Biological Resource Assessment

Southhill Village
Nevada County, CA

November 2005

Prepared for:

Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Rancho Cordova, CA 95827

Prepared by:

GALLAWAY
CONSULTING, INC.
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Phone(530)343-8327 Fax(530)342-1882

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Summary of Findings and Conclusions

As requested, Gallaway Consulting Inc. performed biological surveys within the Southhill Village biological survey area (BSA), formerly called the Bear River Mill site, in Grass Valley, California. The site boundary has since been modified. The surveys were conducted on June 30th, July 1st, July 6th and August 15th, 2005 to determine the presence of sensitive biological resources within the project area and to determine if these resources would be impacted by the proposed project. No federal or state endangered, threatened or sensitive species were observed within the project area. However, the appropriate floristic windows for Stebbin's morning-glory (*Calystegia stebbinsii*), a federal and state endangered species and California Native Plant Society 1B plant; and Cedar Crest allocarya (*Plagiobothrys glyptocarpus* var. *modestus*), a federal species of concern, had already passed at the time of surveys. Suitable habitat for these plants exist onsite, therefore, future protocol-level botanical surveys are recommended April – June. Protocol-level surveys for the California red-legged frog (*Rana aurora draytonii*), a federal threatened species and state species of concern, were conducted by Foothill Associates on October 16th and 29th of 2001. There were no red-legged frogs sighted during the surveys. Due to the presence of suitable nesting and foraging habitat for raptors, a pre-construction raptor survey should be conducted April-May, or no more than 30 days prior to construction activities, to determine whether or not nesting raptors occur in, or in close proximity to, the project area. Should nesting raptors be observed, appropriate mitigation or avoidance measures will be required per the California Department of Fish and Game (CDFG). There are a total of 3.8 acres of *verified* jurisdictional features within the survey area including six (6) seasonal wetlands and 0.2 acres of Other Waters of the U.S., which were delineated by Foothill Associates. One of the verified seasonal wetlands is not included within the revised (current) project boundary. These features should be avoided to the greatest extent possible through the implementation of setbacks of enough width to adequately protect the resource. Where complete avoidance is not possible, impacts should be minimized to the greatest extent practicable. Gallaway Consulting, Inc. has identified additional areas that should be formally surveyed for wetlands and may result in an amendment to the original Foothill Associates delineation. Before construction occurs that will impact Waters of the U.S., including wetlands and Other Waters, the project proponent will be required to notify CDFG regarding construction within waters under their jurisdiction and obtain a water quality certification from the Regional Water Quality Board (Clean Water Act, Section 401); both of these requirements are contingent upon successfully completing the CEQA process. A Section 404 permit from the U.S. Army Corp of Engineers (Clean Water Act), and final approval by CDFG will also be required.

I. Introduction

As requested, Gallaway Consulting Inc. performed a biological survey within the Southhill Village biological survey area (BSA) in Grass Valley, Nevada County, California (**Figure 1**). The BSA is located south of the City of Grass Valley, Nevada County, California, within Section 1 and Section 2, T15N, R8E of the Grass Valley 7.5 minute USGS Quadrangle. Field surveys were conducted on June 30th, July 1st, July 6th and August 15th, 2005 to determine the presence of sensitive natural resources and to determine if these resources would be impacted by the proposed project. Shirley Innecken and Mary Baily, botanists, and Jody Gallaway biologist, conducted the field surveys.

The project was previously entitled the *Bear River Mill* site. Foothill Associates conducted red-legged frog and biological assessment surveys. The project boundary and name have since changed.

II. Methods

Consultation with State and Federal Agencies

Special-status Species

Gallaway Consulting Inc. consulted both the U.S. Fish and Wildlife Service (USFWS) and California Natural Diversity Database (CNDDB), a positive-sighting database managed by the California Department of Fish and Game (CDFG), to identify special-status species occurring, or potentially occurring within a 5-mile radius of the BSA.

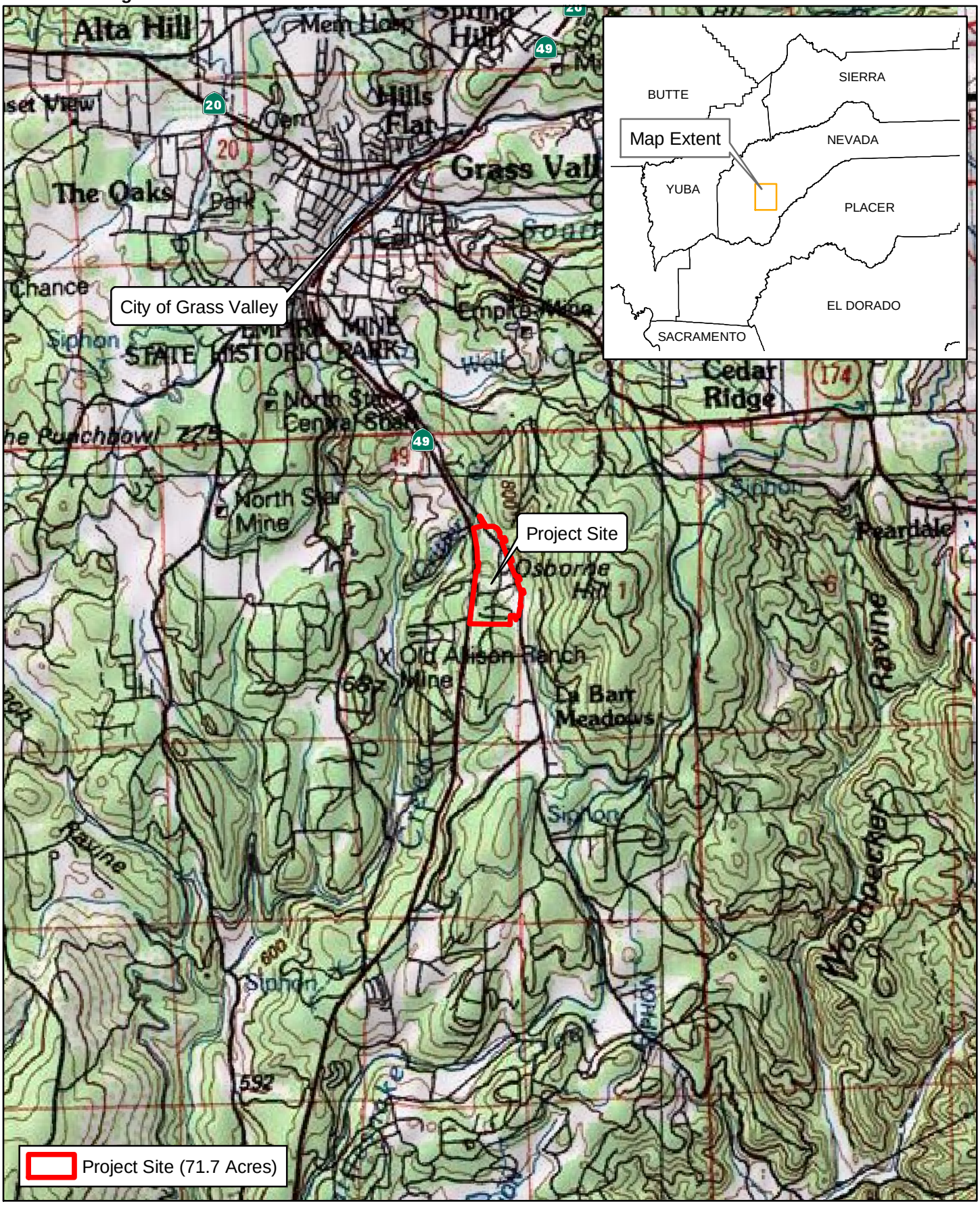
The results of the search included species falling into one of the following categories (see **Appendix A** for a complete listing by USGS quadrangle):

- Designated as rare, threatened, endangered, proposed or candidates for listing by the state or federal governments (ESA, 50 CFR 17.12 for listed plants and various notices in the Federal Register, California ESA, 14 CCR 670.5)
- Listed as Species of Concern by state or federal governments
- Included on the California Native Plant Society (CNPS) List 1A, 1B, and 2 (Skinner and Pavlik, 2001).
- Plants and wildlife that meet the definitions of rare or endangered species under the California Environment Quality Act (CEQA) (State CEQA Guidelines, Section 15380).

Sensitive Natural Communities

Gallaway Consulting Inc. consulted the CNDDB (2005) to identify sensitive natural communities occurring within a 5-mile radius of the BSA. The California Office of Planning and Research and the Office of Permit Assistance (1986) define project effects that substantially diminish habitat for fish, wildlife, or plants, or that disrupt or divide the physical arrangement of an established community as significant impacts under CEQA.

Southhill Village ***Location***



Within Section 1 & 2
T15N, R8E Nevada County, CA.
Grass Valley USGS 7.5" Quad.
Project Site provided by SJO Engineering
Map Date: Jan. 23, 2006.

0 0.5 1 Miles

GALLAWAY CONSULTING, INC.

Figure 1.

This definition applies to certain natural communities because of their scarcity and ecological values and because the remaining occurrences are vulnerable to elimination. For this study, the term "sensitive natural community" includes those communities that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined under CEQA.

Sensitive natural communities are important ecologically because their degradation and destruction could threaten populations of dependent plant and wildlife species and significantly reduce the regional distribution and viability of the community. If the number and extent of sensitive natural communities continue to diminish, the status of rare, threatened, or endangered species could become more precarious, and populations of common species (i.e., not special-status species) could become less viable. Loss of sensitive natural communities also can eliminate or reduce important ecosystem functions, such as water filtration by wetlands and bank stabilization by riparian woodlands for example.

Natural Heritage Specimens

Natural heritage specimens include individual native tree specimens from sensitive natural communities that are $\geq$24" diameter at breast height (dbh). As the larger, more mature members of their communities they provide important structural habitat characteristics and account for the greatest proportion of community propagation—both important to ecological sustainability.

Sensitive Species of Concern

Sensitive Species of Concern are unlisted species that have the potential for listing under state and/or federal Endangered Species Acts if negative population trends continue. By considering them early in the planning process, problems can be avoided if these species are listed during the project permitting process.

Critical Habitat

In addition to potentially occurring special-status wildlife and plant species, we determined whether or not USFWS-designated critical habitat occurs onsite. When the USFWS lists a species as threatened or endangered under the Federal ESA, areas of habitat considered essential to its conservation and survival may be designated as *critical habitat*. These areas may require special consideration and/or protection due to their ecological importance. Although critical habitat may be designated on state or private lands, activities on them are not restricted unless there is federal involvement or direct impacts to listed species are expected.

Waters of the United States, Including Wetlands

The U.S. Army Corps of Engineers (COE) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under Section 404 of the Clean Water Act. The term "Waters of the United States" is an encompassing term that includes "wetlands" and "Other Waters." Wetlands have been defined for regulatory purposes as follows: "Those 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 for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Other Waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4). Field surveys included the preliminary investigation of these features.

Field Surveys

On June 30th, July 1st, July 6th and August 15th, 2005, biological resource surveys were conducted using east west transects spaced 50 meters apart to cover the prescribed BSA. Shirley Innecken and Mary Baily, botanists, and Jody Gallaway biologist, conducted the field surveys to determine the presence of sensitive biological resources within the project area and to determine if these resources would be impacted by the proposed project. Botanical surveys were conducted in accordance with Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000a).

Foothill Associates conducted a biological assessment on August 13th, 1999 to identify whether or not habitat for special-status species occurs onsite. Foothill Associates also conducted protocol-level California red-legged frog surveys on October 16th and 29th of 2001 to determine the presence or absence of this federal threatened species and state species of concern.

Habitat Characterization

By incorporating collected field data and interpreting aerial photos, we characterized habitat within the BSA using a classification system based on Mayer and Laudenslayer (1988). Mapping was performed to identify the habitats potentially impacted by future development and to more accurately assess impact significance level, mitigation effectiveness, and habitat value.

