family

Long-beaked filaree
Short-fruited storksbill
Red-stemmed filaree

Hydrophyllaceae

Phacelia corymbosa

Waterleaf Family

Serpentine phacelia

Iridaceae

Sisyrinchium bellum

Iris Family

Blue-eyed grass

Juncaceae

Juncus bufonius

Rush Family

Toad rush

Liliaceae

Allium falcifolium
Brodiaea californica var. *californica*
Calochortus vestae
Chlorogalum sp.
Dichelostemma capitatum ssp. *capitatum*

Lily Family

Scytheleaf onion
California brodiaea
Coast Range mariposa lily
Soap plant
Blue dicks

Malvaceae

Sidalcea diploscypha

Mallow Family

Fringed checkerbloom

Onagraceae

Camissonia graciliflora
Clarkia gracilis ssp. *gracilis*
Clarkia gracilis ssp. *tracyi*
Clarkia purpurea ssp. *quadrivulnera*
Epilobium minutum

Evening-Primrose Family

Hill suncup
Slender clarkia
Tracy's clarkia
Winecup clarkia
Chaparral willowherb

Orobanchaceae

Orobanche fasciculata

Broom-rape Family

Clustered broom-rape

Papaveraceae

Eschscholzia californica
Platystemon californicus

Poppy Family

California poppy
Creamcups

Plantaginaceae

Plantago sp.
Plantago erecta

Plantain Family

Plantain
Hooker's plantain

Poaceae

Aegilops triuncialis
Aira caryophyllea
Avena barbata
Avena fatua
Bromus carinatus var. *carinatus*
Bromus diandrus
Bromus hordeaceus
Bromus madritensis ssp. *rubens*
Deschampsia danthonioides

Grass Family

Barbed goatgrass
Silver hairgrass
Slender wild oats
Wild oats
California brome
Ripgut grass
Soft chess
Red brome
Annual hairgrass

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

<i>Elymus multisetus</i>	Big squirreltail
<i>Hordeum brachyantherum</i> ssp. <i>californicum</i>	California barley
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley
<i>Hordeum murinum</i>	Foxtail barley
<i>Lolium multiflorum</i>	Annual ryegrass
<i>Melica californica</i>	California melic
<i>Nasella pulchra</i>	Purple needlegrass
<i>Poa annua</i>	Annual bluegrass
<i>Poa secunda</i> ssp. <i>secunda</i>	One-sided bluegrass
<i>Scribneria bolanderi</i>	Scribner grass
<i>Secale cereale</i>	Rye
<i>Taeniatherum caput-medusae</i>	Medusa head
<i>Vulpia microstachys</i> var. <i>ciliata</i>	Fringed fescue
<i>Vulpia microstachys</i> var. <i>microstachys</i>	Small fescue
<i>Vulpia microstachys</i> var. <i>pauciflora</i>	Few-flowered fescue
<i>Vulpia myuros</i> var. <i>myuros</i>	Rattail fescue

Polemoniaceae

Gilia capitata ssp. *capita*
Gilia tricolor
Leptosiphon bolanderi
Linanthus bicolor

Phlox Family

Globe gilia
Bird's eyes
Bolander's linanthus
Bicolored linanthus

Polygonaceae

Eriogonum nudum
Eriogonum vimineum
Rumex crispus

Buckwheat Family

Naked buckwheat
Wicker buckwheat
Curly dock

Portulacaceae

Calandrinia ciliata
Claytonia exigua ssp. *exigua*
Claytonia perfoliata

Purslane Family

Red maids
Little miner's-lettuce
Common miner's lettuce

Primulaceae

Anagallis arvensis

Primrose Family

Scarlet pimpernel

Pteridaceae

Pentagramma triangularis ssp. *triangularis*

Brake Family

Goldback fern

Ranunculaceae

Delphinium hansenii ssp. *hansenii*
Ranunculus sp.

Buttercup Family

Eldorado larkspur
Buttercup

Rosaceae

Crataegus sp.

Rose Family

Hawthorn (horticultural)

Rubiaceae

Galium aparine
Galium parisiense

Madder Family

Cleavers
Wall bedstraw

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Scrophulariaceae

Castilleja attenuata
Castilleja exserta ssp. *exserta*
Castilleja rubicundala ssp. *lithospermoides*
Collinsia sparsiflora var. *sparsiflora*
Mimulus guttatus
Triphysaria eriantha
Verbascum blattaria

Taxodiaceae

Sequoia sempervirens

Valerianaceae

Plectritis macrocera

Snapdragon Family

Valley tassels
Exserted Indian paintbrush
Cream sacs
Spinster's blue eyed Mary
Common monkey-flower
Johnny tuck
Moth mullein

Bald Cypress Family

Redwood (horticultural)

Valerian Family

White plectritis

Appendix G

Checklist of Wildlife Species Observed

**Checklist of Wildlife Species Observed
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA**

Common Name	Scientific Name	Status
BIRDS		
American crow	<i>Corvus brachyrhynchos</i>	None
Black-tailed jackrabbit	<i>Lepus californicus</i>	None
California gull	<i>Larus californicus</i>	None
Common raven	<i>Corvus corax</i>	None
Killdeer	<i>Charadrius vociferus</i>	None
Red-tailed hawk	<i>Buteo jamaicensis</i>	None
Western scrub-jay	<i>Aphelocoma californica</i>	None
MAMMALS		
California ground squirrel	<i>Otospermophilus beecheyi</i>	None
Gopher	<i>Thomomys</i> sp.	None
REPTILES		
Western fence lizard	<i>Sceloporus occidentalis</i>	None