III. Results

Environmental Setting

The BSA is located in Grass Valley, California in the northern high Sierra Nevada mountain range. Topography is characterized by chaparral and pine woodland, grassland, and urbanized and disturbed areas with elevations ranging from approximately 2,200 to 2,600 ft above sea level. Vegetation communities occurring onsite include ponderosa pine forest, montane hardwood-conifer forest, montane chaparral, and annual grassland. The site is bordered by urban and commercial expansion, a gravel mine, State Highway 49, and open space.

Special-status Species

No federal or state endangered, threatened or sensitive wildlife or plant species were observed within the BSA. Several other special-status species are known to occur within a 5-mile radius of the BSA in similar habitats as well, which constitutes a high potential for occurrence within the BSA (**Figure 2**). In addition, suitable nesting and foraging habitat for raptors occurs onsite. A summary of special-status species known to occur, or with the potential of occurring in the BSA, that could potentially be affected by project activities is presented in **Table 1**.

Special-status species known or expected to occur in the BSA:

Oak Titmouse
Status: Federal Species of Local Concern

The oak titmouse has a high potential to occur within the BSA. Oak titmouse prefer open woodlands of oak and pine and oak and sometimes forage and breed in riparian areas, and venture into residential areas.

Species of local concern refers to certain species that the USFWS Sacramento office believe may need management actions depending on the severity of eminent threats and/or declines in population health (USFWS 2005). They are afforded no legal protection and may or may not be listed as threatened or endangered in the future. It is prudent to avoid impacts to these species in case they are listed prior to the completion of the project.

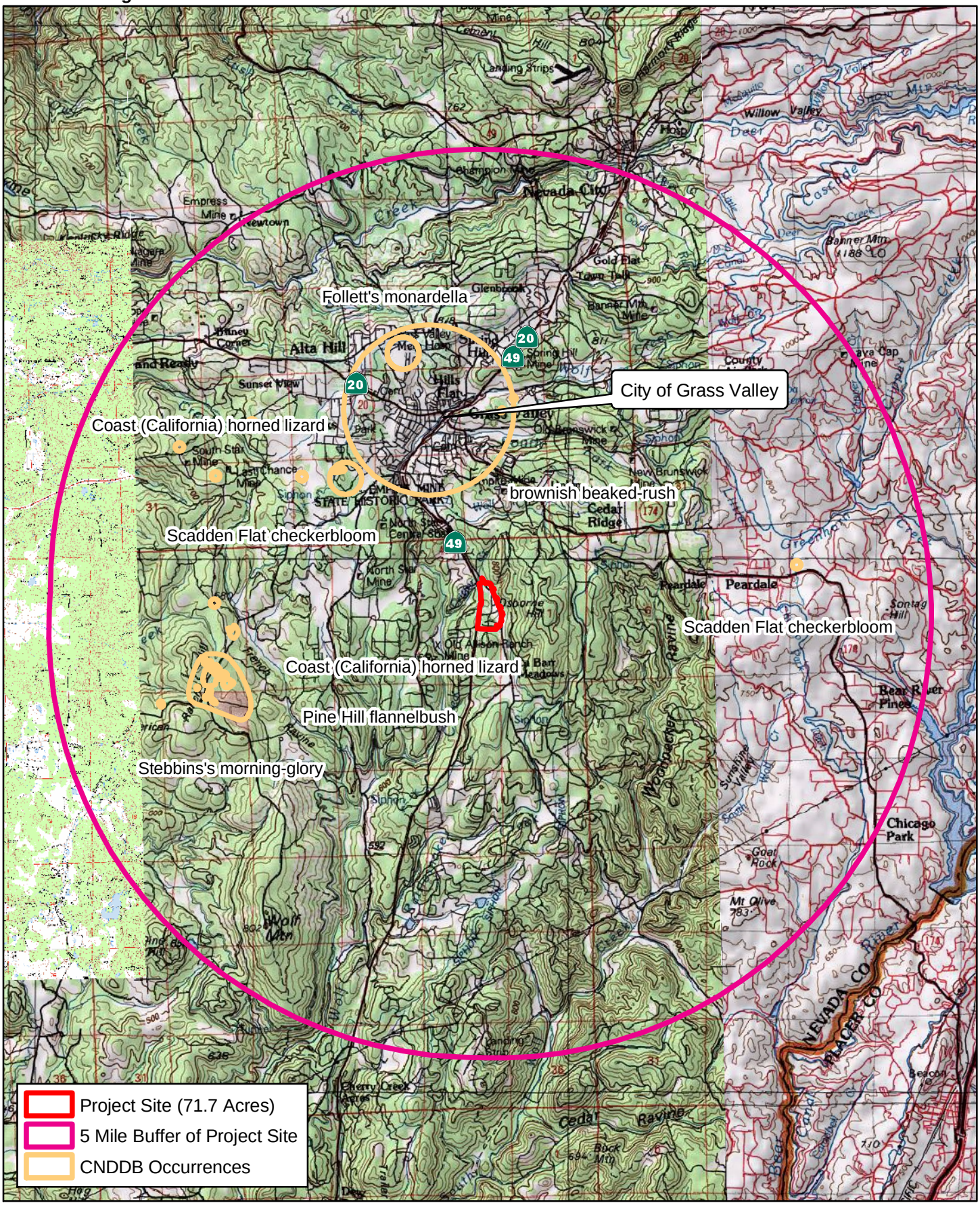
Lawrence's Goldfinch
Status: Federal Species of Concern

Lawrence's goldfinch is present in the Central Valley mostly from April through September. They breed in open oak or other arid woodland and chaparral, near water, and rarely along the immediate coast. Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Lawrence's goldfinch uses nearby herbaceous habitats for feeding and winter erratically in southern coastal lowlands and in the Colorado River Valley.

Lewis' Woodpecker
Status: Federal Species of Concern

Lewis' woodpecker is an uncommon, local winter resident occurring in open oak savannahs, deciduous and coniferous habitats. It is found along eastern slopes of the Coast Ranges south to San Luis Obispo Co. and also winters in the Central Valley, Modoc Plateau, and the Transverse and other Ranges in southern California. Lewis' woodpecker breeds locally along eastern slopes of the Coast Ranges, and in the Sierra Nevada, Warner Mts., Klamath Mts., and in the Cascade Range

Southhill Village ***CNDDB Occurrences***



Within Section 1 & 2
T15N, R8E Nevada County, CA.
Grass Valley USGS 7.5" Quad.
Project Site provided by SJO Engineering
Map Date: Jan. 23, 2006.

0 1 2 Miles

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Figure 2.

Table 1. Special-status species that occur, or may occur within the BSA

COMMON NAME *(Scientific Name)*	STATUS Fed / St/ CNPS	ASSOCIATED HABITATS	POTENTIAL FOR OCCURRENCE
PLANTS			
STEBBINS'S MORNING-GLORY (*Calystegia stebbinsii*)	FE, SE, CNPS 1B	Chaparral, cismontane woodland	High; optimal habitat present onsite; protocol-level surveys recommended April – June
PINE HILL FLANNELBUSH (*Fremontodendron decumbens*)	FE, SR CNPS 1B	Lower ontane coniferous forest	Low; was not observed during protocol-level surveys.
FOLLETT'S MONARDELLA (*Monardella follettii*)	SLC, CNPS 1B	Lower ontane coniferous forest	Low; was not observed during protocol-level surveys.
CEDAR CREST ALLOCARYA (*Plagiobothrys glyptocarpus var modestus*)	FSC	Cismontane woodland, valley and foothill grassland (mesic)	High; optimal habitat present onsite; protocol-level surveys recommended April – June
BROWNISH BEAKED-RUSH (*Rhynchospora capitellata*)	CNPS 2	Lower ontane coniferous forest, meadows and seeps, marshes and swamps, upper ontane coniferous forest	Low; was not observed during protocol-level surveys.
SCADDEN FLAT CHECKERBLOOM (*Sidalcea stipularis*)	SE, CNPS 1B	Marshes and swamps	Low; was not observed during protocol-level surveys.
MAMMALS			
LONG-EARED MYOTIS BAT (*Myotis evotis*)	FSC	Roosts in hollow trees under loose bark, abandoned houses, caves, and mines. Prefers coniferous habitats.	Moderate; suitable habitat occurs onsite
FRINGED MYOTIS BAT (*Myotis thysanodes*)	FSC	Roosts in caves, mines, buildings, and crevices; forages over open habitats; prefers wooded habitats above 3500 ft.	Low; sub-marginal habitat occurs onsite; BSA occurs *below* 3,500 ft.
LONG-LEGGED MYOTIS BAT (*Myotis volans*)	FSC	Roosts in rock crevices, buildings, under tree bark, in snags, mines and caves; prefer wooded, higher-elevation, ontane habitats.	Moderate; suitable habitat occurs onsite
YUMA MYOTIS BAT (*Myotis yumanensis*)	FSC	Woodland and forested areas, large buildings and abandoned mine tunnels within one-half mile of a surface water source; abandoned swallow nests under bridges.	Low; sub-marginal habitat occurs onsite
BIRDS			
OAK TITMOUSE (*Baeolophus inornatus*)	SLC	Open mixed hardwood and mixed hardwood conifer woodlands. Will forage and breed in riparian areas.	High; optimal habitat occurs onsite
LAWRENCE'S GOLDFINCH (*Carduelis lawrencei*)	FSC	Open woodland or shrubland with a nearby source of water.	High; optimal habitat occurs onsite

COMMON NAME *(Scientific Name)*	STATUS Fed / St/ CNPS	ASSOCIATED HABITATS	POTENTIAL FOR OCCURRENCE
VAUX'S SWIFT (*Chaetura vauxi*)	FSC, CSC	Nest-site in a large, hollow tree. Forages over most terrains and habitats, often high in the air. Shows an apparent preference for foraging over rivers and lakes.	Low; sub-marginal habitat occurs onsite
LEWIS' WOODPECKER (*Melanerpes lewis*)	FSC	Open, deciduous and conifer habitats with brushy understory, and scattered snags for nesting.	High; optimal habitat occurs onsite
WHITE HEADED WOODPECKER (*Picoides albolarvatus*)	FSC	Common, yearlong resident of ontane coniferous forests up to lodgepole pine and red fir habitats; forages on live, mature conifers with deeply creviced and scaly bark; nest and roosts in cavities where trees provide cover. Prefers semi-open areas with large, mature trees.	High; optimal habitat occurs onsite
RUFOUS HUMMINGBIRD (*Selasphorus rufus*)	FSC	Uses riparian areas, open woodlands, chaparral, mountain meadows, and other habitats rich in nectar-producing flowers, including gardens and orchards.	Low; sub-marginal winter migration habitat occurs onsite
COOPER'S HAWK (*Accipiter cooperii*)	CSC	Frequents landscapes where wooded areas occur in patches and groves. Often uses patchy woodlands and edges with snags for perching. Dense stands with moderate crown-depths used for nesting	High; optimal habitat occurs onsite
REPTILES & AMPHIBIANS			
CALIFORNIA HORNED LIZARD (*Phrynosoma coronatum frontale*)	FSC, CSC	Inhabits open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats.	Moderate; suitable habitat occurs onsite
CALIFORNIA RED-LEGGED FROG (*Rana aurora draytonii)*	FT, CSC	Found primarily in wetlands and streams in coastal drainages of central California, use a variety of other habitat types including riparian and upland areas, adults often utilize dense, shrubby or emergent vegetation closely associated with deep-water pools with fringes of cattails and dense stands of overhanging vegetation such as willows.	Moderate; suitable habitat occurs onsite

Sources:

- CNDDB, California Department of Fish & Game, November 2003.
- *Restoring Central Valley Streams: A Plan for Action*, California Department of Fish & Game, 1993.
- California Native Plant Society (CNPS). 2003. Inventory of Rare and Endangered Plants (online edition). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. CNPS. Sacramento, CA.
- California Department of Fish & Game (CDFG) website.
- US Fish and Wildlife Service, Sacramento Office website.
- NMFS (NOAA) website.
- California Partners in Flight, Point Reyes Bird Observatory, website.
- Grinnell and Miller, 1944
- California Wildlife Habitat Relationships System - Updates from Zeiner, DC, WF Laudenslayer Jr., KE Mayer, and M White, eds. 1988 – 1990

CODE DESIGNATIONS
FE = Federally-listed Endangered
FT = Federally-listed Threatened
FPT = Federally Proposed Threatened
FPD = Federally Proposed Delisted
FC = Federal Candidate Species
FSC = Federal Species of Concern
SLC = Species of Local Concern
FD = Federal Delisted
SE = State-listed Endangered
ST = State-listed Threatened
SPT = State Proposed Threatened
CSC = California Species of Concern
CNPS 1B = Rare or Endangered in California and Elsewhere
CNPS 1A = Plants presumed extinct in California
CNPS List 2 = Rare, threatened, or endangered in California, but more common elsewhere.

White Headed Woodpecker
Status: Federal Species of Concern

The white-headed woodpecker is a common, yearlong resident of montane coniferous forests up to lodgepole pine and red fir habitats. It occurs in the Sierra Nevada, Cascade, Klamath, Transverse, and Peninsular Ranges and the Warner Mountains. White headed woodpeckers feed in sparse, upper and middle foliage layers of conifers. They also forages on snags, pine and fir cones, and terminal needle clusters. They prefer semi-open areas with large, mature trees, providing 40-70% canopy.

Raptors

Raptors in the orders Falconiformes (hawks, eagles, and falcons) and Strigiforms (owls) are protected in varying degrees under California Fish and Game Code, Section 3503.5, the Migratory Bird Treaty Act as well as state and federal ESA and CEQA for certain species. The BSA contains suitable nesting and foraging habitat for Cooper's hawks.

Stebbin's Morning-Glory
Status: Federal and State Endangered, CNPS 1B

Stebbin's morning-glory is a climbing vine in the Convolvulaceae family. According to CNPS (2005), it is known from fewer than fifteen occurrences and is threatened by development, vehicles, road maintenance, and alteration of fire regimes. Protocol-level surveys for Stebbin's morning-glory are recommended to positively determine its presence or absence.

Cedar Crest Allocarya
Status: Federal Species of Concern

The Cedar Crest allocarya is a strigose annual in the family Boraginaceae. It inhabits moist places, grasslands and woodlands below 1,968 ft (Hickman et al, 1993). It is known to occur in

the northern Sierra Nevada foothills near Grass Valley. According to the Jepson Manual (1993), Cedar Crest allocarya may be a minor variant or hybrid of *Plagiobothrys glyptocarpus* var. *glyptocarpus*.

California Red-Legged Frog
Status: Federal Threatened and State Species of Concern

The California red-legged frog is the largest native frog in the western United States. It is one of two subspecies of the red-legged frog found on the Pacific coast; the other is the northern red-legged frog *Rana aurora aurora*. The California red-legged frog once ranged across much of California, including portions of the Sierra Nevada Mountain Range (California Red-legged Frog, 2001).

Protocol-level surveys were conducted for red-legged frogs by Foothill Associates on October 16th and October 19th of 200l. There were no positive sightings for the red-legged frog. See **Appendix B** for Foothill Associates survey results.

Waters of the United States, Including Wetlands

There are a total of 3.8 acres of *verified* jurisdictional features within the survey area including six (6) seasonal wetlands and 0.2 acres of Other Waters of the U.S, which were delineated by Foothill Associates. One of the seasonal wetlands is not included within the revised (current) project boundary. Furthermore, Gallaway Consulting, Inc. has identified "potential wetland" areas that should be formally surveyed, and which may result in an amendment to the original Foothill Associates delineation (**Figure 3**).

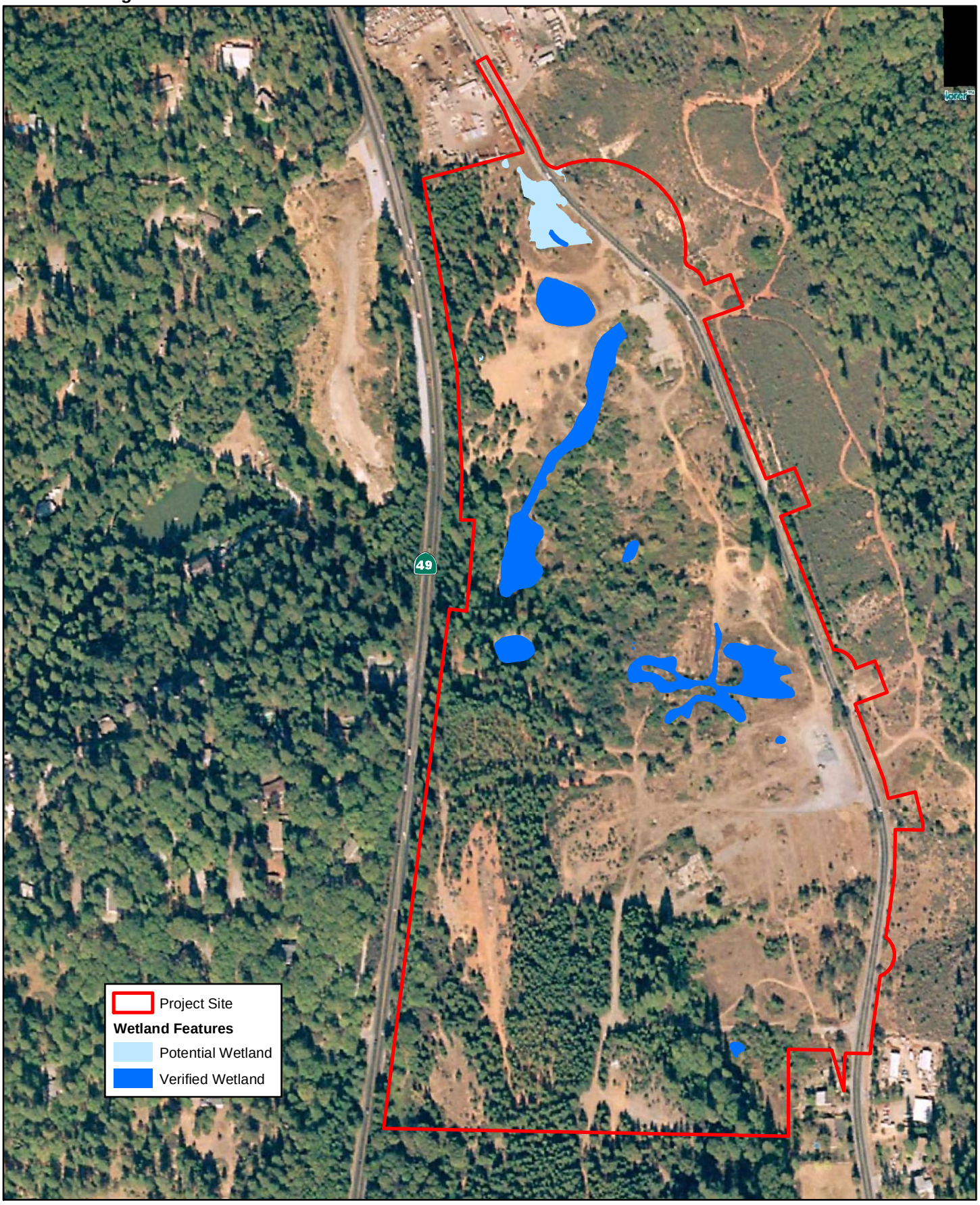
Habitat Characterization

We mapped the extent of all habitat types and other biological resources including waters of the United States that may be impacted by the proposed project using a classification system based on Mayer and Laudenslayer's (1988) (**Figure 4**).

The following habitat types and potential wetland resources occur within the BSA:

Sierran Mixed Conifer

Sierran mixed conifer forest is described by Mayer and Laudenslayer (1988) as an assemblage of conifer and hardwood species that forms a multilayered forest. The forest is typified by white fire, Douglas fir, ponderosa pine, sugar pine, incense cedar, and California black oak (Mayer and Laudenslayer 1988). Common shrubs include deerbrush, manzanita, chinquapin, tan oak, bitter cherry, squawcarpet, mountain whitethorn, gooseberry, rose and mountain misery (Kosco and Bartolome 1983). Montane meadows and riparian deciduous forest are found within Sierran mixed conifer forest (Mayer and Laudenslayer 1988). This habitat type provides food, cover, and forage resources for wildlife (Mayer and Laudenslayer 1988). There are approximately 14.532-acres of Sierran mixed conifer forest within the BSA.



The information contained in this figure shall be considered preliminary until written verification by the USACE.
Surveyed by SI on Jul. 6, 2005
Date of Aerial: March, 2005
Map Date: Jan. 23, 2006

0 200 400 Feet

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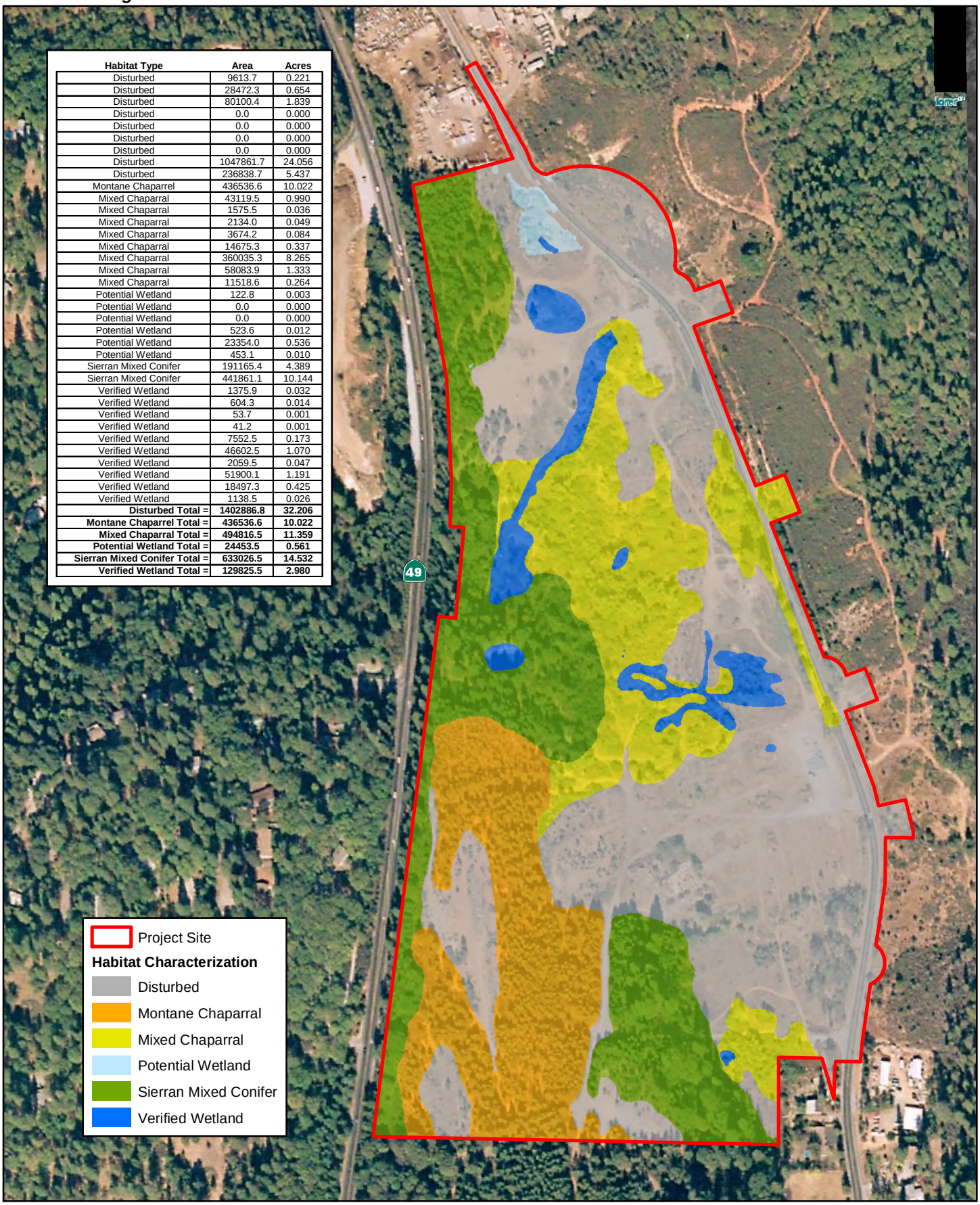
Figure 3.

Habitat Type	Area	Acres
Disturbed	9613.7	0.221
Disturbed	28472.3	0.654
Disturbed	80100.4	1.839
Disturbed	0.0	0.000
Disturbed	0.0	0.000
Disturbed	0.0	0.000
Disturbed	0.0	0.000
Disturbed	1047861.7	24.056
Disturbed	236838.7	5.437
Montane Chaparrel	436536.6	10.022
Mixed Chaparral	43119.5	0.990
Mixed Chaparral	1575.5	0.036
Mixed Chaparral	2134.0	0.049
Mixed Chaparral	3674.2	0.084
Mixed Chaparral	14675.3	0.337
Mixed Chaparral	360035.3	8.265
Mixed Chaparral	58083.9	1.333
Mixed Chaparral	11518.6	0.264
Potential Wetland	122.8	0.003
Potential Wetland	0.0	0.000
Potential Wetland	0.0	0.000
Potential Wetland	523.6	0.012
Potential Wetland	23354.0	0.536
Potential Wetland	453.1	0.010
Sierran Mixed Conifer	191165.4	4.389
Sierran Mixed Conifer	441861.1	10.144
Verified Wetland	1375.9	0.032
Verified Wetland	604.3	0.014
Verified Wetland	53.7	0.001
Verified Wetland	41.2	0.001
Verified Wetland	7552.5	0.173
Verified Wetland	46602.5	1.070
Verified Wetland	2059.5	0.047
Verified Wetland	51900.1	1.191
Verified Wetland	18497.3	0.425
Verified Wetland	1138.5	0.026
Disturbed Total =	**1402886.8**	**32.206**
Montane Chaparrel Total =	**436536.6**	**10.022**
Mixed Chaparral Total =	**494816.5**	**11.359**
Potential Wetland Total =	**24453.5**	**0.561**
Sierran Mixed Conifer Total =	**633026.5**	**14.532**
Verified Wetland Total =	**129825.5**	**2.980**



Habitats based on CWHR
Habitat Classification Scheme.
Map Date: Jan. 23, 2006.

0 200 400 Feet

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Figure 4.

Montane Chaparral

Montane chaparral is described by Mayer and Laudenslayer (1988) as often impenetrable to large mammals. Its structure is affected by site quality, history of disturbance and the influence of browsing animals. Montane chaparral is characterized by evergreen species; however, deciduous or partially deciduous species may also be present. Understory vegetation in the mature chaparral is largely absent. Conifer and oak trees may occur in sparse stands or as scattered individuals. Species composition changes with elevational and geographical range, soil type, and aspect. One or more of the following species usually characterize montane chaparral communities: whitethorn ceanothus, snowbrush ceanothus, Greenleaf manzanita, pinemat manzanita, hoary manzanita, bitter cherry, huckleberry oak, sierra chinkapin, juneberry, Fremont silktassel, Greene goldenweed, mountain mahogany, toyon, sumac and California buckthorn. There are approximately 10.022-acres of montane chaparral within the BSA.

Disturbed Annual Grassland

According to Mayer and Laudenslayer (1988), introduced annual grasses are the dominant plant species in this habitat. These include wild oats, soft chess, ripgut brome, red brome, wild barley, andfoxtail fescue. Common forbs include broadleaf filaree, redstem filaree, turkey mullein, true clovers, bur clover, popcorn flower, and many others. Perennial grasses, found in moist, lightly grazed, or relic prairie areas, include purple needlegrass and Idaho fescue. Many wildlife species use Annual Grasslands for foraging,but some require special habitat features such as cliffs, caves, ponds, or habitats withwoody plants for breeding, resting, and escape cover. Annual grassland occurs in openings within the chaparral and coniferous forests, and in clear cut areas within the BSA. Much of this habitat is severely scarred with dirt bike and four-wheel-drive vehicle trails, roads and jumps.

IV. Potential Impacts and Mitigation

Raptors

Raptors in the orders Falconiformes (hawks, eagles, and falcons) and Strigiforms (owls) are protected in varying degrees under California Fish and Game Code, Section 3503.5, the Migratory Bird Treaty Act, and CEQA. The BSA currently provides optimal nesting and foraging habitat for several of these species and the proposed action has the potential of significantly impacting nesting raptors. Direct take of active nests, eggs, or birds is prohibited by CDFG and measures must be taken to minimize disturbance. Therefore, a qualified wildlife biologist should conduct a pre-construction raptor survey during April-May, or no more than 30 days prior to construction activities, to determine the presence/absence of nesting raptors in the BSA. Should nesting raptors be observed, appropriate spatial and temporal buffers will be required by CDFG. In addition, larger trees (i.e., $\geq$12" dbh) to be removed should be removed between September 1 and March 1 to ensure that active raptor nests are not removed as a result of construction related activities.

All vegetation (i.e., trees, shrubs) that will need to be removed for construction shall be cut down between September 1 and March 1 (outside the nesting season for the species listed above with potential to occur on the site) to ensure that active nests are not removed as a result of the project. To avoid potential erosion impacts, vegetation removal should be limited to cutting of shrubs and trees at ground level to maintain the root system. Once the rainy season has passed, the root systems can be removed. If all vegetation removal associated with construction activities is completed between September 1 and March 1, no pre-construction surveys or additional mitigation is required.

If vegetation removal cannot be accomplished between the months of September and March, the project proponent shall retain a qualified biologist to:

- Conduct a survey for the nesting bird species listed above prior to any construction activity. Active nests located within 500 feet of construction activities shall be mapped.
- If active nests are located in, or within 500 feet of, construction activities, appropriate buffer zones shall be established in consultation with CDFG. Construction activities shall be prohibited within the buffer zone until the end of the nesting season (late July to early August), or until the young have fledged. The qualified biologist shall monitor the nest to determine when the young have fledged and submit weekly reports to CDFG throughout the nesting season.
- If necessary, identified nest trees may only be removed prior to the onset of the nesting season (March) or after the young have fledged (late July to early August).

Migratory Corridors

Prior to any construction, the BSA, which occurs within the City Planning Area, will be annexed into the City and will, therefore, be subject to the City's jurisdictional guidelines as outlined in the City of Grass Valley General Plan. The plan states that "according to the CDFG Regional Wildlife Manager, Jeff Finn, deer are not a significant issue to the City. However, the Downieville/Nevada City Deer Herd does migrate from higher elevations in the Sierra Nevada to just north of the City. The Planning Area does not contain any designated Critical Winter Range for the Downieville/Nevada City Deer Herd." Therefore, because the BSA occurs within the City Planning Area, outside of the critical wintering range, and is located south of the SR 49/SR 20 intersection; California mule deer, their habitat and migration passages, should not be impacted by this project.

Trees

The project may impact trees within the survey area. The County of Nevada zoning regulations require a Biological Inventory and Management Plan for projects that will require the removal of

trees and/or will impact timber resources. Important Timber Resources are defined as being contained on parcels 40 acres or larger, mapped within the Forest designation, and that have ideal soil characteristics for timber production.

Waters of the U.S. Including Wetlands and Other Waters of the U.S.

There are a total of 3.8 acres of *verified* jurisdictional features within the survey area including six (6) seasonal wetlands and 0.2 acres of Other Waters of the U.S which were delineated by Foothill Associates. One of the seasonal wetlands is not included within the revised (current) project boundary. Gallaway Consulting, Inc. has identified an additional area that should be surveyed for wetlands and may result in an amendment to the original Foothill Associates delineation.

Before construction occurs that will impact Waters of the U.S., including wetlands and Other Waters, the project proponent will be required to notify CDFG regarding construction within waters under their jurisdiction and obtain a water quality certification from the Regional Water Quality Board (Clean Water Act, Section 401); both of these requirements are contingent upon successfully completing the CEQA process. A permit from COE (Clean Water Act, Section 404), and final approval by CDFG will also be required.

V. Regulatory Framework

The following laws and regulations were identified as possible constraints to development within the BSA based on the identified resources:

Federal Endangered Species Act

The USFWS and National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) (formerly the National Marine Fisheries Service or NMFS) have jurisdiction over species listed as threatened or endangered under Section 9 of the federal ESA. The ESA protects listed species from harm, or take, which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct," Under section 7 of the ESA, a federal agency must consult with the USFWS and NOAA Fisheries if the agency's action may affect a threatened or endangered species and/or its critical habitat under the authority of each agency.

California Endangered Species Act

The California Department of Fish and Game has jurisdiction over species listed as threatened or endangered under Section 2080 of the California Fish and Game Code. Section 2080 prohibits the take of a species listed by CDFG as threatened or endangered. The state definition of take is similar to the federal definition, except that Section 2080 does not prohibit indirect harm to listed species by way of habitat modification. To qualify as take under the state ESA, an action must have direct, demonstrable detrimental effect on individuals of the species. Impacts on habitat that

may ultimately result in effects on individuals are not considered take under the state ESA but can be considered take under the federal ESA.

Proponents of a project affecting a state-listed species must consult with CDFG and enter into a management agreement and take permit under Section 2081. The state ESA consultation process is similar to the federal process. California ESA does not require preparation of a state biological assessment; the federal biological assessment and the CEQA analysis or any other relevant information can provide the basis for consultation. California ESA requires that CDFG coordinate consultation for joint federally listed and state-listed species to the extent possible;

generally, the state opinion for the listed species is brief and references provisions under the federal opinion.

Clean Water Act, Section 404

The COE and the U.S. Environmental Protection Agency regulate the placement of dredged or fill material into "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the United States include lakes, rivers, streams, and their tributaries, and wetlands. Wetlands are defined for regulatory purposes as "areas 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 for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3).

The COE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits (NWP's) are general permits issued to cover particular fill activities. All NWP's have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each NWP.

Clean Water Act, Section 401

Section 401 of the Clean Water Act requires water quality certification and authorization of placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with Section 401 of the Clean Water Act, criteria for allowable discharges into

surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollution Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Central Valley Regional Water Quality Control Board (CVRWQCB). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the CVRWQCB. The CVRWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Fish and Game Code, Sections 1601-1607

Under the California Fish and Game Code, Sections1601-1607, CDFG regulates projects that divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Proponents of such projects must notify CDFG and enter into streambed alteration agreement with them.

Section 1601 of the California Fish and Game Code requires a state or local governmental agency or public utility to notify CDFG before it begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Once the notification is filed and determined to be complete, CDFG issues a streambed alteration agreement that contains conditions for construction and operations of the proposed project.

California Fish and Game Code, Section 3503.5

Under the California Fish and Game Code, Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes (hawks, eagles, and flacons) or Strigiformes (owls). Take would include the disturbance of an active nest resulting in the abandonment or loss of young.

Migratory Bird Treaty Act

The MBTA (16 United States Code [USC] 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorized the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. The MBTA sets seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 CFR 21, 50 CFR 10).

County of Nevada

The project will require complete compliance with CEQA and NEPA. The lead agency will conduct an environmental review, which will include a review of all studies conducted in compliance with CEQA and NEPA, and the creation and adoption of appropriate mitigation measures. The applicant will be required to conform with County of Nevada regulations protecting sensitive biological resources. Other discretionary permits issued by the County may include a grading permit.

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Appendix A

USFWS and CNDDB Special-status Species Lists for the Southhill Village Subdivsion BSA

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait
Grass Valley Quad

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
1	Calystegia stebbinsii Stebbins's morning-glory	PDCON040H0	Endangered	Endangered	G1	S1.1	1B/3-3-3
2	Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1.2	1B/3-2-3
3	Monardella follettii Follett's monardella	PDLAM180W0			G1	S1.2	1B/3-2-3
4	Phrynosoma coronatum (frontale) Coast (California) horned lizard	ARACF12022			G4T3T4	S3S4	SC
5	Rhynchospora capitellata brownish beaked-rush	PMCYP0N080			G5	S2S3	2/2-2-1
6	Sidalcea stipularis Scadden Flat checkerbloom	PDMAL110R0		Endangered	G1	S1.1	1B/3-3-3

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Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
GRASS VALLEY (542A)
U.S.G.S. 7 1/2 Minute Quad

Database Last Updated: December 23, 2005

Document Number: 060120091945

Listed Species

Invertebrates

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Rana aurora draytonii - California red-legged frog (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Plants

Calystegia stebbinsii - Stebbins's morning-glory (E)

Fremontodendron californicum ssp. decumbens - Pine Hill flannelbush (E)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Species of Concern

Invertebrates

Goeracea oregona - Sagehen Creek goracean caddisfly (SC)

Fish

Pogonichthys macrolepidotus - Sacramento splittail (SC)

Spirinchus thaleichthys - longfin smelt (SC)

Amphibians

Rana boylii - foothill yellow-legged frog (SC)

Spea hammondii (was Scaphiopus h.) - western spadefoot toad (SC)

Reptiles

Clemmys marmorata marmorata - northwestern pond turtle (SC)

Phrynosoma coronatum frontale - California horned lizard (SC)

Birds

Agelaius tricolor - tricolored blackbird (SC)

Baeolophus inornatus - oak titmouse (SLC)

Carduelis lawrencei - Lawrence's goldfinch (SC)

Chaetura vauxi - Vaux's swift (SC)

Cinclus mexicanus - American dipper (SLC)

Cypseloides niger - black swift (SC)

Empidonax traillii brewsteri - little willow flycatcher (CA)

Falco peregrinus anatum - American peregrine falcon (D)

Lanius ludovicianus - loggerhead shrike (SC)

Melanerpes lewis - Lewis' woodpecker (SC)

Numenius americanus - long-billed curlew (SC)

Otus flammeolus - flammulated owl (SC)

Picoides albolarvatus - white-headed woodpecker (SC)

Riparia riparia - bank swallow (CA)

Selasphorus rufus - rufous hummingbird (SC)

Toxostoma redivivum - California thrasher (SC)

Mammals

Euderma maculatum - spotted bat (SC)

Eumops perotis californicus - greater western mastiff-bat (SC)

Myotis ciliolabrum - small-footed myotis bat (SC)

Myotis evotis - long-eared myotis bat (SC)

Myotis thysanodes - fringed myotis bat (SC)

Myotis volans - long-legged myotis bat (SC)

Myotis yumanensis - Yuma myotis bat (SC)

Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Monardella follettii - Follett's monardella (SLC)

Plagiobothrys glyptocarpus var. modestus - Cedar Crest allocarya (SC)

Sidalcea stipularis - Scadden Flat checkermallow (=checkerbloom) (CA)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or

threatened.
- (NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
- *Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (CA) Listed by the State of California but not by the Fish & Wildlife Service.
- (D) *Delisted* - Species will be monitored for 5 years.
- (SC) *Species of Concern*/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game Wildlife and Habitat Data Analysis Branch for official information about these species.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compen-sates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our critical habitat page for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be

able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. In this case, that would be April 20, 2006.

Appendix B

Results of Foothill Associates Surveys for
the Bear River Mill Site

October 23, 2002

Ann Bowers
U.S. Fish and Wildlife Service
2800 Cottage Way, W2605
Sacramento, CA 95825-1846

Subject: Results of a Habitat Assessment for California Red-Legged Frog for the South Hills Site, Nevada County

Dear Ann:

The following letter report describes the findings of a California red-legged frog (CRLF) habitat assessment conducted for the South Hills site in Nevada County. As part of this assessment we also are requesting Service input as to the likelihood of extant populations of CRLF existing in the area. This letter provides the information required in the 1997 USFWS Guidance on Site Assessment for CRLF, which includes:

- An assessment determining if the project area is within range of the species;
- An analysis of whether or not there are known CRLF occurrences within 5 miles of the project area; and,
- An assessment of habitats within the project area and within a one mile radius of the project area.

Survey Area Description and Location

The site is located immediately south of Grass Valley, adjacent to La Barr Meadows Road and east of Highway 49 on the USGS 7.5-minute series Grass Valley quadrangle (Figure 1). The site is composed of two parcels that are on the east and west sides of La Barr Meadows Road. The eastern portion of the site is bordered by La Barr Meadows Road, a gravel pit to the north, and coniferous forest to the east and south. The western portion of the site is bordered by La Barr Meadows Road on the east, coniferous forest to the north and south, and Highway 49 to the west. The estimated elevation of the project area ranges from 2,000 to 2,400 feet above mean sea level (MSL).

Portions of the site have been mined in the past and much of the western portion of the site has been significantly modified for use as a sawmill. A comparison of topography data from 1901, 1949, and 1995 shows significant changes in site hydrology and topography (oversize map, attached). Historically, an intermittent drainage flowed through the site from the western side out the southeast boundary. Three ponds were excavated on the site, along with the construction of several dirt roads. Site elevations were altered in many areas. Many areas of the lower elevations of the site have large concrete slabs and old building foundations, gravel and asphalt

pads, and rubble. Vegetation types on the project site include chaparral, mixed conifer forest, willow scrub, ruderal habitat, and wetlands. Wetlands are shown on Figure 2.

Methods

Available information pertaining to the natural resources of the region was reviewed, including the CNDDB (Grass Valley quadrangle), USFWS Protocol Survey for California Red-Legged Frog (1997).

The study area was assessed on October 16, 2001, 9AM and 1PM, and October 29, 2001, between the hours of 3PM to 5PM. The project area and one mile from project boundaries were assessed for aquatic habitats suitable for CRLF. Both upland and aquatic habitats were noted. Aquatic habitats within one mile, where accessible, were identified and characterized.

The assessment included walking the entire project site, with special attention paid to areas that were considered wetland habitat. When the surveyor reached an aquatic habitat that was inundated, the habitat was approached slowly and the shore and water scanned for presence of amphibians through binoculars and the naked eye. Any sightings or calls of amphibians and other aquatic wildlife were noted. Where aquatic habitats were dry, the bottoms of the wetland were walked to look for any signs of amphibians (when inundated areas dry out near the end of the summer, stranded or dead tadpoles or juveniles can sometimes be found). Any evidence of crayfish or fish would be noted as well. Off-site aquatic habitats were identified by looking for wetlands marked on the quadrangle and/or hydrology maps for the area or topographic indications of potential water flow. Off-site aquatic habitats were checked in the same manner, where accessible. Many aquatic habitats within one mile of the project site were on private property and were not accessible. Photographs of upland and aquatic habitats on-site and accessible off-site are attached.

Results

RLF records

There are no CNDDB records for CRLF within 10 miles of the study area (Figure 3). The Draft Recovery Plan for RLF states that currently, only a few drainages in the foothills of the Sierra Nevada are known to support CRLF. CRLF historically occurred in the lower elevations of Nevada County. Records of extant populations of CRLF occur in Weber Reservoir, near Placerville, El Dorado County, and on Indian Creek, near the town of Woodleaf, Butte County. Another unverified 1998 record occurs on Forest Service land in Sierra County at approximately 5,200 feet. As per our conversation, there are two additional recent records for RLF in Yuba County and Placer counties. My understanding is that the Yuba County record occurs near the Bullard's Bar reservoir. Figure 4 shows the project site in relation to known extant RLF records in Yuba, Nevada, and El Dorado counties. The drainages on the site flow into Wolf Creek watershed, which is part of the Upper Bear River watershed. There are no current records for RLF in this watershed.

Aquatic habitat

Aquatic habitats within the project area include approximately 0.89 acres of pond, 0.04 seasonal wetland, 1.71 acres of seasonal marsh, and 0.18 acres of intermittent drainage (Figure 5). There are three ponds on the site, two to the west of La Barr Meadows Road and one to the east. These ponds are labeled Pond 1 through 3 on Figure 2.

Pond 1 and 2 were inundated at the time of the assessment. Pond 1 is a deep, man-made industrial pond. Cattail was the dominant emergent plant. Trees were restricted to the upper edges of the excavated basin. Pond 2 was the largest pond and is also artificial. Cattails and willows occur along the edges of this pond. Bullfrogs were heard calling and observed sitting on the edge of both ponds. Run-down dock facilities are present on Pond 2. These ponds may have been stocked for fishing in the past. Pond 3 is shallower than the other two ponds and was dry at the time the assessment was conducted. Several dead juvenile bullfrogs were observed in Pond 3.

All other drainages, seasonal marsh, and seasonal wetlands on the site were dry during the assessment. On-site drainages are mostly steep, narrow gullies that appear to carry storm-water run-off from upland areas. The areas mapped as seasonal wetland varied from blackberry (*Rubus discolor*)/California rose (*Rosa californica*) dominated areas to willow scrub. Seasonal marsh was dominated by herbaceous species such as bog rush (*Juncus effusus*), iris-leafed rush (*Juncus* sp.), and nutsedge (*Cyperus* sp.). No amphibians were observed in these habitats during the assessment.

Aquatic habitats within one mile of the project site include perennial and intermittent drainages, Wolf Creek, and a large reservoir. The off-site drainage immediately north of the site was accessible and a portion of the drainage was walked (see Figure 4). That portion of the drainage occurred in a highly disturbed area and adjacent land had been leveled and asphalted. The drainage was approximately 1.5 foot wide and was shallowly inundated (approx. 6 inches to 1 foot deep) at the time of the survey. The water was stagnant in the portion viewed and had a heavy growth of algae. Other aquatic habitats in the area were on private property or accessed by private roads and were not viewed. No amphibians were observed in these habitats.

Upland habitat

Mixed coniferous forest is the predominant habitat type found on the project site. Native trees and shrubs, including black oak (*Quercus kelloggii*), ponderosa pine (*Pinus ponderosa*), madrone (*Arbutus menziesii*), coffeeberry (*Rhamnus californica*), ceanothus (*Ceanothus* sp.), scotch broom (*Cytisus scoparius*), and manzanita (*Arctostaphylos* sp.), comprise the tree and shrub canopy. Herbaceous vegetation is dispersed among the understory such as St. John's wort (*Hypericum* ssp.), wild carrot (*Daucus carota*), plantain (*Plantago* sp.), and Kentucky bluegrass (*Poa pratensis*).

Ruderal vegetation is present in several areas on the project site. Vegetation is sparse in these areas and includes species such as soft chess brome (*Bromus hordeaceus*), yellow starthistle (*Centaurea solstitialis*), lotus (*Lotus* sp.), white sweetclover (*Melilotus alba*), (*Baccharis*

pilularis), curly dock (*Rumex crispus*), Kentucky bluegrass, clover (*Trifolium* sp.), and chickory (*Rafinesquia californica*).

Chaparral habitat is found in several areas on the project site. Vegetation in these areas is extremely dense, and is dominated by several shrubs such as toyon (*Heteromeles arbutifolia*), yerba santa (*Eriodictyon* sp.), scotch broom, and manzanita.

Discussion

Aquatic habitats on the project site and within one mile of the site are suitable habitat for this species. However, several factors argue against the possibility that a remnant population of RLF is present.

- There are no recent records for CRLF in Nevada County and known records for this species occur in different watersheds than Upper Bear Creek.
- The presence of bullfrogs in the ponds would make it difficult for a population of red legged frogs to survive, though these species are known to co-exist in coastal populations of RLF over 100 miles away. The combination of predatory fish and bullfrogs is particularly problematic for RLF.
- Extensive modification of site hydrology on and off-site, modification of site topography, and human use of the site. The site was used intensively in the past as a saw mill.
- The ponds are of recent construction (see attached oversize figure, USGS map history).

However, we understand the high level of concern with CRLF in the Sierra Foothills. If it is the determination that CRLF are an issue in the vicinity of this project, we would like to set up an informal meeting with Service staff to discuss this project as soon as possible.

Please contact me at (916) 782-1011 if you have any questions or comments regarding this submittal. I appreciate your assistance in this matter.

Sincerely,

Theresa Fortner Ward
Regulatory Specialist/Associate Biologist

c: Steve Dolim, Catlin Properties, Inc.
Demar Hooper, Taylor, Hooper & Wiley

FOOTHILL ASSOCIATES

ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

December 9, 2003

Ann Bowers
U.S. Fish & Wildlife Service
2800 Cottage Way, W2605
Sacramento, CA 95825-1846

Subject: **Result of Surveys for the California Red-legged Frog for the South Hill Project in Nevada County, California**

Dear Ann:

This letter report describes the results of surveys for the California red-legged frog (CRLF) conducted for the SouthHill Village project in Nevada County, California. The information provided herein is consistent with "Guidance on Site Assessment and Field Surveys for California Red-legged Frogs (*Rana aurora draytonii*)", prepared by the U.S. Fish and Wildlife Service (Service) and dated February 18, 1997.

A CRLF habitat assessment was previously conducted by Foothill Associates for this property and a letter report was submitted to the Service on October 23, 2002 (enclosed). After subsequent coordination with the Service, it was determined that focused CRLF surveys consistent with Service protocol were warranted on the subject site. The Service also requested that suitable aquatic habitats within one mile of the subject site be surveyed if property access is obtained.

As shown on Figure 4 of the enclosed habitat assessment, a pond is present within one mile of the project site, to the west, that is potentially suitable for supporting CRLF. Demar Hooper, representing the project applicant, obtained contact information for the landowner of this site, and both Mr. Hooper and I placed telephone calls to the landowner requesting property access for the purpose of conducting CRLF surveys. However, the landowner did not return these telephone calls to grant property access. Therefore, surveys were not conducted on this adjacent property.

Please see the enclosed habitat assessment for a description of the survey area description and location, and methods and results of the habitat assessment. The following describes methods and results of the focused CRLF survey on the project site, and provides conclusions regarding the likely status of this species on-site.

Methods

Focused CRLF surveys on the SouthHill Village project site were conducted four times, twice

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during the day and twice at night, with more than 24 hours between each survey. The dates and times these surveys were conducted are indicated below. These surveys were conducted by Anne Flannery of Ibis Environmental with assistance from Ellen Berryman of Foothill Associates. On October 16 and 22, David Funk (Funk Forestry) also assisted in the frog surveys.

Date	Survey Time
October 16, 2003	7:30 am to 12:00 pm
October 22, 2003	7:20 pm to 9:30 pm
October 28, 2003	7:15 am to 9:20 am
October 29, 2003	6:30 pm to 8:30 pm

Day surveys: The first day survey (October 16) consisted initially of walking the property and inspecting the wetlands to ascertain which specific areas needed to be included in the focused searches for CRLF. Aquatic CRLF habitat within the study area consists primarily of Pond 1 and Pond 2 as shown on Figure 2 of the enclosed habitat assessment. It was determined during the October 16 survey that Pond 3 was not suitable for CRLF because the pond had dried to a diameter of approximately 4 feet and was filled with over 100 bullfrog tadpoles (see enclosed photograph). The small intermittent drainages on-site are potentially suitable for summer and dispersal habitat for CRLF, but in these areas the vegetation was too dense to conduct effective walking surveys.

The day surveys were conducted on clear, sunny days (October 16 and 28). Surveyors walked slowly along the perimeters of Ponds 1 and 2, visually scanning the water and banks, using binoculars. Surveyors did not conduct dip-netting.

Evening surveys: The two evening surveys were conducted on still nights at least one hour after sunset, with temperatures ranging from 58 to 65 degrees Fahrenheit. During these evening surveys, surveyors walked slowly along the perimeters of Ponds #1 and #2. Surveyors used 6-volt lamps and binoculars to look for amphibians. Surveyors also noted any amphibian vocalizations and identified calls to species.

Results

No CRLF adults or tadpoles were observed in the survey area. The only amphibian species observed on the project site was bullfrog (*Rana catesbeina*, tadpoles and adults). Only tadpoles and no adults were observed in Pond 3, while only adults and no tadpoles were observed in Ponds 1 and 2.

October 16 day survey. Pond 1 was surveyed between 9:15 am and 9:33 am (18 minutes). No frogs of any species were seen or heard in Pond 1. Pond 2 was surveyed between 10:00 am and 11:00 am (one hour), during which twenty-five (25) bullfrogs were detected. Approximately 100 bullfrog tadpoles were observed in Pond #3, which had dried to a perimeter of only a few feet (see enclosed photograph).

October 28 day survey. Pond 1 was surveyed between 8:45 am and 9:15 am (30 minutes). Two (2) unidentified frog plops were heard and one bullfrog was heard jumping into the pond. Pond 2 was surveyed between 7:15 am and 8:30 am (one hour and 15 minutes). Twenty-six (26) bullfrogs were seen and one unidentified frog plop was heard in Pond 2.

October 22 night survey. Pond 1 was surveyed between 7:15 pm and 7:53 pm (38 minutes). Eight (8) bullfrogs were seen and two (2) unidentified frog plops were heard. Pond 2 was surveyed between 8:00 pm and 9:20 pm (one hour and 20 minutes). Seventy-seven (77) bullfrogs were identified and one unidentified frog plop was heard.

October 29 night survey. Pond 1 was surveyed between 8:00 pm and 8:30 pm (30 minutes). Ten (10) bullfrogs were detected. Pond 2 was surveyed between 6:20 pm and 7:40 pm (one hour and 20 minutes). Eighty-six (86) frogs were detected, eight-two (82) of which were bull frogs and four (4) of which could not be identified.

Discussion

No CRLF adults or tadpoles were observed during protocol-level surveys of suitable habitat on the South Hill project site. This and additional lines of evidence indicate that CRLF is highly unlikely to be present on the project site.

The nearest known location for CRLF is from Sailor Flat in Nevada County, over 8 miles from the South Hills project site. The main avenues of dispersal for this species are through connected watersheds, with some upland dispersal occurring during rain events and recorded up to one mile from the aquatic habitat (USFWS, 2001). Wetlands on the project site are not hydrologically connected to the habitat at the Sailor Flat site, or within the same watershed. Based on distance and lack of habitat connectivity, it is highly unlikely that CRLF dispersal occurs between the nearest known CRLF population and the project site.

The abundance of bullfrogs in the aquatic habitat on-site further indicates that a population of CRLF is not likely to be present. Hayes and Jennings (1988) found a negative correlation between bullfrog presence and the presence of CRLF. Although bullfrogs and CRLF can co-occur, they generally do not. Bullfrogs prey on tadpoles, juveniles and large adults. Bull frogs also have a competitive advantage over CRLF because they are larger, have more generalized feeding habits, and have an extended breeding season, and bull frog tadpoles are unpalatable to many predatory fish. Researchers found less than 5% survival rates of CRLF tadpoles in the presence of bullfrog tadpoles, whereas in ponds free of bullfrog tadpoles, survival rates were estimated in the range of 30-40% (Lawler, 1999).

In conclusion, given (1) the lack of observations of any CRLF during protocol-level surveys of the South Hill site, (2) the abundance of bull frogs in aquatic habitat on-site, and (3) the distance from, and lack of connectivity to, the nearest known CRLF population, it is unlikely that CRLF are present on the proposed project site.

Thank you for your review of these survey results. Please contact me at (916) 435-1202 if you have any questions or require additional information.

Sincerely,

Ellen Berryman

Ellen Berryman

cc: Tom Cavanaugh, US Army Corps of Engineers
Laura Whitney, US Army Corps of Engineers
Steve Dolim, Catlin Properties

Literature Cited

Hayes, M. P. and M. R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellowlegged frog (*Rana boylii*): implications for management. In Management of amphibians, reptiles, and small mammals in North America. eds R. C. Szaro, K. E. Severson and D. R. Patton. Gen. Tech. Rep. RM166. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. pp. 144158.

Lawler, S. P., D. Dritz, T. Strange, and M. Holyoak. 1999. "Effects of Introduced Mosquitofish and Bullfrogs on the Threatened California Red-Legged Frog." *Conservation Biology* 13(3):613-22.

U.S. Fish and Wildlife Service. 2001. Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for the California red-legged frog. Federal Register: Vol. 66, No. 49. March 13, 2001.

October 23, 2002

Ann Bowers
U.S. Fish and Wildlife Service
2800 Cottage Way, W2605
Sacramento, CA 95825-1846

Subject: Results of a Habitat Assessment for California Red-Legged Frog for the South Hills Site, Nevada County

Dear Ann:

The following letter report describes the findings of a California red-legged frog (CRLF) habitat assessment conducted for the South Hills site in Nevada County. As part of this assessment we also are requesting Service input as to the likelihood of extant populations of CRLF existing in the area. This letter provides the information required in the 1997 USFWS Guidance on Site Assessment for CRLF, which includes:

- An assessment determining if the project area is within range of the species;
- An analysis of whether or not there are known CRLF occurrences within 5 miles of the project area; and,
- An assessment of habitats within the project area and within a one mile radius of the project area.

Survey Area Description and Location

The site is located immediately south of Grass Valley, adjacent to La Barr Meadows Road and east of Highway 49 on the USGS 7.5-minute series Grass Valley quadrangle (Figure 1). The site is composed of two parcels that are on the east and west sides of La Barr Meadows Road. The eastern portion of the site is bordered by La Barr Meadows Road, a gravel pit to the north, and coniferous forest to the east and south. The western portion of the site is bordered by La Barr Meadows Road on the east, coniferous forest to the north and south, and Highway 49 to the west. The estimated elevation of the project area ranges from 2,000 to 2,400 feet above mean sea level (MSL).

Portions of the site have been mined in the past and much of the western portion of the site has been significantly modified for use as a sawmill. A comparison of topography data from 1901, 1949, and 1995 shows significant changes in site hydrology and topography (oversize map, attached). Historically, an intermittent drainage flowed through the site from the western side out the southeast boundary. Three ponds were excavated on the site, along with the construction of several dirt roads. Site elevations were altered in many areas. Many areas of the lower elevations of the site have large concrete slabs and old building foundations, gravel and asphalt

pads, and rubble. Vegetation types on the project site include chaparral, mixed conifer forest, willow scrub, ruderal habitat, and wetlands. Wetlands are shown on Figure 2.

Methods

Available information pertaining to the natural resources of the region was reviewed, including the CNDDB (Grass Valley quadrangle), USFWS Protocol Survey for California Red-Legged Frog (1997).

The study area was assessed on October 16, 2001, 9AM and 1PM, and October 29, 2001, between the hours of 3PM to 5PM. The project area and one mile from project boundaries were assessed for aquatic habitats suitable for CRLF. Both upland and aquatic habitats were noted. Aquatic habitats within one mile, where accessible, were identified and characterized.

The assessment included walking the entire project site, with special attention paid to areas that were considered wetland habitat. When the surveyor reached an aquatic habitat that was inundated, the habitat was approached slowly and the shore and water scanned for presence of amphibians through binoculars and the naked eye. Any sightings or calls of amphibians and other aquatic wildlife were noted. Where aquatic habitats were dry, the bottoms of the wetland were walked to look for any signs of amphibians (when inundated areas dry out near the end of the summer, stranded or dead tadpoles or juveniles can sometimes be found). Any evidence of crayfish or fish would be noted as well. Off-site aquatic habitats were identified by looking for wetlands marked on the quadrangle and/or hydrology maps for the area or topographic indications of potential water flow. Off-site aquatic habitats were checked in the same manner, where accessible. Many aquatic habitats within one mile of the project site were on private property and were not accessible. Photographs of upland and aquatic habitats on-site and accessible off-site are attached.

Results

RLF records

There are no CNDDB records for CRLF within 10 miles of the study area (Figure 3). The Draft Recovery Plan for RLF states that currently, only a few drainages in the foothills of the Sierra Nevada are known to support CRLF. CRLF historically occurred in the lower elevations of Nevada County. Records of extant populations of CRLF occur in Weber Reservoir, near Placerville, El Dorado County, and on Indian Creek, near the town of Woodleaf, Butte County. Another unverified 1998 record occurs on Forest Service land in Sierra County at approximately 5,200 feet. As per our conversation, there are two additional recent records for RLF in Yuba County and Placer counties. My understanding is that the Yuba County record occurs near the Bullard's Bar reservoir. Figure 4 shows the project site in relation to known extant RLF records in Yuba, Nevada, and El Dorado counties. The drainages on the site flow into Wolf Creek watershed, which is part of the Upper Bear River watershed. There are no current records for RLF in this watershed.

Aquatic habitat

Aquatic habitats within the project area include approximately 0.89 acres of pond, 0.04 seasonal wetland, 1.71 acres of seasonal marsh, and 0.18 acres of intermittent drainage (Figure 5). There are three ponds on the site, two to the west of La Barr Meadows Road and one to the east. These ponds are labeled Pond 1 through 3 on Figure 2.

Pond 1 and 2 were inundated at the time of the assessment. Pond 1 is a deep, man-made industrial pond. Cattail was the dominant emergent plant. Trees were restricted to the upper edges of the excavated basin. Pond 2 was the largest pond and is also artificial. Cattails and willows occur along the edges of this pond. Bullfrogs were heard calling and observed sitting on the edge of both ponds. Run-down dock facilities are present on Pond 2. These ponds may have been stocked for fishing in the past. Pond 3 is shallower than the other two ponds and was dry at the time the assessment was conducted. Several dead juvenile bullfrogs were observed in Pond 3.

All other drainages, seasonal marsh, and seasonal wetlands on the site were dry during the assessment. On-site drainages are mostly steep, narrow gullies that appear to carry storm-water run-off from upland areas. The areas mapped as seasonal wetland varied from blackberry (*Rubus discolor*)/California rose (*Rosa californica*) dominated areas to willow scrub. Seasonal marsh was dominated by herbaceous species such as bog rush (*Juncus effusus*), iris-leafed rush (*Juncus* sp.), and nutsedge (*Cyperus* sp.). No amphibians were observed in these habitats during the assessment.

Aquatic habitats within one mile of the project site include perennial and intermittent drainages, Wolf Creek, and a large reservoir. The off-site drainage immediately north of the site was accessible and a portion of the drainage was walked (see Figure 4). That portion of the drainage occurred in a highly disturbed area and adjacent land had been leveled and asphalted. The drainage was approximately 1.5 foot wide and was shallowly inundated (approx. 6 inches to 1 foot deep) at the time of the survey. The water was stagnant in the portion viewed and had a heavy growth of algae. Other aquatic habitats in the area were on private property or accessed by private roads and were not viewed. No amphibians were observed in these habitats.

Upland habitat

Mixed coniferous forest is the predominant habitat type found on the project site. Native trees and shrubs, including black oak (*Quercus kelloggii*), ponderosa pine (*Pinus ponderosa*), madrone (*Arbutus menziesii*), coffeeberry (*Rhamnus californica*), ceanothus (*Ceanothus* sp.), scotch broom (*Cytisus scoparius*), and manzanita (*Arctostaphylos* sp.), comprise the tree and shrub canopy. Herbaceous vegetation is dispersed among the understory such as St. John's wort (*Hypericum* ssp.), wild carrot (*Daucus carota*), plantain (*Plantago* sp.), and Kentucky bluegrass (*Poa pratensis*).

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Discussion

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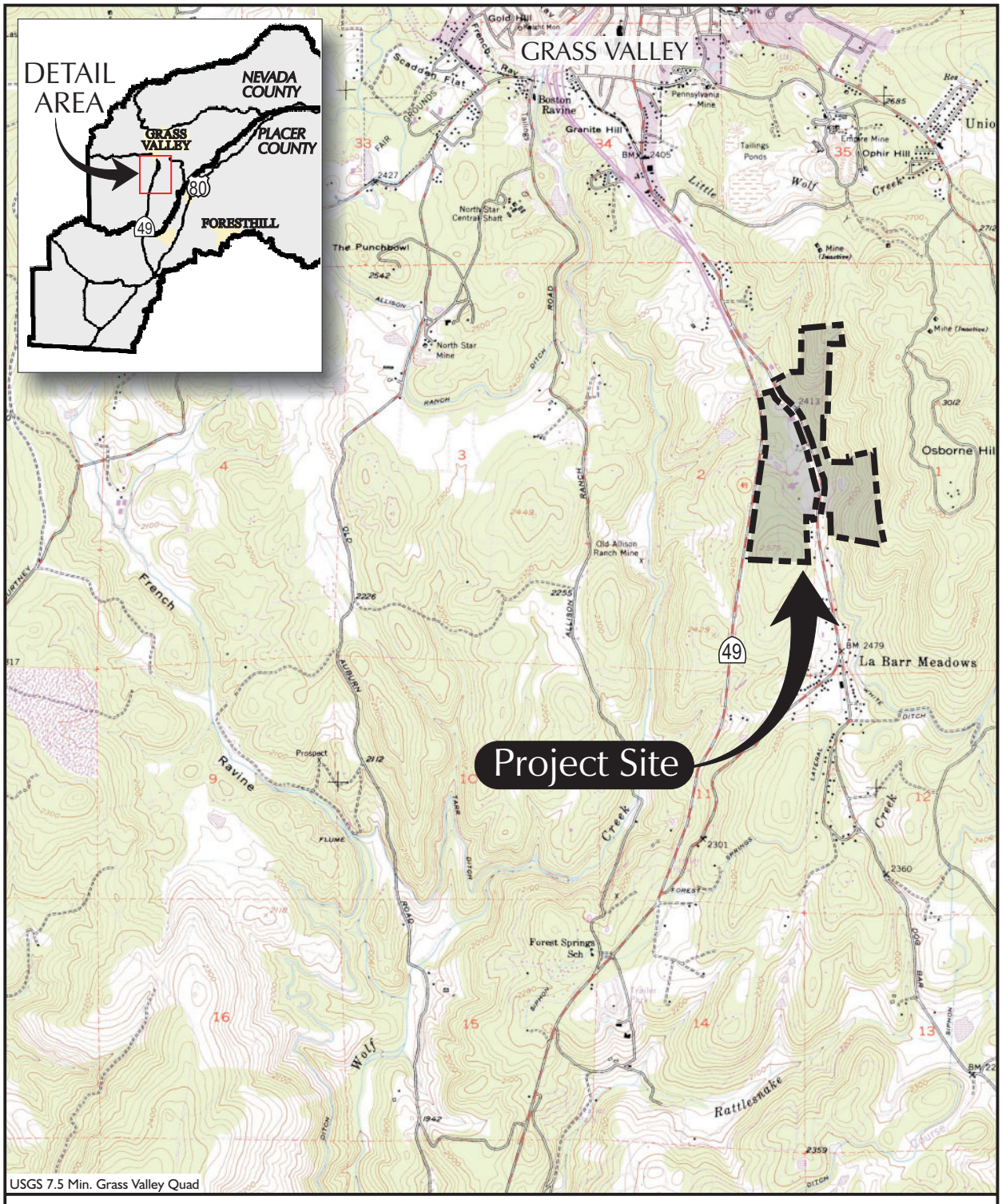
Please contact me at (916) 782-1011 if you have any questions or comments regarding this submittal. I appreciate your assistance in this matter.

Sincerely,

Theresa Fortner Ward
Regulatory Specialist/Associate Biologist

c: Steve Dolim, Catlin Properties, Inc.
Demar Hooper, Taylor, Hooper & Wiley



SITE AND VICINITY

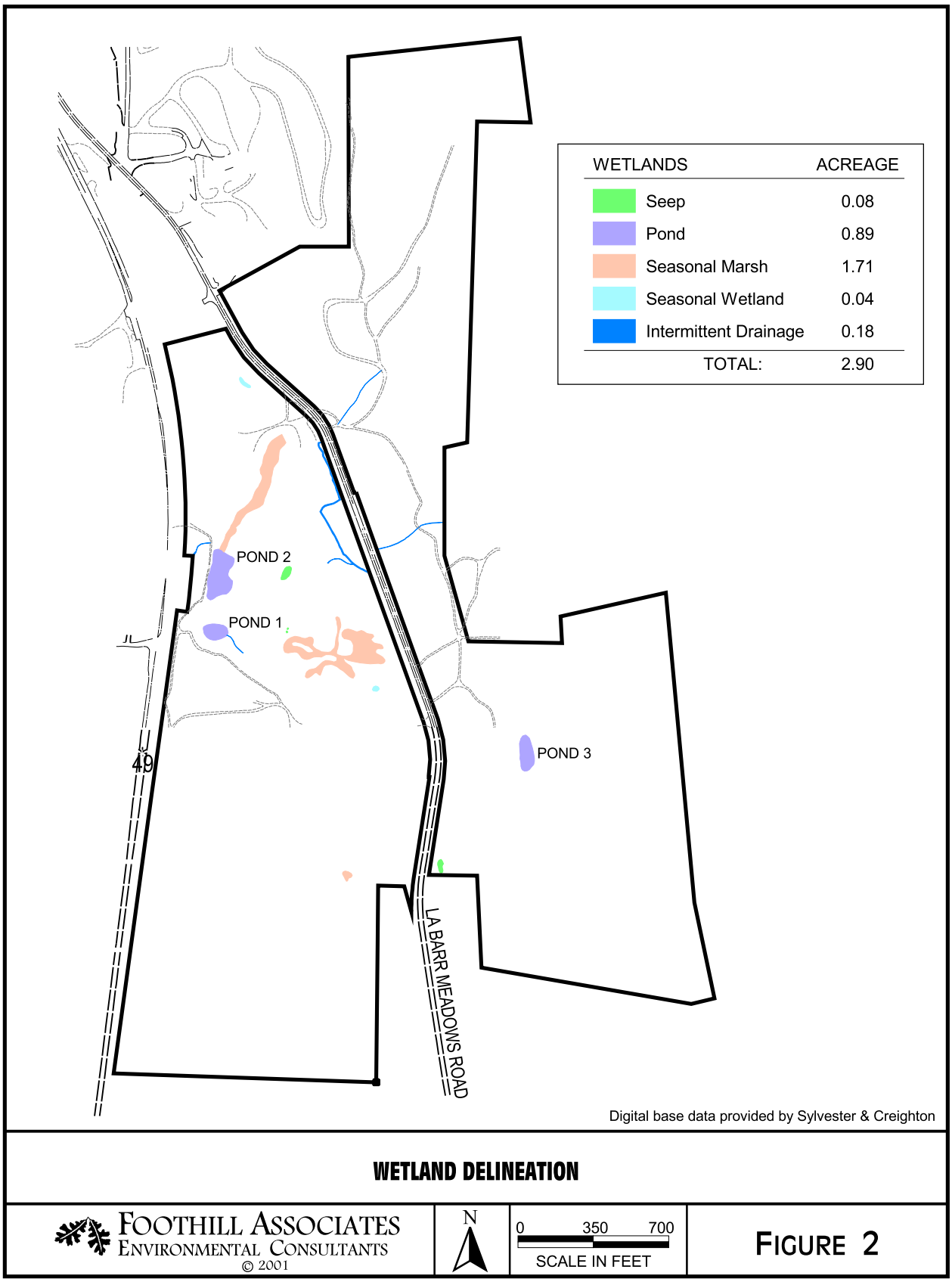
FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTANTS

N

0 1500 3000
SCALE IN FEET

FIGURE 1

SOUTH HILL



WETLAND DELINEATION

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTANTS

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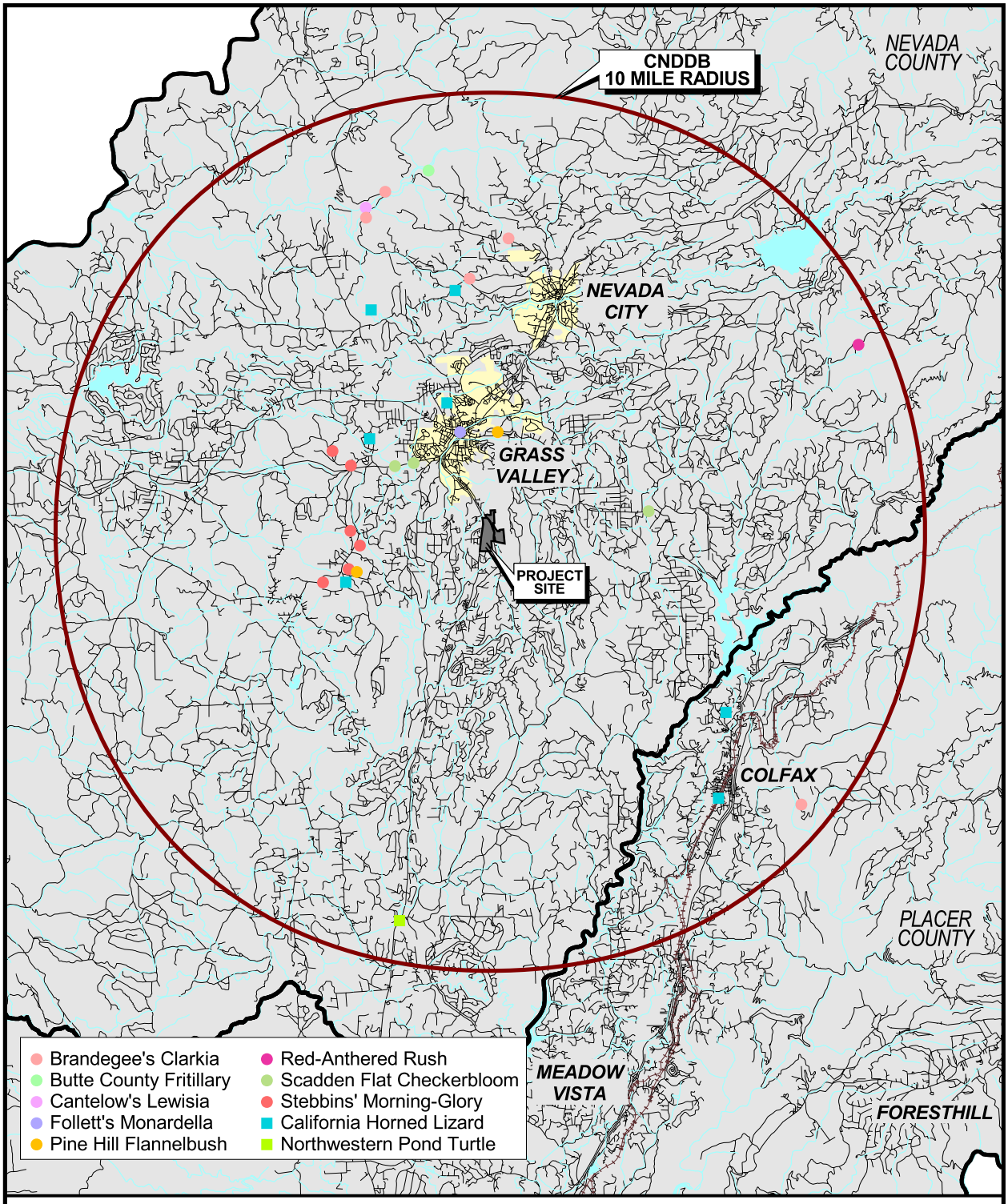
SCALE IN FEET

FIGURE 2

SOUTH HILL

Welands.apr



CNDDB

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTANTS

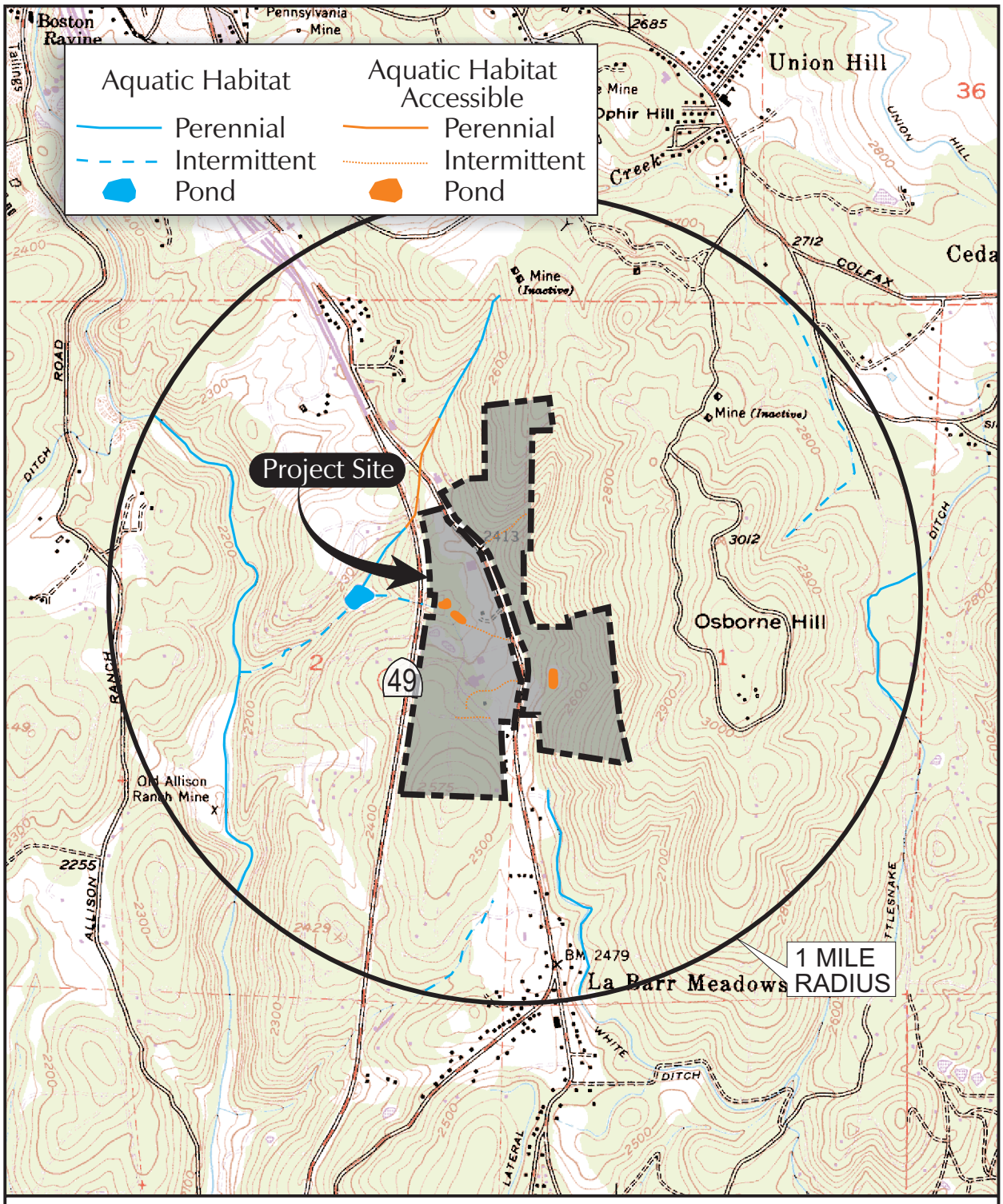
N

0 3.5
SCALE IN MILES

FIGURE 3

SOUTH HILL

SOURCE: CNDDB, 8/2/01



AQUATIC HABITATS

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTANTS

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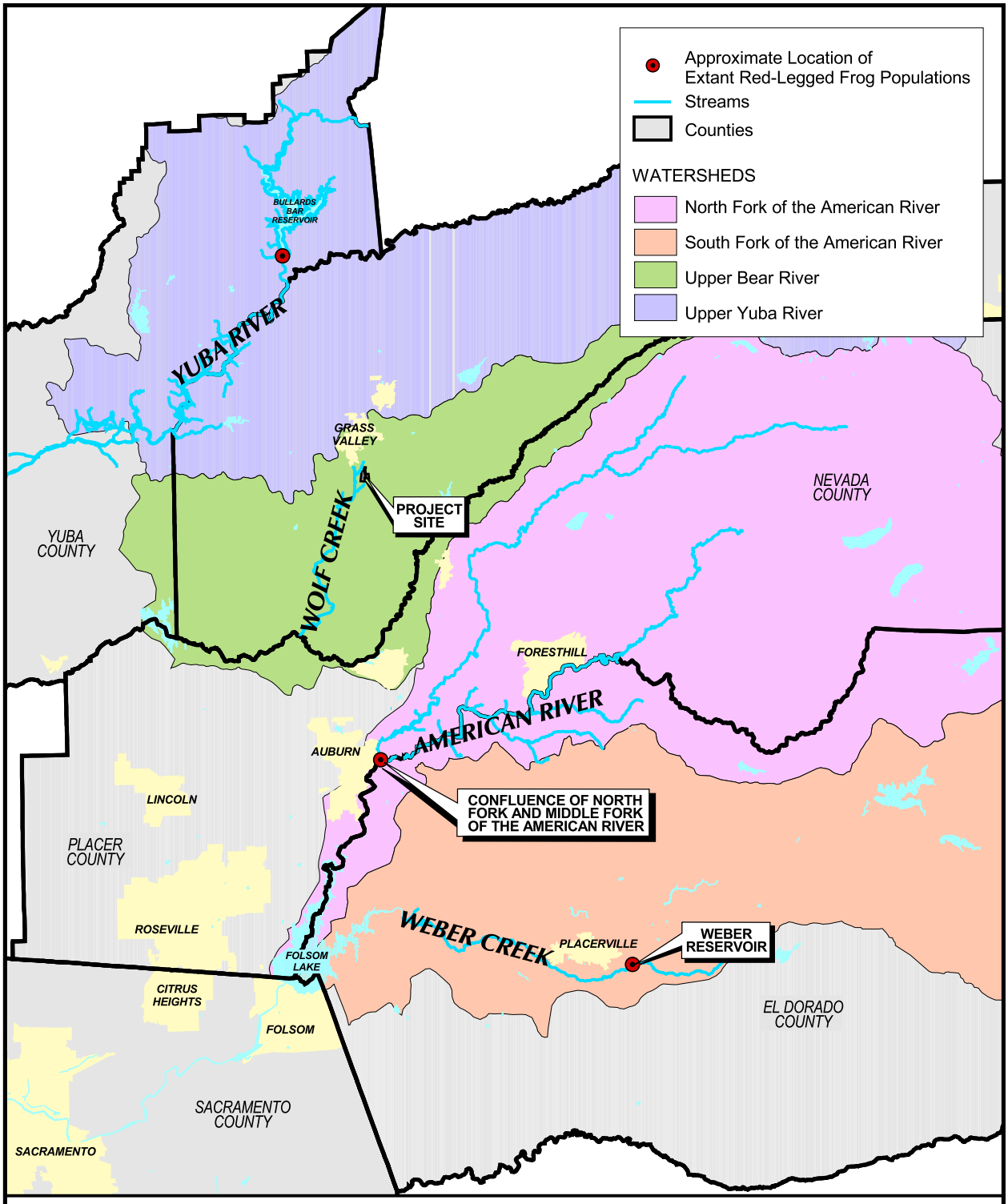
0 1000 2000
SCALE IN FEET

FIGURE 4

SOUTH HILL



PROJECT SITE IN RELATION TO WATERSHEDS WITH RED LEGGED FROG RECORDS

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTANTS

N

0 10
SCALE IN MILES

FIGURE 5

SOUTH HILL

rfl_record.apr

Attachment A

Electronic Copy of Report on CD